

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

Capital structure refers to the blend of debt and equity employed by a firm to support its long-term operations, representing the enduring financing arrangement. In essence, it encompasses the sum of items on the liability side of the balance sheet, excluding current liabilities (Khan & Jain, 1997). The decision on capital structure is pivotal for businesses, aiming to optimize shareholder value and influence the organization's resilience in a competitive landscape. Business managers face the challenge of determining the optimal mix of debt and equity to minimize financing costs and enhance value maximization. Consequently, the role of capital structure in firm performance and economic stability becomes theoretically significant. The impact of capital structure on firm performance can be elucidated through various avenues. Notably, incorporating debt can enhance profitability, given that interest payments on debt are tax-deductible, thereby leveraging shareholder profits. Within the realm of corporate decision-making, funding and investment stand out as crucial areas. The capital structure decision, where a firm is funded through a combination of debt and equity, is a strategic aspect known as optimal capital structure. Additionally, decisions related to leverage, an integral administrative consideration, contribute to shaping the company's financial structure. Terms such as capitalization, leverage ratio, capital structure, and financial structure are essentially interchangeable, encapsulating the concept of the sources and amounts of money utilized by the firm to construct and acquire assets (Barges, 2009).

The Optimum Capital Structure is characterized by the lowest overall cost of capital and the highest firm value. It represents the optimal debt-to-equity ratio that maximizes the value of the firm, striking a balance within the ideal range while minimizing the cost of capital. The primary goal of this structure is to reduce the cost of capital, thereby decreasing the firm's reliance on creditors and enhancing its ability to fund core operations. To ascertain the appropriate level of risk that ensures the expected return on capital surpasses the cost of capital, the calculation of the weighted average cost of capital becomes essential (Bhattarai, 2017).

Financial structure refers to the allocation of funds in a business, encompassing both short-term and long-term sources. A subset of financial structure is capital structure, which specifically focuses on the proportion of long-term financing sources. The goal is to arrange these funding sources in a balanced manner, taking into account their relative size and distribution. Long-term debt, preferred stock, and net worth are components of a company's capital structure, representing the enduring financing of its assets. Unlike short-term borrowing, capital structure implies a degree of permanency. Each element in the capital structure incurs distinct costs for the firm, and the decisions made in this regard are crucial for optimizing returns and influencing the firm's competitive position. Capital structure decisions significantly impact a business's performance (Birru, 2016), making them essential for navigating the competitive landscape (Abor, 2005). Businesses can choose between debt and equity capital to finance their assets, but an optimal strategy often involves a balanced mix of both. The significance of the decision between debt and equity may diminish for company owners in cases where interest isn't eligible for tax deductions. Conversely, when interest payments are tax-deductible, owners may aim to enhance their organization's value by favoring a substantial reliance on 100% debt financing (Champion, 2000).

The capital structure of a company outlines how it funds its assets. By obtaining or increasing capital through avenues like preferred shares, common shares, or retained earnings, a company can mitigate debt-related risks, lowering the likelihood of bankruptcy. On the other hand, opting for debt financing enables the owner to maintain control, potentially boosting returns on operations. Corporate bonds, long-term loans, and short-term debt are the three types of debt that can directly impact working capital. For example, a company's debt-to-equity ratio, which shows its leverage, is 70% if it relies 70% on loan financing and 30% on equity financing. Skillful management of debt and equity financing is crucial, as an attractive ratio becomes a key factor for potential investors. The connection between capital structure and financial performance is particularly significant in the banking industry, where changes in financial leverage, given its relatively low level of equity capital compared to total assets, can have a substantial impact (AL-Kayed et al., 2014).

Profitability is a measure of how effectively an organization can generate profit in comparison to its expenses. An efficient organization achieves a higher percentage of profit relative to its costs than a less efficient counterpart, which incurs higher expenses to achieve the same profit. Additionally, banks face strict regulations regarding their capital structure. When deciding on capital structure, a critical consideration is determining the optimal capital structure for the firm, as highlighted by Chandra and Sharma (2015).

## **1.2 Problem Statement**

Capital structure is a crucial strategic financial decision for companies. It involves the combination of long-term funding sources, including both debt and equity securities, which represent the enduring financing of the company. Long-term debt, preference share capital, and shareholder cash are all included in this combination. The capital structure functions essentially as the framework for financing an organization's assets. In practice, it is evident that some firms obtain funds without conducting thorough analyses, putting their sustainability at risk in the highly competitive modern business environment.

Examining the impact of capital structure on the profitability of development banks in Nepal is a crucial research area, given these institutions' pivotal role in the country's economic landscape. The capital employed by development banks significantly affects their financial health, operational efficiency, and overall sustainability. However, there is a noticeable gap in the current literature concerning a comprehensive understanding of how the specific composition of capital influences the profitability dynamics of these banks within the Nepalese context. Recent economic and regulatory shifts have brought substantial changes to Nepal's banking sector, particularly development banks. The evolving financial markets and regulatory framework emphasize the necessity for a nuanced exploration of the relationship between capital structure and profitability. As highlighted by Shakya and Subba (2018), while studies have delved into various aspects of banking in Nepal, there is a distinct lack of research addressing the intricate interplay between capital structure choices and the financial performance of development banks.

The lack of a comprehensive analysis creates a challenge for policymakers, banking professionals, and academics, as there is no clear understanding of the optimal capital structure that suits the distinctive characteristics and challenges faced by development banks

in Nepal. The scarcity of research on this specific subject hinders the formulation of targeted strategies aimed at improving the profitability and sustainability of these banks. Furthermore, the majority of research that has already been done has focused on factors like risk and liquidity, which has left a significant void in our knowledge of how capital structure affects Nepalese development banks' profitability directly (Shrestha, 2021 & Rai, 2023).

Therefore, it is essential to fill this research gap by thoroughly investigating the complex relationship between capital structure and profitability in the context of Nepal Development Bank. The aim of this study is to provide valuable insights, contribute to the existing body of knowledge and lay the foundation for evidence-based decision-making in the banking sector. This study analyzes the banking industry in Nepal by carefully examining the determinants of capital structure and its impact on key profitability indicators such as return on assets (ROA) and return on equity (ROE). It aims to provide practical recommendations to stakeholders. Therefore, it is important to engage in capital structure discussions, especially among selected banks in Nepal, and determine whether building the right mix of capital structures will contribute to competitive advantage. A research question was formulated to guide this study:

- i. What is the capital structure and profitability position of development banks in Nepal?
- ii. Is there any relationship between capital structure and profitability of development banks in Nepal?
- iii. To what extent does capital structure affects the firm profitability of selected development banks in Nepal?

### **1.3 Objectives of the Study**

The main objective of this study is to investigate the impact of capital structure on the profitability of development banks in Nepal, especially by evaluating the operating performance of these banks. The specific objectives of the study are detailed as follows:

- i. To examine the current status of capital structure and profitability of Nepalese Development banks.
- ii. To analyze the relationship between capital structure and profitability of Nepalese development banks.
- iii. To analyze the impact of capital structure in the firm's profitability of development banks in Nepal?

### **1.4 Rationale of the Study**

The emphasis of this course is both theoretical and practical, i.e. application-oriented. Some of the meanings are: This study helps provide information on the composition of capital structure based on time to maturity. This study is important because it closes a knowledge gap about how capital structure choices affect the profitability of particular development banks in Nepal. Additionally, a potential benefit of this study is that it could investigate the capital structure of particular development banks. Researchers, students, and individuals interested in more in-depth research will find this study to be beneficial. Similarities aside, financial institutions might benefit from this study.

### **1.5 Limitations of the study**

The research may not be able to generalize to the entire population of the 17 development banks due to the small sample size.

- i. The research may not be able to generalize to the entire population of the 17 development banks due to the small sample size.
- ii. Because the study only looked at five development banks, it might not be representative of Nepal's complete banking sector.

- iii. The accuracy of the corresponding banks' annual report has a significant bearing on the dependability of the secondary data.
- iv. The dependent variables in this study are ROE and ROE, while the independent factors are CHTDR, LATDR, NRBTDR, LACLR, and CATAR.
- v. The data in this study are analyzed using both analytical and descriptive methods.

## **CHAPTER II**

### **LITERATURE REVIEWS**

#### **2.1 Introduction**

The purpose of this chapter is to lay the theoretical groundwork for the investigation and clarify the relationship between capital structure and profitability. In addition, it analyses empirical reviews that investigate how capital structure affects profitability.

#### **2.2 Theory of Capital Structure**

Increasing the wealth of a company's owners or shareholders is one of its main goals. The price at which the company's outstanding shares are currently trading essentially represents the wealth of its shareholders. In order to achieve this goal, the management of the company must make wise financing choices about the best capital structure, with the ultimate goal of lowering its cost of capital (Goyal, 2013). This section of the study explores theories related to the investigation of capital structure, including the Modigliani and Miller Model Theory, Net Income Theory, Net Operating Theory, and Traditional Theory.

##### **2.2.1 Net Income Theory**

According to net income theory, a company can raise debt in order to lower its overall cost of capital. The net income approach states that a rise in financial leverage lowers the weighted average cost of capital, which raises the value of the company and its stock price. The net income valuation theory is based on three important assumptions. First, we assume that there are no taxes. Second, it assumes that the cost of debt is lower than the cost of equity. According to the cost of equity capital adjustment study, investors' perception of risk remains unchanged when debt is utilized. This implies that the cost of debt or cost of equity is unaffected by adding or modifying debt. The three basic assumptions of net income theory imply that when the leverage ratio varies, neither the cost of debt nor the cost of equity alters.

As the percentage of debt, or less expensive financing sources, rises in the capital structure, the weighted average cost of capital tends to decrease. The company's overall value has increased as a result of this reduction. Consequently, an increased usage of debt or an increase

in debt will boost shareholder returns and raise the market value of existing equity provided the cost of debt and equity are held constant (Pandey, 1992). Financial leverage is a significant factor in a company's capital structure, according to net income theory. A corporation can maximize its market price per share by achieving the highest total cost of capital through a prudent combination of debt and equity. In the event of debt elimination or zero financial leverage, the total cost of capital is equivalent to equity capital. The cost of capital, weighted average, will decrease. Risk and reward are traded off in capital structure policy. A company's profits are at risk when it uses more debt, but the projected return on equity also rises as a result. Stock prices often decline when risk increases, while the opposite is true when predicted returns are larger. A well-designed capital structure aims to maximize stock price while maintaining a balance between risk and reward. Furthermore, the overall cost of capital for a business is reduced by an ideal capital structure.

### **2.2.2 Net Operating Theory**

The foundation for calculating net operational income (NOI) is used to assess the profitability of real estate investments that generate money. To calculate NOI, deduct all running costs that are deemed reasonably reasonable from the property's revenue. This is a pre-tax figure that does not include depreciation, capital expenses, or loan principal and interest payments. In the real estate sector, this ratio is frequently employed; in other sectors, it is known as earnings before interest and taxes. The net operational income theory, which stands in sharp contrast to the net income theory, is an alternative explanation to capital structure. This idea claims that capital structure decisions are irrelevant for a corporation. It is believed that changes in leverage will not have an impact on the company's total worth, stock market value, or overall cost of capital. These financial considerations are not taken into account when determining the level of leverage.

### **2.2.3 The Modigliani and Miller Model Theory**

Three fundamental theses make up the Modigliani and Miller (MM) hypothesis. First, we make the assumption that the capital structure affects both the firm's value ( $V$ ) and total cost of capital ( $K_0$ ). The cost of capital and firm value, in accordance with MM theory, are



constant at all leverage levels. Capitalizing the anticipated operational savings with a risk-appropriate discount rate yields the entire amount. According to the second theory of MM, the capitalization rate of the pure equity stream multiplied by the financial risk premium is equivalent to the cost of equity ( $K_e$ ). The Modigliani and Miller (MM) hypothesis is composed of three main theses. First, we assume that the total cost of capital ( $K_0$ ) and the firm's value ( $V$ ) are impacted by the capital structure. According to MM theory, the cost of capital and company value are constant across all leverage levels. The full amount is obtained by capitalizing the expected operating savings and applying a risk-appropriate discount rate. The second theory of MM states that the cost of equity ( $K_e$ ) is equal to the capitalization rate of the pure equity stream multiplied by the financial risk premium.

