

Major Research Project
Study on the Impact of Capital Structure on
Financial Performance of Indian Banks:
HDFC, SBI, ICICI and PNB

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CERTIFICATE

This is to certify that Khushali Garg, roll number 2K21/DMBA/64, student of Masters of Business Administration at Delhi School of Management, DTU has successfully completed the project titled “**Study on the Impact of Capital Structure on Financial performance of Indian Banks: HDFC, SBI, ICICI and PNB**” under my guidance and supervision. It is her original work and has not been submitted for the award of any credits/degree whatsoever to the best of our knowledge.

The project is submitted in partial fulfillment of the requirement for the award of the degree of Master of Business Administration.

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DECLARATION

I solemnly declare that the project dissertation report titled “**Study on the Impact of Capital Structure on Financial performance of Indian Banks: HDFC, SBI, ICICI and PNB**”, submitted to Delhi School of Management, DTU is based on my original work under the guidance of my mentor Mr. Chandan Sharma, Assistant Professor, Delhi School of Management, DTU, and submitted in partial fulfillment of the requirement for the award of the degree of Master of Business Administration.

I further certify that the work contained in this report has not been submitted to any other institution for the award of any degree.

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It has been my constant endeavor to ensure that the project is completed in the best possible manner and ensure that it is error-free.

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EXECUTIVE SUMMARY

The banking industry is a critical component of any economy, and its stability and efficiency are crucial for sustained economic growth. One of the key determinants of the performance of banks is their capital structure, which refers to the mix of debt and equity used to finance their operations. In recent years, the issue of capital structure has become particularly important for banks in emerging markets such as India, where the financial sector has been undergoing significant changes.

The objective of this research report is to investigate the impact of capital structure on the financial performance of four major banks in India: HDFC, SBI, ICICI and PNB. The research seeks to understand the relationship between the banks' capital structure and their profitability, asset quality, liquidity and solvency. In doing so, we aim to identify the factors that contribute to the financial performance of these banks and provide recommendations for improving their performance.

The scope of this study will cover the period from 2018 to 2022, during which the Indian banking sector underwent significant reforms, including the implementation of the Insolvency and Bankruptcy Code, recapitalization of public sector banks, and adoption of the Basel III norms. The study will use publicly available data from the banks' financial statements, including their balance sheets, income statements, and cash flow statements, to analyze their capital structure and financial performance.

The methodology used in this study will include a descriptive analysis of the banks' capital structure and financial performance, including measures such as Return on Assets (ROA), Return on Equity (ROE), Debt-to-Equity (D/E) ratio, and interest coverage ratio (ICR). We will also use regression analysis to measure the statistical significance of the relationship between capital structure and financial performance, controlling for other factors that may influence performance.

In conclusion, this study seeks to provide insights into the factors that influence the financial performance of Indian banks, and their capital structure in particular. By analyzing the capital structure of HDFC, SBI, ICICI and PNB, we hope to provide recommendations for optimizing the mix of debt and equity to enhance their financial performance.

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CHAPTER 1

INTRODUCTION

1.1 Background

The capital structure of a company refers to the way it finances its assets by using a mix of debt, equity, and hybrid securities. Decisions regarding capital structure are considered vital in financial management as they directly affect the profitability and overall financial performance of a company. Capital structure decisions can help maximize earnings, minimize risks, and increase the value of a company.

In the banking industry, the capital structure plays an even more crucial role, as banks act as financial intermediaries that accept deposits from customers and channel those deposits into lending activities. In India, the banking sector is one of the most significant sectors for investors, with 57 banks operating alongside 30 non-banking financial institutions (NBFIs).

Despite the importance of capital structure in the banking industry, there has been limited research attention to the relationship between capital structure and financial performance of banks in India. Thus, this study aims to measure the impact of capital structure on the financial performance of Indian banks over a period of 2018 to 2022.

The study will focus on analysing the proportionate relationship between debt and equity and the determination of optimal capital structure to provide empirical evidence on potential problems in performance and capital structure of Indian banks. Moreover, this study will compare the capital structure and financial performance of Indian banks with non-banking financial institutions, such as insurance firms, pawn shops, and microloan organizations, to gain a broader understanding of this issue in the financial sector.

The findings of this study are expected to contribute to the existing literature on capital structure and profitability and provide valuable insights for financial managers and investors in the Indian banking industry. By analysing the relationship between capital structure and financial performance, this study aims to help banks make informed decisions regarding their capital structure to maximize their profitability and long-term growth.

The purpose of this study is to measure the impact of capital structure on the performance of Indian banking and non-banking firms from 2018 to 2022. It aims to:

- Compare the impact of capital structure decisions between these two sectors.
- Capital structure refers to the proportional relationship between debt and equity.
- Determining the significant relationship between capital structure and financial performance.

1.2 Problem Statement

The banking industry in India has witnessed significant changes in recent years, including the implementation of regulatory reforms aimed at improving the efficiency and stability of the sector. However, despite these reforms, the Indian banking sector continues to face challenges in maintaining high levels of financial performance. One of the key factors that could be contributing to this challenge is the capital structure of banks, which is critical for their profitability and overall financial health.

In light of this, the problem statement for this research report is to investigate the relationship between capital structure and financial performance of four major banks in India, namely HDFC, SBI, ICICI and PNB. Specifically, we aim to address the following questions:

1. How do these banks finance their operations through the use of debt and equity, and what is the current mix of debt and equity in their capital structure?
2. How has the capital structure of these banks evolved over the past five years, and what factors have influenced these changes?
3. What is the relationship between the banks' capital structure and their financial performance, as measured by key indicators such as ROA, ROE, D/E ratio and ICR?

1.3 Objective of the Study

1. To analyse the capital structure of HDFC, SBI, ICICI and PNB banks in India and determine the extent to which they are reliant on debt and equity financing.
2. To evaluate the financial performance of the banks over the period from 2018 to 2022, focusing on key indicators such as ROA, ROE, D/E ratio and ICR.
3. To examine the relationship between capital structure and financial performance of the banks using statistical tools such as regression analysis.
4. To identify the key drivers of changes in the capital structure of the banks over the period of analysis.
5. To provide recommendations for improving the financial performance of the banks based on the insights gained from the analysis of their capital structure and financial performance.

Through achieving these objectives, this study aims to contribute to the understanding of the factors that affect the financial performance of Indian banks and provide insights for improving their performance.

1.4 Scope of Study

A study on impact of capital structure on financial performance of Indian Banks may include the following:

1. Analysis of India's banks' and non-banking financial institutions' capital structures and how they affect their profitability.
2. Determining the ideal capital structure for Indian banks and other financial entities.
3. Analysing the numerous aspects, such as risk, size, and financial performance, that affect the capital structure decisions made by banks and non-banking financial organisations in India.
4. The capital structures of Indian banks and non-banking financial institutions are compared to those of their foreign counterparts.
5. Analysis of the performance of Indian banks and non-banking financial organisations in relation to changes in capital structure throughout time.

