# CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF COMMERCIAL BANK IN NEPAL

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

By

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## CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of the dissertation entitled **"Capital Structure and Financial Performance of Commercial Bank in Nepal".** The work of this dissertation has not been submitted previously for conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during that research work have 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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Sushma B. K.

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## REPORT OF RESEARCH COMMITTEE

**Sushma B.K.** has defended the dissertation proposal entitled **"Capital Structure and Financial Performance of Commercial Bank in Nepal".** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per the suggestion and guidance of the supervisor Keshar Singh Khati and submit the dissertation for evaluation and viva voce examination.

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## APPROVAL SHEET

We have examined the dissertation entitled **"Capital Structure and Financial Performance of Commercial Bank in Nepal".** presented by Sushma B.K. for the degree of Master of Business Study (MBS). We hereby certify that the dissertation is acceptable for the award of a degree.

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## ABBREVIATIONS

| | | |
|---|---|---|
| C.V. | = | Coefficient of Variation |
| CAR | = | Capital Adequacy Ratio |
| CR | = | Credit Risk |
| DAR | = | Debt to Assets Ratio |
| DCR | = | Debt to Capital Ratio |
| DER | = | Debt Equity Ratio |
| DPR | = | Dividend Payout Ratio |
| DPS | = | Dividend Per Share |
| EBIT | = | Earnings Before Interest and Taxes |
| EBL | = | Everest Bank Limited |
| EPS | = | Earnings Per Share |
| F/Y | = | Fiscal Year |
| FS | = | Firm Size |
| Ltd | = | Limited |
| MPS | = | Market Price Per Share |
| NBL | = | Nepal Bank Limited |
| NMB | = | NMB Bank Limited |
| NPA | = | Non-Performing Assets |
| P/E | = | Price Earnings Ratio |
| RBB | = | Rastriya Banijya Bank Limited |
| ROA | = | Return on Assets |
| ROE | = | Return on Equity |
| SANIMA | = | SANIMA Bank Limited |
| SD | = | Standard Deviation |
| SN | = | Serial Number |
| SPSS | = | Statistical Package for the Social Sciences |
| TDTA | = | Total Debt to Total Assets |
| TDTE | = | Total Debt to Total Equity |

## ABSTRACT

The financial structure of a business is may be one of its most important considerations. The success of any organization is determined by its capital structure. Financial managers now have more pressure to determine the optimal capital structure that would optimize shareholder value. This study looks at the relationship between capital structure and bank financial performance in Nepal. The debt ratio (DR) is used in the study as a stand-in for a bank's capital structure, and earning per share (EPS), return on equity (ROE), and return on assets (ROA) are used to measure a bank's performance in the nation under investigation. Over a ten-year period, from 2012 to 2022, the study chose five out of the twenty commercial banks, and information was taken from each bank's annual financial statement. To achieve the study's objectives, a descriptive research design was chosen. Additionally, an inferential analysis using statistical tools like regression analysis, correlation analysis, and hypothesis testing was chosen in SPSS to examine the relationship between the dependent and independent variables.

The study's other findings indicate that NMB has the lowest level of TDTE and ROE, while Rastriya Banijya Bank Limited has the highest level of TDTA, TDTE, and ROE, indicating that Rastriya Banijya Bank is able to properly utilize its funding sources. Since Nepal Bank Limited has the highest ROA and EPS levels and NMB Bank Limited has the lowest, it has a poorer capital composition trade-off between risk and return than other banks. Lastly, compared to other commercial banks in the sample, Everest Bank Limited has the greatest level of CAR.



Keywords: Commercial Bank, Financial Performance, and Capital Structure

# CHAPTER I
# INTRODUCTION

## 1.1 Background of the Study

The foundation of any nation's economy is its banking sector. It facilitates effective monetary intermediation, which leads to long-term economic progress. Robust financial systems stimulate investment through efficient resource allocation, savings mobilization, trade of products and services, and financing of profitable business operations. Any country's financial and banking sectors are the foundation of its economy. Research indicates that the banking sector is a strong cornerstone of the country's financial system, especially for developing nations.The financial sector in Nepal has seen substantial change over the past 70 years. Banking services are still the oldest industry in Nepal, despite the fact that the country's modern financial system was only established in the early 20th century.

According to Sangami (2010), a bank's good financial standing serves as a guarantee for its depositors as well as for its shareholders, staff, and the whole economy. One kind of financial intermediary that provides banking and other financial services to its customers is a bank. In general, a bank is a business that provides standard financial services, such as accepting deposits and making loan. Certain banking services are provided by a number of non-banking entities, despite the fact that they do not legally qualify as banks. A banking system also referred to as a system the bank offers provides cash management services to customers and logs all of their daily account and portfolio transactions. The oldest service sector in Nepal is banking, however the creation of the country's current financial system dates only to the early 20th century.

A company's capital structure outlines the methods used to raise the funds required to launch and grow its operations. It is a mix of capital that a company has retained through its financing decisions, including debt and stock. Funding of some type is necessary for business operations. Capital structure is important from a financial standpoint since it impacts the company's ability to meet stakeholder goals (Simerly & Li, 2000). Since an organization's financial structure directly affects its profitability, it is imperative to choose wisely. Companies might obtain funding from internal or external sources. Retained earnings are an example of an internal source of funding; external sources include trade credit, loans from financial institutions, the issuance of

loan stock, and the issuance of equity shares. Therefore, the establishment of a capital structure may have an impact on a company's governance structure, which may have an impact on a company's capacity to make strategic decisions (Pradhan and Pokhrel, 2016).

The capital structure and the company's financing decision are directly tied. It is mostly made up of the debt and equity that are utilized to fund the business. Scholars persistently examine capital structures in an effort to ascertain the existence of ideal capital structures. The general consensus is that the ideal capital structure minimizes a company's cost of capital while optimizing shareholder wealth. Thus, choices about the capital structure have a big influence on the company's financial results (Gupta, 2014). According to Shibru et al. (2015), there is no correlation between a bank's capital structure and its growth or risk. Instead, the capital structure of Ethiopian banks is determined in large part by factors such as profitability, bank size, tangibility, and liquidity. Generally speaking, a company has a wide range of capital structure options.

Financial intermediation is a service provided by banks to guarantee the effective mobilization and distribution of capital to the actual economy. Although other financial institutions are involved in the intermediation process, banks are thought to be the most important financial intermediaries. Maximizing a company's wealth or worth is its ultimate goal (Ganiyu et al. 2019). In the past ten years, the irrelevance theory has witnessed some astounding turning points about the connection between profitability and capital structure. Mwangi, Makau, and Kosimbei (2014), the authors of the seminal study on irrelevance theory, argued that capital structure has no effect on a firm's worth and that a firm's market value is positively connected with the amount of long-term debt it utilizes in its structure.

Barbosa and Louri (2010) asserted that there are numerous interconnected performance measures, such as profitability, customer satisfaction, productivity, and productivity. A company's managers perform better when it uses debt financing because there is less moral hazard because they have less "free cash flow" at their disposal. Consequently, the business will use more debt in an effort to increase profitability. But using more debt would unavoidably lead to higher agency costs, which will impair any business's capacity to turn a profit (Myers, 1984).

Abu-Rub (2012) found that capital structure has a beneficial effect on financial performance. Gupta and Mahakud (2020) found that the profit margin of India's well-capitalized banks is larger than that of their competitors. There is a clear positive correlation between capital sufficiency and profitability, with research showing that a bank will be more lucrative the higher its capital ratio. It's common knowledge that a bank's profitability will decline as its costs increase. This negative link between expenses and profitability has been supported by studies conducted by Bourke (1989), which suggests that profitable banks may be able to operate at lower costs.

Abdul (2012) shown that financial leverage and corporate performance are negatively correlated. Muathe et al. (2014) found a negative link between financial leverage and both return on equity and return on assets. It has been demonstrated that total debt and the debt-to-equity ratio have a negative effect on a company's performance (Akeem et al., 2014). Conversely, Taani (2013) discovered that a bank's performance is enhanced by its total debt.

According to Shrestha et al. (2014), debt considerably boosts the financial performance of Nepal's commercial banks. According to studies by Bist (2024), Bhatta (2023), and Ojha (2018), leverage also has a positive association with return on assets and a negative correlation with return on equity for commercial banks.

The discussion above demonstrates the growing importance of research on capital structure management and the effect of capital mix on bank performance in Nepalese commercial banks. While similar discoveries have been made in the context of other nations, Nepal has not yet seen any of these findings utilizing more recent data. Thus, the capital structure and corporate performance of Nepalese commercial banks are the main subjects of this study.

## 1.2 Problem Statement

Financing decisions the vital decisions in the financial performance of an enterprise and also the performance is directly affected by such decisions. The study's conclusions show a positive relationship between bank size and profitability, interest coverage ratio, and short-term debt to total assets. It implies that an increase in a bank's size, interest coverage, and short-term debt to total assets all boost profitability. Nonetheless, there is an inverse relationship between profitability and the ratios of

long-term debt to total assets, total debt to total assets, and debt to equity. The results of the regression show that the size of profitable banks, the interest coverage ratio, and the ratio of short-term debt to total assets all have positively significant beta coefficients.The debt-to-equity ratio with profitability, the debt-to-total-assets ratio, and the long-term debt-to-total-assets ratio, on the other hand, all have negatively significant beta coefficients (Pradhan and Khadka, 2017).

One of the primary determinants of a bank's performance is its capital structure. In this regard, the bulk of empirical studies examining the performance of banks have focused on a monotonic linear relationship between the capital structure and the bank's performance (Goddard et al., 2004). The study's findings showed that the examination of banking performance had left out some important information. In the banking industry, the relationship between capital and earnings may also be non-monotonic. However, the elements that determine performance may also be more diverse, accounting for both internal and external influences on the bank's performance.

Wang, Gosh, and Petrova (2012), The data indicates that the current capital structure of the firm is significantly impacted negatively by a developed variable called weighted average historical profitability. Regardless of market conditions, this effect is robust and applies to small versus large businesses, as well as businesses with high and low growth. According to our findings, the company's capital structure was mostly created by accruing historical operating profits. When Taub (1975) compared the debt ratio to four profitability indicators through regression analysis, he found a strong positive correlation between debt and profitability. Furthermore, Abor (2005) found a significant positive relationship between overall debt and profitability.The previous discussions, which were based on the empirical literature currently available, have made it rather clear that the results of studies looking into the relationship between capital structure and profitability are inconclusive and require further empirical investigation.

Octavia and Brown (2008) shown that the capital structure of banks is still a topic that receives little attention in the banking literature. Additionally, banks have not been included in prior empirical studies on standard capital structure choice due to the unique nature of the deposit contract, the amount of leverage that banks use, and

regulatory restrictions. Furthermore, banks and non-banks alike must comprehend the factors that influence capital structure and performance, as well as the effects of financing choices and capital structure on the latter. The process by which banks select their capital structure and the variables influencing their business financing behavior are not well understood. Likewise, The finance literature has given a great deal of attention to the relationship between capital structure and performance. However, there hasn't been much research done on the topic in relation to the banking sector (Taani, 2013).

Baral (2004) showed that company risk, dividend payout ratio, debt service capacity, and degree of operating leverage play a little role in determining the financial leverage and that corporate size, growth rate, and profitability play a large role. Furthermore, statistically significant coefficients linked to size and growth and statistically insignificant coefficients linked to business risk, dividend payout ratio, and debt service capacity suggest that financial firms are more concerned with business expansion than they are with debt service capacity. Pradhan (1994), Pradhan and Ang (1994), and Pradhan et al. (2002) were among the research that concentrated on the financial distress (bankruptcy) component of capital structure in the case of Nepal; other aspects of capital structure were left to be investigated. The majority of empirical research examining the connection between capital structure and company performance has been conducted in the manufacturing sector; the number of studies in the banking sector is very small, which restricts the applicability of the findings from these studies. Additionally, there is a dearth of research that examines the applicability of capital structure theories in Nepali contexts as well as the variables influencing capital structure decisions using more recent data. Therefore, there is a need to examine the capital structure hypotheses concerning capital structure determinants and their impact in firm performance in the context of Nepal.

The research questions posed in this research are:

- What is the structure and pattern of capital adequacy ratio, debt asset ratio, debt equity ratio, firm size, and credit risk in Nepalese commercial banks?

- Is there any relationship between the capital adequacy ratio, debt asset ratio, debt equity ratio, firm size, and credit risk to ROA and ROE in the current situation of Nepalese commercial banks?

- How do the dependent and independent variables impact the financial performance in Nepalese commercial banks?

## 1.3 Objectives of Study

The major objective of this study is to analyze the impact of capital on financial performance in Nepalese commercial banks. The specific objectives are as follows:

- To assess the structure and pattern of capital adequacy ratio, debt asset ratio, debt equity ratio, firm size, and credit risk in Nepalese commercial banks.

- To analyze the relationship between the capital adequacy ratio, debt asset ratio, debt equity ratio, firm size, and credit risk to ROA and ROE in the current situation Nepalese commercial banks.

- To examine the impact of dependent and independent variables on financial performance in Nepalese commercial banks.

## 1.4 Rationale of the Study

There have been numerous research on this subject conducted in other nations, but not enough have been done in Nepal. As a result, this study serves as the foundation for additional research on the performance and capital structure of banks. The goal of this study is to determine whether the bank's debt-to-equity ratio is appropriate for the company's ideal capital structure. The study assesses the relationship between the financial performance of the chosen Nepalese commercial banks and several capital structure variables, including credit risk, bank size, capital adequacy ratio, total debt to equity ratio, and total debt to total assets ratio.As a result, the analysis helps investors decide which banks are the best places to put their money.

The government, financiers, and institution directors can assess the bank's efficacy and maintain the government plan, depositor preferences, and bank managers' tactics to meet predetermined objectives by studying capital structure and financial performance. The banking industry is crucial to the development and prosperity of

every state. A well formed and well-rounded financial system is the foundation of economic growth and prosperity. Effective loan allocation and use are facilitated by a robust banking system (Haque and Tariq, 2012).

Making a wise leverage choice helps optimize an organization's performance. However, when it comes to leverage, Nepalese enterprises don't make wise choices. According to Pandey (1985), there may be some value in viewing the interest rate as the pivot for exerting leverage-based forces, as the function of financial leverage resembles a physics lecture. It at least implies taking relevant variables into account. Profit margins are positively correlated with interest rates, which also indicate decreased risk of loss. Additionally, there is a larger likelihood of profit and a bigger danger of unprofitable leverage with increased borrowing. On the other hand, some Nepalese businesses that are profitable are not leveled, while those that are losing money are leveraged. The state of Nepalese businesses indicates that leverage is a persistent issue, either as a result of management's illogical conduct or a lack of guidelines for an appropriate financing mix.