#### **2.2.4 Traditional Theory**

By combining elements of both the net income theory and the net operating income theory, the traditional theory—also known as the intermediate theory—takes a middle ground. It makes the same assumptions as the net income theory, namely that the capital structure affects both the cost of capital and the firm's overall value. This is different from the net income theory, though, in that it rejects the notion that a firm's value always rises with leverage. Traditional theory acknowledges that leverage above a certain point raises the total cost of capital and hence lowers the firm's overall value, which is consistent with net operating income theory. But because it does not assert that the weighted average cost of capital is constant across all debt levels, it diverges from the net operating income theory.

The fundamental idea behind classical leverage and valuation theory is that a company's overall cost of capital can be decreased by using debt-to-equity ratios wisely, which will raise the company's overall worth. This opinion is predicated on the idea that, in comparison to common equity, debt is a relatively inexpensive source of capital. By varying the leverage, comparatively inexpensive funding sources might take the place of more costly ones, particularly when more debt is used than equity. Naturally, this results in reduced total capital expenses. As debt ratios continue to rise, investors become more risk averse and pursue larger equity ratios. This rise in equity ratios could not be sufficient to counteract the advantages of more cost-effective debt, though. Fundamentally, the benefits of using debt capital are so

great that even after taking into account higher equity ratios, there is still an advantage to using cheaper sources of financing.

Nonetheless, there could be two outcomes if debt keeps growing. First, a company's capital adequacy ratios rise dramatically with greater financial risk, making it more vulnerable to demands for higher returns from creditors. The expense of debt rises as a result. The usage of debt causes the weighted average cost of capital (WACC) to climb above a particular point, which lowers enterprise value. Consequently, utilizing debt to some degree raises the worth of a company. Moreover, there are drawbacks to using debt. This specific debt-to-equity ratio is said to represent the ideal capital structure.

### **2.2.5 Determinants of Profitability**

In the literature examining factors that influence bank profitability, return on assets (ROA), return on equity (ROE), and sometimes net interest margin (NIM) are often considered. The determinants of bank profitability are usually categorized into internal and external variables. The term "internal variables" refers to elements like liquidity risk, credit risk, bank size, leverage, and cost management that affect business choices and policy goals within a bank. Conversely, industry-specific and macroeconomic factors are the sources of external variables, which include things like real per capita income, rates of inflation, unemployment, concentration, and competitiveness. A company's profitability is affected by a variety of determinants, each of which can have a positive or negative impact on the company's overall profitability. Against this background, this study investigates the determinants of profitability, focusing on liquidity, firm size, debt, and efficiency.

#### **i. Liquidity**

Profitability and liquidity are related. Liquidity is related to working capital position and current assets such as average accounts receivable, inventory, and cash. Adequate liquidity is essential to meeting short-term obligations, but it is important to maintain optimal levels. The concept of appropriate liquidity level can be explained in the following points: High levels of liquidity have a negative impact on a company's profitability because idle assets do not generate income or have low productivity. As a company's liquid assets increase, its

profitability decreases. Conversely, if a company has insufficient liquidity or short-term assets, it may affect its ability to meet short-term obligations and lead to deterioration of goodwill in the long run. Therefore, it is important to find the right compromise between liquidity and profitability to maintain an optimal level of liquid assets.

## **ii. Firm Size**

Company size is an important factor that determines profitability. Therefore, it is considered a control variable. Firm size has a positive relationship with short-term debt ratio (Abor J. 2008). According to Penrose (1959), large companies benefit from economies of scale and scope, which affect profitability. Larger companies also have the opportunity to increase their market power, further impacting their profitability and overall performance. Large companies are able to take on more debt or become more leveraged because their profits are higher, which allows them to repay their debt more effectively (Shepherd, 1989). The benefits of diversification contribute to the stability of large firms' earnings, allowing them to take on more debt and increase leverage ratios (Castanics, 1983; Fitman and Wessels, 1988; Wald, 1999). Conversely, younger or smaller companies may not be able to tolerate high debt ratios as their earnings may be unstable. Lenders to large businesses are more likely to receive interest and principal repayments than lenders to small businesses, reducing intermediary costs associated with debt. Empirical evidence shows that there is a positive relationship between firm size and capital structure, as in analyzes by Barclay and Smith (1996), Friend and Lang (1988), and Hovakimian et al. Companies tend to finance their operations through equity rather than debt. show. (2004).

## **iii. Leverage**

The percentage of debt capital in a company's overall capital structure is known as leverage. An increased degree of leverage, or debt capital, makes the company's finances riskier. Higher levels of leverage come with greater risk and potential rewards, but using too much debt can negatively impact the company's ability to remain solvent over the long run. As a result, it is imperative to keep the company's debt levels at a suitable level; 40% debt to 60% equity is generally regarded as the ideal ratio.

After analyzing how much debt was used to finance corporate assets, Abor (2005) concluded that businesses that employed a higher percentage of debt were deemed to be highly leveraged. Diverse opinions are expressed about the connection between profitability and leverage in empirical research. The findings of Robb & Robinson (2009) and Ruland & Zhou (2011) indicate a favorable correlation between profitability and leverage. Jensen (1976) discovered that a corporation's market value grows when it uses debt, supporting his optimistic hypothesis about the relationship between debt and firm profitability. Financial leverage is proven to have a positive impact on a firm's return on equity when comparing the earning potential of the firm's assets to the total interest expense of the firm's debt. According to Abor (2005), return on equity, a measure of profitability, and total debt have a positive link. In a similar vein, Chandrakumarmangalam and Govindasamy (2010) discovered a positive correlation between debt and profitability, meaning that a high debt load maximizes shareholder wealth.

#### **iv. Efficiency**

Efficiency is a critical aspect in various domains, encompassing economic, industrial, and technological spheres. In economic terms, efficiency refers to the optimal allocation and utilization of resources to maximize output while minimizing input. As highlighted by Baumol and Blinder (2015), efficiency is fundamental for sustainable economic growth, as it ensures that a society can achieve its goals with the least number of resources, promoting productivity and competitiveness. In industries, efficiency is often measured by the ratio of output to input, reflecting the effectiveness of production processes. For instance, lean manufacturing principles, popularized by Womack and Jones (2003), emphasize the elimination of waste and continuous improvement to enhance efficiency in production. This approach has been widely adopted across industries, leading to streamlined operations and cost savings.

Moreover, efficiency is a key consideration in technological advancements. In information technology, algorithms and systems are designed to optimize processes, reducing computational time and resource requirements. For instance, the concept of algorithmic efficiency is crucial in computer science, where developers aim to create algorithms that can

perform tasks with the least number of computational resources. Knuth (1997) discusses the importance of algorithmic efficiency in his seminal work, "The Art of Computer Programming," highlighting how well-designed algorithms contribute to faster and more effective computational processes. Overall, efficiency plays a pivotal role in driving progress and success across diverse fields, serving as a cornerstone for achieving optimal outcomes with limited resources.

### **2.3 Empirical Review**

The researcher can perform the research more satisfactorily by looking at previous research. This review's main goal is to examine related ideas that have already been looked into by other researchers in a fresh way. To maximize the efficacy of this study, a variety of academic journals, theses, scholarly articles, and related publications will be consulted. The literature review provides insightful direction for this investigation.

#### **Review of Literature in International Context**

Xuezhi Qin and Dickson (2015) examined the profitability position of commercial banks, focusing on the case of Tanzania. The research examines the profitability of development banks in Tanzania from 2000 to 2009, using case studies from National Microfinance Bank (NMB), National Bank of Commerce (NBC), and CRDB. Indicators like return on average assets, net interest income on average assets, and non-interest expense on average assets are used to evaluate the profitability of commercial banks. To find out if there is a significant difference in the profitability of development banks, panel secondary data from Tanzania National Commercial Bank, CRDB, and National Microfinance Bank over a ten-year period was used. An ANOVA test was then performed. Additionally, we looked into how asset quality, liquidity, and capital adequacy affected development banks' profitability using a regression model. There were no appreciable variations in development banks' profitability, according to the survey's findings. With the exception of the amount of non-performing loans, which had a negative effect on profitability, the regression model showed that asset quality and liquidity had a positive impact on profitability. Furthermore, it was discovered that capital sufficiency had a detrimental effect on profitability. The analysis verified that the development bank's profitability is consistent and satisfies regulatory standards set by the Bank of Tanzania (BOT).

Shubita and Alsawalhah (2015) analyzed the impact of capital structure on the profitability of industrial companies listed on the Amman Stock Exchange over a six-year period (2004-2009). Multiple regression analysis and correlation analysis were employed in the study, and the sample comprised his 39 enterprises. The findings demonstrated a strong inverse link between debt and profitability. This implies that a rise in debt is linked to a fall in a company's profitability, i.e., a rise in debt is correlated with a decline in profitability. Additionally, the findings demonstrated that profitability is increased by control variables like size and sales growth. It's interesting to note that these findings differ from earlier empirical research by Abor (2005) and Arabahmadi & Arabahmadi (2013).

Nirajini and Priya (2016) analyzed the capital structure and financial performance, examining the financial years from 2006 to 2010 for listed trading companies in Sri Lanka. The study's data was taken from the sample companies' annual reports, and multiple regression and correlation analysis were used for analysis. The results showed that capital structure and financial performance were positively correlated. This study demonstrates that a company's capital structure has a major effect on its financial performance and that long-term debt, the leverage ratio, and gross profit margin (GPM) are all connected with net profit margin (NPM) and return on capital employed. At the significant level of 0.05 and 0.1, it was also demonstrated that there is a relationship between return on equity (ROE), return on assets (ROA), and return on equity (ROE).

Arabahmadi (2017) investigated the relationship between capital structure and profitability by analyzing data of 252 non-financial companies listed on the Tehran Stock Exchange from 1999 to 2008. Consistent with previous theory, this study identified a positive relationship between return on equity and short-term debt. This means that an increase in short-term debt is associated with an increase in profitability when interest rates are low. On the other hand, if a company chooses to increase its long-term debt, it will lead to a decline in profitability.

Raja and Dave (2018) examined the profitability is intricately linked with capital structure, making capital structure decisions a significant concern for firms of any type and size. They emphasize the critical importance of choosing an appropriate combination of debt and equity for finance managers. The study's objective is to analyze the impact of capital structure on profitability, with Return on Equity (ROE) serving as the dependent variable. Independent

variables include derived measures of short-term debt, long-term debt, and total liability. The study's sample comprises BSE – 100 companies, analyzed over a 5-year period from 2007 to 2012. The researchers employed regression analysis (OLS) to quantify the magnitude of each variable's impact on profitability. The findings suggest that financing a firm through debt has a negative effect on its profitability. Additionally, the study highlights the importance for firms to adopt the right combination of long-term and short-term debt.

Yegon et al. (2018) investigated the impact of capital structure on the profitability of a sample of banks in Kenya. As a result, a positive correlation was observed between short-term debt and profitability, while a negative correlation was observed between long-term debt and profitability. Interestingly, this study did not find a significant relationship between total debt and profitability. The authors interpret these results as support for static trade-off theory. However, this study has some limitations, including a small sample size of 11 participants, which is recognized as common in research in developing countries. The practical implications of the results are not explicitly discussed, except in relation to static trade-off theory. This study recognizes that existing theories on capital structure contribute to the decision-making process, even if certain aspects of the theory are only partially supported. Capital structure decisions are complex and multidimensional, making it difficult to consider all relevant factors, especially when bounded rationality exists. The authors note that detailed case study observations of individual institutions' funding decisions over time are valuable in exploring this complexity.

Khalifa (2019) analyzed the impact of capital structure on financial performance using two main sets of variables. Profitability is assessed using return on assets (ROA) and return on equity (ROE) as proxies, while capital structure is represented by variables such as short-term debt, long-term debt, total debt, and debt-to-equity ratio. size. This study focused on a sample of 30 U.S. energy companies over a nine-year period from 2005 to 2013, using secondary data from financial reports available online. Smart PLS (partial least squares) version 3 was used for data analysis, and multiple regression revealed that 10% of ROE and 34% of ROA were predicted by the independent variables. Specifically, total debt had a significant negative impact on both ROE and ROA, while only sales had a significant negative impact on ROE. On the other hand, short-term debt had a positive impact on ROE.

The relationships between long-term debt, debt-to-equity ratio, total asset size, and profitability showed insignificant or mixed results. This study acknowledges the limitations of a small sample size and recommends that future studies examine longer time frames with larger sample sizes and include additional independent variables such as taxation and concentration.