CHAPTER 2

LITERATURE REVIEW

Several studies have examined the relationship between capital structure and financial performance of Indian banks. For instance,

a study by Padhi and Sahoo (2016) found that capital structure had a significant impact on the profitability of Indian banks, with an optimal level of debt-to-equity ratio being 0.75.

Similarly, **a study by Prusty and Barik (2015)** found that Indian banks with higher leverage had lower profitability, while those with higher equity had higher profitability.

In addition, **a study by Gupta and Singh (2017)** found that Indian banks with higher debt-to-equity ratios had higher interest expenses, which negatively impacted their net interest margins and profitability.

Similarly, **a study by Meenakshi and Arputham (2017)** found that Indian banks with high debt-to-equity ratios had lower asset quality, which affected their profitability and financial stability. Moreover, the regulatory environment and market conditions have been found to influence the capital structure and financial performance of Indian banks.

A study by Aggarwal and Malhotra (2015) found that the Indian banking sector was highly regulated, with restrictions on foreign investment and capital requirements affecting the capital structure of banks. Similarly, **a study by Aithal and Aithal (2015)** found that market conditions such as economic growth and inflation had a significant impact on the profitability of Indian banks.

Overall, the literature suggests that capital structure is an important determinant of financial performance for Indian banks, with an optimal level of leverage being crucial for profitability and stability. However, the impact of capital structure on financial performance is influenced by a variety of factors such as regulatory environment, market conditions, and management practices.

2.1 Some important determinants of the study:

DEBT

Debt refers to the portion of a company's financing that comes from borrowing money, typically from banks, financial institutions, or bondholders. Debt financing allows a company to raise capital without giving up ownership or control of the business. However, it also involves making interest payments and principal repayments to lenders over a specific period of time. The level of debt in a company's capital structure can impact its financial risk and the cost of capital, as well as influence the company's flexibility in making business decisions. Determining the optimal level of debt in a company's capital structure is an important task for financial management.

Debt can be useful for individuals and organizations in certain circumstances, such as investing in education, starting a business, or buying a home. However, excessive debt can lead to financial stress and can become a burden on the borrower. High levels of debt can also impact credit scores and make it difficult to obtain loans or credit in the future.

Governments also take on debt to finance public projects and initiatives. National debt refers to the total amount of money owed by a government. High levels of national debt can lead to concerns about a country's economic stability and can affect the value of its currency.

EQUITY

Equity is a key component of a company's capital structure, along with debt. Unlike debt, which represents a financial obligation that must be repaid with interest, equity represents a permanent ownership interest in the company. Equity holders are entitled to a portion of the company's profits, known as dividends, and also have voting rights in certain corporate decisions.

Equity can be an attractive form of financing for companies because it does not involve interest payments or a legal obligation to repay. However, issuing equity dilutes existing ownership and can reduce earnings per share for current shareholders. Additionally, issuing too much equity can lead to a loss of control by the company's founders or existing shareholders.

The optimal mix of equity and debt in a company's capital structure depends on various factors, including the company's industry, growth prospects, and risk tolerance.

| Feature | Debt | Equity |
|-----------------------------|---|--|
| Source of funds | Borrowing from lenders | Selling ownership stakes to investors |
| Financial obligation | Interest and principal payments | Dividends (optional) and permanent ownership |
| Priority in repayment | Senior to equity | Subordinate to debt and other obligations |
| Voting rights | No voting rights | Voting rights in certain corporate decisions |
| Ownership interest | No ownership interest | Ownership interest and control in the company |
| Risk and return | Fixed interest payments, lower risk and lower returns | Variable returns, higher risk and higher returns |
| Impact on capital structure | Increases leverage and financial risk | Increases equity and dilutes existing ownership |

Overall, debt represents a financial obligation that must be repaid with interest and has priority in repayment over equity, while equity represents permanent ownership interest in the company and has variable returns and subordinate priority in repayment. Companies must consider the trade-offs between debt and equity when determining their optimal capital structure.

TYPES OF DEBT

There are several types of debt, each with its own features and characteristics. Here's a brief overview of some common types of debt:

Bank loans

Bank loans are a common form of debt financing in which a company borrows money from a bank or other financial institution. These loans can be secured or unsecured and are typically repaid with interest over a set period of time.

Bonds

Bonds are debt securities that are issued by companies or governments to raise capital. Investors purchase bonds and receive regular interest payments over the life of the bond. When the bond matures, the principal amount is returned to the investor.

Lines of credit

Lines of credit are a flexible form of debt financing in which a company is granted access to a certain amount of credit that can be used as needed. Interest is only charged on the amount of credit that is actually used.

Factoring

Factoring is a type of debt financing in which a company sells its accounts receivable to a third-party, known as a factor, at a discount in exchange for immediate cash. The factor then collects payment from the company's customers.

TYPES OF EQUITY

There are several types of equity, each with its own characteristics and features. Here's a brief overview of some common types of equity:

Common stock: Common stock represents ownership in a company and gives shareholders the right to vote on certain corporate decisions, such as the election of board members. Common stockholders may also receive dividends if the company chooses to pay them.

Preferred stock: Preferred stock represents a hybrid form of equity and debt. Preferred stockholders receive priority over common stockholders in the payment of dividends and in the event of liquidation, but do not have voting rights.

Restricted stock: Restricted stock is common stock that is subject to certain restrictions, such as a vesting schedule or limitations on transferability. Restricted stock is often used as a form of executive compensation.

Stock options: Stock options give employees or other individuals the right to purchase company stock at a predetermined price, known as the exercise price. Stock options can be an attractive form of compensation because they allow the holder to benefit from increases in the company's stock price.

2.2 Optimal Capital Structure

Features of Optimal Capital Structure

PROFITABILITY

A company must consider whether the financing it undertakes will result in optimal profits in the short and long term.

FLEXIBILITY

A high level of debt can lead to pressure from creditors and reduce a company's operational flexibility, while equity financing can increase the number of decision-

makers. Therefore, a company must decide on the best financing mix to achieve the necessary flexibility.

CONTROL

The optimal financing mix can help a company maintain proper control over its operations.

INSOLVENCY MANAGEMENT

By achieving an optimal capital structure, a company can reduce its bankruptcy costs and increase its earnings.

2.3 Financial Hierarchy

The financing hierarchy is an essential aspect of the capital structure, and it defines the order in which a company should raise funds based on cost, risk, and other parameters. The three main components of the financing hierarchy are:

RETAINED EARNINGS

It refers to the profits that a company retains instead of distributing them as dividends. Reinvesting these profits back into the company's operations is called "plowback." Retained earnings are considered a cost-effective and low-risk method of financing as they do not involve any transaction costs or covenants.

DEBT

It is another important component of the capital structure, and it allows individuals and institutions to take on obligations that they would otherwise be unable to. Businesses can leverage their private equity investment through debt, but it comes with some drawbacks, such as the definite and certain obligation to repay the money or other valuable items borrowed.