This study has a significant role to play in filling a gap in understanding the impact of capital on the financial performance of Nepalese commercial banks which serve as a reference for financial managers to equip them with applied knowledge of the potential problems in financing decisions and firm performances.

## 1.5 Limitations of the Study

Despite the continuous efforts made to arrive at meaningful conclusions from the study, the following major limitations have been outlined.

- The study is based on the assumption of linear relationship between dependent and independent variables. Thus, the study has not considered the non-linearity biases that are normally characterized in markets of emerging countries.
- Just five of the twenty commercial banks are taken into consideration for the research. A few banks combined during the research period, and as those institutions' data were unavailable, they were not included in the study's objectives.

- It has only considered the secondary data for the study purpose. Data collection from conducting a primary survey is not taken into consideration. It is limited to the data available in the annual reports of the sample banks and data from NRB.
- This study has taken ROA and ROE only as the measure of financial performance. However, there are several other variables such as earnings per share, dividend per share, market value per share, net operating margin, etc. which measure the financial performance of Nepalese commercial banks.
- This study assumes a level of homogeneity across banks, which may not be true, since banks in the study are of different sizes and have different objectives.
- There are other different models to analyze the collected data but only the regression model is used to analyze the secondary data to measure the performance of commercial banks. Analysis of the bank's profitability is not only based on regression and correlation analysis.
- This study has taken data from a period of ten years only those selected banks.

# CHAPTER II
# LITERATURE REVIEW

This section deals with a brief review of existing and prior empirical studies, related to the subject of this study. It is a way to discover what other researchers have covered and left in the area. A critical review of the literature helps the researcher to develop a thorough understanding and insight into previous research works that relate to the present study.

## 2.1 Theoretical Review

Capital structure is a mix of debt and equity capital maintained by a firm. Capital structure is also referred to as the financial structure of a firm. The capital structure of a firm is very important since it relates to the ability of the firm to meet the needs of its stakeholders. Modigliani and Miller (1958) were the first ones to introduce the topic of capital structure and they argued that capital structure was irrelevant in determining the firm's value and its future performance. Lubatkin and Chatterjee (1994) as well as many other studies have proved that there exists a relationship between capital structure and firm value. Modigliani and Miller (1963) showed that their model is no more effective if tax is taken into consideration since tax subsidies on debt interest payments will cause a rise in firm value when equity is traded for debt (Roshan 2009).

Capital structure is a very important decision for firms so that they can maximize returns to their various stakeholders. Moreover, an appropriate capital structure is also important to the firm as it will help in dealing with the competitive environment within which the firm operates. Modigliani and Miller (1958) argued that an 'optimal' capital structure exists when the risk of going bankrupt is offset by the tax savings of debt. Once this optimal capital structure is established, a firm would be able to maximize returns to its stakeholders and these returns would be higher than returns obtained from a firm whose capital is made up of equity only (all equity firm).

The net operating income approach is converse to this approach. This approach contends that the value of a firm and the cost of the capital are independent of capital structure. Thus, the firm cannot increase its value by a judicial mixture of debt and equity capital. These are two extreme approaches to capital structure. Solomon developed the intermediate approach to the capital structure in 1963. This traditional

theory of capital structure pleads that the value of the firm increases to a certain level of debt capital and after that, it tends to remain constant with a moderate use of debt capital, and finally value of the firm decreases (Solomon, 1963). Thus, this theory holds the concept of optimal capital structure.

The capital structure is defined as the mix of debt and equity that the firm uses in its operation. The capital structure of a firm is a mixture of different securities. In general, firms can choose among many alternative capital structures. For example, firms can arrange lease financing, use warrants, issue convertible bonds, sign forward contracts, or trade bond swaps. Firms can also issue dozens of distinct securities in countless combinations to maximize overall market value (Abor, 2005). A firm's capital structure is the mix of its financial resources available for carrying on the business and is a major determinant of how the business operates.

As financial capital is an uncertain but critical resource for all firms, suppliers of finance can exert control over firms. The two major classes of financing for a business are debt and equity. While debt holders exert lesser control over the company and do not determine how the business is run, they earn a fixed rate of return and are protected by contractual obligations. The contractual obligations dictate what return is to be paid for the finance and when it is due. Equity holders are the residual claimants of all the business' returns, bearing most of the risk and having greater control over decisions (Kochhar, 1997).

Companies that want to finance their assets might do it with debt or equity capital. A combination of loan and equity is the best option. If interest was not tax deductible, business owners would not care whether they utilized debt or equity; if it was, they would employ 100% debt financing to increase the value of their companies (Azhagaiah & Gavoury, 2011). Agency expenses result from the company's capital structure's usage of debt. The interactions that exist between debt holders and shareholders as well as between managers and shareholders give rise to agency expenses (Jensen & Meckling, 1976). A company's sources of funding, which may be generally divided into debt and equity financing, make up its capital structure.(Brockington, 1992).

Equity finance is finance provided by owners of the business and it is risk-bearing finance. The holders of this finance own a portion of the firm denominated in shares

and they are entitled to dividends. However, it is not mandatory to pay a dividend all the time as the company may retain the profits for financing the expansion of its operations. Equity owners also share in the risks of the business and are the last to benefit when a business is wound up after debt holders have been paid. Debt finance is finance generated through borrowing from external sources such as banks or from issues of bonds, all of which attract a fixed return. Debt may be short-term, (repayable over periods shorter than one year) or long-term, (repayable over periods longer than one year). The lender does not gain control of the business but is paid interest for the use of his funds. The borrower has a contractual obligation to pay the interest and to repay the principal when due, despite the performance or profitability of the business.

## 2.2 Theories of Capital Structure

### 1. Modigliani Miller Irrelevance Theory

The present theory of capital structure is said to have originated with Modigliani and Miller's 1958 capital structure irrelevance theory. Based on presumptions about investor behavior and the capital market, MM shows that a firm's capital structure has no impact on its value. The theory outlines business financial choices that have no impact on the firm's worth. The first of the theory's four prepositions is that a company's worth remains constant whether it raises capital through debt or equity. There is a constant weighted average cost of capital.The Modigliani-Miller theorem is predicated on the following premises: homogenous expectation, homogeneous risk, equal access to all pertinent information, perfect and frictionless markets, no transaction costs, no default risk, no taxation, and the ability for both businesses and investors to borrow money at the same interest rate. Second, the rate of return on equity increases in a linear fashion with the debt ratio, meaning that the projected return on equity increases as the debt-to-equity ratio rises. Third, the distribution of dividends merely modifies the proportion of debt to equity in the company's financing; it has no effect on the market valuation of the company.

Fourth a firm should expect a rate of return at least equal to the cost of capital no matter where the finance would come from.As a result, the average and marginal costs of capital need to be the same. The rate necessary for capital investment, commonly known as the "hurdle rate," is another name for the continuous cost of capital. In short, the theory says that in an arbitrage-free market without corporate

income tax or bankruptcy costs, a firm's value is invariant with respect to its leverage policy; that is, regardless of the firm's financing source equity or debt.

Baxter (1976) advanced the theory by introducing the issue of bankruptcy costs and their effect on the value of the indebted firm.These expenses consist of reorganization expenditures, legal fees, and liquidation charges in the event that the company files for bankruptcy. Therefore, a company with more debt would pay more to file for bankruptcy than a company with less debt. Shuetrim et al. (1998) pointed out problems with the theorem's first claim and demonstrated how the firm's cash flows are split between debt holders, equity holders, and the government. They also demonstrated that the capital structure of a company that maximizes value will be the one that minimizes the amount of cash flows that are taxed by the government.

**2. Pecking Order Theory**

The peacking order theory of capital structure states that firms have a prefered hierarchy for financing decisions.This order reflects the motivations of the financial manager to retain control of the firm, reduce According to the pecking order hypothesis of capital structure, companies have a preferred hierarchy when it comes to financing choices. In situations where internal cash flow is insufficient to cover capital expenditure, businesses would borrow money rather than issue shares. Prioritizing internal financing above external funding of any kind is the ultimate priority. Internal funds don't demand extra financial disclosures that might result in a loss of competitive advantage or flotation expenses. In the event that a company has to raise outside capital, it is preferable to employ debt, convertible securities, preferred stock, and common stock in that sequence (Myers, 1984). This arrangement represents the finance manager's goals to maintain company control, lower equity agency fees,the agency costs associated with equity, and prevent a negative market response to the news of a fresh stock offering.

There are two main presumptions made by the theory regarding financial managers. The first of them is the probability that management of a company are more informed than outside investors about the company's profitability and prospects for future growth. It is highly desirable to maintain the confidentiality of such information. Managers might avoid disclosing to the public the company's investment prospects

and possible returns on investment by using internal funds. The second premise is that managers will behave in the current shareholders' best interests.

Harris and Raviv (1991) assert that capital structure decisions attempt to remove information asymmetry-related inefficiencies based on the pecking order hypothesis. Firms' avoidance of capital markets can be explained by the information asymmetry between insiders and outsiders as well as the ownership split (Myers, 2001).

The theory does not, however, account for the impact of taxes, financial hardship, agency charges, security issuance expenses, or the range of investment options that a corporation has with respect to its real capital structure, which presents some limits. It overlooks the issues that might occur when management of a company amass so much financial latitude that they lose their ability to respond to market discipline. As such, the theory is provided to supplement the conventional trade-off model rather than to replace it.

**3. Trade-off Theory**

The term trade-off theory is used by different authors to describe a family of related theories.A firm's decision-maker assesses the advantages and disadvantages of various leverage strategies in each of these theories. It is frequently believed that an internal solution is found in order to achieve a balance between marginal costs and marginal gains. The controversy over the Modigliani-Miller theorem gave rise to the first iteration of the trade-off theory. The addition of corporate income tax to the initial amount made debt advantageous since it protected gains from taxes. This implies 100% debt financing since the firm's objective function is linear and there is no offsetting cost of debt.

The desired leverage ratios will differ from company to company because of the variations in firm-specific features. Institutional variations will also cause the goal ratio to vary between nations. These variations include disparate banking systems, tax rates, bankruptcy laws, etc. According to the argument, companies should have higher debt ratios if they have more tangible assets and taxable revenue to protect. Businesses having a higher proportion of intangible assets, which lose value in a liquidation, ought to depend more on equity funding. According to trade-off theory, a larger debt ratio is expected for more lucrative businesses since they should have greater capacity to service debt and more taxable revenue to shelter.Under trade-off

theory, the firms with high growth opportunities should borrow less because they are more likely to lose value in financial distress.

**4. Agency Costs Theory**

The idea states that agency costs—which comprise the price of both debt and equity issues—determine a company's capital structure. The costs associated with equity concerns might include diminished welfare for the principle as a result of the agent's actions deviating from those that maximize the welfare of the principal, as well as monitoring expenditures incurred by the principal (the equity holders) and bonding expenses incurred by the agent (the management).

The opportunity costs resulting from debt's influence on the company's investment choices, bond expenditures and monitoring by bondholders and the owner-manager, and the expenses related to bankruptcy and reorganization are all included in the agency costs of debt (Hunsaker, 1999). Since agency costs are incurred by both debt and equity, the ideal debt-to-equity ratio requires balancing the two types of expenses. Conflicts of interest between various agent groups—managers, creditors, and stockholders—are a factor in agency costs. Two categories of agency issues may exist.

An agency issue involving shareholders and managers It occurs when management don't want to put in the effort to maximize firm value, which is better for shareholders, and instead possess less than 100% of the company's assets. "The problem is how to motivate managers to disgorge the cash rather than invest it below the cost of capital or waste it on organizational inefficiencies," Jensen (1986) said, citing the advantage of debt as a limitation on management discretion. Low-debt company managers tend to spend free cash flows more freely, which results in fewer worthwhile initiatives and poorer returns.On the other hand, managers of a firm with debt in its capital structure are obligated to pay interest, which means they have less free cash flow and must decide how best to allocate these cash flows. An opposing viewpoint holds that debt holders receive some of the power that shareholders have over management, allowing Similar reasoning was put out by Grossman and Hart (1982), but from a somewhat different angle, who claimed that firms with a high proportion of equity financing have a very low chance of going bankrupt. These companies do not penalize their managers for low profitability, and they do not

provide them with any incentives to perform better. Additionally, managers who file for bankruptcy may incur personal expenditures including reputational damage, among other things. Managers are therefore disciplined by the accumulation of debt since the incentive effect results from the desire to avoid bankruptcy. In summary, this kind of agency dilemma suggests that greater leverage is correlated with improved business performance. Decisions on the transfer of wealth from bondholders to shareholders are made by shareholders or their representatives in shareholder-bondholder conflicts.In order to protect themselves from this kind of wealth expropriation, bondholders will seek a larger return on their bonds or obligations.

This kind of issue stems from the conceptual distinction between debt and shareholders. While the latter accept lesser returns and take less risk, the former accept more risks and seek bigger returns. As a result, investors can choose to pursue initiatives that carry more risk than debt holders would. If these initiatives succeed, investors will receive higher returns; if they fail, loan holders and investors will bear the whole loss (Jensen and Meckling, 1976). More leveraged businesses consequently take on lower-risk investments.

Conversely, Myers (1977) demonstrated how underinvestment may result from differences in objectives between Businesses with significant development potential may be less likely to use leverage and more long-term debt than businesses in more developed industries, which might reduce conflicts. Because convertible debt has a lower agency cost than plain debt, Jensen and Meckling (1976) suggested that the issuing of convertible debt or debt with warrants can serve as alternative means of minimizing the conflicts.

**5. Information Signaling Theory**

According to this notion, insider information is communicated to outside investors through a company's capital structure decision. It also mentions how lenders find it challenging to effectively determine the degree of risk due to the issue of unequal or incomplete information in organizations. The desire of managers to carry out expensive capital structure rearrangement reform projects acts as proven indications of their motivation to share insider information about a firm's worth with the public stock market. According to Ross (1977), a company will raise its leverage (debt)

when it feels that its asset worth has increased. According to Leland and Pyle (1977), a company might indicate a rise in value by lowering its leverage (debt). Based on the two signaling theories mentioned above, an increase in debt will raise prices according to the Ross (1977) model, whereas an increase in debt will lower prices according to Leland and Pyle (1977).