Javed, Younas, and Imran (2020) analyzed the impact of capital structure on the performance of 63 companies listed on Karachi Stock Exchange. This study was carried out over a five-year period, from 2007 to 2011, and data was gathered through State Bank of Pakistan balance sheet examination. Researchers looked into the relationship between capital expenditures (DTA, EQA, LDA) and company performance (ROA, ROE, and ROS) using a fixed effects model as a pooled regression model. The association was found to exist; however, its direction was not entirely clear from the results. With return on assets (ROA) as the dependent variable, capital structure positively affected company performance. However, when return on equity (ROE) is utilized as the dependent variable, the debt-to-asset ratio (DTA), equity-to-equity (EQA), and long-term debt-to-asset ratio (LDA) all exhibit positive relationships. have a positive influence. was shown. Showed a negative impact Showed a negative impact. When return on sales (ROS) was considered as the dependent variable, DTA and EQA showed a negative relationship with ROS, while LDA showed a positive influence on ROS. This study concludes that capital structure influences firm performance and emphasizes that managers need to be careful when making capital structure decisions.

Nicolae (2021) examined the determinants of bank profitability, focusing on evidence from the EU 27 banking system during the period 2004-2011. The research aimed to identify the main factors influencing banks' profitability and categorized them into two major groups: bank-specific (internal) factors and industry-specific and macroeconomic (external) factors. The empirical findings were consistent with the anticipated results, revealing that credit and liquidity risk, management efficiency, business diversification, market concentration/competition, and economic growth significantly influenced bank profitability, both in terms of Return on Average Assets (ROA) and Return on Average Equity (ROE). Notably, the study highlighted a positive impact of competition on bank profitability in the EU27.



Kukaj, Morina and Misiri (2022) examined the 2008–2018 financial results of both foreign and native banks operating in Kosovo's banking industry. Over a ten-year period, the study examined the financial reports of both domestic and foreign banks and gleaned insights from them. The aim of this study was to determine whether Kosovo's foreign-owned banks are more profitable than those that are locally owned. To comprehend earlier conclusions and approaches applied in related study fields, the researchers studied the body of existing literature. The STATA software programmer was used to process the data using GMM modelling, fixed effects, random effects, Hausman-Taylor regression, and linear regression. All independent variables (profit margin, return on equity, and the ratio of net sales to net assets) were significant at the 5% statistical confidence level, according to the major findings based on the empirical results. The study revealed that the profit margin and return on equity of commercial banks in Kosovo positively influence the return on equity. Conversely, an increase in the ratio of net sales to net assets negatively impacts the return on equity. This paper's practical value lies in its comprehensive examination of Kosovo's commercial banks' profitability and its capacity to identify the most lucrative domestic and foreign-owned banks through comparative analysis. comprises figuring out the capital bank.

Alshantti (2022) investigated the impact of bank liquidity management on the profitability of commercial banks in Jordan. The independent variables considered were investment ratio, quick ratio, capital ratio, net credit facilities to total assets, liquidity ratio, and the dependent variables were return on equity (ROE) and return on assets (ROA). Regression analysis tools were employed together with the development of hypotheses. The findings indicate that return on equity, which is a measure of profitability, is impacted negatively by other variables but favorably by investment and quick ratio. Similarly, return on assets, a measure of profitability, exhibited a negative correlation with other factors but a positive link with both the durability rate and the investment rate.

Gemin Xio and Jiongshan Zhang (2023) investigated the impact of capital strength and tangibility on the financial performance of banks and insurance companies listed on the Colombo Stock Exchange in Sri Lanka. The independent variables considered were total assets, size, and debt-to-assets ratio, and the dependent variables were return on assets (ROA) and return on equity (ROE). Correlation, average, coefficient variation, and regression

modeling tools were used for the analysis. Statistical Package for the Social Sciences (SPSS) was used for correlation and regression analyzes to determine the association and influence of variables. The results of the study showed that there is a significant relationship between capital intensity, tangibility, and financial performance.

Hajisaaaid (2023) analyzed the correlation between capital structure and profitability in Saudi Arabia's basic materials sector from 2009 to 2018. Various statistical techniques were used, including regression analysis, fixed effects models, random effects models, and Hausman tests. The independent variables are the total debt-to-total-assets ratio (DA), the long-term debt-to-total-assets ratio (LDA), and the short-term debt-to-total-assets ratio (SDA). Return on equity (ROE) is chosen as the dependent variable. The findings demonstrated a negative correlation between return on equity (ROE) and short-term debt to total assets (SDA). Additionally, there is a positive association found between profitability and total debt (DA), but a negative correlation between long-term debt to total assets (LDA) and return on equity (ROE).

Francisca (2023) examined the capital structure was undertaken within the financial and manufacturing sectors, focusing on evidence from oil firms in Nigeria. The study specifically concentrated on performance indicators such as Return on Assets (ROA) and Return on Equity (ROE). Notably, the study omitted the consideration of the significance of retained earnings in influencing firm market value and profitability. The research emphasized that the optimal capital structure mix not only enhances firms' operational efficiency but also contributes to their competitive advantages. Utilizing the PGM/ARDL approach to test individual effects, the study aimed to analyze the impact of capital structure on the performance, market value, and profit-generating efficiency of oil and gas sector firms. The findings highlighted a durable connection between capital structure, retained earnings, market value, and long-term performance. Specifically, firms in the oil and gas sector were observed to rely on short-term debt for financing operational and business endeavors. Additionally, a positive correlation between retained earnings and capital structure was identified, suggesting that firms with higher earnings retention tend to experience faster growth prospects. Furthermore, an inverse relationship was noted between long-term debt, retained earnings, market value, and performance indicators. The study's results aligned with

trade-off theory, pecking order theory, and relevant Modigliani and Miller (MM) 1963 capital structure propositions.

Gofe and Asfaw (2023) analyzed the factors influencing capital structure decisions of commercial banks in Ethiopia. The objective was to identify existing gaps and assess the state of research in this area in order to provide direction for future research. Due to the limited number of studies and limited access to known databases, this review primarily used open search engines and databases to search for 11 relevant articles published from time to time. It involved scientific research. Various keywords were used to locate articles, and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework guided the analysis. Inclusion and exclusion criteria were specified in the study protocol, and descriptive analyzes were performed using different parameters. Citation analysis was also conducted to identify influential authors and works. This result suggests that there is a discrepancy between the variables examined in the study and previous literature, and citations of the study were limited. Studies focusing on several variables have yielded contradictory results regarding the theory supporting the factors that influence the capital structure decisions of commercial banks in Ethiopia. Existing banking literature lacks comprehensive coverage of banks' capital structure, including how banks decide on their capital structure and what variables influence firms' financing behavior. There is confusion. This study recommends a detailed study of banks' capital structure decisions and identification of relevant factors to improve our understanding of this area.

**Table 1***Summary of Empirical Review in International Context*

S.N	Authors	Objectives	Methodology	Findings
1.	Xuezhi Qin & Dickson Pastory (2015)	The study examines development banks profitability in Tanzaina for the ten years period. The study used National Microfinance Bank, National Bank Commerce and CRBD as the case study.	Hypothesis, ANOVA and regression model was used.	The findings revealed that there is no significant difference on profitability among the development banks, in the context of regression model it has been noted that liquidity and assets quality has positive impact in profitability with exception to the level of non-performing loans which was negative influence on profitability. Also, capital adequacy has shown negative impact on profitability. The study confirmed the profitability of development banks to stable and meeting the regulatory requirement of the Bank of Tanzaina(BOT)..
2.	Shubita & Alsawalh ah (2015)	To analyze the effect of capital structure in profitability by examining the effects of capital structure on profitability of industrial companies.	Correlation and regression methods was used.	These finding imply that an increase indebt position is associated with a decrease in profitability. The results shows that profitability increase profitability increase with control variables.
3.	Nirajini & Priya (2016)	To determine the capital structure and financial performance of listed trading companies in sirlanka.	Correlation and regression model are was used.	These results reveled a positive relationship between capital and financial performance. Capital structure are significantly impact on the financial performance of the firms.
4	Arabahmadi (2017)	To examines the relationship between capital structure and profitability using data from 252 non-financial companies in Tehran Stock Exchange.	Correlation and regression was used.	It found a positive association between the ROE and short-term debt. This suggests increasing short-term debt with low interest rate will lead to increase in profitability but when firms increase long-term debts it results in a decrease in profitability.
5.	Raja & Dave (2017)	To assess the profitability is attuned with capital structure.	Regression model was used.	The researchers found that financing a firm through debt negatively affects profitability oof the firm. Moreover, it is always crucial for the firms to adopt right combination of long-term and short-term debt.
6.	Yegon et. al (2018)	(i)To evaluate the relationship between liquidity and performance	Regression and Correlation and Descriptive statistics was used.	The correlation between capital ratio and ROE is positive and it is negative for quick ratio and liquidity ratio with ROE and ROA.
7.	Khalifa (2018)	To analyze the effect of capital structure on financial performance.	Partial Least Square Version and multiple regression was used.	The total debt has a significant negative impact on ROE and ROA, while size in term of sales has significantly negative impact on ROE and ROA, while size in terms of sales has significantly negative effect only on ROE of the American firms. It would be more accurate if future studies included are independent variables such as taxation and concentration.
8.	Javed, Younas & Imran (2019)	To analyze the impact of capital structure on firm performance of 63	Fixed effects and regression model was used.	To find the relationship between firm performance (ROA, ROE, ROS) and capital expenditure (DTA, EQA, LDA). Results showed that there does exist a relationship was mixed.

		companies listed on karachi stock exchange.		
9.	Nicole (2020)	To analyzed the determinants of banks profitability evidence firm EV27 banking system.	Correlation and regression was used.	To find that consistent with the expected results. Credit and liquidity risks, management efficiency the diversification of business.
10.	Kukaj, Morina, & Misiri, (2021)	To evaluate the financial performance of banks in Kosovo, both domestics and foreign ones, we have analyzed the financial reviews of these bank for 10 years (2008-2018).	Linear regression, Fixed Effects, Random Effect, Hausman Taylor Regression and GMM modelling.	We conclude that all independent variables (return on equity, net sales to net assets ratio, profit margin ratios) are significant at 5% level of statistical confidence. Return on equity and profit margin have a positive impact on increasing the return on assets of commercial banks in Kosovo, while increasing the ratio of net sales to net assets has a negative impact on return on assets.
11.	Alshantti, (2022)	To examine the effect of the banking liquidity management on profitability in the Jordanian commercial banks.	Hypothesis and regression were used.	Profitability as measured by return on equity is affected positively by the investment and quick ratios, and negatively affected by the other variables. profitability as measured by return on equity is affected positively by the investment and acid test ratios, and negatively affected by the other variables.
12.	Gemin Xio & Jiongshan Zhang (2023)	To study the impact of capital strength & tangibility on financial performance of banking & insurance companies listed in Colombo stock exchange in Sri Lanka.	Correlation, mean, coefficient variation and regression model were used.	To find out the association and impact of the variables the correlation and regression analysis has been made by using Statistical Package for Social Science (SPSS). The findings of this study revealed that there is a significant relationship between the Capital Intensity and tangibility and the financial performance.
13.	Hajisaaid (2023)	To conduct the study on relationship between capital structure and profitability of eight companies working in the basic material sector in Saudi Arabia during the period 2009 to 2018.	Regression analysis, fixed effect model, random effect model, and Housman test was used. the return on equity (ROE) is dependent variables.	The results illustrate a negative relationship between short-term debt to total assets ratio (SDA) and return in equity ratio (ROE). A negative relationship between long-term debt to total assets ratio (LDA) and return in equity ratio (ROE), and positive relationship between total debt (DA) and profitability.
14.	Francisca (2023)	To examined capital structure in the financial and manufacturing sectors in evidence from oil and firms in Nigeria	Regression analysis was used.	The researcher found that implies that firms with higher earnings retention tend to experience faster growth prospects. An inverse nexus was observed between long-term debt, retained earnings, market value, and performance indicators. This study supports trade-off theory, pecking order theory, and relevant MM 1963 capital structure propositions.
15.	Gofe, T. E., Asfaw, A. S. (2023)	To analyze the literature on factors affecting capital structure decisions of commercial banks in Ethiopia.	Correlation coefficient and regression analysis was used.	The findings regarding the theories supported by factors affecting the capital structure decisions of commercial banks in Ethiopia were contradictory and not justified. The banking literature still doesn't cover the capital structure of banks very much. There is currently a lack of clarity regarding how banks determine their capital

### **Review of Literature in Nepalese Context**

Sthapit and Maharjan (2012) examined the profitability position of NABIL and SCBN, measure the liquidity position of NABIL and SCBN, and investigate the relationship between liquidity and profitability of NABIL and SCBN. The independent variables included LFCLR, LFTDR, NRBTDR, CHTDR, and CBTDR, while the dependent variable was ROA. The study employed descriptive statistics, t-test, and multiple regression tools for analysis. The results indicated that LFTDR and NRBTDR had a negative and significant impact on ROA of SCBN, whereas CHTDR had a positive and significant effect. However, liquidity ratios did not show significant effects on the profitability of NABIL. Consequently, the study concluded that the liquidity performance of SCBN was superior to that of NABIL.