NEW EQUITY

It is the third component of the financing hierarchy and represents ownership in an asset after all debts associated with that asset have been paid off. It is considered the most expensive form of financing due to the high cost of issuing new shares and the

dilution of ownership. Equity holders also receive any residual cash flows after debt payments have been made.

2.4 Rationale For Financing Hierarchy

Managers prize adaptability. More so than internal funding, external financing restricts flexibility. New stock issues weaken control, while new debt issues result in bond covenants. The quantifiable cost of obtaining finance is the "cost" being discussed in this instance. This is the cost of interest a business incurs while borrowing money. The claim on earnings that must be granted to shareholders in exchange for their ownership portion in the company is referred to as the cost of capital when it comes to equity. For instance, if you need to borrow Rs. 40,000 from a bank at 10% interest while operating a small business, you can do so, or you can offer your neighbour Rs. 40,000 in exchange for a 25% stake in your company. Let's say the company makes Rs. 20,000 in profits the next year.

If you took out a bank loan, your profit would be Rs. 16,000 after interest costs (cost of debt financing) of Rs. 4,000. If equity financing is employed, on the other hand, one would have no debt (and, hence, no interest expense), but would only be able to keep 75% of their profit (the remaining 25% being owned by their neighbour). Therefore, the maximum personal gain would be Rs. 15,000 ($75\% \times \text{Rs. } 20,000$).

This illustration demonstrates how issuing debt as opposed to equity is less expensive for the company's original shareholder. Taxes improve the situation even further if one is in debt since they serve as a tax shelter by allowing interest expenses to be subtracted from income before income taxes are assessed (although we have omitted taxes from this case for simplicity). The fact that debt has fixed interest rates is undoubtedly advantageous, but it may also be risky for businesses because it creates a fixed expense. Returning to our example, let's say the business only made Rs. 5,000 the following year.

With debt financing, you would still be required to pay the same Rs. 4,000 in interest, leaving you with just Rs. 1,000 in profit ($\text{Rs. } 5,000 - \text{Rs. } 4,000$). In the case of equity, you once more incur no interest costs but only keep 75% of your earnings, leaving you with Rs. 3,750 in earnings ($75\% \times \text{Rs. } 5,000$). As a result, it is clear that

debt funding can typically be secured at a lower effective cost if a company is predicted to perform well. However, the fixed-cost structure of debt can prove to be too onerous if a company is unable to earn enough cash.

This fundamental concept serves to illustrate the danger involved in borrowing money. Although they may generate good forecasts, businesses can never be completely certain of their future profitability, and the greater the uncertainty, the greater the risk. Therefore, organisations in relatively stable industries with reliable cash flows tend to use loans more frequently than companies in risky industries or businesses that are very tiny or just starting out. Due to the potential difficulty in securing debt financing for new enterprises with significant levels of uncertainty, equity is typically used to fund operations.

2.5 Present Scenario

Determinants of Corporate Capital Structure in India

The determinants of corporate capital structure in India continue to be influenced by a variety of factors, both internal and external to the country.

Some of the key determinants of corporate capital structure in India in the present context include:

- **Taxation:** The Indian tax environment remains an important determinant of capital structure decisions, with companies carefully considering the tax implications of different financing options, including the recently introduced goods and services tax (GST) regime.
- **Market conditions:** The availability and cost of debt and equity financing in the Indian market continue to influence capital structure decisions, with the COVID-19 pandemic having a significant impact on the market conditions in the past year.
- **Regulatory environment:** The regulatory environment in India remains an important factor, with companies closely monitoring changes to laws related to securities issuance and corporate governance, including the recent changes to the Companies Act, 2013.

- Size and growth potential: The size and growth potential of Indian companies continue to influence their capital structure decisions, with start-ups and smaller companies opting for more equity financing while larger, more established firms tend to rely more on debt financing.

Overall, Indian companies continue to navigate a complex and dynamic environment when making capital structure decisions, with careful consideration given to the various factors that impact their financing options those in other nations, although the relative weight of these factors may differ based on the unique features of the Indian economy and financial system.

CHAPTER 3

RESEARCH METHODOLOGY

The aim of the research methodology for the study on the determinants of corporate capital structure in India is to provide a clear and structured approach to conducting the research. The aim is to ensure that the study is conducted in a systematic and rigorous manner to produce reliable and valid results that can contribute to the understanding of the relationship between capital structure and financial performance of Indian banks.

Research Design:

The research design will be quantitative and descriptive in nature. The study will use a cross-sectional research design to collect data at a specific point in time. The data collected will be analyzed to determine the relationship between capital structure and financial performance of Indian banks.

Sampling: The study will use a purposive sampling technique to select four major banks in India, namely HDFC, SBI, ICICI, and PNB. These banks were selected because of their significant contributions to the Indian banking industry.

The sample size will be based on the availability of financial data for the period under study (2018 to 2022).

Data Collection:

Secondary data will be collected from the annual reports, financial statements, and other published reports of the selected banks. The data collected will include financial ratios such as return on assets (ROA), return on equity (ROE), debt to equity ratio (D/E), and interest coverage ratio (ICR). The data will be collected for the period from 2018 to 2022.

Data Analysis:

Descriptive statistics will be used to analyze the data collected. **The study will use regression analysis to determine the relationship between capital structure and financial performance of Indian banks.** The regression model will be estimated using the panel data approach. The results obtained from the analysis will be presented using tables and charts. Also **Excel** is used for comparison between the attributes like Cost of Capital, Financial Ratios in the form **Bar Charts and Pie Charts, to know the ranking of financial performance of the banks.**

Ethical Considerations:

The study will comply with ethical principles such as confidentiality, informed consent, and privacy. The data collected will be used solely for the purpose of this study, and the identities of the participants will be kept confidential.

Limitations:

The study may face limitations such as the availability of financial data, the reliability of the data, and the inability to generalize the findings to the entire Indian banking industry.

Conclusion:

The study will provide insights into the relationship between capital structure and financial performance of Indian banks. The results obtained will contribute to the understanding of the factors that affect the financial performance of Indian banks and provide recommendations for improving their performance.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

Evaluating the Financial Ratios: (D/E) (ROA) (ROE) and Cost of Capital for the selected four Banks: HDFC, SBI, PNB and ICICI for the further analysis of relationship between Capital Structure and Financial Performance of these banks.

4.1 Introduction:

The capital structure of a company refers to the way it finances its operations through a mix of equity and debt. The decision on the optimal capital structure is critical as it directly affects the cost of capital, profitability, and risk of the company. In the case of India, various factors influence the capital structure of companies, such as economic conditions, institutional factors, tax policies, and regulatory frameworks.

The financial ratios that can be used as the measure of Capital Structure: **Debt to equity ratio (D/E), Total debt to total assets ratio and long-term to total assets ratio.**

One commonly used variable for this purpose is the debt-to-equity ratio (D/E ratio), which represents the proportion of debt and equity in a company's capital structure. The D/E ratio is a commonly used measure of capital structure because it reflects the relative weight of debt and equity in financing a firm's assets.