**6. Free Cash Flow Theory**

After all costs, including investments, have been covered, a company's free cash flow is the amount of money left over. Enabling a corporation to seize possibilities that augment shareholder value is the reason it has significance. According to this notion, managers are discouraged from misusing the company's profits for personal gain when free cash flow is mitigated by paying dividends and interest on debt.

According to Jensen (1989), top managers are more likely to invest in initiatives with a negative net present value (NPV) than to provide dividends to shareholders when they have access to free cash flows. He contends that a rise in employee turnover at the company should have an impact on management pay. Therefore, the company's goal is to grow by investing in a variety of initiatives, even if they have a negative net present value (NPV). According to Dorff (2007), management pay typically rises in tandem with a rise in employee turnover inside the company. Paying dividends to reduce the level of free cash flow is not favored over paying the principle and interest on debt due to legal restrictions (Jensen, 1986).

**7. Life Cycle Theory**

According to the notion, businesses employ various forms of funding depending on their stage of development. The corporate life cycle idea was put out by Disiboshi in 1989 and holds that companies are born, mature, and eventually perish. Most upstarts lose money, therefore they search for the advantages of debt. Personal guarantors are used by entrepreneurs since no one wants to lend to them. Ownership and management are inextricably linked; there is no distinction between them. Since there are no assets to use as collateral and prospects are unclear, decision flexibility is extremely crucial at this point. The growth stage and the upstart share many traits. Rapidly expanding businesses are reluctant to take on large debt since it would limit their ability to take on new initiatives.At this point, borrowing is substantial and reasonably priced. Businesses now have a substantial asset base. The management

and ownership of a company separate as they develop and mature. The necessity for substantial borrowing results from the requirement for management discipline. The company's investment requirements are known. Businesses often retire the majority of their debt and have little need for investments as they get older.

**8. Contemporary Capital Structure Theories**

According to Graham and Harvey (2001), corporate finance officers (CFOs) believe that preserving financial flexibility and minimizing debt is crucial for being prepared for unanticipated possibilities. CFOs are often quite cautious about taking on debt. According to Buringuriza and Hyltenstam (2002), nations with low levels of financial development and industries that rely on outside financing typically have smaller enterprises, which indicates poor growth and performance. They said that nations with more financial development also tend to do less R&D and have slower growth rates for equity-financed firms. In contrast to industrialized nations, as the banking system advances, bank-dependent sectors expand more quickly in low-GDP nations.

Table 1

*Summary of Capital Structure Theories*

| Theories | Relationship | Effects |
|---|---|---|
| Modigliani and Miller | No effects | Assumed perfect market |
| Pecking-Order | Negative | Performance affects debt |
| Trade-off | Positive | Performance affects debt |
| Agency problem | Negative | Debt affects performance |
| Information signaling | Positive | Performance affects debt |
| Life cycle | Depends | Firm’s investments needs are predictable |
| Contemporary | Negative | Debt affects performance |
| Free-cash-flow | Positive | Debt affects performance |

## 2.3 Empirical Review

### 2.3.1 Review of International Literature

Cuevas-Vargas et al. (2022) look at how innovation and capital structure affect the success of small and medium-sized Mexican manufacturing companies. The influence of capital structure on innovation is substantial, although its effect on business performance is only indirect.

Ayange et al. (2021) used annualized panel data for a sample of 15 listed businesses from various sectors between 1999 and 2018 to investigate the effects of capital structure variables on the performance of manufacturing firms in Nigeria.In comparison to other book value, the results show that the performance proxy measured by ROE considerably influences SDTA, SIZE, LDTA, and TDTA findings. Tobin's Q and financial performance are found to have a robust association.

Mudany (2019) evaluated the performance-capital structure link. The study found that financial leverage significantly and favorably affects the performance of businesses. The study also shown a favorable correlation between capital structure and financial success. The firm's financial performance was shown to be significantly impacted by its capital structure. The article came to the conclusion that, in order to turn a profit and run a profitable organization, every company has to have a wise capital structure.

Siddik, Kabiraj, and Joghee (2018) used panel data from 22 banks during the years 2008–2018 to explore the effects of capital structure on bank performance in developing economies in Bangladeshi banks. The effects of capital structure on the profitability of Bangladeshi banks as measured by profits per share, return on equity, and return on assets were experimentally investigated in this study. The pooled ordinary least square analysis's findings demonstrated that capital structure and bank performance are inversely related. All capital structure factors, including TDTA, LTDTA, and STDTA, show substantial inverse effects on ROA, according to the data. Additionally, this study found that while liquidity has a negative correlation with bank performance in emerging economies like Bangladesh, growth possibilities and size have a favorable correlation. Thus, the analysis came to the conclusion that capital structure had a major detrimental effect on Bangladeshi banks' performance. These detrimental effects can be accounted for by the features of an undeveloped

bond and stock market in developing nations like Bangladesh, including information asymmetry, stringent loan covenants, and other factors that result in a high cost of debt. This study recommends that instead of significantly depending on loan capital in their capital structure, financial managers should attempt to finance from retained earnings.

The impact of capital structure on the performance of firms listed on the Karachi Stock Exchange (KSE) was examined by Basit and Hassan (2017). The study sample is made up of 50 companies that are listed on the Karachi Stock Exchange and were observed for a total of 250 firm-years between 2010 and 2014. Debt to Equity is the independent variable, and Marketing, Size, Earnings per Share, Return on Equity, and Return on Assets are the dependent factors. The study used multiple linear regressions, descriptive statistics, and the Pearson correlation coefficient. The results indicate a substantial association between the debt-to-equity ratio and earnings per share, return on equity, and return on assets. The debt to equity ratio, however, is proven to have a considerable influence on size and return on assets. Moreover, it is advised that other firm-specific variables, such as taxes and dividends, be employed over a longer time period to assess the influence and get a more precise result. In the long run, this study will help finance managers identify the ideal capital structure and advance research by supplying fresh insights into the effects of capital structure. However, in order to verify the divergence in the construction of the capital structure, other large economies can also be studied with various other businesses.The debt to equity ratio, however, is proven to have a considerable influence on size and return on assets. Moreover, it is advised that other firm-specific variables, such as taxes and dividends, be employed over a longer time period to assess the influence and get a more precise result. In the long run, this study will help finance managers identify the ideal capital structure and advance research by supplying fresh insights into the effects of capital structure. However, in order to verify the divergence in the construction of the capital structure, other large economies can also be studied with various other businesses.

Ahmed (2015) used cross-sectional panel data from 63 Australian listed businesses over a three-year period (2012-2014) to conduct research on capital structure and profitability in Australian service sector enterprises. This study looks at how

decisions about capital structure (debt vs. equity) impact profitability or corporate performance. Two distinct forms of data on the dependent variables Return on Equity (ROE) and Return on Asset (ROA), the independent variables LTD, STD, and TD, and the control variables size and growth are gathered in order to do the study. The study discovered that short-term debt had the greatest statistically significant influence on profitability in these service-sector enterprises, with overall debt having a substantial impact on company performance as assessed by return on equity.

Yegon, Cheruiyot, Sang, and Cheruiyot (2014) used panel data taken from the financial statements of the firms listed on the Nairobi Stock Exchange to explore the link between capital structure and the firm's profitability in the Kenyan banking industry. The study's reference period spans eight years, commencing with the fiscal year. Since various businesses have varied funding requirements, the examination is restricted to the banking sector. The study came to the conclusion that there is a strong positive correlation between short-term debt and profitability. This implies that since short-term debt is often less expensive, adding more of it to the capital structure will raise profit levels and make short-term debt the preferred financing option for successful organizations.

Leon (2013) looked on the connection between capital structure and the 2008–2012 financial performance of Sri Lankan industrial companies that were listed. The accounting profitability of financial performance was assessed using Return on Equity (ROE) and Return on Assets (ROA). A sample of thirty listed manufacturing companies was chosen. Using SPSS, the data were examined and hypotheses were put to the test using regression and correlation analysis. The results showed that return on equity and leverage had a substantial negative connection. Furthermore, there was no meaningful correlation found between return on assets and leverage. It is also recommended that future research based on this analysis determine the ideal capital structure that improves performance in Sri Lanka.

Velnampy and Niresh (2012) examined the eight-year period from 2002 to 2009 in which 10 listed Sri Lankan banks' capital structure and profitability were assessed. The study is limited to Sri Lankan listed banks in the Banks, Finance & Insurance industry. Moreover, secondary data collecting forms the basis of the study's execution. Descriptive statistics and correlation analysis have been used to study the data in

order to determine the link between capital structure and profitability. In this case, profitability is the dependent variable and capital structure is the independent variable. Four ratios are used to quantify profitability: net profit, return on equity, return on capital employed, and net interest margin.The Debt to Total Funds ratio and the Debt/Equity ratio are used to measure capital structure. The study found that capital structure and profitability are negatively correlated, with the exception of the relationship between debt to equity and return on equity, wherein a rise in debt financing results in higher interest payments and a subsequent drop in profitability.

Shubita and Alsawalhah (2012) investigated the relationship between capital structure and profitability of the industrial companies listed on Amman Stock Exchange during a six-year period (2004-2009). The study sample consists of 39 companies, applying correlations and multiple regression analysis. The findings of this study show a noticeably inverse relationship between debt and profitability. These results suggest that a larger debt position is linked to a lower profitability; that is, the higher the debt, the worse the firm's profitability. The findings also demonstrate that profitability rises in relation to the control variables of size and growth in sales. This might be a result of Jordan's economic crisis. Sales levels typically decline during economic downturns, which causes issues for firms' cash inflow. As a result, businesses begin to miss obligation payments.

Abbadi and Abu-Rub (2012) analyzed the Effect of Capital Structure on the Performance of Financial Institutions on sample of banking sector in Palestine consists of 22 banks( commercial , investment and Islamic) during the time period of 2007 to 2010.Using return on equity and return on asset as measures of accounting efficiency and Tobin's Q test to gauge market efficiency through wealth maximization, the study employed a model to investigate the impact of capital structure on profitability.According to the study, while leverage reduces bank profitability, total deposit to assets and return on assets both rise with bank efficiency. Additionally, it was shown that leverage had a negative impact on the bank's market value. However, there was a substantial positive correlation between market value and ROA as well as bank deposits relative to total deposits.

Hoffmann (2011) carried out research on Determinants of the Profitability of the US Banking Industry during the period 1995-2007 by using panel data of 11777 us banks.

The study observed that profitability of the US banks is non-monotonic correlated with its capital structure. The study highlighted how the minimum capital requirements and intricate regulatory structure of the US banking sector have an impact on the financing choices made by banks and, therefore, their profits. The study made the case that there is a non-monotonic link between capital structure and profitability. However, the study asserted that the link between them is likely to be unfavorable if the non-monotonic relationship is disregarded and attention is solely directed toward one effect. A rapid rise in capital will result in lower profitability since it won't be used right away. Additionally, as the study focused on the years leading up to the 2009 financial crisis, the majority of US banks were heavily leveraged at that point.

Gupta, Srivastava and Sharma (2011) carried out research on Capital structure and financial performance of the companies of India by using data of 100 companies listed on National Stock Exchange (NSE) of India in a 5-year time horizon (2006-2010) from prowess database of CMIE. Moreover, financial firms were excluded from study due to the peculiarity in terms of operations, structure of assets and liabilities that would hinder analysis and inter-company comparisons.The variables were computed and Excel was used to examine the data. Pearson correlation coefficient was used to determine the correlation between the independent and dependent variables after the variables were entered into the SPSS program. The study found a negative correlation between financial leverage and a number of company performance metrics, including profitability. One way to interpret this conclusion is that businesses with large levels of leverage would be less profitable. Put otherwise, the degree of debt exceeds the optimal level, and the consequences of financial difficulty are more significant than the benefits of the tax shield. . Totally, with respect to observed link between capital structure and performance, the conclusion is that company that has high profitability and good performance have less debt and the reasons behind using of debts by Indian companies may be constant interest rate in any level of debt and risk.

Davydenko (2011) investigated the determinant of Bank Profitability in Ukraine on samples of largest 10 banks (domestic and foreign ownership) profitability from 2005 to 2009 in Ukraine. The comprehensive quarterly income statement and balance sheet

data for a group of Ukrainian banks were used in this investigation. The study's dependent variables include return on equity, which quantifies the return to shareholders on a unit of capital, and return on assets, which shows how well a bank uses its assets to produce revenue. The credit risk, size, ownership structure, GDP, and inflation were all considered independent factors. Furthermore, the study's findings showed that foreign ownership has a major negative impact on the profitability of Ukrainian banks while capital and bank size have a large beneficial impact. Lastly, the profitability of Ukrainian banks is adversely affected by liquidity, albeit negligibly.

Azhagaiah and Gavoury (2011) conduct study on The Impact of Capital Structure on Profitability with Special Reference to it Industry in India during the time period of 8 years ranging from 1999–2000 to 2006–2007 by using Regression Analysis (to analyze the unique impact of capital structure on Profitability), in addition to descriptive statistics such as Mean, Standard Deviation, and Ratios. The study compared the D/E (debt to equity ratio) and TDTA (total debt to total assets) using metrics like ROA (return on assets) and ROCE (return on capital employed). There was differentiation between low-, medium-, and high-income enterprises within the firms. It was discovered that judgments on capital structure had an impact on low-income businesses. However, it was shown that the usage of debt had a detrimental effect on medium-sized businesses, who fared better when they used less debt, indicating the importance of capital structure for these businesses. High revenue businesses showed the similar relationship, with rising debt levels resulting in declining performance. All things considered, capital structure had a detrimental effect on performance. Growing the debt ratio was found to have a detrimental impact on the profitability and performance of the corresponding enterprises in all sizes. The conclusion is that capital structure variables and profitability variables (ROA and ROCE) have a strong one-to-one relationship. Additionally, the CS has a significant impact on profitability, and an increase in the use of debt funds in capital structures tends to lower the net profit of Indian companies listed on the Bombay Stock Exchange.