Adhikari (2015) examined the liquidity and profitability situation of banks, analyzing profitability ratios such as return on shareholders' equity, total assets, and deposits of sampled banks. The research also evaluated the cash reserve ratio (CRR) maintained by banks and examined the relationship between net profit and total deposits, as well as net profit and investments. The study focused on three commercial banks, utilizing secondary data from sources like Nepal Stock Exchange Limited, economic surveys, and annual reports of the sampled commercial banks. Financial and statistical tools were employed for analysis. Compared to SBI bank, Nabil had a poorer liquidity position, and its investment in government securities as a percentage of current assets was higher. In terms of investments to total deposits and government securities to total working funds, Nabil Bank led the way, although its ratio of shares and debentures to total working funds was lower. In terms of profitability, Nabil showed higher returns on total working funds and loans and advances compared to SBI bank. However, Nabil's total interest paid to total working funds was lower than that of SBI bank. Analyzing risk ratios, Nabil demonstrated lower liquidity risk and credit risk than SBI bank but higher capital risk. Trend analysis indicated that Nabil's ratios of loans and advances to total deposits and total investment to total deposits were greater than

those of SBI bank, suggesting a potentially stronger position for Nabil. SBI bank was noted to have a good liquidity position.

Pradhan (2016) investigated the impact of liquidity on the performance of Nepalese commercial banks. Using return on equity (ROE) and return on assets (ROA) as dependent variables, and investment ratio, liquidity ratio, capital ratio, and quick ratio as independent variables. The study found that the capital ratio and ROE had a positive link, whereas the quick ratio and liquidity ratio had a negative correlation with both ROE and ROA. The empirical data showed that there is a conflicting link between a firm's financial performance and its liquidity risk. Thus, the goal of the study was to determine how liquidity affected Nepal's commercial banks' profitability.

Pangeni (2018) examined the profitability and liquidity state of Nepalese commercial banks, as well as the correlation between the two. The study used secondary data that was taken out of Nepalese commercial banks' annual reports and adopted a descriptive research design. Regression and correlation analysis were performed to investigate the relationship between profitability and liquidity. Metrics including net profit margin, return on equity (ROE), and return on assets (ROA) were used in the study to evaluate the profitability status. Indicators such as the current ratio, the ratio of cash and bank balance to total deposit, and the ratio of cash and bank balance to current deposit were used to gauge liquidity status. Ten Nepalese commercial banks were included in the analysis: ADBL, Everest, Himalayan, Nepal SBI, Nepal Investment, Nabil, Laxmi, Global IME, Kumari, and Prime Commercial Banks over the past ten fiscal years from 2007/08 to 2019/17. The results showed that, among the chosen Nepalese commercial banks over the given time frame, liquidity and profitability had a positive and substantial association. It's crucial to remember that the study's findings, which showed that ADBL and NABIL have strong liquidity positions and profitable operations, are based on a certain group of institutions.

Pokharel and Pokhrel (2019) examined the liquidity management and profitability positions of commercial banks, employing various statistical and financial tools. The average profitability of commercial banks was found to be mostly zigzag, while the banks' liquidity ratios showed signs of instability. The study came to the conclusion that banks' liquidity ratios

fell short of the required benchmarks. Moreover, it indicated that the Cash Reserve Ratio (CRR) was higher than the limit specified by the 2016–17 monetary policy. The investment in government securities, cash and bank balance to total deposit (CBBISD), and return on assets (ROA) were found to positively correlate with CRR in the study. On the other hand, there was an inverse correlation between ROA and CRR and CBBISD. In terms of liquidity, all other ratios (CRR, CBBISD, and Investment in Government Securities to Current Assets (IGSCA)) shown positive correlations with Return on Equity (ROE), with the exception of the Current Ratio (CR), which displayed an adverse association with ROE. With the exception of the association between IGSCA and ROA, the research also revealed a substantial relationship between liquidity ratios and profitability.

Agarwal (2019) evaluated the profitability of public and private sector banks, recognizing profitability as a primary objective for all business ventures. The study focused on assessing the financial health of these banks through key profitability indicators, including return on assets, return on equity, net interest margin, and operating profits. Analyzing data from the years 2005 to 2017, the study revealed that private sector banks outperformed their public sector counterparts in terms of profitability. Public sector banks, grappling with increasing non-performing assets, encountered negative returns on their assets in recent years, leading to a deterioration in their overall profits.

Shrestha and Jha (2020) examined the liquidity on profitability of foreign joint venture commercial banks in Nepal, specifically focusing on HBL, EBL, and NBB chosen from a sample of 17 development banks in Nepal. The study covered the period from 2014/15 to 2018/19 AD, utilizing data extracted from the annual reports and accounts of the selected banks. Employing correlation and regression analysis, the study aimed to explore the relationship between liquidity and profitability indicators, investigating whether a cause-and-effect relationship existed. The research revealed a fluctuating trend in the average profitability of development banks, contrasting with the unstable trend observed in liquidity ratios. The study concluded that the liquidity ratios of the banks fell below prescribed standards. Notably, the Liquidity Asset to Deposit Ratio (LADR) had a significant impact on both Return on Assets (ROA) and Return on Equity (ROE) for HBL, EBL, and NBB. The Net Receivables to Total Deposit Ratio (NRBTDR) and Cash Reserve Ratio (CRR) showed



a weak but significant impact on ROA for all sample banks. However, NRBTD/CRR had a negative impact on ROE for NBB and a positive impact on the other two. The Cash and Cash Equivalents to Total Deposit Ratio (CACL) significantly affected ROA for HBL and EBL but had no significant impact on NBB. CACL, however, had a significant impact on ROE for all three banks. While it had less of an effect on NBB, the Current Holdings of Tradable Debt to Total Deposit Ratio (CHTD) had a major influence on ROA and ROE for HBL and EBL. Furthermore, ROA and ROE for each of the three banks were significantly impacted by the Current Assets to Total Assets Ratio (CATA). The study recognizes its limitations, including the inability to generalize the findings to non-quoted banks and its exclusive emphasis on foreign joint venture commercial banks in Nepal, even though the results are significant for the designated institutions and industry.

Kathi (2020) analyzed the impact of liquidity on the profitability of Nepalese commercial banks, focusing on ten out of twenty-seven listed commercial banks over the period from 2013 to 2019. The study made use of secondary data taken from the Nepal Rastra Bank's (NRB) Bank Supervision Reports as well as the annual reports of the chosen commercial banks. Indicators of liquidity such as asset quality, cash-deposit ratio, and credit-deposit ratio were taken into account, while return on equity (ROE) and return on assets (ROA) were used as stand-ins for profitability. The results of the Hausman test and the fixed effects approach showed that asset quality was positively and significantly correlated with ROE but negatively and significantly correlated with ROA. There was a slight but favorable correlation between ROA and ROE and the Cash Deposit Ratio (CADR). On the other hand, there was a negative and negligible correlation between the Credit-Deposit Ratio (CDR) and ROE, and a positive but insignificant correlation with ROA. The study's conclusions help to clarify the intricate relationship that exists between profitability and liquidity indicators in the context of Nepalese commercial banks.

Bhatt and Jain (2020) analyzed the correlation between the capital structure and profitability of commercial banks in Nepal. The research focused on 17 Nepalese development banks, using financial data obtained from NRB BI Statistics and the Bank Supervision Report covering the period from 2010 to 2019. Return on Equity served as the indicator for profitability, while short-term debt, long-term debt, deposits, and the total debt to assets ratio

were employed as proxies for capital structure. Additionally, bank size and asset growth were considered as control variables. The findings revealed that over 40 percent of bank profitability, as measured by return on equity, could be explained by the explanatory capital structure variables. The study indicated that return on equity had an insignificantly positive relationship with long-term debt and deposits, while showing an insignificantly negative relationship with short-term debt and total debt. Across all regression models, profitability exhibited a significantly positive association with bank size, indicating that larger banks tended to yield higher returns for shareholders.

Jaish (2020) examined the connection between Nepalese insurance companies' capital structures and their financial results. Return on assets and earnings per share were the dependent factors, and size, liquidity, tangibility, equity to total assets ratio, and total debt ratio were the independent variables. The study used data taken from the annual reports of listed insurance companies in Nepal to analyse the basic structure of capital and financial performance using a descriptive and casual comparative research design. 84 observations from 14 insurance firms during 2013–14 and 2018–19 were included in the study. Regression analysis was used to evaluate the effect on financial performance metrics, namely earnings per share and return on assets. The findings showed that insurance businesses performed better financially when their debt ratios were higher. Within the industry, a rise in equity, size, and liquidity was linked to a decline in return on assets, but an increase in debt ratio and tangibility was linked to an increase in return on assets. While equity, size, and liquidity ratio had a negative effect on earnings per share, tangibility and the debt ratio had a favorable impact. The main finding of the study indicated that the financial performance of insurance businesses in Nepal is significantly influenced by a number of characteristics, including size, liquidity, tangibility, leverage, equity to total assets ratio, and leverage. It was suggested that insurance businesses in Nepal that wished to improve their financial performance should raise their ratio of total debt to tangible assets and decrease their ratio of equity to firm size and liquidity.

Timilsina (2020) investigated the factors that influence capital structure in Nepalese commercial banks, with a particular emphasis on 17 development banks and 112 observations from 2011–12 to 2017–18. The study used return on assets, bank size, assets tangibility, assets growth, and liquidity as independent factors, and total debt to total equity and total debt to total assets as dependent variables. The annual reports of the institutions that were sampled served as the source of the data. The study employed regression modelling and the computation of Pearson's correlation coefficients to evaluate the influence and importance of bank-specific variables on the capital structure of Nepalese development banks. The findings indicated positive correlations between bank size and assets tangibility with total debt to total assets, while return on assets, assets growth, and liquidity showed negative correlations with total debt to total assets. Similarly, return on assets, bank size, assets tangibility, assets growth, and liquidity exhibited negative correlations with total debt to total equity. These results suggested that higher assets growth, return on assets, and liquidity were associated with lower total debt to total assets and total debt to total equity. Conversely, a higher bank size and assets tangibility were linked to higher total debt to total assets. The study concluded that return on assets, bank size, and assets tangibility were the most influential factors, while assets growth and liquidity were the least influential factors affecting the capital structure of Nepalese development banks affecting the capital structure of Nepalese development banks.

Shrestha (2021) analyzed the portfolio behavior of commercial banks in Nepal, delving into various aspects such as investment portfolio, liability portfolio, and assets portfolio. The study made notable efforts to scrutinize the individual investment portfolios of Nepalese domestic banks, revealing a pattern of investments in government securities, national saving bonds, debentures, and company shares. The research also explored the factors influencing the supply and demand of bank credit. In terms of credit supply, the study identified dependencies on total deposits, lending rates, bank rates, lagged variables, and dummy variables. Simultaneously, the demand for bank credit was assumed to be influenced by factors like national income, lending rates, Treasury bill rates, and other relevant variables.

Sudha (2022) analyzed the deposit mobilization of commercial banks, focusing on AXIS LTD and CUB LTD. Given the importance of deposit mobilization to banking operations, the study's objective was to evaluate the growth and trend of deposit mobilization for both banks between 2011–2012 and 2020–2021. Three different deposit kinds were taken into account in the evaluation: term, savings, and demand deposits. Information was gathered from the official websites of AXIS LTD and CUB LTD regarding the total deposits they mobilized in India over the designated period. For data analysis, descriptive statistics such as mean, standard deviation, coefficient of variation, and compound annual growth rate (CAGR) were used. The results showed that, for both AXIS LTD and CUB LTD in India, the mobilization of all kinds of deposits increased significantly throughout the given time frame.

Neupane (2023) examined the determinants of profitability in Nepalese development banks. The research employed descriptive statistics to depict the profitability of Nepalese banks and its influencing factors. Furthermore, the study computed correlation coefficients to evaluate the relationship between several profitability measures and their determinants. The research used a panel data regression model that included both Fixed Effect Model and Random Effect Model to get deeper into the factors and how they affected profitability. The investigation revealed that the development of the banking sector, GDP growth, inflation, exchange rate, concentration ratio, and other factors all had a significant and opposite impact on the profitability of Nepalese development banks as determined by Return on Assets (ROA). Internal variables that affect ROA, such as bank size, capital base, loans, deposits, off-balance sheet activities, and branch count, did not, however, show a discernible effect. The study revealed that the only factors that significantly impacted Net Interest Margin (NIM), another profitability metric, were capital adequacy, the total number of branches, and the rate of inflation. The study came to the conclusion that while macroeconomic variables have a smaller but still considerable impact on the profitability of Nepalese development banks, external factors—particularly those peculiar to the industry—had a major impact on ROA.