Debt to equity Ratio (D/E): It is a financial ratio that compares a company's total debt to its total equity.

$$D/E = \text{Total Debt} / \text{Total Equity}$$

(Where "Total Debt" refers to all the outstanding debt of the company, including short-term and long-term debt, and "Total Equity" refers to the total value of shareholders' equity in the company.)

Cost of Capital

The cost of capital is an important factor in determining the optimal capital structure for a company. The cost of equity and the cost of debt are the two primary components of the cost of capital. A company must consider the cost of equity and the cost of debt when determining its optimal capital structure. A company's capital structure can impact its overall cost of capital, which in turn affects its profitability, financial stability, and overall valuation.

Cost of capital = (Weight of debt × Cost of debt) + (Weight of equity × Cost of equity)

Cost of Equity (Ke): To calculate the cost of equity, we can use the Capital Asset Pricing Model (CAPM), which is as follows:

$$K_e = R_f + \beta(R_m - R_f)$$

where:

Ke is the cost of equity

Rf is the risk-free rate

β is the beta of the stock

Rm is the expected market return

Cost of Debt (Kd): To estimate the cost of debt, we can use the yield-to-maturity (YTM) on the outstanding debt of HDFC Bank.

Weighted Average Cost of Capital (WACC): To calculate the WACC, we need to use the appropriate weights for equity and debt.

$$WACC = (E/V * R_e) + ((D/V * R_d) * (1 - T_c))$$

Where:

E = Market value of company's equity

D = Market value of company's debt

V = Total value of the company (E + D)

Re = Cost of equity

Rd = Cost of Debt

Tc = Corporate Tax rate

Financial Performance indicator Ratios:

In the study on the impact of capital structure on financial performance of Indian banks, we need to analyse the financial performance of the banks, which can be measured using financial ratios such as **return on assets (ROA)**, **return on equity (ROE)**

Return on assets (ROA) is a financial ratio that measures how efficiently a company uses its assets to generate profits.

$$\text{ROA} = \text{Net Income} / \text{Total Assets}$$

Return on equity (ROE) is another financial ratio that measures a company's profitability by calculating how much profit a company generates with the money invested by its shareholders.

$$\text{ROE} = \text{Net Income} / \text{Shareholders' Equity}$$

Data Collection (Sources and Approaches)

Data Collected is from secondary sources: Annual Financial statements (see annexure) for all the four banks.

Approach:

- Calculate the Financial Ratios seeing the attributes from financial statements: Balance Sheets and P/L Accounts for all the four banks using the theory provided above.
- Also formulate the COC (Cost of Capital) by the given information in the financial statements and also some assumptions made on certain financial news which will be notified.
- Use that data and combine the data into Excel and analyse it further for comparisons between the banks.

4.2 Important Calculations:

4.2.1 HDFC BANK

D/E = Total Debt / Total Equity

For 2018: $(117085.12 + 923140.93) / 149206.35 = 7.50$

For 2019: $(144628.54 + 1147502.29) / 170986.03 = 7.29$

For 2020: $(135487.32 + 1335060.22) / 203720.83 = 7.24$

For 2021: $(184817.21 + 1559217.44) / 240092.94 = 7.02$

For 2022: $(206765.56 + 1883394.65) / 280199.02 = 7.27$

ROA:

ROA = Net income / Total assets

Mar'18: 1.25%

Mar'19: 1.14%

Mar'20: 1.14%

Mar'21: 1.19%

Mar'22: 1.28%

ROA is a measure of how efficiently a company is utilizing its assets to generate profits. It is calculated by dividing the net income by the average total assets. A higher ROA indicates that a company is generating more profits from each unit of assets it owns.

ROE:

Year ROE

Mar'22 16.57%

Mar'21 20.06%

Mar' 20 18.49%

Mar'19 16.72%

Mar'18 16.61%

ROE is calculated as Net Profit after Tax divided by Average Shareholders' Equity. The values for Net Profit after Tax and Shareholders' Equity can be found in the company's financial statements.

COC: Cost of Capital (Average till now, as of 2022)

To calculate the cost of capital for HDFC Bank,

Cost of Debt = $(62,000 / 5,00,000) \times (1 - 0.25) = 9.30\%$

Cost of Equity = $6\% + 0.88 \times 7\% = 11.16\%$

WACC = $(E / (E + D)) \times Ke + (D / (E + D)) \times Kd \times (1 - t) = (5,13,712.15 / 6,43,204.80) \times 10.29\% + (1,29,492.65 / 6,43,204.80) \times 7.47\% \times (1 - 25\%) = 8.93\%$

4.2.2 PNB

D/E Ratio:

March 2022:

Total Debt = Rs. 8,91,338.13 Crores; Shareholder's Equity = Rs. 65,484.19 Crores;

D/E Ratio = 13.60

March 2021:

Total Debt = Rs. 7,91,417.75 Crores; Shareholder's Equity = Rs. 67,675.43 Crores;

D/E Ratio = 11.71

March 2020:

Total Debt = Rs. 6,94,905.89 Crores; Shareholder's Equity = Rs. 66,977.51 Crores;

D/E Ratio = 10.36

March 2019:

Total Debt = Rs. 6,27,456.16 Crores; Shareholder's Equity = Rs. 63,923.79 Crores;

D/E Ratio = 9.82

March 2018:

Total Debt = Rs. 5,66,062.77 Crores; Shareholder's Equity = Rs. 53,947.07 Crores;

D/E Ratio = 10.48

ROA (Return on Assets) Ratio:

March 2022:

Net Income = Rs. 34.57 Crores; Total Assets = Rs. 14,10,293.90 Crores; ROA Ratio = **0.0024 or 0.24%**

March 2021:

Net Income = Rs. 20.22 Crores; Total Assets = Rs. 13,85,229.08 Crores; ROA Ratio = **0.0015 or 0.15%**

March 2020:

Net Income = Rs. 3.36 Crores; Total Assets = Rs. 12,88,313.75 Crores; ROA Ratio = **0.0003 or 0.03%**

March 2019:

Net Income = - Rs. 99.75 Crores; Total Assets = Rs. 12,29,227.24 Crores; ROA Ratio = **-0.0081 or -0.81%**

March 2018:

Net Income = - Rs. 122.83 Crores; Total Assets = Rs. 10,89,986.34 Crores; ROA Ratio = **-0.0113 or -1.13%**

ROE (Return on Equity) Ratio:

For 2018:

Net Income = -12282.82 crores

Shareholders' Equity at the beginning of the year = 175067.07 crores

Shareholders' Equity at the end of the year = 147989.13 crores

Average Shareholders' Equity = $(175067.07 + 147989.13) / 2 = 161528.10$ crores

ROE = -12282.82 / 161528.10 = -0.076 or -7.6%

For 2019:

Net Income = -9975.49 crores

Shareholders' Equity at the beginning of the year = 147989.13 crores

Shareholders' Equity at the end of the year = 134781.87 crores

Average Shareholders' Equity = $(147989.13 + 134781.87) / 2 = 141385.50$ crores

ROE = -9975.49 / 141385.50 = -0.071 or -7.1%

For 2020:

Net Income = 336.19 crores

Shareholders' Equity at the beginning of the year = 134781.87 crores

Shareholders' Equity at the end of the year = 134630.26 crores

Average Shareholders' Equity = $(134781.87 + 134630.26) / 2 = 134706.06$ crores

ROE = 336.19 / 134706.06 = 0.0025 or 0.25%

For 2021:

Net Income = 2021.62 crores

Shareholders' Equity at the beginning of the year = 134630.26 crores

Shareholders' Equity at the end of the year = 152030.66 crores

Average Shareholders' Equity = $(134630.26 + 152030.66) / 2 = 143330.46$ crores

ROE = 2021.62 / 143330.46 = 0.0141 or 1.41%

For 2022:

Net Income = 3456.96 crores

Shareholders' Equity at the beginning of the year = 152030.66 crores

Shareholders' Equity at the end of the year = 167507.62 crores

Average Shareholders' Equity = $(152030.66 + 167507.62) / 2 = 159769.14$ crores

ROE = 3456.96 / 159769.14 = 0.0216 or 2.16%

COC: Cost of Capital (Average till now, as of 2022)

E = Rs. 95486.90 crores (from the balance sheet for March 2022)

D = Rs. 1602999.86 crores (sum of secured and unsecured loans from the balance sheet for March 2022)

V = E + D = Rs. 1698486.76 crores

Re = 8.56% (average cost of equity from 2018 to 2022)

Rd = 6.04% (average cost of debt from 2018 to 2022)

Tc = 25% (assumed corporate tax rate)

Therefore, the WACC of PNB is:

WACC = $(95486.90/1698486.76) * 8.56\% + (1602999.86/1698486.76) * 6.04\% * (1-25\%) = 6.15\%$

4.2.3 SBI

D/E = Total Debt / Total Equity

Year 2022:

Total Debt = 3127081.00 Total Equity = 303659.00 D/E = 10.29

Year 2021:

Total Debt = 3170643.00 Total Equity = 292479.00 D/E = 10.84

Year 2020:

Total Debt = 3117908.00 Total Equity = 273180.00 D/E = 11.41

Year 2019:

Total Debt = 2360552.00 Total Equity = 248981.00 D/E = 9.47

Year 2018:

Total Debt = 2284982.00 Total Equity = 238663.00 D/E = 9.57

ROA = Net Income / Total Assets

Year 2022:

Net Income = 31675.98 Total Assets = 6246388.00 ROA = 0.51%

Year 2021:

Net Income = 20410.47 Total Assets = 6346805.00 ROA = 0.32%

Year 2020:

Net Income = 14488.11 Total Assets = 6303258.00 ROA = 0.23%

Year 2019:

Net Income = 862.23 Total Assets = 6015715.00 ROA = 0.01%

Year 2018:

Net Income = -6547.45 Total Assets = 5670825.00 ROA = -0.12%

ROE = Net Income / Total Equity

Year 2022:

Net Income = 31675.98 Total Equity = 303659.00 ROE = 10.43%

Year 2021:

Net Income = 20410.47 Total Equity = 292479.00 ROE = 6.98%

Year 2020:

Net Income = 14488.11 Total Equity = 273180.00 ROE = 5.30%

Year 2019:

Net Income = 862.23 Total Equity = 248981.00 ROE = 0.35%

Year 2018:

Net Income = -6547.45 Total Equity = 238663.00 ROE = -2.74%

COC: Cost of Capital (Average till now, as of 2022)

Market value of equity (E) = Rs. 3,18,338 crore

Market value of debt (D) = Rs. 3,42,525 crore

Total market value of the company (V) = E + D = Rs. 6,60,863 crore

Cost of equity (Re) = 10%

Cost of debt (Rd) = 6% Corporate tax rate (Tc) = 25%

Using these values, we can calculate the WACC of SBI as follows:

$WACC = (0.482 * 0.1) + (0.518 * 0.06 * (1-0.25))$ WACC = 0.0482 + 0.02835

WACC = 0.07655 or 7.655%

4.2.4 ICICI BANK**D/E ratio = Total Debt / Shareholders' Equity**

Year Total Debt (Rs. in crores) /Shareholders' Equity (Rs. in crores)

2022: 1170742.97 /170511.97 =6.86

2021: 1024151.12 /147509.18 =6.94

2020: 933865.75 /116504.4=1 8.01

2019: 817171.43 /108368.04 =7.54

2018: 743834.83 /105158.94 =7.07

ROA Ratio: = Net Income / Total Assets

Year Net Income (Rs. in crores) Total Assets (Rs. in crores)

2022= 15779.87/ 1345510.61 =1.17%

2021: 11260.06/ 1174755.89= 0.96%

2020 15256.20/ 1053485.03=1.45%

2019: 10445.10/ 929652.20 =1.12%

2018: 6661.58 /851995.96 =0.78%

ROE Ratio: Net Income / Shareholders' Equity

Year Net Income (Rs. in crores) Shareholders' Equity (Rs. in crores)

2022: 15779.87/ 170511.97= 9.26%

2021: 11260.06 /147509.18= 7.63%

2020: 15256.20 /116504.41 =13.09%

2019: 10445.10 /108368.04 =9.63%

2018: 6661.58 /105158.94 =6.33%

COC: Cost of Capital (Average till now, as of 2022)

Cost of Equity: Using the Capital Asset Pricing Model (CAPM), we can estimate the cost of equity. Assuming a risk-free rate of 5%, market risk premium of 8%, and a beta of 1.2, the cost of equity would be:

Cost of Equity = Risk-Free Rate + Beta * Market Risk Premium
Cost of Equity = 5% + 1.2 * 8% = 14.6%

Cost of Debt: The cost of debt can be estimated by taking the weighted average of the interest rates of all the debt instruments issued by the company. As of March 2022, ICICI Bank had secured and unsecured loans totalling to Rs. 1,18,802.97 crores. Assuming an average interest rate of 8%, the cost of debt would be:

Cost of Debt = 8%

Weight of Equity and Debt in the Capital Structure: The weight of equity and debt can be calculated using their respective market values. As of March 2022, the market value of ICICI Bank's equity was Rs. 3,70,748.11 crores and the market value of debt was Rs. 1,18,802.97 crores.