Table 2

*Summary of International Literature Reviewed*

| S.N | Name of Article | Author | Objective | Variable | Methodology | Major Findings |
|---|---|---|---|---|---|---|
| 1 | Impact of capital structure and innovation on firm performance. Direct and indirect effects of capital structure. | Cuevas-Vargas et al (2022) | To look at how capital structure and innovation affect the success of small and medium-sized Mexican manufacturing companies. | Dependent and Independent | Empirical and Descriptive | Firm performance is relatively little impacted by capital structure, while innovation is greatly impacted by it. |
| 2 | Effects of capital structure on firms' performance in Nigeria | Ayange et al (2021) | To examines capital structure measures on manufacturing firm's performance in Nigeria using annualized panel data for a sample of 15 quoted firms from diverse sector 1999-2018 | Dependent and Independent | Descriptive and Empirical | The results indicate that performance proxy by ROE and Tobin's Q significantly influence SDTA, SIZE, LDTA, and TDTA findings revealed a robes relationship between Tobin's Q and financial performance compared to other book value. |
| 3 | Effect of capital structure on performance: A Critical Review | Mudany (2019) | To access the relationship between the capital structure and performance. | Dependent and Independent | Descriptive and Exploratory. | The paper revealed that financial leverage has a positive and significant effect on firm performance. Also, there was positive relationship between capital structure and financial performance. |
| 4 | Impact of | Siddik, Kabiraj | To investigate | Dependent | Descriptive | The results showed |

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|---|---|---|---|---|---|---|
| | capital structure on performance of Banks. | and Joghee (2018) | the impact of capital structure on performance of banks in a developing economy in the banks of Bangladesh using the panel data of 22 banks for the period of 2008-2018. | and Independent | and Analytical. | that capital structure inversely affected bank performance. This study also observed that growth opportunities, size and liquidity had negative association to the performance of banks in the developing economy, i.e, Bangladesh |
| 5 | Impact of capital structure on firms Performance: A study on Karachi Stock Exchange (KSE)Listed firms on Pakistan | Basit and Hasson (2017) | To investigate the impact of capital structure on firms' performance of the companies listed on Karachi Stock Exchange (KSE). | Dependent and Independent | Descriptive and Analytical | The study found that Return on Equity and Return on Assets are significantly correlated to Debt-to-Equity ratio, while Debt to Equity ratio had a significant impact on size and ROA. |
| 6 | Impact of debt on profitability of firms: Evidence from non-financial sector of Pakistan. | Habib et al. (2016) | To investigate the impact of debt on profitability of firms in Pakistan. | | Descriptive and Analytical | The study revealed a significant but negative relationship between debt and profitability. |
| 7 | Capital structure and profitability in the Australian service sector firms: A panel data analysis: | Ahmed (2015) | To study the impact of capital structure and profitability in the Australian service sector firms by using cross sectional panel data from 63 | Dependent and Independent | Descriptive and Analytical | The study found significant impact of total debt on firm performance whereas sales growth and asset growth are affected negatively. |

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|---|---|---|---|---|---|---|
| | | | Australian listed companies over three years (2012-2014) | | | |
| 8 | The effects of capital structure on Firm's profitability: Evidence from kenya's Banking sector | Yegon,Cheruiyot and J.sang (2014) | To investigate the relationship between capital structure and the firm's profitability of banking industry in Kenya, by using panel data extracted from the financial statements of the companies listed on the Nairobi Stock Exchange. | Dependent and Independent | Descriptive and Analytical | The study concluded that short term debt has significant positive relationship with the profitability whereas long term debt has significant negative relationship. |
| 9 | The impact of capital structure on financial performance of the listed manufacturing firms in Srilanka | Leon (2013) | To investigate the relationship between capital structure and the financial performance of listed manufacturing firms in Srilanka | Dependent and Independent | Descriptive and Exploratory | The findings revealed that, there was a significant negative relationship between Leverage and ROE. And there was no significance relationship between leverage and ROA. |
| 10 | The relationship between capital structure and profitability. | Velnampy and Niresh (2012) | To analysis the relationship between capital structure and profitability of ten listed | | Descriptive and Exploratory | The study revealed that there is a negative association between capital structure and profitability. |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Srilankian banks. | | | |
| 11 | The relationship between capital structure and profitability. | Shubita and Alswalhah (2012) | Study relationship between debt and profitability. | Dependent and Independent | Descriptive and Exploratory | The higher the debt, the lower the profitability of the firm. The results also showed that profitability increases with control variables-size and sales growth. |
| 12 | The Effect of capital Structure on the Performance of Palestinian Financial Institutions. | Abbadi and Aburub (2012) | Using return on equity and return on asset as indicators of accounting efficiency and Tobin's Q test to gauge market efficiency through wealth maximization, the impact of capital structure on profitability will be investigated. | Dependent and Independent | Descriptive and Analytical | Leverage was found to have a detrimental impact on earnings. |
| 13 | Determinants of the profitability of the US banking industry | Haffmonn (2011) | To study and explore the determinants of the profitability of the US banking industry | Dependent and Independent | Descriptive and Exploratory | The study argued that the relationship between capital structure and profitability is non-monotonic. |
| 14 | Capital Structure and Financial Performance: Evidence from India. | Gupta, Stivastava and Sharma (2011) | Effect of Capital Structure on Financial Performance | Dependent and Independent | Descriptive and Analytical | The study revealed that company that has high profitability and good performance has less debt. |
| 15 | Determinants | Davydenko | Identify | Dependent | Descriptive | Capital and bank |

| | | | | | | |
|---|---|---|---|---|---|---|
| | of Bank Profitability in Ukraine. | (2011) | factors relating to bank profitability in Ukraine. | and Independent | and Exploratory | size have significant positive effects where liquidity negative effects on the profitability. |
| 16 | The impact of capital structure on profitability with special reference to it industry in India. | Azhagaiah and Gavoury (2011) | ROA and ROCE to check against the D/E and TDTA | Dependent and Independent | Analytical and Exploratory | The study concluded that there has been a strong one-to-one relationship between capital structure variables and profitability variables. |

### 2.3.2 Review of Nepalese Article

The impact of business size and capital structure on the financial performance of Nepalese commercial banks was investigated by Chalise (2022). The study used secondary sources of data and was based on a sample of 14 commercial banks that included government-owned, joint venture, and private banks throughout the years 2013/2014-2018/2019. The calculation of functions linking the ROA and EPS with measures of capital structure and total assets was done using regression analysis. The findings showed that EPS and ROA had a negative relationship with capital structure. Nonetheless, it demonstrated that EPS and ROA were positively correlated with capital structure. A significant area of study in corporate finance literature has been capital structure and its effects on financial performance. It investigates how firm size and capital structure affect financial performance of commercial banks.

In 2020, Shrestha This article examines the effects of bank-specific factors on the financial performance of commercial banks in Nepal. Return on assets (ROA) is a metric used to evaluate financial performance. Similar to this, bank-specific elements are proxied by managerial efficiency (ME), liquidity (LIQ), credit risk (CR), assets quality (AQ), and operational efficiency (OE). Panel data from 17 commercial banks covering the years 2010–11–2017–18 were used in this study. The Housman test determined that the Fixed Effect model is more appropriate than the Random Effect model, and the Breusch and Pagan Lagrangian multiplier test demonstrated that the Pooled Regression model is inappropriate. This study concludes, using the Fixed Effect model, that bank-specific factors significantly affect the financial performance

of commercial banks in Nepal. In conclusion, this research indicates that while CR has a detrimental effect on the financial performance of Nepalese commercial banks, ME, AQ, and OE have a considerable beneficial impact.

Jaishi (2020) investigated the connection between Nepalese insurance companies' financial performance and their capital structure. The dependent variables were earnings per share and return on assets. The following were the dependent variables: size, liquidity, tangibility, equity to total assets ratio, and total debt ratio. According to a study conducted on 14 insurance businesses in Nepal between 2013–14 and 2018–19, insurance companies with higher debt ratios do better financially. Return on assets in the industry is positively correlated with an increase in debt ratio and tangibility, and negatively correlated with an increase in equity, size, and liquidity. Earnings per share is positively impacted by the debt ratio and tangibility, and negatively impacted by the equity, size, and liquid ratio. The main finding of this study was that the financial performance of the investments and securities of the Nepalese insurance business was largely determined by the following factors: size, liquidity, tangibility, leverage, equity to total assets ratio, and total debt ratio.

The study on capital structure and company performance in Nepal was examined by Pradhan and Pokharel (2018). During the years 20012/13–20016/17, 19 commercial banks made up the study's sample. The NRB's bank supervision reports and the annual reports of the participating banks provided the data for this investigation. Both descriptive and regression analytic statistics were used to analyze the data that were gathered. The present study considered three types of capital structure variables: the ratio of total debt to total assets, the ratio of long-term debt to total assets, and the ratio of short-term debt to total assets. Additionally, bank-specific factors included asset growth and bank size.Additionally, earnings per share, net interest margin, and return on assets were used to gauge financial success. The study's findings also revealed that, in the context of Nepal, the two main variables influencing the financial performance of commercial banks are size and credit. Ultimately, the analysis showed a negative correlation between financial success and the ratio of total debt to total assets.

In order to investigate the impact of capital structure on the performance of manufacturing companies listed at the Nepal Stock Exchange, Bhattarai (2016) conducted research on "capital structure and form performance: Evidence from

Nepalese manufacturing companies." The research employed secondary data from eight manufacturing firms' published annual reports and financial statements for the years 2004 through 2014. Multiple regression study results indicate that capital structure and Nepalese manufacturing enterprises' performance are significantly negatively correlated. Apart from capital structure, there is a considerable positive correlation between the size of the company and its performance, but a negative correlation between tangibility and performance. The study comes to the conclusion that Nepalese manufacturing enterprises perform worse when they use more debt in their capital structure.

Amatya (2016) looked into how macroeconomic and firm-specific factors affected the financial performance and share price in Nepal's commercial banks. The study applied the multiple regression model, which is represented by ordinary least squares, on the listed enterprises for the years 2002–2003–2012–2013. The study has conducted an analysis of pooled cross-sectional data. Return on equity and return on assets were employed in the study as indicators of bank performance. Similarly, firm-specific factors like as dividends per share, capital adequacy ratio, nonperforming loan to total loan, and firm size have been used. Ultimately, the study's findings showed that capital adequacy ratio, company size, and dividend per share all positively affect bank performance and share price.

Neupane (2013) conducted a study on the "Efficiency and Productivity of Commercial Banks in Nepal" from 2007–2008 to 2011–2012. The study examines how several factors affect the 22 commercial banks in Nepal's level of efficiency. While Tobit regression is used to examine the factors that influence efficiency, the Malmquist Index is used to gauge productivity and efficiency. Overall, the findings demonstrate that Nepalese commercial banks' productivity change has improved over the course of the sample period and that technological advancements, not efficiency-related factors, are to blame for the growth in productivity change. The Tobit regression model discovered a favorable correlation between capital adequacy and efficiency as well as the debt-to-equity ratio.Furthermore, bank loans appear to be more highly valued than alternative bank outputs like investments and securities, and successful banks with lower leverage and greater capital adequacy ratio are judged to be more efficient.

Using the empirical methodology developed by Berger and Hannan (1993), Pradhan and Gajurel (2010) sought to examine the structure-performance hypotheses within the setting of the banking business in Nepal over the years 2001–2009. Only commercial banks operating during the nine-year sample period from 2001 to 2009 are taken into account in this analysis. As a result, over the sample period, there are a minimum of 15 banks (for 2001) and a maximum of 25 banks (for 2009). Based on the findings, the classic structure-conduct performance explanation and the quit life hypothesis are better able to explain the structure-performance relationship, but the X-efficiency hypothesis also has some, albeit limited, support. This study's empirical findings have several management and policy implications.First, there are two consequences of market concentration: a decline in market concentration boosts bank profitability and efficiency. Therefore, legislators ought to concentrate on enacting laws that encourage market competitiveness. Additionally, improved banking efficiency boosts market competition and bank profitability, which are two positive side effects. Therefore, banks should improve their cost/scale efficiency, or management efficiency, as this boosts industry competition and profitability at the bank level. Finally, the structure and profitability of an industry depend on the state of the economy. According to the empirical findings, the concentration-profitability relationship in the banking sector of Nepal is better explained by the classic structure-conduct-performance theory and the quit life hypothesis.

In order to elucidate the capital structure pattern and its determinants for a small set of 20 non-financial enterprises listed in NEPSE during the years 1992–2004, Gajurel (2005) conducted a study on "Capital Structure Management in Nepalese Enterprises." Using econometric research, decomposition analysis, features of portfolio analysis, and manager opinion surveys, it is discovered that although Nepalese companies are heavily leveraged, their long-term debt ratio is noticeably low. Leverage is found to be favorably correlated with asset size and structure, but adversely correlated with liquidity, risk, growth, and non-debt tax shield. The estimates' indications point to the involvement of both trade-off and pecking order theories in the explanation of Nepalese enterprises' capital structure. Additionally, the capital market, GDP, and inflation are macroeconomic factors that affect a firm's capital structure decisions.According to a research of opinion surveys, managers in Nepal choose internal financing above bank loan financing.

Table 3

*Summary of Nepalese Literature Reviewed*

| S. N | Name of Article | Author | Objective | Variable | Methodology | Major Findings |
|---|---|---|---|---|---|---|
| 1 | The impact of capital structure and firm size on the financial performance of commercial banks in Nepal | Chalise (2022) | To determine and evaluate how capital structure affects ROA and EPS, as well as how bank size affects financial performance. | Dependent | Descriptive | The research showed that EPS and ROA were negatively correlated with capital structure. |
| 2 | Determinants of financial Performance of Nepalese Commercial Banks: Evidence from Panel Data Approach | Shrestha (2020) | To determine what factors affect Nepalese commercial banks' financial performance. | Dependent and Independent | Descriptive, correlation and Causal-comparative | According to the results of the fixed effects regression on ROA, ME, LIQ, AQ, and OE significantly improve the financial performance of Nepalese commercial banks as assessed by ROA. |
| 3 | Determinants of financial Performance of Nepalese Commercial Banks: Evidence from Panel Data Approach<br>Capital structure and its impact on financial performance in insurance companies of Nepal | Jaishi (2020) | To analyze the relationship between capital structure and the financial performance of Nepalese firms. | Dependent and Independent | Descriptive, correlation and Causal-comparative | The result showed that insurance companies having a high debt ratio have better financial performance.<br>The impact of the debt ratio and tangibility on earning per share is positive and there is the negative impact of equity, size and liquid ratio |

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|---|---|---|---|---|---|---|
| | | | | | | on earning per share. |
| 4 | Capital Structure and corporate performance in nepal | Pradhan and Pokharel (2016) | To find out the effect of capital structure on firm performance by using cross sectional analysis of secondary data of 19 banks with 133 observations for the period 2007/08 to 2013/14. | Dependent and Independent | Descriptive | Total debt to total assets ratio is negatively related to financial performance. |
| 5 | Capital structure and firm performance - evidence from Nepalese manufacturing Companies | Bhattarai (2016) | analyzing how capital structure affects the performance of industrial firms that are listed on the Nepal Stock Exchange. | Dependent and Independent | Descriptive and Analytical | The study comes to the conclusion that Nepalese manufacturing enterprises perform worse when they use more debt in their capital structure. |
| 6 | Efficiency and Productivity of Commercial Banks in Nepal. | Neupane (2013) | To evaluate Nepal's commercial banks' performance from 2007/08 to 2011/12. | Dependent and Independent. | Descriptive and Analytical. | There is favorable association between capital sufficiency and financial performance. |
| 7 | Structure-performance Relation in Nepalese Banking Industry. | Pradhan and Gajurel (2010) | to use the Berger and Hannan model to analyze and test structure-performance assumptions for the banking sector in Nepal from 2001 to 2009. | Dependent and Independent | Descriptive, correlation and Causal-comparative. | According to the empirical findings, the concentration-profitability relationship in the banking sector of Nepal is better explained by the classic structure-conduct- |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | performance theory and the quit life hypothesis. |
| 8 | Capital structure management in Nepalese enterprises | Gajurel (2005) | To identify and analyze the determent of capital structure. | Dependent and Independent | Descriptive and analytical | The research indicates that there is a positive correlation between leverage and asset structure and size, whereas there is a negative correlation with liquidity, risk, growth, and non-debt tax shield. |

## 2.4 Research Gap

The review of the above relevant works of literature has contributed to enhancing the fundamental understanding and knowledge, which is required to make the study meaningful and purposeful. There is various research conducted on capital structure and performance in different countries but no single research has been conducted by taking the variables this study has undertaken. Though a number of studies in various developing and developed countries have been conducted, the findings of these studies may not be applied in the Nepalese context. The study attempts to explore the various factors affecting the performance of Nepalese commercial banks.