Rai (2023) examined the impact of recapitalization on the performance of Nepalese commercial banks, utilizing return on assets and return on equity as dependent variables. Bank deposits, bank size, liquidity, capital investment ratio, and capital adequacy ratio were

among the independent factors. Secondary data from 26 commercial banks with 208 observations from 2013–14 to 2020–21 served as the foundation for this study. Reports from the Ministry of Finance, yearly reports from a subset of commercial banks, and Banking and Financial Statistics released by Nepal Rastra Bank were among the data sources. Regression models and correlation coefficients were used to assess the importance of recapitalization and its effects on the banks' operating results. The results showed that capital adequacy ratio positively affects return on assets, implying that a greater capital adequacy ratio translates into a higher return on assets. On the other hand, liquidity was found to have an adverse effect on return on equity and return on assets, suggesting that higher liquidity levels are associated with lower performance indicators. Additionally, the return on equity and return on assets were positively impacted by bank size, indicating that larger banks yield higher returns. However, return on equity and return on assets were negatively impacted by the capital investment ratio, indicating that a rise in the capital investment ratio is associated with a fall in these performance metrics. The study also showed that bank deposits positively impacted return on equity and return on assets, suggesting that higher bank deposits translate into better profits for Nepalese commercial banks.

Luitel (2023) investigated the influence of macroeconomic variables on the profitability of Nepalese commercial banks, utilizing return on assets and return on equity as dependent variables. The money supply, interest rate, GDP, exchange rate, unemployment rate, and inflation were the independent variables. The study's foundation was secondary data—128 observations from 2013–14 to 2020–21—obtained from 16 commercial banks. Reports from the Ministry of Finance, yearly reports from a subset of commercial banks, and Banking and Financial Statistics released by Nepal Rastra Bank were among the data sources. Regression models and correlation coefficients were used in the analysis to determine the importance and effect of macroeconomic variables on the profitability of commercial banks in Nepal. The results showed that the exchange rate had a negative effect on return on equity as well as return on assets, indicating that a rise in the exchange rate causes these profitability metrics to decline. Both return on equity and return on assets showed a positive correlation with interest rates, suggesting that better returns are associated with rising interest rates. Furthermore, return on equity and return on assets were negatively impacted by money

supply, suggesting that a rise in money supply results in a fall in these profitability metrics. The study also showed that return on equity and return on assets were negatively impacted by the unemployment rate, indicating that a rise in the jobless rate results in to a decrease in these measures of profitability for Nepalese commercial banks.

**Table 2**

*Summary of Literature Review in Nepalese Context*

S.N	Authors	Objectives	Methodology	Findings
1.	Adhikari, (2015)	(i). To identify the liquidity position of the selected Commercial banks. (ii). To identify the status of profitability and risk position of selected Commercial Banks of Nepal.	Descriptive statistics, Correlation and Regression was used.	Return on total working fund and return on loan and advances of Nabil is higher than that of SBI bank. But total interest paid to total working fund of Nabil is lower than that of SBI bank. The risk ratio, liquidity risk and credit risk of Nabil is lower than that of SBI bank whereas it is higher in case of capital risk.
2.	Pradhan (2016)	To examined the effect of liquidity on the performance of Nepalese commercial banks.	Correlation was used.	The study found that the correlation between capital ratio and ROE is positive and it is negative for quick ratio and liquidity ratio with ROE and ROA. The empirical evidence has showed that a mixed relationship between liquidity risk and financial performance of firms. Therefore, this study is directed towards establishing the effect of liquidity on the profitability of commercial banks in Nepal.
3.	Pangeni (2018)	To examine the liquidity position, profitability status and relationship between liquidity and profitability of commercial banks	Descriptive statistics, Correlation and Regression was used.	A positive and significant relationship between liquidity and profitability among the Nepalese commercial banks over the period. However, the findings of this paper are based on a study conducted on the selected banks. Hence, the results show that ADBL and NABIL have good liquidity position and profitability position.
4.	Pokhrel (2019)	i)To measure the profitability status of Nepalese commercial banks (ii) To assess the liquidity position in Nepalese commercial banks.	Descriptive statistics and Hypothesis were used.	The CRR and IGSCA are positively correlated with ROA while CRR and CBBISD are inversely correlated with ROA. In case of liquidity-ROE Relation, CR is inversely correlated to ROE but all other ratios (CRR, CBBISD and IGSCA) are positively correlated with ROE. It also has reported there is significant relationship between liquidity ratios with profitability, except between IGSCA and ROA.
5.	Agarwal (2019)	To assessed profitability of Public and Private Sector Banks: A Comparative Study Profitability is the main goal of all business venture.	Correlation and simple regression was used.	The result of the analysis carried out for the period 2005-2017 shows that private sector banks are in better profitable positions than the public sector banks. Public sector banks with increasing non-performing assets are experiencing negative return

				on their assets in recent years which are deteriorating their profits.
6.	Shrestha & jha (2020)	(i). To evaluate the profitability position of HBL, NBB & EBL. (ii)To examine the liquidity position of HBL, NBB & EBL. (iii)To evaluate the association of liquidity and profitability of HBL, NBB &EBL. (iv)To analyze the influence of liquidity on the profit position of HBL, NBB &EBL.	Descriptive statistic, Correlation and Multiple Regression was used.	The study concluded that the LADR has significant impact in ROA as well as ROE. NRBTD/CR has weak significant impact on ROA of all sample banks whereas, it has negative impact ROE of NBB and have the positive impact on other two. CACL has significant effect on ROA of HBL and EBL whereas there is no significant impact on ROA due to CACL in NBB. Further, CACL has significant impact on ROE on all three banks. CHTDR has significant effect on ROA and ROE of HBL and EBL whereas NBB has weak significant impact on both the profitability index. CATA has significant effect on ROA in HBL, EBL and NBB.
7.	Jaish (2020)	To examines the relationship between capital structure and the financial performance of Nepalese insurance companies.	Multiple regression was used.	This results that total debt ratio, equity to total assets ratio leverage size, liquidity and tangibility are the significant factors in determining the financial performance of Nepalese insurance companies. the insurance companies of Nepal interested to increase financial performance can increase their total debt ratio and tangible assets and decrease equity firm size and liquidity ratio.
8.	Bhatt and Jain (2020)	To examine the relationship between the capital structure and the profitability of commercial Banks in Nepal	Regression model was used.	Results showed that more than 40 percent bank profitability measured by return on equity is predicted by the explanatory –capital structure variables. It is also revealed that return on equity is insignificantly positively related with long term debt and deposits.
9.	Kathi (2020)	To study on impact of liquidity on profitability of Nepalese commercial banks.	Descriptive statistics, Correlation and Regression was used.	The result showed that assets quality has negative and significant relationship with return on assets whereas it has positive and significant relationship with return on equity. Cash deposit ratio (CADR) has positive and insignificant relationship with return on assets (ROA) and return on equity (ROE). However, the study reveals that CDR has positive but insignificant relationship with ROA and has negative and insignificant relationship with ROE.
10.	Timilsina (2020)	To examine the determinants of capital structure in Nepalese commercial bank in Nepal and management Investment portfolio.	Pearson’s correlation coefficient and regression model was used.	The results show banks size and assets tangibility are positively correlated with total debt to total assets where as return on assets, assets growth and liquidity are the negatively correlated with total debt to total assets.
11.	Shrestha (2021)	To analyzed portfolio behavior of commercial banks in Nepal. It has made remarkable efforts to examine various portfolio behavior of Commercial Bank in Nepal.	Descriptive statistic, Correlation and Multiple Regression was used.	She found that the supply of bank credit was expected to depend on total deposit, lending rate, bank rate, lagged variables and dummy variables. Similarly, demand of bank credit was assumed to be affected by national income, lending rate, Treasury bill rate End other variables.
12.	Sudha (2022)	To examine the deposits mobilization of commercial banks a comparative study	Descriptive Statistics, mean, standard	To evaluate the trend and growth in deposit mobilization of AXIS LTD and CUB LTD during the years from 2011-2012 to 2020-2021. Three different types of deposits, namely demand

		with AXIS LTD and CUB LTD.	deviation, coefficient variance.	deposits, saving deposits and term deposits is considered for the study and the Compound Annual Growth Rate (CAGR) are calculated for analyzing these data. Finally found that there has been a remarkable growth in mobilization of all kinds of deposits in AXIS LTD and CUB LTD in India on the whole.
13.	Neupane (2023)	To examine the key determinants of profitability of Nepalese development banks.	correlation coefficient and panel data regression model was used.	This study concluded that the profitability of Nepalese development banks measured by return on assets is significantly influenced by the external factors. Among external factors, industry specific factors have high degree of impact on return on assets whereas macroeconomic variables have quite a weak degree but significant impact on profitability of Nepalese development banks as measured by return on assets. Further, the profitability measured by net interest margin (NIM) is significantly influenced only by capital adequacy, absolute number of branches and annual inflation rate.
14.	Rai (2023)	To examined the effect of recapitalization on the performance of Nepalese commercial banks.	correlation coefficients and regression models was used.	The study showed that bank deposits have a positive impact on return on assets and return on equity. It means that increase in bank deposits leads to increase in return on assets and return on equity in Nepalese commercial banks.
15.	Luitel (2023)	To examined the impact of macro-economic variables on the profitability of Nepalese commercial banks.	correlation coefficients and regression models were used.	The study showed that exchange rate has a negative impact on return on assets and return on equity. It indicates that increase in exchange rate leads to decrease in return on assets and return on equity. Similarly, interest rate has a positive impact on return on assets and return on equity. It indicates that increase in interest rate leads to increase in return on assets and return on equity.

## 2.4 Research Gap

The previous studies reviewed primarily focused on determining the optimal capital structure or the level of profitability a company should achieve. However, there is a notable absence of efforts to explore the thesis's link between profitability and capital structure. In order to close this gap, the current study looks into how capital structure affects profitability while taking the bank's overall profitability position into account as well as the capital structure's composition. While looking over the body of current literature, it becomes apparent that although other studies have explored various variables, the present study uniquely incorporates return on assets (ROA) and return on equity (ROE) as dependent variables. The



objective is to analyze how the composition of the capital structure affects not only the financial health of the bank but also the wealth of shareholders.

Research on this topic is limited within the context of Nepal. The aim of this study is to fill the existing research gap regarding the analysis of profitability in five selected banks, with a primary focus on development banks established in different periods. The study is limited to a five-year data span, which could potentially affect the accuracy of the findings. Various ratios and trend analysis are employed to evaluate the profitability of the five banks. Additionally, statistical methods such as mean, correlation, and regression analysis are utilized to assess the risk and the impact of capital structure on profitability at a specific development bank.

Hence, from an academic and policy perspective, this research has proven valuable for a diverse audience, including individuals, academics, professors, students, and business professionals. I trust that this study will serve as a valuable resource for others engaged in related subjects in the future.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

The research methodology serves as a systematic approach to address research problems with specific objectives. In this study, the primary aim is to assess how the capital structure influences the profitability of chosen Development banks, namely MNBBL, GBBL, MBBL, KSBBL, and JBBL. The adopted research methodology encompasses various components, including the design of the research, identification of the population and sample, sources of data, procedures for data collection, and the tools and techniques employed for data analysis.

#### **3.1 Research Design**

Research studies that are comparative, causal, and descriptive have all been used to help this study reach its goal. The descriptive research design was used in order to gather relevant data and identify facts. This kind of survey is typically used to summarize the current state of affairs and events while also evaluating the beliefs, actions, and traits of a certain community. Given that the purpose of this study is to evaluate the profitability position of MNBBL, GBBL, MBBL, KSBBL and JBBL.

#### **3.2. Population and Sample**

The total population of this study is comprised of 17 Development banks of Nepal (NRB, 2022), which are currently in earning high profit. Using judgmental sampling method Muktinath Bikas Bank Limited, Garima Bikas Bank Ltd, Mahalaxmi Bikas Bank Limited, Kamana Sewa Bikas Bank Limited and Jyoti Bikas Bank Limited are considered because they are representative of a larger group or category of banks. For instance, if these banks are from different regions of the country and vary in terms of their size, ownership structure, or business focus, they can provide insights into a diverse range of banking practices. The selection of MNBBL, GBBL, MBBL, KSBBL, and JBBL in the study sample is based on their representation of diverse banking operations, encompassing different market segments and regions. This approach ensures a comprehensive evaluation of profitability dynamics within the banking industry, considering factors such as size, business models, and regional influences.