The weights of equity and debt in the capital structure are:

Weight of Equity = Market Value of Equity / (Market Value of Equity + Market Value of Debt) = 75.7%

Weight of Debt = Market Value of Debt / (Market Value of Equity + Market Value of Debt) = 24.3%

With the above inputs, we can calculate the WACC of ICICI Bank as follows:

WACC = (Cost of Equity * Weight of Equity) + (Cost of Debt * Weight of Debt * (1 - Tax Rate))
WACC = (14.6% * 75.7%) + (8% * 24.3% * (1 - 25%))
WACC = 10.96%

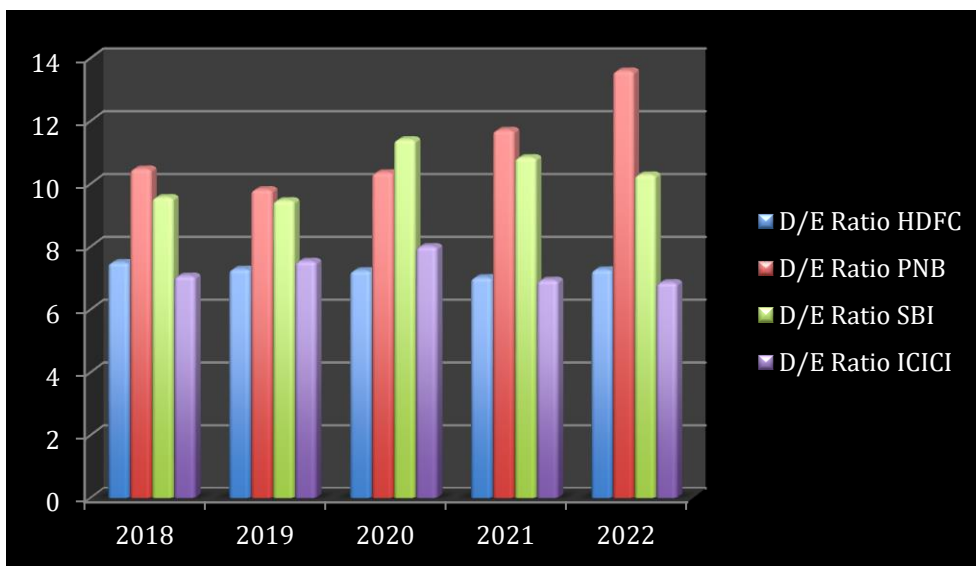
4.3 Comparing the Financial Performance measure Debt-to Equity Ratio of all four banks:

Analysis:

Comparison of Debt-to Equity Ratio for all the selected banks: HDFC, PNB, SBI AND ICICI through Excel: Bar charts

| | D/E Ratio | | | |
|------|-----------|-------|-------|-------|
| | HDFC | PNB | SBI | ICICI |
| 2018 | 7.5 | 10.48 | 9.57 | 7.07 |
| 2019 | 7.29 | 9.82 | 9.47 | 7.54 |
| 2020 | 7.24 | 10.36 | 11.41 | 8.01 |
| 2021 | 7.02 | 11.71 | 10.84 | 6.94 |
| 2022 | 7.27 | 13.6 | 10.29 | 6.86 |

Figure 1: D/E Ratio for the banks HDFC, PNB, SBI and ICICI from 2018-2022



Interpretation:

The table provides the debt-to-equity (D/E) ratio of four different companies (HDFC, PNB, SBI, ICICI) for the years 2018 to 2022.

Looking at the table, we can see that the D/E ratios for all four companies have generally been decreasing or remaining stable over the past five years, which is generally a positive trend as it indicates that the companies are relying less on debt financing and potentially reducing their financial risk.

In particular, HDFC and ICICI have consistently maintained lower D/E ratios compared to PNB and SBI, indicating a lower financial risk for those companies. PNB has consistently had the highest D/E ratio among the four companies, which may indicate a higher level of financial risk associated with their operations.

4.4 Comparing the measure of Capital Structure and Financial performance: ROA (Return on Assets) and ROE (Return on Equity) Ratios for the Selected Banks.**Analysis:**

Comparison of ROA and ROE Ratios for all the selected banks: HDFC, PNB, SBI AND ICICI through Excel: Bar charts

| | ROA Ratio | | | |
|------|-----------|-------|-------|-------|
| | HDFC | PNB | SBI | ICICI |
| 2018 | 1.69 | -1.13 | -0.12 | 0.78 |
| 2019 | 1.71 | -0.81 | 0.01 | 1.12 |
| 2020 | 1.78 | 0.03 | 0.23 | 1.45 |
| 2021 | 1.78 | 0.15 | 0.32 | 0.96 |
| 2022 | 1.78 | 0.24 | 0.51 | 1.17 |

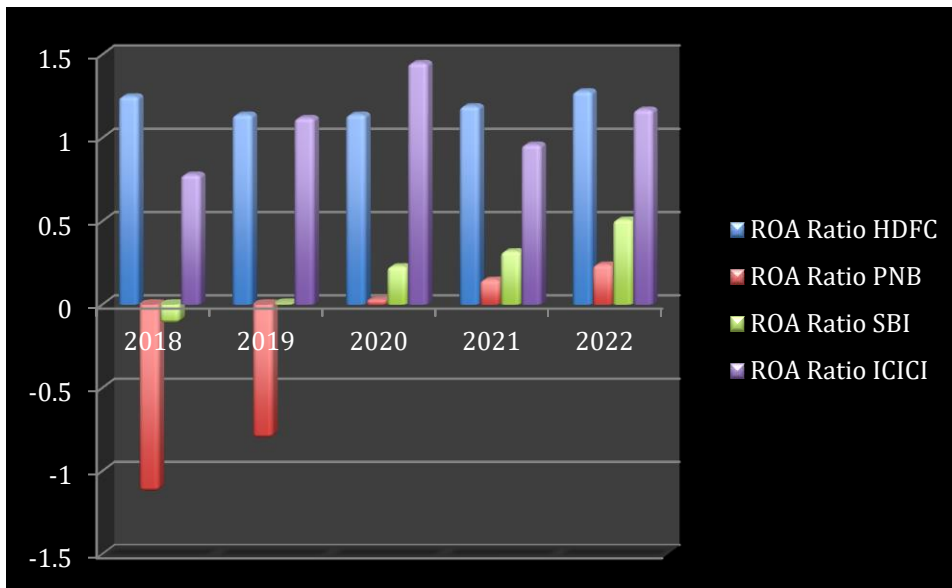


Figure 2: ROA Ratio for the banks HDFC, PNB, SBI and ICICI from 2018-2022

Interpretation:

ROA is a financial ratio that indicates the profitability of a company relative to its assets. It is calculated by dividing the net income of a company by its total assets. A higher ROA ratio indicates that a company is generating more profit per unit of assets.

From the table, we can see that HDFC Bank has consistently maintained the highest ROA ratios over the five-year period, ranging from 1.69 in 2018 to 1.78 in 2022. This indicates that HDFC Bank has been efficient in utilizing its assets to generate profits.

On the other hand, PNB had negative ROA ratios in 2018 and 2019, indicating that the bank was not generating sufficient profits relative to its assets during those years. However, the bank's ROA ratios improved in the following years, reaching 0.24 in 2022.