This study focuses on major bank-specific variables that influence performance such as ROA, debt-to-assets ratio, debt-to-equity ratio, capital adequacy ratio, credit risk, and firm size. No research in the Nepalese context has undertaken all these variables in one study. Though there are a number of studies on determinants of bank performance, the literature shows no uniformity in the findings. Thus, the empirical results found in the other countries cannot be generalized in the context of another country. However, in the

context of Nepal, only a few efforts have been made to examine the issues related to the determinants of banks' capital structure and performance. Specifically, the study is primarily designed to fill the gap of similar studies in the Nepalese context. This study has covered three banks with five years of data. Thus, it is believed that this study is different from earlier studies of the Nepalese context.

# CHAPTER III
# RESEARCH METHODOLOGY

This chapter deals with the research design and methodology. It provides a detailed account of the methods used to carry out the investigation and solve the research topic. Therefore, this chapter covers the technique used in this study, which is divided into sections that describe the instruments, sample description, time frame, research goal and design, and data collection process. Without a methodology, there's a chance that the conclusions reached will be interpreted incorrectly. Research methodology clarifies the approach and procedure used in every facet of the investigation and aids in the solution of systemic issues. Research methodology lays forth the general plan for a study and is used to gather information and data.

## 3.1 Research Design

The research designs used in this study are causal-comparative and descriptive. The descriptive research design was used in order to gather sufficient information regarding the underlying problems pertaining to the capital structure and financial performance of commercial banks in Nepal. It explains the factual and true state, circumstance, and circumstances. As a result, a descriptive research approach was used for this study. Additionally, the study reveals a causal association between a few variables related to bank capital structure and the commercial banks' financial performance in Nepal.

## 3.2 Population, Sample, and Sampling Design

There are twenty commercial banks in Nepal overall, which equals the study's population. Joint ventures and private commercial banks that have been providing banking services for at least ten years have been considered for the sample in order to investigate the impact of various capital structure variables and control variables on the financial performance of banks. This is because none of them could provide sufficient scope for the study. Convenience sampling, or non-probability sampling, was employed to choose the sample. This study includes a sample of five Nepali commercial banks, each of which data was gathered between 2012–13 and 2021–22. The samples were chosen on the basis of the total value of the firm on Nepal Stock

Exchange Limited as of the end of 2021/22. Table 4 presents the list of sample banks along with the study period and number of observations.

Table 4

*List of Sample Banks*

| S.N. | Name of the Bank |
|---|---|
| 1 | Nabil Bank Limited (NABIL) |
| 2 | Sanima Bank Limited |
| 3 | Everest Bank Limited (EBL) |
| 4 | Rastriya Banijya Bank Ltd. |
| 5 | NMB Bank Limited |

### 3.3 Nature and Sources of Data

This section elaborates on how data were collected to carry out this study. The study is based on secondary data. The variables used in the study are capital structure variables (capital adequacy ratio, debt asset ratio, and debt equity ratio), control variable (firm size and credit risk) and financial performance variables (return on asset, return on equity). The necessary secondary data and information have been collected from the annual reports of selected commercial banks and Banking and Financial Statistics published by Nepal Rastra Bank and data obtained from Nepal Stock Exchange Limited.

### 3.4 Data Collection Instrument and Procedures

This section deals with statistical and econometric models used for the purpose of analysis of secondary data. Regression, correlation, and descriptive analysis methods are used in the study. The descriptive statistics give the variables' mean, standard deviation, minimum, and maximum values to help describe the characteristics of the sample businesses. Correlation analysis is used to assess the direction and degree of the link between dependent and independent variables. The amount that an independent variable impacts a dependent variable, either by itself or in conjunction with other factors, is ascertained by regression analysis. It explains the various statistical tests of significance for the validation of the linear regression analysis model. Each model is assessed for individual impacts using regression and correlation using the Statistical Package for Social Science (SPSS).

### 3.5 Data Processing Procedure and Data Analysis Method

Regression analysis, correlation analysis, and descriptive statistics are the data analysis techniques employed in this study. In the context of Nepal, the primary goal of the data analysis in this study is to investigate the predictive ability of firm-specific variables in explaining the effect of capital structure on the performance of 20 commercial banks. The relationship between capital structure factors and performance variables is verified through the application of various statistical techniques. The study's findings are analyzed using the quantitative research methodology. The quantitative technique is thought to be an appropriate approach for the study because it makes use of both secondary and numerical data. The 2-tailed level of significance was used to compute the results of every statistical test. Descriptive and inferential statistics are both used in statistical analysis.

First, this study presents comprehensive descriptive statistics to examine the viability or endorsement of the aforementioned conjectures. Afterwards, it makes use of a number of regressions to confirm the support or lack thereoffor the hypotheses. In order to achieve this, it focusses on how variables in the organizational structure correlate with various indicators of risk and business performance while accounting for other pertinent factors. The models used in this research aim to examine the connection between performance and capital structure-related parameters. This study attempts to investigate the empirical relationship between the drivers of deposit of Nepalese commercial banks using the following regression model.

#### 3.5.1 Descriptive Statistical Tools

This study has been carried out using a variety of statistical methods in addition to financial ones. The analysis's outcome has been correctly tallied, contrasted, examined, and explained. The present investigation uses statistical approaches to examine the correlation between dividend and other variables.

**A. Arithmetic Mean (A.M.)**

An average is the value, which represents a group of values. It depicts the characteristic of the whole group. In general, if $X_1$, $X_2$, $X_3$, ....., $X_n$ are the given 'n' observations then their arithmetic mean, usually denoted by $\bar{X}$ is given by,

$\overline{X}=\frac{\sum X}{n}$

Where,

$\overline{X}$ = Arithmetic Mean

$\sum X$ = Sum of Observations

*n*= Number of Observations

**B. Standard Deviation**

Standard deviation is the positive square root of the arithmetic average of the squares of all the deviations measured from the arithmetic average of the series. The standard deviation measures the absolute dispersion of a distribution.

$$\sigma=\sqrt{\frac{\sum\left(X-\overline{X}\right)^2}{n}}$$

Where,

σ = Standard Deviation

$\left(X-\overline{X}\right)^2$ = Sum of Square deviation from the mean

n = Total Number of Observations

- **Coefficient of Variation (C.V.)**

It is the measurement of the relative dispersion developed by Karl Pearson. It is used to compare the variability of two or more series. "The coefficient of variation is the relative measure of dispersion, comparable across distribution which is defined as the ratio of the standard deviation to mean expressed in percent." (Levin & Rubin, 1994)

$$C.V.=\frac{\sigma}{\overline{X}}\times 100$$

Where,

C.V = Coefficient of Variation

σ = Standard Deviation of Sample

$\overline{X}$ = Mean

### 3.5.2 Inferential Statistical Tools

- **Correlation Analysis**

  The method for determining how closely the variables are related to one another is correlation analysis. It assists us in figuring out how closely two or more variables

relate to one another. It indicates both the direction and the strength of the link. A number called the coefficient of correlation shows how closely two variables are related to one another and how much changes in one cause changes in the other.

The value of coefficient of correlation always lies between 1. A value 1 indicates a perfect negative relationship between the variables and a value of 1 indicates a perfect positive relationship. A value of zero indicates that there is no relation between the variables. Thus, in this study, the degree of relationship between market price and other relevant financial indicators such as dividend per share, earning per share, dividend payout ratio, etc. is measured by the correlation coefficient. The correlation coefficient can be calculated as:

$$r = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - \left(\sum X\right)^2}\sqrt{n\sum Y^2 - \left(\sum Y\right)^2}}$$

Where,

r = Coefficient of Correlation

n = Number of Observations

**Regression Analysis**

By establishing an estimated functional relationship between the variables, regression is a statistical method for determining relationships between the variables. It is employed to ascertain whether or not the provided independent variable has an impact on the dependent variable. Combined regression equation for this study is:

Performance = f (CAR, DAR, DER, FS, CR) + e

Where,

CAR = Capital Adequacy Ratio

DAR = Debt to Assets Ratio

DER = Debt Equity Ratio

FS = Firm Size

CR = Credit Risk

E = Error Term

More specifically, the given model can be segmented into the following two models.

**Model 1**

$ROA = \beta_0 + \beta_1 CAR + \beta_2 DAR + \beta_3 DER + \beta_4 FS + \beta_5 CR + e$

Where,

ROA = Return on Assets

CAR = Capital Adequacy Ratio

DAR = Debt to Assets Ratio

DER = Debt Equity Ratio

FS = Firm Size

CR = Credit Risk

E = Error Term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Coefficients

Prior Expectation = $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$

In above model, the dependent variable is the return on assets indicated by the net profit after tax divided by total assets.

**Model 2**

$ROE = \beta_0 + \beta_1 CAR + \beta_2 DAR + \beta_3 DER + \beta_4 FS + \beta_5 CR + e$

Where,

ROE = Return on Equity

CAR = Capital Adequacy Ratio

DAR = Debt to Assets Ratio

DER = Debt Equity Ratio

FS = Firm Size

CR = Credit Risk

e= Error Term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Coefficients

Prior Expectation = $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$

In above model, the dependent variable is the return on equity indicated by the net profit after tax divided by equity.

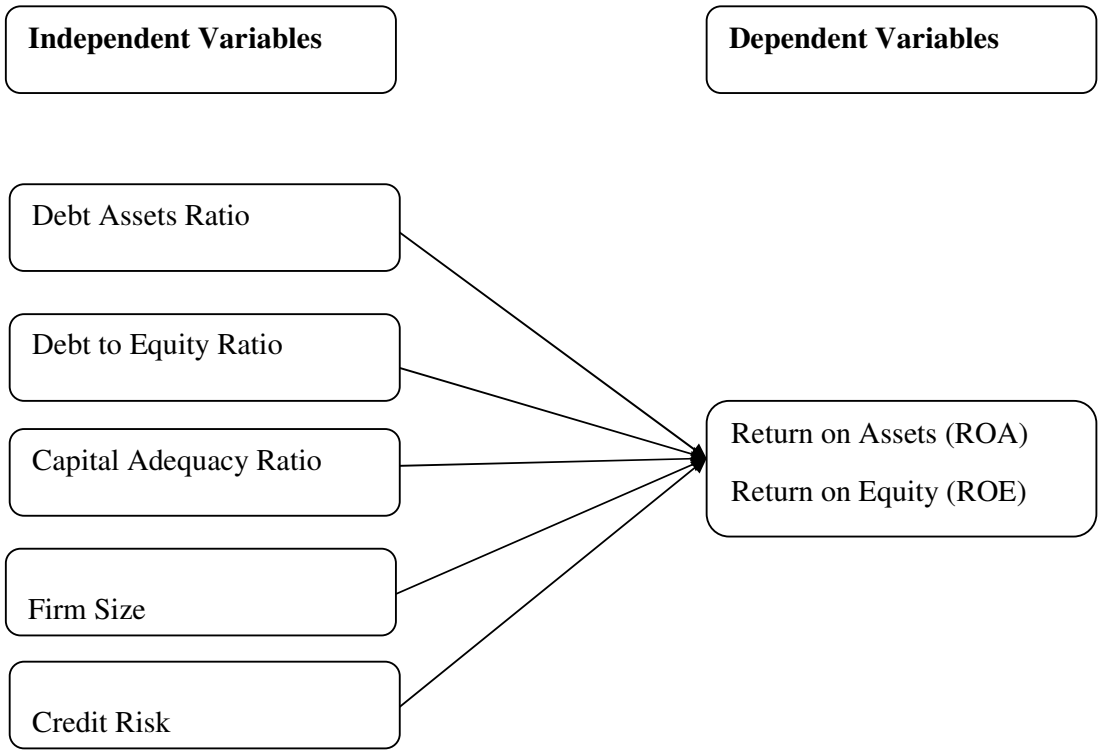
### 3.6 Research Framework and Definitions of Variables

Capital is the life blood of any organization; no any organization can function without capital. The several factors that might make a difference in the capital structure of any

firm can be the size of the firm, growth rate, and so on. The research framework that describes the dependent and independent variables used in the study of this table.

Figure 1

*Research Framework*




*Source: Oli, (2021)*

These variables have been defined below,

**Independent Variables:**

- Debt Assets Ratio

The ratio of total debt to total assets is a measurement of the amount of leverage that a business has previously employed to purchase assets. One coverage statistic that offers a reasonably broad indication of a company's capacity to pay its debts when they become due is the ratio of total debt to total assets. It is calculated as the ratio of total assets to total debt, which includes both short- and long-term debt. Debt to asset ratio was determined by San and Heng (2011) to have a detrimental effect on business performance. Nonetheless, profitability and the

debt-to-asset ratio were found to be strongly positively correlated by Berger and Bonaccorsi (2006).