### **3.3. Nature and Sources of Data**

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

### **3.4. Instrument of Data Collection**

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

### **3.5. Data Processing Procedure**

Firstly, data were extracted from the annual reports of the bank and put them in a sheet. Then data were entered into the spreadsheet to work out the financial ratios and prepare necessary figures, according to the need and requirement of this study. For this purpose, gathered data have been processed using computer programs like Microsoft Excel, Microsoft Word.

### **3.6. Method of Analysis**

To obtain the fact result, a variety of profitability measurement instruments and methodologies are used under this. Karl Pearson's correlation coefficient and ratio analysis are two statistical and financial techniques used to analyze and show the acquired and organized data in a systematic manner.

### 3.6.1. Financial Tools

A potent and widely utilized financial analysis tool is ratio analysis. Ratios can be computed for any two elements within financial statements, representing the mathematical relationship between them. In financial terms, a ratio denotes the numerical or quantitative connection between two variables. Ratios play a crucial role in condensing extensive financial data, facilitating qualitative assessments, and are considered a paramount indicator for assessing business performance. Numerous ratios exist for scrutinizing and interpreting the financial performance of an enterprise or firm. However, for our specific objective, only pertinent and significant ratios are examined.

### 3.6.2. Statistical Tools

A crucial role is played by statistical tools in company operations. In the corporate sector, every performance should be calculated to determine the precise profit or loss. These are a few common mathematical tools used in daily life. The statistical tools listed below can be used to interpret data.

#### 1. Arithmetic Mean

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

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

Where,

$\bar{X}$  = Arithmetic Mean

$\sum X$  = Sum of Elements

N = Number of Observation

#### 2. Standard Deviation

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

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

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

### 3. Coefficients of Variation

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

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

### 4. Coefficient of Correlation

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

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

Where,

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

Proprieties

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

## 5. Multiple Regression Analysis

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

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

Where, for  $i = n$  observation

$y_i$  = dependent variable

$x_i$  = explanatory variables

$\beta_0$  = y-intercept (constant term)

$\beta_p$  = slope coefficients for each explanatory variable.

### Study Model

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

Where,

$X_1$  = Liquid assets to current liabilities ratios

$X_2$  = NRB Balance to total deposit ratio

$X_3$  = Cash in hand to total deposit ratio

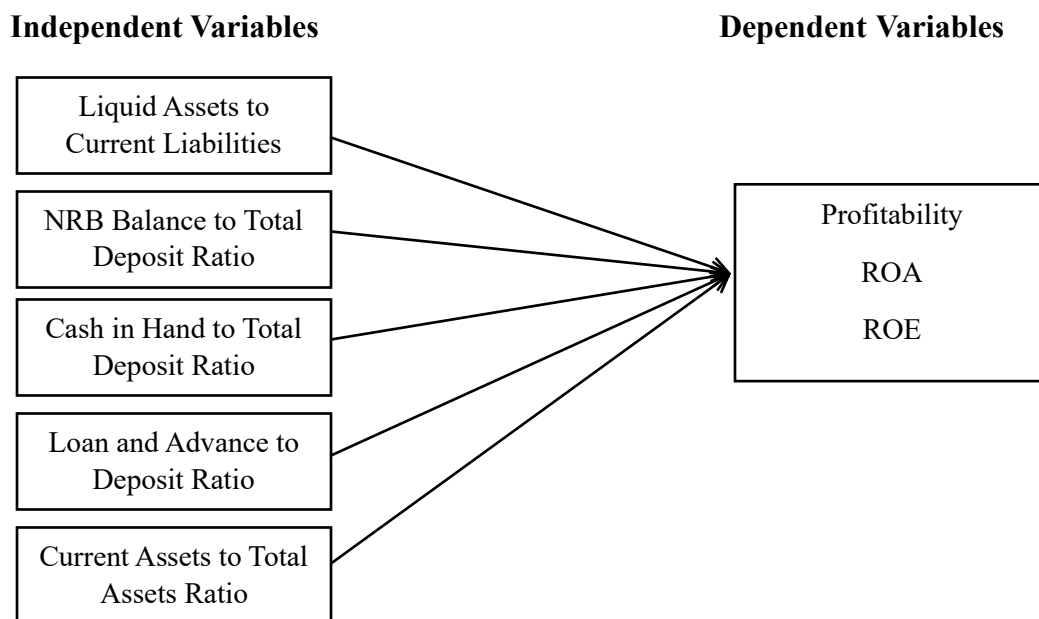
$X_4$  = Loan and advances to deposits ratio

$X_5$  = Current assets to total assets ratio

### 3.7 Research Framework and Definition of Variables

#### 3.7.1 Research Framework

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



*Figure: The Research Framework*

*Source: Kajananthan and Nimalthasan (2013) and Bhatt (2020)*

#### 3.7.2 Definition of Variables

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

##### **Independent Variables**

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

## **1 Financial Ratio**

Under the financial tool, mainly capital structure and profitability of the banks have been measured.

### **Liquidity**

The capacity to pay short-term or financial obligations as they become due is known as liquidity. In a commercial bank, liquidity refers to the institution's capacity to meet all of its contractual commitments on time. These responsibilities can include lending, deposit investment and withdrawal, and liability maturity, all of which occur naturally as part of the bank's regular operations. Additionally, liquidity relates to the capacity to finance the growth of assets and pay down debts without suffering unanticipated losses. As a result, effective liquidity management within the bank contributes to the institution's ability to meet its cash needs, which are frequently erratic and dependent on outside variables as well as the actions of other agents.

Liquidity is the capacity to pay debts or other short-term obligations as they become due. A commercial bank's liquidity is defined as its ability to meet all of its contractual commitments on time. These obligations can include lending, investing, withdrawing deposits, and maturing liabilities—all of which are normal business operations. Effective liquidity management in the bank helps to ensure that the bank is able to meet incurred cash, which is frequently uncertain and subject to external factors as well as the behavior of other agents. Liquidity is also defined as the bank's capacity to fund asset growth and meet liabilities as they become due without incurring unexpected losses.

### **Liquid assets to Current liability ratio (LACLR):**

Liquid assets to current liability ratio (LACLR) indicates that the proportion of total liquid assets to current liabilities, as seen on commercial banks' balance sheets, including the sum of current deposits, savings deposits, bills payable, and creditors. A greater ratio indicates the banks' stronger liquidity position, which is advantageous for potential new investment opportunities. The following formula is used: More liquidity in banks is indicated by a higher ratio, which is favorable for fresh investment prospects.



$$\text{LACLR} = \frac{\text{Liquid assets}}{\text{current liabilities}}$$

Where,

Liquid assets = cash in hand + money at call and short notice

Current liabilities = Due to BFI + due to NRB+ Derivatives financial institution + current deposit + saving deposit+ bills payable + income tax payable

### **NRB balance to total deposit ratio (NRBTDR):**

NRB balance to total deposit ratio (NRBTDR) indicates the amount deposited in Nepal Rastra Bank and total deposits collected by the commercial banks. Higher ratio means that there is a high liquidity position in the banks. The formula is as follows:

$$\text{NRBTDR} = \frac{\text{NRB Balance}}{\text{Total deposit ratio}} \times 100\%$$

### **Cash in hand to total deposit ratio (CHTDR):**

Cash in hand to total deposit ratio (CHTDR) shows the ratio of cash in hand on total deposits per given in balance sheets of the commercial banks. Higher ratio shows the higher liquidity position of the banks that gives more useful for new investment opportunity. The formula is as follows:

$$\text{CBTDR} = \frac{\text{cash in hand}}{\text{total deposit}} \times 100\%$$

### **Loan and advance to total deposit ratio (LTDR):**

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

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

### **Current assets to total assets ratio (CATAR)**

The current assets to total assets ratio (CATAR) measures the amount of total funds invested in working capital and sheds light on the relevance of a company's current assets. It's worth noting how much of that portion of total assets is taken up by current assets, as current assets are primarily responsible for forming working capital and also contribute to growing liquidity. The current assets to total deposit ratio is the ratio of current assets to total assets (CATAR). The following is the formula.

$$\text{CATAR} = \frac{\text{Current assets}}{\text{Total assets}} 100\%$$

Where,

Current assets = cash and cash equivalent + NRB balance + derivative financial instrument + placement with bank & financial institutions + other trading assets

### **Profitability Ratio**

Profitability ratios constitute a category of financial measures employed to evaluate a company's capacity to produce earnings in comparison to its incurred expenses. In the context of most of these ratios, a higher value compared to a competitor's ratio or a previous period's ratio suggests positive performance and success for the company.

#### **a. Return of Equity**

The return on equity is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

$$\text{ROE} = \frac{\text{NPAT}}{\text{Total equity}} \times 100$$

**b. Return on Assets**

Return on assets is an indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management is at using assets to generate earnings. Calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage. Sometimes this is referred to 'return on investment'

$$ROA = \frac{NPAT}{Total\ assets} \times 100$$

## CHAPTER IV

### RESULTS AND DISCUSSION

In this chapter, collected data are analyzed and interpreted as per the stated methodology in the previous chapter. The study's findings were obtained with the aid of financial statements covering the period from FY 2012–13 to FY 2021/22. Financial ratios are used to analyze the data, which are shown in tabular and diagrammatic form. Additionally, the data have been analyzed using statistical methods including regression, co-efficient of variation, mean, standard deviation, and correlation coefficient.

#### 4.1 Results

The main goals of every organization are to maximize wealth and profits. As a result, every employee in the company works to increase profits. It is critical to their future development and survival in these cutthroat markets. Several profitability ratios that show the bank's operational effectiveness have been examined in this section. Profitability ratios are very helpful to measure the overall efficiency of operation of financial institutions. Higher ratio shows the higher efficiency of the bank.

##### 4.1.1 Descriptive Analysis of the Variables

Table 3

*Descriptive Analysis*

	Minimum	Maximum	Mean	Std. Deviation
ROA	2.31	33.08	1.61	0.49
ROE	0.20	2.64	16.61	5.42
LACLR	2.07	59.73	10.95	5.62
NRBTDR	2.00	21.66	8.68	3.40
CHTDR	1.21	4.75	2.37	0.53
LATDR	48.32	94.16	76.22	7.48
CATAR	8.10	39.06	17.87	3.94

Valid N(listwise) 70

*Source: Annual Report*

Table 3 presents a detailed Descriptive Analysis of various financial metrics for five different banks: MNBBL, GBBL, MBBL, JBBL, and KSBBL. Each bank is evaluated based on eight key indicators, including Tools, LACLR (Loan Asset Composition Ratio), NRBTDR (Non-Performing Loan Ratio to Total Deposits Ratio), CHTDR (Capital to Total Deposits Ratio), LATDR (Loan to Asset Ratio), CATAR (Capital Adequacy to Asset Ratio), ROA (Return on Assets), and ROE (Return on Equity). Let's delve into a comprehensive analysis of each bank.

The table presents key financial performance indicators for a set of companies, offering insights into their profitability, cash flow, leverage, and solvency. The first paragraph focuses on Return on Assets (ROA), which ranges from 2.31% to 33.08%, with a mean of 1.61% and a narrow standard deviation of 0.49%. This suggests a considerable diversity in asset efficiency across the companies, with a relatively low average and limited variability. The second paragraph delves into Return on Equity (ROE), spanning from 0.20% to 2.64%, with a mean of 16.61% and a wider standard deviation of 5.42%. The range indicates varying levels of profitability concerning equity, and the higher standard deviation suggests more significant differences in how efficiently companies utilize their equity for generating returns.

Moving to the third paragraph, the focus shifts to Leverage Adjusted Cash Flow Return (LACLR), which ranges from 2.07% to 59.73%, with a mean of 10.95% and a standard deviation of 5.62%. The diverse LACLR values reflect differences in cash flow returns considering leverage, showcasing variability in how companies manage their cash flows in relation to their debt. In the final paragraph, attention is directed towards three ratios: Net Revenue Before Tax and Depreciation Return (NRBTDR), Cash Holding to Total Debt Ratio (CHTDR), and Long-Term Asset to Total Debt Ratio (LATDR). NRBTDR exhibits a range of 2.00% to 21.66%, CHTDR spans from 1.21 to 4.75, and LATDR ranges from 48.32% to 94.16%. These ratios illustrate diverse trends in converting net revenue into returns, managing cash in relation to debt, and evaluating long-term solvency, respectively. The means and standard deviations for these ratios provide further insights into the overall financial health and risk profile of the companies.