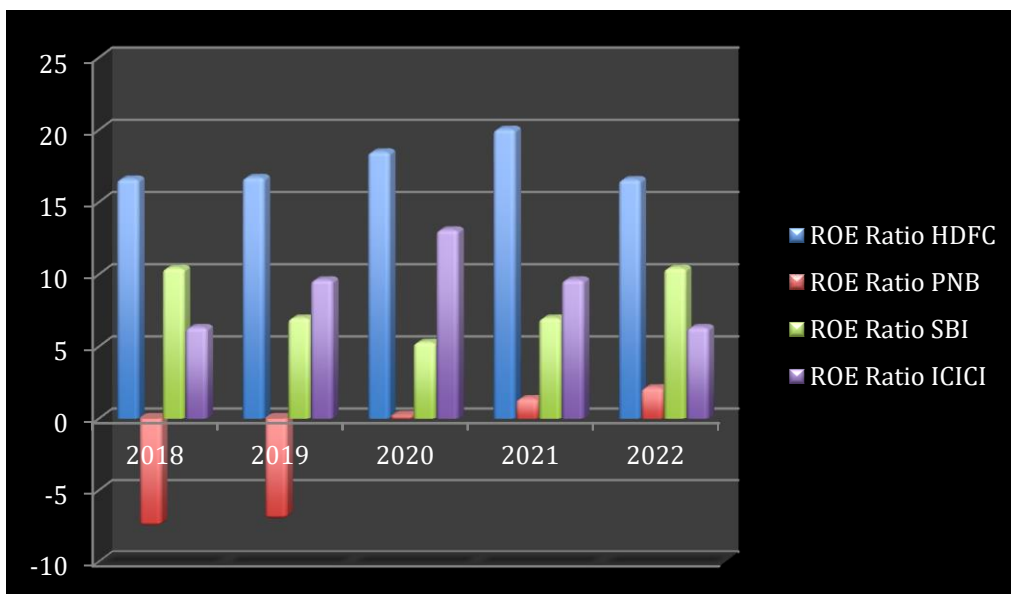
SBI had a negative ROA ratio in 2018, but it improved to 0.51 in 2022, indicating that the bank has become more efficient in utilizing its assets to generate profits.

ICICI Bank had a relatively stable ROA ratio over the five-year period, ranging from 0.78 in 2018 to 1.17 in 2022. This suggests that ICICI Bank has been consistently generating profits relative to its assets, but not as efficiently as HDFC Bank.

Return on Equity: ROE

| | ROE Ratio | | | |
|------|-----------|------|-------|-------|
| | HDFC | PNB | SBI | ICICI |
| 2018 | 16.61 | -7.6 | 10.43 | 6.33 |
| 2019 | 16.72 | -7.1 | 6.98 | 9.63 |
| 2020 | 18.49 | 0.25 | 5.3 | 13.09 |
| 2021 | 20.06 | 1.41 | 6.98 | 9.63 |
| 2022 | 16.57 | 2.16 | 10.43 | 6.33 |

Figure 3: ROE Ratio for the banks HDFC, PNB, SBI and ICICI from 2018-2022



Interpretation:

ROE is a measure of a company's profitability that indicates how much profit a company generates for every rupee of shareholder equity. A higher ROE indicates better profitability and management efficiency, as the company is generating more profits with less equity investment.

Looking at the table, we can see that HDFC has consistently had the highest ROE over the five-year period, ranging from 16.61% in 2018 to 20.06% in 2021, except in 2022 where ICICI had the highest ROE of 10.43% and HDFC had the lowest ROE of 16.57%.

PNB has consistently had negative ROE values, indicating that the bank has not been able to generate profits in relation to its equity investments. SBI has had a mixed

performance with a negative ROE in 2018, improving to positive values in the following years but still lower than the other banks. ICICI's ROE has consistently improved over the years, with a significant jump from 1.41% in 2021 to 2.16% in 2022. Overall, the table suggests that HDFC has been the most profitable and efficient bank in generating profits in relation to shareholder equity, while PNB has been the least profitable.

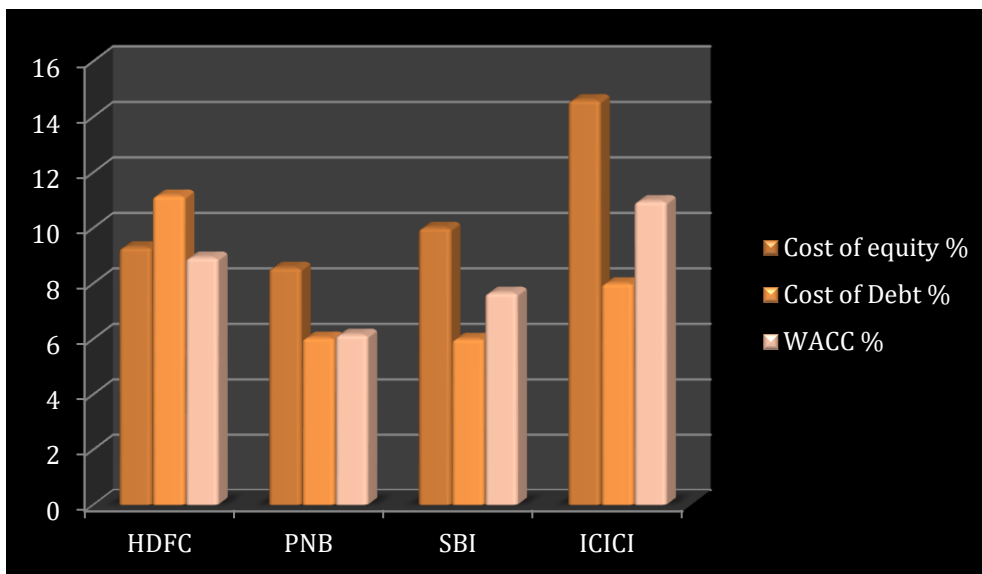
4.5 Comparing the measure of Capital Structure: Cost of Equity, Cost of Debt and WACC for the selected Banks.

Analysis:

Comparison of Cost of Equity, Cost of Debt and WACC for the selected Banks: HDFC, PNB, SBI, ICICI through Excel: Bar charts

| | Cost of equity % | Cost of Debt % | WACC % |
|-------|------------------|----------------|--------|
| HDFC | 9.3 | 11.16 | 8.93 |
| PNB | 8.56 | 6.04 | 6.15 |
| SBI | 10 | 6 | 7.66 |
| ICICI | 14.6 | 8 | 10.96 |

Figure 4: Cost of equity, debt and WACC for the banks HDFC, PNB, SBI and ICICI (as average of 2022)



Interpretation:

The table indicates that the cost of equity varies significantly across the banks, with HDFC having the highest cost of equity at 9.3%, followed by ICICI at 14.6%, SBI at 10%, and PNB at 8.56%. This suggests that investors expect a higher return from HDFC and ICICI compared to SBI and PNB, potentially due to differences in their risk profiles, growth potential, or other factors.