- Debt to Equity Ratio

This long-term solvency ratio shows how well a company's long-term financial policies are doing. It illustrates the relationship between the amount of assets financed by investors and the amount financed by creditors. The debt-to-equity ratio is also referred to as the "external-internal equity ratio" because it illustrates the link between external equity, or liabilities, and internal equity, or stockholders' equity. It is a measurement of the percentage of debt to shareholders' equity in a company's overall funding. The ratio shows the amount of money raised in debt. Abdul (2012) found that the total debt-to-equity ratio and financial performance had a statistically significant negative association. Debt to equity ratio was determined by Aburub (2012) to have a beneficial effect on business performance evaluation metrics.

- Capital Adequacy Ratio

It is a specialized ratio used by banks to determine the adequacy of their capital keeping in view their risk exposures. The quantity of capital deemed sufficient to successfully carry out the primary capital function of averting bank failure through loss absorption is known as adequate capital. The best defence against bankruptcy and liquidation resulting from the risk in the banking industry is enough capital. Molyneux & associates (2007). Any bank with insufficient capital is subject to unspoken limitations. The majority of its management time is devoted to staying on the safe side, figuring out ways to prevent takeovers or raise money. Bank liabilities have an incentive to participate in risk-shifting or asset substitution since they resemble debt. This implies that they will engage in risky operations in order to transfer the risk to creditors.

Berger (1995) detected a positive relationship between the two variables. Based on their analysis, Berger and Bonaccorsi (2006) found that banks with strong capitalization tend to be more profitable since they are able to withstand some economic hardship. Profitability and capital adequacy ratio were discovered to be directly and significantly correlated by the research. Higher the capital adequacy

ratio, higher the bank profitability, according to Bourke's (1989) findings that the capital adequacy ratio and financial performance are positively correlated.

- Firm Size

In terms of total assets, the bank's size is determined. Greater information about a company is anticipated to be available as it grows in size. This lowers the level of information asymmetries in the market and enables credit from lenders. Firm size has a detrimental impact on performance, as demonstrated by Aloy (2012). Yet, Sufian et al. (2009) and Flamini et al. (2009) discovered that business size had a favorable effect on performance.

- Credit Risk

Credit risk is another bank-specific variable that affects the performance of the bank. The breadth and magnitude of risks in the financial services industry have never been higher. In defining exceptional performance, risk management has taken front stage alongside revenue maximization and operating expense reduction. Standard economic theory states that managers of value-maximizing firms should maximize expected profit regardless of the variability around its expected value. Risk management activities, therefore, generally occur at the strategic, macro, and micro levels in every financial institution (Haneef et al., 2012). Financial ratios, specifically the ratio of nonperforming loans to NPLs, are utilized as a stand-in for the degree of credit risk. When compared to the overall amount of loans in a bank, the quantity of non-performing loans (NPL) is high.

**Dependent Variables:**

Return on Assets

ROA is the major ratio that indicates the profitability of the banks. The net income to total assets ratio is what it is. It assesses how well bank management can turn a profit using the resources available to them. It also shows how well a company's management uses all of the institution's resources to generate net income (Khrawish, 2011).

## Return of Equity

A corporation's profitability is gauged by the return on equity (ROE) ratio, which shows how much money is made using the capital that shareholders have invested in the company. The profitability performance of a corporation is more efficient the greater this ratio. These profitability measures assess the management effectiveness and financial success of the company. Profitability ratios, however, only tell one aspect of a company's performance (Gibson 2013, and Bodie et al 2009).

# CHAPTER IV
# RESULTS AND DISCUSSION

## 4.1 Introduction

The previous chapter presented the research methodology applied to meet the objectives of the study. This chapter is concerned with the presentation and analysis of data collected. This is one of the major chapters of this study because it indicates detailed analysis and interpretation of data from concrete results of commercial banks. The main objective is to present the results and analysis of the financing as well as discussion of results. The following data is the collection of information on the capital structure of banks.

### 1. Equity Capital of Banks

The equity capital of commercial banks is presented in Table 5. Here, equity capital includes share capital and general reserves.

*Table 5*

*Equity Capital (in millions)*

| FY | NMB | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 2624 | 1273 | 2424 | 4828 | 6689 |
| 2013/14 | 2813 | 2387 | 2833 | 5457 | 7641 |
| 2014/15 | 3314 | 66757 | 3430 | 7023 | 9486 |
| 2015/16 | 6915 | 76061 | 5532 | 8514 | 11594 |
| 2016/17 | 10687 | 10484 | 9148 | 11545 | 14095 |
| 2017/18 | 16489 | 19070 | 10788 | 16135 | 20586 |
| 2018/19 | 17403 | 21586 | 12024 | 17625 | 23189 |
| 2019/20 | 20935 | 23029 | 12844 | 18637 | 25856 |
| 2020/21 | 23944 | 28674 | 15050 | 20683 | 33858 |
| 2021/22 | 431463 | 32678 | 17020 | 22794 | 17980 |
| Mean | 53658.7 | 28199.9 | 9109.3 | 13324.1 | 17097.4 |
| SD | 132975.3 | 25070.3 | 5294.3 | 6654.5 | 8836.0 |
| CV(%) | 2.5 | 0.9 | 0.6 | 0.5 | 0.5 |

(Note: Annual Report of NMB, RBB, SANIMA, EBL, and NBL)

Equity represents the amount of money that would be returned to a bank's shareholders if all of the assets were liquidated and all of the bank's debt is paid off.

Table 5 shows that, every commercial had a fluctuation equity. NMB has a large amount of equity rather than other commercial banks.

**2. Total Debt of Banks**

The total debt of commercial banks is presented in Table 6. Here, total debt includes long-term debt and short-term debt.

Table 6

*Total Debts (in millions)*

| FY | NMB | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 22502 | 104442 | 19553 | 61718 | 66552 |
| 2013/14 | 27378 | 124537 | 26544 | 65866 | 79634 |
| 2014/15 | 38024 | 137504 | 36871 | 93143 | 106500 |
| 2015/16 | 67698 | 162444 | 50612 | 106327 | 115706 |
| 2016/17 | 76130 | 168337 | 67935 | 105963 | 126237 |
| 2017/18 | 16490 | 178261 | 81034 | 128677 | 140392 |
| 2018/19 | 118067 | 204469 | 97075 | 152452 | 177950 |
| 2019/20 | 158517 | 243737 | 113492 | 166386 | 211824 |
| 2020/21 | 207603 | 281313 | 145827 | 190967 | 257208 |
| 2021/22 | 228280 | 297564 | 175600 | 202587 | 330000 |
| Mean | 96068.9 | 190260.8 | 81454.3 | 127408.6 | 161200.3 |
| SD | 78413.7 | 65601.7 | 51904.2 | 49464.6 | 83588.1 |
| CV (%) | 0.8 | 0.3 | 0.6 | 0.4 | 0.5 |

Debt is the amount of money borrowed by one party from another. Banks used debt to pay for long-term assets such as land, buildings, and equipment or to add more cash to their working capital to cover ongoing, short-term expenses. NBL has a huge amount of total debt rather than other banks in 2021/22.

**3. Capital Adequacy Ratio**

Capital Adequacy Ratio (CAR) of banks are presented in table 7. CAR is a specialized ratio used by bank to determine the adequacy of their capital keeping in view their risk exposure. CAR is regarded as the amount of capital that can effectively discharge the primary capital function of preventing bank failure by observing losses. Table 7 shows that there is fluctuating trend of CAR in all commercial banks.

Table 7

*CAR (in %)*

| FY | NMB | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 14.87 | 3.31 | 14.87 | 13.38 | 11.13 |
| 2013/14 | 10.75 | 4.62 | 12.57 | 13.74 | 11.24 |
| 2014/15 | 11.13 | 10 | 11.08 | 12.48 | 11.57 |
| 2015/16 | 10.93 | 10.46 | 12.36 | 11.89 | 11.73 |
| 2016/17 | 13.61 | 10.39 | 15.57 | 26.53 | 12.42 |
| 2017/18 | 15.75 | 11.22 | 12.41 | 28.36 | 13.0 |
| 2018/19 | 15.45 | 13.39 | 13.19 | 24.53 | 12.5 |
| 2019/20 | 15.08 | 12.64 | 13 | 23.43 | 13.1 |
| 2020/21 | 15.08 | 13.46 | 13.57 | 21.01 | 12.8 |
| 2021/22 | 13.59 | 13.29 | 13.66 | 19.96 | 13.1 |
| Mean | 13.6 | 10.3 | 13.2 | 19.5 | 12.3 |
| SD | 2.0 | 3.6 | 1.3 | 6.2 | 0.8 |
| CV(%) | 0.1 | 0.3 | 0.1 | 0.3 | 0.1 |

## 4. Total Assets

Total assets of banks are presented in table 8. Here, total assets include Cash, Marketable securities, Accounts receivable, Prepaid expenses, Inventory, Fixed assets, Intangible assets, Goodwill, Other assets.

Table 8

*Total Assets (in millions)*

| FY | NMB | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 25126 | 105715 | 21977 | 66546 | 73241 |
| 2013/14 | 30212 | 126924 | 29377 | 71323 | 87275 |
| 2014/15 | 41337 | 144179 | 40301 | 100034 | 115986 |
| 2015/16 | 74674 | 171050 | 55965 | 114841 | 127300 |
| 2016/17 | 86817 | 178832 | 69996 | 117507 | 140332 |
| 2017/18 | 104914 | 197332 | 91821 | 144811 | 160978 |
| 2018/19 | 135470 | 226410 | 109064 | 170078 | 201139 |
| 2019/20 | 179452 | 266766 | 126311 | 185023 | 237680 |
| 2020/21 | 231547 | 309987 | 160751 | 211650 | 291066 |
| 2021/22 | 255150 | 330243 | 192511 | 225381 | 420000 |
| Mean | 116469.9 | 205743.8 | 89807.4 | 140719.4 | 185499.7 |
| SD | 82321.5 | 76394.2 | 57280.9 | 55997.6 | 106569.2 |
| CV(%) | 0.7 | 0.4 | 0.6 | 0.4 | 0.6 |

Total assets refer to the total amount of assets owned by a person or entity. Assets are items of economic value, which are expended over time to yield a benefit for the owner. If the owner is a business, these assets are usually recorded in the accounting records and appear in the balance sheet of the business. Table 8 show that total assets is in increasing trend of all commercial banks.

**5. Profitability**

Profitability is the ability of a bank to use its resources to generate revenues above its expenses. In other words, this is a bank's capability of generating profits from its operations. Table 9 shows there is fluctuation net profit all banks. It is in increasing trend.

Table 9

*Net Profit (in millions)*

| FY | NMB | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 360 | 1310 | 305 | 1471 | 2219 |
| 2013/14 | 410 | 1837 | 428 | 1550 | 2320 |
| 2014/15 | 501 | 4643 | 624 | 1574 | 2094 |
| 2015/16 | 1115 | 2355 | 996 | 1730 | 2819 |
| 2016/17 | 1467 | 2776 | 1304 | 2006 | 3613 |
| 2017/18 | 967 | 5960 | 1362 | 2582 | 3982 |
| 2018/19 | 1256 | 1394 | 1735 | 3054 | 4239 |
| 2019/20 | 1627 | 762 | 1130 | 2516 | 3463 |
| 2020/21 | 2544 | 3424 | 1737 | 1771 | 4528 |
| 2021/22 | 1498 | 4293 | 1240 | 2479 | 5200 |
| Mean | 1174.5 | 2875.4 | 1086.1 | 2073.3 | 3447.7 |
| SD | 668.8 | 1680.6 | 501.0 | 545.8 | 1063.8 |
| CV(%) | 0.6 | 0.6 | 0.5 | 0.3 | 0.3 |

**6. Bank Size**

Table 10 shows there is fluctuation in the Bank Size of all banks. The average bank size is greater than 10 in all banks. The lowest bank size is 10 in NMB and Sanima Bank and the highest bank size is 5.3 in RBB.

Table 10

*Bank size (in millions)*

| FY | NMB | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 4.40 | 5.02 | 4.34 | 4.82 | 4.86 |
| 2013/14 | 4.48 | 5.10 | 4.47 | 4.85 | 4.94 |
| 2014/15 | 4.62 | 5.16 | 4.61 | 5.00 | 5.06 |
| 2015/16 | 4.87 | 5.23 | 4.75 | 5.06 | 5.10 |
| 2016/17 | 4.94 | 5.25 | 4.85 | 5.07 | 5.15 |
| 2017/18 | 5.02 | 5.30 | 4.96 | 5.16 | 5.21 |
| 2018/19 | 5.13 | 5.35 | 5.04 | 5.23 | 5.30 |
| 2019/20 | 5.25 | 5.43 | 5.10 | 5.27 | 5.38 |
| 2020/21 | 5.36 | 5.49 | 5.21 | 5.33 | 5.46 |
| 2021/22 | 5.41 | 5.52 | 5.28 | 5.35 | 5.62 |
| Mean | 4.9 | 5.3 | 4.9 | 5.1 | 5.2 |
| SD | 0.4 | 0.2 | 0.3 | 0.2 | 0.2 |
| CV(%) | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 |

## 4.2 Descriptive Analysis of Variables of the Study

Descriptive statistics are brief descriptive coefficients that summarize a given data set, which can be either a representation of the entire or a sample of a population. Descriptive analysis only describes the dependent and independent variables of capital structure.

### 4.2.1 Total Debt to Total Assets (TDTA)

Table 11

*TDTA*

| FY | NBM | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 0.896 | 0.988 | 0.89 | 0.927 | 0.91 |
| 2013/14 | 0.906 | 0.981 | 0.904 | 0.923 | 0.91 |
| 2014/15 | 0.92 | 0.954 | 0.915 | 0.931 | 0.92 |
| 2015/16 | 0.907 | 0.95 | 0.904 | 0.926 | 0.91 |
| 2016/17 | 0.877 | 0.941 | 0.971 | 0.902 | 0.9 |
| 2017/18 | 0.157 | 0.903 | 0.883 | 0.889 | 0.87 |
| 2018/19 | 0.872 | 0.903 | 0.89 | 0.896 | 0.88 |
| 2019/20 | 0.883 | 0.914 | 0.899 | 0.899 | 0.89 |
| 2020/21 | 0.897 | 0.907 | 0.907 | 0.902 | 0.88 |
| 2021/22 | 0.895 | 0.901 | 0.912 | 0.899 | 0.79 |
| Mean | 0.821 | 0.934 | 0.907 | 0.91 | 0.886 |
| SD | 0.234 | 0.033 | 0.025 | 0.016 | 0.03748 |
| CV(%) | 28.463 | 3.554 | 2.7 | 1.716 | 4.22979 |

Result from table 11 shows that all banks have fluctuated ratio from 2012/13 up to 2021/22. The overall mean of TDTA is in satisfactory level.