In conclusion, the table offers a comprehensive overview of the financial landscape of the companies, emphasizing the variability and diversity in key financial metrics. Analyzing these indicators collectively facilitates a nuanced understanding of the companies' performance, aiding in making informed decisions about their financial health and risk management. The descriptive analysis in Table 1 provides a comprehensive understanding of the financial performance of each bank, allowing stakeholders to compare and assess their strengths, weaknesses, and risk profiles. The range, mean, and SD values offer valuable insights into the variability and central tendency of the financial metrics for each bank, aiding in informed decision-making and risk management.

#### **4.1.2 Correlation of Coefficient**

The correlation coefficient serves as a tool to evaluate the association between multiple variables, indicating whether they are positively or negatively correlated. In this context, Karl Pearson's Coefficient of Correlation has been employed to examine the relationship between liquidity and profitability. The analysis involves assessing the strength and direction of the linear connection between the variables of interest. The correlation coefficient, denoted by "r," is a statistical metric ranging from -1 to 1. Its purpose is to provide insights into the nature of the relationship between two variables. A value of 1 signifies a perfect positive correlation, indicating that as one variable increases, the other also increases proportionally. Conversely, a value of -1 denotes a perfect negative correlation, suggesting that as one variable increases, the other decreases proportionally. A correlation coefficient of 0 implies no linear relationship between the variables. The application of this statistical measure aids in understanding the degree and direction of the correlation between liquidity and profitability.

In financial analysis, correlation coefficients play a crucial role in unraveling the relationships between various financial metrics. For example, there is a significant interest in examining whether a positive correlation exists between a bank's Tools (representing financial leverage) and its Return on Assets (ROA), suggesting that increased leverage is associated with higher profitability. Similarly, delving into the correlation between the Loan Asset Composition Ratio (LACLR) and Return on Equity (ROE) offers valuable insights into how a bank's composition of loan assets relates to its overall returns for shareholders. Correlation of

coefficient shows the relationship between two or more than two variables. It measures the variables are positively or negatively co-related. For this purpose, Karl Pearson's Co-efficient of correlation has been used to find out and analyze the relationship between liquidity and profitability. The analysis employed correlation coefficient assessment to ascertain the magnitude and direction of the linear relationship between the variables.

Table 4

*Correlation Matix*

	ROA	ROE	CHTDR	LADR	NRBTDR	LACLR	CATAR
ROA	1						
ROE	.135	1					
CHTDR	.245	-.164	1				
LATDR	.250	-.446**	.588**	1			
NRBTDR	-.277	.080	.008	.115	1		
LACLR	.017	.005	-.328*	-.505**	.035	1	
CATAR	.061	-.101	-.446**	-.471**	.140	.710**	1

\*\* correlation is significant at the 0.01 level (2-tailed)

Table 4 displays the correlations between the dependent and independent variables. Specifically, the table illustrates the relationships between liquidity variables (such as LATDR, NRBTDR, LACLR, CATAR, and CHTDR) and profitability variables (including return on assets and return on equity).

The correlation analysis reveals that CHTDR has a positive but statistically insignificant relationship with ROA (correlation coefficient = 0.245) and a negative but insignificant relationship with ROE (correlation coefficient = -0.163). LATDR exhibits a positive yet insignificant correlation with ROA (correlation coefficient = 0.25) and a negative and

significant correlation with ROE (correlation coefficient = -0.446). NRBTDR demonstrates a negative and insignificant correlation with ROA (correlation coefficient = -0.277) and a positive but insignificant correlation with ROE (correlation coefficient = 0.80). LACLR displays a positive but insignificant correlation with both ROA (correlation coefficient = 0.017) and ROE (correlation coefficient = 0.005).

Ultimately, the correlation coefficient between CATAR and ROA is 0.061. The correlation of CATAR with ROA indicates a positive but insignificant relationship. The correlation coefficient between CATAR and ROE is -0.101. The correlation of CATAR with ROE suggests a negative but insignificant relationship.

#### **4.1.3 Regression Analysis**

Regression analysis serves as a statistical technique employed to examine the connections between variables by constructing an estimated functional relationship among them. This method is valuable for assessing the robustness of relationships between two or more variables.

##### **The Multiple Regression of ROA on Liquidity**

The regression analysis investigates the influence of liquidity variables, such as Liquid Assets to Current Liability Ratio (LACLR), NRB Balance to Total Deposit Ratio (NRBTDR), Cash in Hand to Total Deposit Ratio (CHTDR), Loan and Advance to Deposit Ratio (LATDR), and Current Assets to Total Assets Ratio (CATAR), on the changes in Return on Assets (ROA) for the chosen banks.

The equation for this regression model is outlined below:

$$ROA = a_1 + b_1LACLR + b_2NRBTDR + b_3CHTDR + b_4LATDR + b_5CATAR \dots \dots \dots (i)$$

Where, ROA= Return on Asset,  $a_1$ = Constant,  $b_1$ ,  $b_2$ ,  $b_3$ ,  $b_4$  and  $b_5$  = Regression coefficient



Table 5

*Regression of ROA ON Liquidity Position***Model Summary**

Model	R	R square	Adjusted R Square	Std. Error of the Estimate
1	.4701	.221	.423	.5199

a. Predictors: (Constant), LATDR, NRBTDR, LACLR, CATAR and CHTDR

The table 5 shows that total variation of the ROA that explained by independent variable i.e. LATDR, NRBTDR, LACLR, CATAR and CHTDR. R is the correlation coefficient which measure the degree of association between dependent and independent variable. R is 0.4701 which shows that there is low degree of positive correlation between dependent and independent variable. The value of coefficient of multiple Determinations ( $R^2$ ) is 0.2210. it indicates that 22.10 percent of total variation in ROA is explained by independent variables i.e. LATDR, NRBTDR, LACLR, CATAR and CHTDR and remaining is explained by other variables. The standard error of estimate is 0.51999. It indicates that 52 percent is variation between actual and estimated value.

Table 6

*Analysis of Variance (ANOVA)*

Model	Sun of Square	df	Mean of Square	F	Sig.
Regression	3.376	5	0.675	2.497	0.044
Residual	11.897	64	0.270		
Total	15.237	69			

a. Dependent Variable: ROA

b. Predictors: (Constant), LATDR, NRBTDR, LACLR, CATAR and CHTDR

Table 6 shows that the value of F is 0.04 at 5 percent level of significance, the value is less than 0.05 which indicates that the overall model is reasonably fit and there is a statistically significant association between ROA and independent variable (liquidity).

Table 7

*Regression Coefficient of ROA*

Model	Unstandardized Coefficients		Standardized Coefficients	T value	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.512	0.645		0.793	0.432
CHTDR	0.156	0.100	0.269	1.560	0.026
LATDR	0.009	0.008	0.206	3.672	0.014
NRBTDR	-0.042	0.019	-0.320	-2.206	0.133
LACLR	-0.001	0.010	-0.015	-0.074	0.941
CATAR	0.023	0.014	0.331	1.632	0.010

Dependent Variable: (ROA)

Table 7 presented provides a summary of the coefficients obtained from a regression analysis, which appears to be a multiple linear regression model. This type of analysis is commonly used in statistics to examine the relationship between a dependent variable and several independent variables. In this case, the dependent variable is referred to as ROA, which is not listed in the table but is mentioned in parentheses at the bottom. ROA likely stands for return on assets, a financial metric used to evaluate a company's profitability.

These coefficients represent the estimated effect of each independent variable on the dependent variable ROA without any standardization. They indicate the change in the dependent variable for a one-unit change in the independent variable, holding all other variables constant. For example, a one-unit increase in CHTDR is associated with a 0.156-unit increase in ROA. These coefficients represent the estimated effect of each independent variable on the dependent variable after standardizing all variables. Standardization is done to compare the relative importance of each variable on the same scale, which is especially useful when variables have different units or scales. A higher absolute value of Beta indicates

a stronger influence on ROA. For instance, CATAR has a Beta value of 0.331, suggesting it has a relatively stronger impact on ROA compared to other variables in the model.

The t value represents the ratio of the estimated coefficient (B) to its standard error. It is used to test the statistical significance of the coefficient. In this context, the t values for CHTDR, LATDR, NRBTD, LACLR, and CATAR are 1.560, 3.672, -2.206, -0.074, and 1.632, respectively. A higher absolute t value indicates greater statistical significance. For instance, NRBTD has a relatively high absolute t value (-2.206), suggesting it might be statistically significant in explaining variations in ROA. This column represents the p-value associated with each coefficient. The p-value indicates the probability of obtaining the observed result or more extreme if the true effect of the variable on ROA is zero. Lower p-values (typically less than 0.05) suggest that the variable is statistically significant. In this table, CHTDR, LATDR and CATAR have p-values less than 0.05, indicating that they are statistically significant predictors of ROA.

In summary, this table provides valuable information about the coefficients of a multiple linear regression model, allowing us to assess the relationships between the listed independent variables CHTDR, LATDR, NRBTD, LACLR, CATAR and the dependent variable ROA. The standardized coefficients and p-values help determine the strength and significance of these relationships. However, it's important to note that additional information, such as the model's goodness of fit and the context of the analysis, would be needed to fully interpret the results and draw meaningful conclusions.

### **The Multiple Regression of ROE on Liquidity**

The regression analysis examines the impact of liquidity variables, including Liquid Assets to Current Liability Ratio (LACLR), NRB Balance to Total Deposit Ratio (NRBTD), Cash in Hand to Total Deposit Ratio (CHTDR), Loan and Advance to Deposit Ratio (LADR), and Current Assets to Total Assets Ratio (CATA), on the changes in Return on Equity (ROE) concerning the liquidity position of the chosen banks. The regression results are presented in Table 4.4.2, and the equation for this regression model is expressed as follows:

$$ROE = a_1 + b_1LACLR + b_2NRBTD + b_3CHTDR + b_4LATDR + b_5CATAR \dots \dots \dots (ii)$$

Where, ROE= Return on Equity,  $a_1$ = Constant,  $b_1$ ,  $b_2$ ,  $b_3$ ,  $b_4$  and  $b_5$  = Regression Coefficient.

Table 8

*Regression of ROE on Liquidity Position*

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. error. of the Estimate
1	0.5746	0.3302	0.2541	5.6611

a) Predictors: (Constant), LATDR, NRBTD, LACLR, CATAR and CHTDR

Table 8 shows that total variation of the ROE that explained by independent variable i.e. LATDR, NRBTD, LACLR, CATAR and CHTDR. R is the correlation coefficient which measure the degree of association between dependent and independent variable. R is 0.5746 which shows that there is low degree of positive correlation between dependent and independent variable. The value of coefficient of multiple Determinations ( $R^2$ ) is 0.3302. it indicates that 33.02 percent of total variation in ROE is explained by independent variables i.e., LATDR, NRBTD, LACLR, CATAR and CHTDR and remaining is explained by other variables. The standard error of estimate is 5.6611 which indicates that there is variation between actual and estimated value.

Table 9

*Analysis of Variance (ANOVA)*

Model	Sum of Square	df	Mean of Square	F-test	Significance F
Regression	695.360	5	139.072	4.33	0.002
Residual	1410.12	64	32.048		
Total	2105.489	69			

a. Dependent Variable (ROE)

b. Predictors: (Constant), LATDR, NRBTD, LACLR, CATAR and CHTDR

Table 9 shows that the value of P is 0.002 at 5 percent level of significance, the value is less than 0.05 which indicates that the overall model is reasonably fit and there is a statistically significant association between ROE and independent variable (liquidity).

Table 10

*Regression Coefficient of ROE*

Model	Unstandardized Coefficients		Standardized Coefficients	T value	Sig.
	B	Std. Error	Beta		
1 (Constant)	46.361	7.019		6.605	0.000
CHTDR	0.332	1.086	0.049	2.508	0.031
LATDR	-0.337	0.085	-0.669	-3.963	0.000
NRBTDR	0.089	0.205	0.005	0.443	0.667
LACLR	-0.039	0.109	-0.067	-0.368	0.720
CATAR	-0.292	0.155	-0.355	-2.489	0.016

(a) Dependent Variable (ROE)

The Table 10 provided a multiple linear regression analysis, which is a statistical technique used to examine relationships between a dependent variable and several independent variables. In this particular analysis, the dependent variable being studied is ROE, which stands for Return on Equity, a financial metric used to evaluate a company's profitability in relation to its shareholders' equity. This column denotes the various components or predictors integrated into the regression model. In this case, the model considers five independent variables: CHTDR, LATDR, NRBTDR, LACLR, and CATAR.