### 4.2.2 Total Debt to Total Equity (TDTE)

Table 12

*TDTE*

| FY | NBM | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 8.575 | 82.044 | 8.066 | 12.783 | 9.95 |
| 2013/14 | 9.661 | 52.173 | 9.37 | 12.07 | 10.42 |
| 2014/15 | 11.474 | 2.06 | 10.75 | 13.263 | 11.23 |
| 2015/16 | 9.79 | 2.136 | 9.149 | 12.488 | 9.98 |
| 2016/17 | 7.124 | 16.057 | 7.426 | 9.178 | 8.96 |
| 2017/18 | 1 | 9.348 | 7.511 | 7.975 | 6.82 |
| 2018/19 | 6.784 | 9.472 | 8.073 | 8.65 | 7.67 |
| 2019/20 | 7.572 | 10.584 | 8.836 | 8.928 | 8.19 |
| 2020/21 | 8.67 | 9.811 | 9.69 | 9.233 | 7.6 |
| 2021/22 | 0.529 | 9.106 | 10.317 | 8.888 | 32.5 |
| Mean | 7.118 | 20.279 | 8.919 | 10.346 | 11.332 |
| SD | 3.625 | 25.982 | 1.146 | 2.034 | 7.57084 |
| CV(%) | 50.929 | 128.125 | 12.846 | 19.664 | 66.8094 |

Result from table 12 shows that all of the above banks showed a fluctuation in the use of debt financing where from 2012 to 2021.

### 4.2.3 Earning Per Share (EPS)

The table 13 indicates, there is a fluctuation situation of earnings per share of selected commercial bank in Nepal. RBB shows the highest EPS in 2021/22 (34.85) among others. But in average, EPS of NBL is highest among all because it has optimum level of capital structure that has efficiently managed between risk and return trade off of equity, short term debt, and long-term debt. So, the shareholder's wealth has maximized among other banks.

Table 13

*EPS*

| FY | NBM | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 18.02 | 21.79 | 15.13 | 91.88 | 91.05 |
| 2013/14 | 20.5 | 21.38 | 19.28 | 86.04 | 76.12 |
| 2014/15 | 21.48 | 57.07 | 24.47 | 78.04 | 57.24 |
| 2015/16 | 22.1 | 27.42 | 32.55 | 65.97 | 59.27 |
| 2016/17 | 22.24 | 32.32 | 26.31 | 44.32 | 59.86 |
| 2017/18 | 21.86 | 30.26 | 21.22 | 32.78 | 49.51 |
| 2018/19 | 18.79 | 56.04 | 28.22 | 38.05 | 50.57 |
| 2019/20 | 11.18 | 48.61 | 20.18 | 29.71 | 36.16 |
| 2020/21 | 14.76 | 37.27 | 23.94 | 19.91 | 33.57 |
| 2021/22 | 17.92 | 34.85 | 18.48 | 26.3 | 18.6 |
| Mean | 18.885 | 36.701 | 22.978 | 51.3 | 53.195 |
| SD | 3.619 | 13.074 | 5.162 | 26.724 | 20.9467 |
| CV(%) | 19.162 | 35.623 | 22.463 | 52.094 | 39.3771 |

### 4.2.4 Return on Assets (ROA)

Table 14

*ROA*

| FY | NBM | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 0.014 | 0.012 | 0.014 | 0.022 | 0.03 |
| 2013/14 | 0.014 | 0.007 | 0.015 | 0.022 | 0.027 |
| 2014/15 | 0.012 | 0.032 | 0.015 | 0.016 | 0.018 |
| 2015/16 | 0.015 | 0.014 | 0.018 | 0.015 | 0.022 |
| 2016/17 | 0.017 | 0.016 | 0.019 | 0.017 | 0.026 |
| 2017/18 | 0.009 | 0.03 | 0.015 | 0.018 | 0.025 |
| 2018/19 | 0.009 | 0.006 | 0.016 | 0.018 | 0.021 |
| 2019/20 | 0.009 | 0.003 | 0.009 | 0.014 | 0.015 |
| 2020/21 | 0.011 | 0.011 | 0.011 | 0.008 | 0.016 |
| 2021/22 | 0.006 | 0.013 | 0.006 | 0.011 | 0.012 |
| Mean | 0.012 | 0.014 | 0.014 | 0.016 | 0.0212 |
| SD | 0.003 | 0.01 | 0.004 | 0.004 | 0.00587 |
| CV(%) | 28.881 | 67.518 | 28.197 | 26.959 | 27.66581 |

Table 14 indicates a return on assets of selected commercial banks in Nepal. This is the contribution of bank assets in profit generation from table 14 indicates, NMB,

RBB, SANIMA, EBL and NBL have a fluctuation result for the rest of ten years. NBL has greater mean of 0.0212 than other banks which indicates that NBL generates higher return on its assets in contrast to other four banks.

### 4.2.5 Return on Equity (ROE)

Table 15 indicates the return on equity of selected commercial banks in Nepal, this is the contribution of shareholders' funds in profit generation. The information indicates that NBL experienced a rise in return on equity from 2012 showing a ratio of 0.332 up to 2016 (0.256) and after that up to 2021 there is fluctuations situation. NMB experienced a rise in the return on assets from 2012 showing a ratio of 0.137 up to 2016 (0.161). Moreover, other banks have fluctuation results of falling and rising return on equity ratios.

*Table 15*

ROE

| FY | NBM | RBB | SANIMA | EBL | NBL |
|---|---|---|---|---|---|
| 2012/13 | 0.137 | 1.029 | 0.126 | 0.305 | 0.332 |
| 2013/14 | 0.145 | 0.351 | 0.151 | 0.284 | 0.304 |
| 2014/15 | 0.151 | 0.07 | 0.182 | 0.224 | 0.221 |
| 2015/16 | 0.161 | 0.031 | 0.18 | 0.203 | 0.243 |
| 2016/17 | 0.137 | 0.265 | 0.143 | 0.174 | 0.256 |
| 2017/18 | 0.059 | 0.313 | 0.126 | 0.16 | 0.193 |
| 2018/19 | 0.072 | 0.065 | 0.144 | 0.173 | 0.183 |
| 2019/20 | 0.078 | 0.033 | 0.088 | 0.135 | 0.134 |
| 2020/21 | 0.106 | 0.119 | 0.115 | 0.086 | 0.152 |
| 2021/22 | 0.003 | 0.131 | 0.073 | 0.109 | 0.098 |
| Mean | 0.105 | 0.241 | 0.133 | 0.185 | 0.2116 |
| SD | 0.051 | 0.301 | 0.035 | 0.071 | 0.0743 |
| CV(%) | 48.392 | 124.951 | 26.562 | 38.2 | 35.1268 |

## 4.3 Correlation Between Dependent and Independent Variables

### 4.3.1 ROA and Independent Variables

The table shows the overall correlation between variables. Under this section, the correlation between independent and dependent variable are analyzed. The correlation coefficient between ROA and Bank size is -0.204, which means there is negative relationship between ROA and Bank size. The correlation coefficient between ROA

and EPS is -0.071 which means there is negative relationship between ROA and EPS. Similarly, the correlation coefficient between TDTA and ROA is 0.155 correlation value which shows positive relationship between TDTA and ROA. It is statistically significant. Again, the correlation coefficient between TDTE and ROA is -0.158 correlation value, which shows positive relationship between ROA and TDTE. It is statistically insignificant. The correlation coefficient between ROA and EPS is 0.590 correlation value, which shows a positive relationship between ROA and EPS. It is statistically insignificant.

Table 16

*Correlations Matrix*

| | | ROA | Bank size | CAR | TDTA | TDTE | EPS |
|---|---|---|---|---|---|---|---|
| ROA | Pearson Correlation | 1 | | | | | |
| | Sig. (2-tailed) | | | | | | |
| Bank size | Pearson Correlation | -.204 | 1 | | | | |
| | Sig. (2-tailed) | .155 | | | | | |
| CAR | Pearson Correlation | -.071 | .154 | 1 | | | |
| | Sig. (2-tailed) | .623 | .285 | | | | |
| TDTA | Pearson Correlation | .155 | -.036 | -.163 | 1 | | |
| | Sig. (2-tailed) | .283 | .806 | .258 | | | |
| TDTE | Pearson Correlation | -.158 | .011 | -.440** | .217 | 1 | |
| | Sig. (2-tailed) | .273 | .937 | .001 | .130 | | |
| EPS | Pearson Correlation | .590** | -.008 | -.083 | .148 | -.086 | 1 |
| | Sig. (2-tailed) | .000 | .958 | .566 | .304 | .554 | |

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

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

*Note: APPENDIX-1*

**Research Hypothesis Testing**

$H_1$= There is a significant relationship of ROA and Bank size, CAR, TDTA, TDTE and EPS.

There is no significant relationship of ROA and Bank size with p-value of 0.155, no significant relationship of ROA and CAR with p-value of 0.623, and there is no significant relationship of ROA and TDTA with p-value of 0.283. There is no significant relationship of ROA and TDTE with p-value of 0.273. There is significant relationship of ROA and EPS with p-value <0.001.

### 4.3.2 ROE and Independent Variables

The above table shows the overall correlation between variables. Under this section, the correlation between independent and dependent variable are analyzed. The correlation coefficients between ROE and Bank size are -0.171, which means there is negative correlation between ROE and Bank size. According to the table, the correlation between ROE and CAR has -0.408 value which means there is negative correlation between ROE and CAR. Similarly, the correlation coefficients between TDTA and ROE have 0.237 correlation value which shows negative relationship between TDTA and ROE. Again, the correlation coefficient between TDTE and ROE has 0.819 correlation value which shows high degree of negative and strong relationship between TDTE and ROE. Again, the correlation coefficient CAR and ROE have -.408** correlation value which means negative relationship between CAR and ROE. It is also statistically significant. The correlation coefficients between ROE and EPS is 0.236, which means there is positive correlation between ROE and EPS. Besides TDTA and TDTE, other variables have statistically not significant because their p-value is greater than their significant level.

**Research Hypothesis Testing**

$H_1$= There is a significant relationship of ROE and Bank size, CAR, TDTA, TDTA, TDTE, and EPS.

There is no significant correlation between bank size and ROE with a p-value of 0.235. Similarly, there is a correlation between TDTA and ROE with a p-value of 0.097. There is significant correlation between CAR and ROE with p-value of 0.003 as well as significant correlation between TDTE and ROE with p-value < 0.001. There is no significant correlation between EPS and ROE with a value of 0.099. In conclusion, ROE has significant relationship with CAR and TDTE.

Table 17

*Correlations*

| | | ROE | Bank size | CAR | TDTA | TDTE | EPS |
|---|---|---|---|---|---|---|---|
| ROE | Pearson Correlation | 1 | | | | | |
| | Sig. (2-tailed) | | | | | | |
| Bank size | Pearson Correlation | -.171 | 1 | | | | |
| | Sig. (2-tailed) | .235 | | | | | |
| CAR | Pearson Correlation | -.408** | .154 | 1 | | | |
| | Sig. (2-tailed) | .003 | .285 | | | | |
| TDTA | Pearson Correlation | .237 | -.036 | -.163 | 1 | | |
| | Sig. (2-tailed) | .097 | .806 | .258 | | | |
| TDTE | Pearson Correlation | .819** | .011 | -.440** | .217 | 1 | |
| | Sig. (2-tailed) | .000 | .937 | .001 | .130 | | |
| EPS | Pearson Correlation | .236 | -.008 | -.083 | .148 | -.086 | 1 |
| | Sig. (2-tailed) | .099 | .958 | .566 | .304 | .554 | |

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

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

*Note: APPENDIX-2*

## 4.4 Regression Analysis

### 4.4.1 ROA and Independent Variable

*Table 18*

Model Summary (Model 1)

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .639[a] | .408 | .341 | .00530 |

a. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

*Note: APPENDIX-3*

Based on the modal summary, table 20 shows the correlation coefficient (R value) for this research is 0.639. This means there is a moderate degree of positive relationship between dependent and independent variables. Similarly, the R square indicates the extent of percentage the independent variable can explain the variation in the dependent variable. So, 0.408 (40.8%) of variance in ROA is explained by Bank size, TDTE, TDTA, CAR, and EPS remaining is due to other factors.

Table 19

*ANOVA Table*

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .001 | 5 | .000 | 6.070 | .000[b] |
| | Residual | .001 | 44 | .000 | | |
| | Total | .002 | 49 | | | |

a. Dependent Variable: ROA

b. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

*Note: APPENDIX-3*

The table 19 shows that significant value (0.000) is less than 5%. Overall, regression model is significant i.e. there is linear relationship between ROA, EPS, Bank size, TDTE, TDTA, and CAR.

Table 20

*Coefficients*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 1 | (Constant) | .027 | .015 | | 1.859 | .070 |
| | Bank size | -.004 | .003 | -.188 | -1.592 | .118 |
| | CAR | -6.694E-05 | .000 | -.046 | -.349 | .728 |
| | TDTA | .005 | .007 | .090 | .744 | .461 |
| | TDTE | -7.658E-05 | .000 | -.148 | -1.111 | .273 |
| | EPS | .000 | .000 | .558 | 4.688 | .000 |

a. Dependent Variable: ROA <=0.05

*Note: APPENDIX-3*

The table 20 shows that the impact of independent variable on dependent variable. There is no significant impact with independent variables (Bank size, CAR, TDTA, and TDTE) on ROA because the significant value of all these independent variables is greater than 0.05 and there is significant impact of EPS on ROA because the p-value (significant) is less than 0.05. The model summary can be presented as follows:

$Y_{ROA}$= 0.027 - 0.004(Bank size) - 6.694E - 05(CAR) + 0.005(TDTA) - 7.658E-05(TDTE) + 0.000(EPS).

### 4.4.2 ROE and Independent Variables Model-2

Based on model summary, table 21 shows the correlation coefficient (R value) for this research is 0.893. This means there is a high degree of positive relationship between dependent and independent variables.

Table 21

*Model Summary (Model 2)*

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 2 | .893[a] | .797 | .774 | .07018 |

a. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

*Note: APPENDIX-4*

Similarly, the R square indicates the extent of percentage the independent variables can explain the variation in the dependent variable. So, 0.797 (79.7%) of variance in ROE is explained by Bank size, CAR, TDTE, TDTA and EPS and remaining is due to other factors.

Table 22

*ANOVA Table*

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 2 | Regression | .850 | 5 | .170 | 34.529 | .000[b] |
| | Residual | .217 | 44 | .005 | | |
| | Total | 1.067 | 49 | | | |

a. Dependent Variable: ROE

b. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

*Note: APPENDIX-4*

Table 22 indicates that there is significant relationship between dependent variable and independent variable. ROE has significant relationship with all independent variables having significant value of 0.000 which is less than 0.05.

The model summary can be presented as follows:

$Y_{ROE}$= 0.424 - 0.090 (Bank size) + 0.001 (CAR) + 0.004 (TDTA) + 0.010(TDTE) + 0.002(EPS)**.**

Table 23

*Coefficients*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | t | Sig. |
| 2 | (Constant) | .424 | .193 | | 2.194 | .034 |
| | Bank size | -.090 | .034 | -.182 | -2.634 | .012 |
| | CAR | .001 | .003 | .024 | .308 | .759 |
| | TDTA | .004 | .095 | .003 | .039 | .969 |
| | TDTE | .010 | .001 | .857 | 10.976 | .000 |
| | EPS | .002 | .000 | .310 | 4.438 | .000 |

a. Dependent Variable: ROE

*Note: APPENDIX-3*

Table 23 shows that the impact of independent variable on dependent variable. There is significant impact of Bank size, TDTE and EPS on ROE because the p-value (significant) is less than 0.05. There is no significant impact with independent variables (CAR and TDTA) on ROE because the significant value of all these independent variables is greater than 0.05.

## 4.5 Major Findings

i. While reviewing the table of TDTA of all banks, the ratio is greater than 80%. The table shows that TDTA ratio of NMB bank is lower i.e., 82.1% and RBB is higher i.e., 93.4%. It indicates that RBB has high degree of influence and may lack the financial flexibility of a business where business outweigh debts.

ii. The average mean of TDTE of RBB is higher i.e., 20.279, which means that RBB uses more debt as compared with equity or shareholder fund. Although

using huge debts is much riskier to shareholders, may increase bankruptcy cost and cost of debt of banks.

iii. Average CAR of all selected bank is above 10.3%**.** The commercial banks need to maintain 11% capital adequacy ratio. The CAR table shows that EBL holds higher capital adequacy ratio 19.5% and RBB holds lower CAR 10.3%. Higher CAR shows the better performance of the bank.

iv. ROE of banks has significant positive correlation with CAR and TDTE and negative correlation with TDTA and EPS.

v. In addition, ROA of banks has significant positive correlation with EPS and negative with CAR, TDTA and TDTE.

vi. The regression analysis showed that all the independent variable shows significant relationship with the selected banks' performance in terms ROA and ROE.

### 4.6 Discussion of the study

The table of TDTA of all banks, the ratio is greater than 80%. The table shows that TDTA ratio of NMB bank is lower i.e., 82.1% and RBB is higher i.e., 93.4%. It indicates that RBB has high degree of influence and may lack the financial flexibility of a business where business outweigh debts. The average mean of TDTE of RBB is higher i.e., 20.279, which means that RBB uses more debt as compared with equity or shareholder fund. Although using huge debts is much riskier to shareholders, may increase bankruptcy cost and cost of debt of banks. Average CAR of all selected bank is above 10.3%**.** The commercial banks need to maintain 11% capital adequacy ratio. The CAR table shows that EBL holds higher capital adequacy ratio 19.5% and RBB holds lower CAR 10.3%. Higher CAR shows the better performance of the bank. ROE of banks has significant positive correlation with CAR and TDTE and negative correlation with TDTA and EPS. In addition, ROA of banks has significant positive correlation with EPS and negative with CAR, TDTA and TDTE. The regression analysis showed that all the independent variable shows significant relationship with the selected banks' performance in terms ROA and ROE.

In this study, the effect of capital structure on the financial performance of banks has been expressed by evaluating ROA, ROE and EPS. The study found out that total debt to total equity (TDTE) has positive impact on return on asset (ROA) but bank size has

inverse impact on ROA. This study was based on 5 commercial banks over the period of fiscal year 2012/2013 to 2021/2022. This result is contradicted with the study conducted by Siddik, Kabiraj and Joghee (2018). They found out that TDTE had significant inverse impact on ROA while bank size has positive association on ROA. The study was based on panel data of 22 banks of Bangladesh for the period of 2008-2018.

In this study there was positive correlation between TDTE with bank size and total debt to total asset (TDTA). However, there was negative correlation between TDTE with ROA, capital adequacy ratio (CAR) and earning per share (EPS). The study conducted by Basit and Hasssan (2017) showed that EPS, ROE and ROA are significantly correlated to debt to equity. The study based on the sample of 50 companies listed under Karachi Stock exchange covered the period of 2010-2014.

The result of this study showed that there was negative correlation between ROA and TDTE, which was not significant. This study was based on 5 commercial banks over the period of fiscal year 2012/2013 to 2021/2022. The similar result was found in the study conducted by Habib et al. (2016) in Pakistan. The result of the study showed that a significant but negative relationship of TDTE with ROA. The study is based on the 340 firms listed on the Karachi Stock Exchange over the period of 2003-2012.

This study shows that there is significant impact of TDTE on ROE. Similar, result was found in the study conducted by Ahmed (2015). The study found that significant impact of total debt on firm performance, evaluated by ROA. The study was conducted in Australian service sector firms by using cross sectional panel data from 63 listed companies over three years (2012-2014).

The study indicates that model is reasonably fit for this research analysis. For instance, the correlation coefficient of ROA with Bank size, CAR, TDTA, TDTE and EPS are- 0.204, - 0.071, 0.155, - 0.158, and 0.590**respectively. Similarly, the correlation coefficient of ROE with Bank size, CA, TDT, TDTE, and EPS are - 0.171, - 0.408**, 0.237, 0.819**, and 0. 236.respectively. The regression analysis has showed that ROA and ROE have significant relationship with EPS, Bank size, and TDTE.

# CHAPTER-V
# SUMMARY AND CONCLUSION

This chapter includes summary, conclusion, and recommendation for further research.

## 5.1 Summary

Combining a company's total debt to total assets, total debt to total equity, equity capital, capital adequacy ratio, and earning per share creates its capital structure. When examining a company's capital structure, the ratio of total debt to total assets is taken into account. When analysts talk about a company's capital structure, they most usually mean its debt-to-equity ratio, which sheds light on how risky the business is. A corporation with a significant debt load typically has a more aggressive capital structure, which increases the risk to investors. However, it is possible that this risk will drive much of the company's expansion.

The term capital structure refers to the percentage of capital at work in a business by types. Broadly speaking, there are two forms of capital that is equity capital and debt capital. Each type of capital has its benefits and drawbacks and a substantial part of wise corporate steward ship and management is attempting to find the perfect capital structure regarding risk/reward payoff for shareholders.

The capital structure of a concern depends upon a large number of factors such as leverage or trading on equity, growth of the company, nature and size of business, the idea of retaining control, flexibility of capital structure, requirement of investors, cost of flotation of new securities, timing of issue, corporate tax rate and the legal requirements. It is not possible to rank them because all such factors of new securities, timing if issues, corporation tax rate and the legal requirements. It is not possible to rank them because all such factors are of different important and the influence of individual factors of a firm change over a period of time. Capital Structure is referred to as the ratio of different kinds of securities raised by a firm as long-term finance. Capital Structure means a combination of all long-term sources of finance. It includes Equity Share capital, Reserve and Surplus, Preference Share capital, Loan, Debenture and other such long-term sources of finance. A company has to decide the proportion in which it should have its own finance and outsider’s finance particularly debt finance. Based on the proportion of finance, WACC and value of a firm are affected. The main objective of this study is to find out the exact relationship between capital

structure and financial performance of the selected commercial banks for which out of total population of 20 commercial banks, five banks NMB Bank, Rastriya Banijya Bank Limited (RBB), Sanima Bank Limited (SANIMA), Everest Bank Limited (EBL), and Nepal Bank Limited (NBL) as sample of commercial banks. This research has been accomplished by collecting and calculating Equity Capital of Banks, Total debt of Banks, Capital Adequacy Ratio (CAR), Total Assets, Profitability, Total Debt to Total Assets (TDTA), Total Debt to Total Equity (TDTE), Earning Per Share (EPS), Return on Assets (ROA), Return on Equity (ROE).

## 5.2 Conclusion

Commercial banks are the strength of economic development of the country which flow the capital from various part of the country to deficit unit as an intermediary and ultimately promote and finance the industries, business, infrastructures and other welfare of the citizens. It collects the deposits from the surplus customer units and provide to those who are in need. It's service range and scope of activities are in wide range hence able to earn large profit.

The study concluded that RBB has higher level of TDTA which has mean value of 0.934 which is highest among all. NMB has lowest level of TDTA which has the mean value of 0.821. RBB used huge amount of total debt to finance their assets from the selected commercial banks.

RBB has higher level of TDTE which has the mean value of 20.279 which is highest among all. It shows that RBB use huge amount of debt to finance their equity for the wealth of the bank as well as for shareholders. The CAR of EBL is higher than of other banks i.e., 19.5%.

RBB has higher level of ROE which has the mean value of 0.241 which is greater among all. NMB has lowest level of ROE. NBL has higher level of ROA which has the mean value of 0.0212 which is highest among others. NBL has highest level of ROA because its efficient use of capital structure composition of all the components takes short term debt, long term debt and equity.

NBL has higher level of EPS which has the mean value of 53.195 which is highest among others. NMB has lowest level of EPS which has the mean value of 18.885 because its risk and return tradeoff between capital composition is weak than another bank.

## 5.3 Implications

From the above analysis, it is found that all the selected banks are financially strong and has high reputation in the market. All the banks have appropriate capital structure with fluctuating profit. The regression analysis has showed that all the independent variable shows significant relationship with the selected banks' performance in terms of ROA and ROE. The result indicates that TDTE and EPS significantly affect the financial performance of Nepalese commercial banks in terms of ROE.

A study should be taken to analyze the impact of TDTE and EPS on financial performance of other development banks, financial companies, service companies and non-listed companies. In addition, future studies could be done to analyze the determinants of financial performance in Nepalese banks. Moreover, study on relationship between the financial performance of Nepalese commercial banks and companies of other nations should be done.

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## APPENDIX-1

### Correlations

| | | ROA | Bank size | CAR | TDTA | TDTE | EPS |
|---|---|---|---|---|---|---|---|
| ROA | Pearson Correlation | 1 | -.204 | -.071 | .155 | -.158 | .590** |
| | Sig. (2-tailed) | | .155 | .623 | .283 | .273 | .000 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| Bank size | Pearson Correlation | -.204 | 1 | .154 | -.036 | .011 | -.008 |
| | Sig. (2-tailed) | .155 | | .285 | .806 | .937 | .958 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| CAR | Pearson Correlation | -.071 | .154 | 1 | -.163 | -.440** | -.083 |
| | Sig. (2-tailed) | .623 | .285 | | .258 | .001 | .566 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| TDTA | Pearson Correlation | .155 | -.036 | -.163 | 1 | .217 | .148 |
| | Sig. (2-tailed) | .283 | .806 | .258 | | .130 | .304 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| TDTE | Pearson Correlation | -.158 | .011 | -.440** | .217 | 1 | -.086 |
| | Sig. (2-tailed) | .273 | .937 | .001 | .130 | | .554 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| EPS | Pearson Correlation | .590** | -.008 | -.083 | .148 | -.086 | 1 |
| | Sig. (2-tailed) | .000 | .958 | .566 | .304 | .554 | |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |

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

## APPENDIX-2

**Correlations**

| | | ROE | Bank size | CAR | TDTA | TDTE | EPS |
|---|---|---|---|---|---|---|---|
| ROE | Pearson Correlation | 1 | -.171 | -.408** | .237 | .819** | .236 |
| | Sig. (2-tailed) | | .235 | .003 | .097 | .000 | .099 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| Bank size | Pearson Correlation | -.171 | 1 | .154 | -.036 | .011 | -.008 |
| | Sig. (2-tailed) | .235 | | .285 | .806 | .937 | .958 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| CAR | Pearson Correlation | -.408** | .154 | 1 | -.163 | -.440** | -.083 |
| | Sig. (2-tailed) | .003 | .285 | | .258 | .001 | .566 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| TDTA | Pearson Correlation | .237 | -.036 | -.163 | 1 | .217 | .148 |
| | Sig. (2-tailed) | .097 | .806 | .258 | | .130 | .304 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| TDTE | Pearson Correlation | .819** | .011 | -.440** | .217 | 1 | -.086 |
| | Sig. (2-tailed) | .000 | .937 | .001 | .130 | | .554 |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |
| EPS | Pearson Correlation | .236 | -.008 | -.083 | .148 | -.086 | 1 |
| | Sig. (2-tailed) | .099 | .958 | .566 | .304 | .554 | |
| | N | 50 | 50 | 50 | 50 | 50 | 50 |

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

## APPENDIX-3

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | EPS, Bank size, TDTE, TDTA, CAR[b] | . | Enter |

a. Dependent Variable: ROA

b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .639[a] | .408 | .341 | .00530 |

a. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .001 | 5 | .000 | 6.070 | .000[b] |
| | Residual | .001 | 44 | .000 | | |
| | Total | .002 | 49 | | | |

a. Dependent Variable: ROA

b. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .027 | .015 | | 1.859 | .070 |
| | Bank size | -.004 | .003 | -.188 | -1.592 | .118 |
| | CAR | -6.694E-5 | .000 | -.046 | -.349 | .728 |
| | TDTA | .005 | .007 | .090 | .744 | .461 |
| | TDTE | -7.658E-5 | .000 | -.148 | -1.111 | .273 |
| | EPS | .000 | .000 | .558 | 4.688 | .000 |

a. Dependent Variable: ROA

## APPENDIX-4

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | EPS, Bank size, TDTE, TDTA, CAR[b] | . | Enter |

a. Dependent Variable: ROE

b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .893[a] | .797 | .774 | .07018 |

a. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | .850 | 5 | .170 | 34.529 | .000[b] |
| | Residual | .217 | 44 | .005 | | |
| | Total | 1.067 | 49 | | | |

a. Dependent Variable: ROE

b. Predictors: (Constant), EPS, Bank size, TDTE, TDTA, CAR

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .424 | .193 | | 2.194 | .034 |
| | Bank size | -.090 | .034 | -.182 | -2.634 | .012 |
| | CAR | .001 | .003 | .024 | .308 | .759 |
| | TDTA | .004 | .095 | .003 | .039 | .969 |
| | TDTE | .010 | .001 | .857 | 10.976 | .000 |
| | EPS | .002 | .000 | .310 | 4.438 | .000 |

a. Dependent Variable: ROE

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