These coefficients reflect the estimated impact of each independent variable on the dependent variable ROE without any standardization. Essentially, they indicate the change in ROE for a one-unit change in the independent variable, while holding all other variables constant. For example, for each one-unit increase in CHTDR, the model estimates an increase in ROE of 0.332 units. These coefficients offer the estimated effect of each independent variable on the dependent variable ROE after standardizing all variables. Standardization is employed to facilitate the comparison of the relative importance of each variable, particularly when the variables have different units or scales. The standardized Beta values enable us to

identify the variables with the most substantial impact on ROE. For instance, LATDR has a negative standardized coefficient of -0.669, indicating that it has a relatively strong negative influence on ROE compared to the other variables in the model.

The t value represents the statistical significance of each coefficient. It is calculated as the ratio of the estimated coefficient (B) to its standard error. Larger absolute t values suggest greater statistical significance. In this table, the t values for CHTDR, LATDR, NRBTD, LACLR, and CATAR are 2.508, -3.963, 0.443, -0.368, and -2.489, respectively. The t value of -3.963 for LATDR, for instance, indicates high statistical significance, implying that LATDR is a crucial variable in explaining variations in ROE. This significance column provides the p-values associated with each coefficient. A p-value communicates the probability of obtaining the observed result (or a more extreme one) if the true effect of the variable on ROE is zero. Smaller p-values (typically below 0.05) suggest that the variable is statistically significant. In this table, LATDR and CATAR have p-values of 0.000 and 0.016, respectively, signifying that they are statistically significant predictors of ROE.

To sum it up, this table offers valuable insights into the coefficients of a multiple linear regression model, allowing us to assess the relationships between the listed independent variables CHTDR, LATDR, NRBTD, LACLR, CATAR and the dependent variable (ROE). The standardized coefficients and p-values provide information about the strength and statistical significance of these relationships. The results suggest that LATDR and CATAR are statistically significant predictors of ROE, while CHTDR, NRBTD, and LACLR have less impact in this specific model.

## 4.2 Discussion

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

The average current to current liabilities ratio of MNBBL is 5.57%, GBBL 7.47%, MBBL 6.64%, JBBL 9.18% and KSBBL 25.91%. The ratio of average current assets to current liabilities is highest for KSBBL and lowest for MNBBL. The presented data illustrates that KSBBL has the highest current assets relative to short-term debt, whereas MNBBL has the lowest. On average, the NRB balance to total deposit ratios for the banks are as follows: MNBBL at 7.32%, GBBL at 7.51%, MBBL at 7.57%, JBBL at 12.63%, and KSBBL at 8.37%. The ratio of average NRB balance to average total deposits is highest for JBBL and lowest for MNBBL. It shows that the NRB balance of JBBL is the highest compared to the total deposits collected and the lowest is that of Muktinath Bikas Bank Limited. The average cash to total deposits ratio of MNBBL is 1.93%, GBBL 3.64%, MBBL 2.54%, JBBL 2.38% and KSBBL 1.38%. The average cash to total deposit ratio is highest for GBBL and lowest for KSBBL. It shows that the amount of cash retained by GBBL is the highest compared to the total amount of deposits collected, while the lowest amount of cash is held by KSBBL. The mean ratio of loan and advance to total deposit for the sampled banks is as follows: MNBBL at 74.96%, GBBL at 90.05%, MBBL at 73.70%, JBBL at 82.60%, and KSBBL at 59.77%. GBBL holds the highest average ratio, indicating a greater proportion of loans and advances in relation to the total deposits, while KSBBL has the lowest. This suggests that GBBL maintains the highest level of loans and advances relative to the total deposits, while KSBBL has the lowest.

The average return on assets (ROA) for the sampled banks is as follows: MNBBL at 1.66%, GBBL at 2.07%, MBBL at 1.32%, JBBL at 1.29%, and KSBBL at 1.69%. GBBL achieves the highest average ROA of 2.07%, while MBBL Bank Limited records the lowest at 1.32%. This indicates that GBBL earns the highest average return in proportion to its assets, while MBBL Bank Limited has the lowest. In terms of return on equity (ROE), the mean values are MNBBL at 22.47%, GBBL at 14.11%, MBBL at 15.77%, JBBL at 12.21%, and KSBBL at 18.47%. The highest ROE is observed in MNBBL, and the lowest is in JBBL Bank Limited. This suggests that MNBBL Bank Limited has a higher Return on Equity (ROE) compared to JBBL Bank Limited among the banks studied. The correlation coefficients between ROA and

CHTDR, LACAR, LATDR and CATAR are 0.245, 0.017, 0.25 and 0.061, respectively. This shows that the relationship is positive but not significant. Likewise, the correlation coefficient between ROA and NRBTDR stands at -0.277, denoting a negative but statistically insignificant relationship. In the case of ROE and NRBTDR, the correlation coefficient is 0.0801, suggesting a positive yet insignificant association. Meanwhile, the correlation coefficient between ROE and LACLR is 0.005, indicating a positive and insignificant relationship. Moreover, the correlation coefficients between ROE and CHTDR, LATDR, and CATAR are -0.163, -0.445, and -0.101, respectively. These values imply a negative but statistically insignificant relationship between ROE, CHTDR, and CATAR. Notably, LATDR exhibits a significant relationship with ROE.

Multiple regression of ROA and liquidity (CHTDR, LATDR, NRBTDR, CATAR and LACLR) this table provides valuable information about the coefficients of the multiple linear regression model, allowing us to evaluate the relationship between the listed independent variables (CHTDR, LATDR, NRBTDR, LACLR, CATAR) and the dependent variable (ROA). Standardized coefficients and p-values help determine the strength and significance of these relationships. However, it is important to note that additional information, such as model fit and analysis context, is needed to fully interpret the results and draw meaningful conclusions. Multiple regression of ROE and liquidity (CHTDR, LATDR, NRBTDR, CATAR and LACLR), this table provides valuable information about the coefficients of the multiple linear regression model, allowing us to evaluate the relationship relationships between independent variables are listed (CHTDR, LATDR, NRBTDR). , LACLR, CATAR) and dependent variable (ROE). Standardized coefficients and p-values provide information about the strength and statistical significance of these relationships. The results show that LATDR and CATAR are statistically significant predictors of ROE, while CHTDR, NRBTDR and LACLR have less impact in this particular model.

The study shows that the five sample banks have interrelationships between the profitability of deposits, loans and advances. The banks selected in the sample manage their liquidity position in the best possible way. However, some liquidity indices reflect a positive correlation and a negative relationship with profitability indices. Banks must be able to



maintain their liquidity at optimal levels. Banks are required to invest in long-term, medium-term or short-term loans and advances to yield the highest rate of return, implying that optimal investment in liquid assets can be made. Banks' profitability fluctuates mainly in all sampled banks, which can be due to fluctuations in liquidity indicators and other external factors. However, all banks try to increase their profits every year. LATDR has a significant relationship with ROE, which shows that LATDR has an influence on ROE. This result is similar to previous studies such as Shrestha & Jha (2020) and Bwacha & Xi (2018). And LATDR has insignificant relationship with ROA, which means LATDR does not affect ROA. Results supported by Kathi, (2020). LACLR has insignificant relationship with ROA as well as ROE. This conclusion is supported by Stapit & Maharjan (2012). In the banking sector, more liquidity implies less profit and vice versa. Liquidity shows the strength of banks in terms of operations and profitability shows efficient and effective maximization of value over a period of time.

## CHAPTER V

### SUMMARY AND CONCLUSION

#### 5.1 Summary

This study is prepared to find out the impact of capital structure on the profitability of development banks i.e. MNBBL, GBBL, MBBL, JBBL and KSBBL. Liquidity, deposits, loans and advances and current earning assets are the key factors that help a bank achieve its goals. If banks have high liquidity, then they cannot make profits. Because most of the capital structure is reserved in the bank, it does not bring profit to the bank. Insufficient liquidity of banks can lead to serious financial problems such as loss of public confidence and even lead to bank liquidation. Liquidity management is a challenge for banks that want to achieve significant profits. The first chapter includes the research background, problem statement, significance and limitations of the study. The second chapter includes a review of relevant literature, theoretical background of banking principles as well as previous journals, articles and these. The second chapter includes a review of unpublished journals, articles and theses and presents them as theoretical background. Chapter 3 presents the methods and techniques applied to evaluate the relationship between capital structure, deposits, loans and advances profitability of banks in the research sample. In the fourth chapter, data and information collected from different sources are analyzed and presented where the analysis and evaluation are done using different financial and statistical tools. The various capital structure, deposit, loan, advance and profit ratios of current assets are used as statistical tools while the mean, standard deviation, coefficient of variation, coefficient correlation and regression analysis were used as statistical tools.

In this study, after analyzing financial data, capital structure in terms of liquidity ratio, KSBBL and JBBL share high liquidity and the ability to create large new investment opportunities. However, in terms of liquidity for CHTDR, GBBL has larger capital resources to pay creditors compared to other banks in the sample. KSBBL's similar CATAR has a larger amount of liquid assets to support its asset base compared to other banks in the sample. Furthermore, GBBL's loan investment ratio is higher than total deposits (LATDR), which shows that better utilization of total deposits has been made to generate better returns. Finally, JBBL's cash in hand to total deposit ratio (CHTDR) is higher, which means JBBL has kept inflation under control.

According to correlation analysis, the ROA relationship is positively correlated with CHTDR, LATDR, LACLR and CATAR and vice versa is negatively correlated with NRBTD. Similarly, NRBTD and LACLR are positively correlated with ROE but CHTDR, LATDR and CATAR are negatively correlated.

## **5.2 Conclusion**

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

KSBBL's LACLR, NRBTD and CATAR had the largest fluctuations and other MNBBL, GBBL, MBBL and JBBL had the smallest fluctuations. JBBL's CHTDR and LADR are the most volatile compared to other sample banks.

Similarly, the profitability of financial indicators: KSBBL's ROA has the most volatility and GBBL, MNBBL, JBBL and MBBL have the lowest volatility. MNBBL's ROA decreased slightly over the study periods. The ROE of KSBBL and MNBBL seems unattractive due to high volatility. And the ROE of GBBL, MBBL and JBBL showed the lowest volatility, while GBBL showed consistency throughout the study period.

The correlation between ROA with CHTDR, LADR, LACLR and CATAR is positive and insignificant, which shows that the independent variable has no impact on ROA. And the correlation between NRBTD is negative but not significant. The correlation between ROE and CHTDR, LADR, CATAR is a negative relationship but not statistically significant, showing that the independent variable increases, ROE decreases and vice versa but the independent variables do not affect ROE. ROE and LADR have a negative but significant relationship, which shows that LADR has an impact on ROE. Correlation analysis shows that there is relationship between the dependent variables, i.e., ROA, ROE, and the independent variables, i.e., LADR, CHTDR, NRBTD, LACLR and CATAR.

### 5.3 Implications

The following recommendations have been given for the enhancement of the liquidity and profitability position of the selected banks.

- i. The average liquidity ratio of MNBBL is comparatively less than that of other examined development banks. Therefore, it is suggested that MNBBL should enhance its liquidity position concerning the liquidity ratio. The average cash-to-total deposits ratio of KSBBL is lower than that of the selected development banks. Hence, it is advisable for KSBBL to maintain its cash-to-total deposits ratio at an adequate level. The average loan and advances-to-total deposits ratio of KSBBL is lower than that of the selected development banks. Therefore, it is recommended to maintain an adequate loan and advances-to-total deposits ratio for KSBBL. The average NRB TDR of MNBBL is lower among the selected development banks, so it is advisable for MNBBL to maintain an adequate NRB balance-to-total deposit ratio.
- ii. Therefore, the average liquid assets to total GBBL deposits ratio in selected development banks is recommended to maintain an appropriate ratio of liquid assets to total GBBL deposits. JBBL's average ROA is lower among selected development banks, so JBBL is recommended to increase the use of more profitable assets. JBBL's average ROE is lower among selected development banks, therefore, it is recommended to increase operating efficiency to generate more profits for the bank.
- iii. This study may be helpful to fulfil the gaps of proper research about relationship between liquidity and profitability. It may provide the knowledge about liquidity in Nepalese development banks and their profitability position.
- iv. This study reflects the relationship between liquidity, deposits, loans and advances profitability position of five selected development banks only. Furthermore, researchers can be carried out using larges sampling other development banks and commercial banks too.