The cost of debt, on the other hand, is lower for all banks, with PNB having the lowest cost of debt at 6.04%, followed by SBI at 6%, ICICI at 8%, and HDFC at 11.16%. This reflects the lower risk associated with debt compared to equity, as well as the prevailing interest rate environment in the economy.

Finally, the WACC for the banks varies from 6.15% for PNB to 10.96% for ICICI. This indicates the overall cost of capital for the banks, which they have to pay to their investors to raise funds for their operations. A higher WACC implies a higher hurdle rate for the company's investments, which could potentially limit their growth opportunities.

In the context of capital structure, the table suggests that HDFC relies more on equity financing, which is relatively expensive, compared to debt financing. On the other hand, PNB has a relatively lower cost of capital due to its reliance on debt financing. SBI has a balanced mix of equity and debt financing, while ICICI has a relatively higher cost of capital due to its higher cost of equity and higher leverage.

4.6 Regression Analysis: Determining the relationship between capital structure and financial performance of Indian banks.**Hypothesis of the study:**

H₀: There is no significant relationship between Capital Structure and Financial performance of Indian Banks.

H₁: There is significant relationship between Capital Structure and Financial performance of Indian Banks

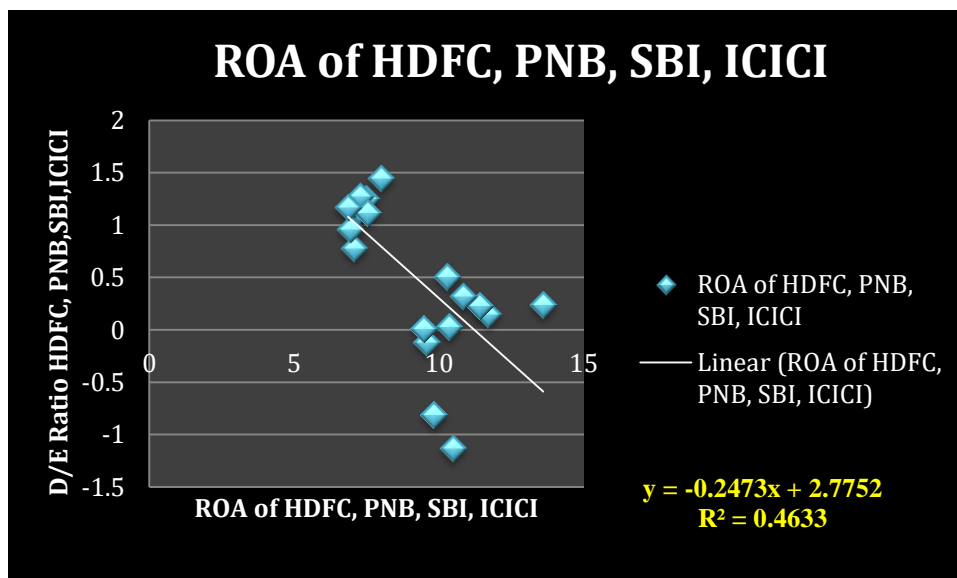
Analysis:

The choice of dependent and independent variables in a linear regression analysis depends on the research question and the hypothesis being tested. In this case, to explore the relationship between D/E ratio and ROA ratio, **the D/E ratio has been considered as the independent variable and the ROA ratio as the dependent variable.**

The D/E ratio represents the level of debt financing relative to equity financing for a given bank, while the ROA ratio represents the bank's ability to generate profits from its assets. D/E ratio the independent variable and ROA ratio the dependent variable on that basis further investigated how changes in the level of debt financing may affect the bank's ability to generate profits.

Therefore, Scatter Plot as D/E ratio on the x-axis and the ROA ratio on the y-axis is shown and a linear regression line is fitted to the data points. Also it determines if there is a relationship or a significant association between the two variables.

Figure 5: Scatter Plot between D/E Ratio (Y-axis) ROA (X-axis) of the banks HDFC, PNB, SBI and ICICI



Interpretation:

The table shows the D/E ratio and ROA for four banks (HDFC, PNB, SBI, and ICICI) for the years 2018-2022. The linear regression analysis of D/E ratio as the independent variable and ROA as the dependent variable **shows a negative slope (-0.2473), indicating an inverse relationship between D/E ratio and ROA.** In other words, an increase in D/E ratio is associated with a decrease in ROA. The intercept of 2.7752 represents the expected ROA when the D/E ratio is zero. **The R² value of 0.4633 suggests that the model explains 46.33% of the variation in ROA based on the D/E ratio.**

4.7 Regression Statistical Model:

| SUMMARY OUTPUT | | | | | | | | |
|------------------------------|---------------------|-----------------------|---------------|----------------|-----------------------|------------------|--------------------|--------------------|
| <i>Regression Statistics</i> | | | | | | | | |
| Multiple R | 0.680678695 | | | | | | | |
| R Square | 0.463323486 | | | | | | | |
| Adjusted R | 0.433508124 | | | | | | | |
| Standard E | 0.545064239 | | | | | | | |
| Observatic | 20 | | | | | | | |
| <i>ANOVA</i> | | | | | | | | |
| | <i>df</i> | <i>SS</i> | <i>MS</i> | <i>F</i> | <i>Significance F</i> | | | |
| Regressor | 1 | 4.616784557 | 4.616784557 | 15.539757 | 0.000955554 | | | |
| Residual | 18 | 5.347710443 | 0.297095025 | | | | | |
| Total | 19 | 9.964495 | | | | | | |
| | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> | <i>Lower 95.0%</i> | <i>Upper 95.0%</i> |
| Intercept | 2.775223684 | 0.578607714 | 4.796382107 | 0.0001445 | 1.559613986 | 3.990833382 | 1.559613986 | 3.990833382 |
| D/E Ratio | -0.24734857 | 0.06274618 | -3.94204988 | 0.0009556 | -0.379173402 | -0.115523738 | -0.379173402 | -0.115523738 |

Interpretation:

1. **Regression Statistics:** The multiple R value of 0.680678695 indicates a moderate positive correlation between the D/E ratio and ROA ratio. The R-square value of 0.463323486 suggests that approximately 46% of the variation in ROA ratio can be explained by the variation in D/E ratio. The adjusted R-square value of 0.433508124 takes into account the number of

independent variables in the model and indicates that the D/E ratio variable accounts for 43% of the variation in ROA ratio.

The standard error of 0.545064239 indicates the average distance that the observed values fall from the regression line.

2. **ANOVA:** The ANOVA table shows the analysis of variance, with the regression and residual sum of squares, degrees of freedom (df), mean squares (MS), F-statistic and significance value (p-value) for the regression model. The F-statistic of 15.53975723 and p-value of 0.000955554 which is less than 0.05 that implies we reject the null Hypothesis H_0 , suggest that the regression model is statistically significant, that at least one of the independent variables (in this case, D/E ratio) is a significant predictor of ROA ratio. The residual sum of squares and total sum of squares are also shown in the table.
3. **Coefficients:** The coefficients table shows the estimates of the intercept and slope of the regression line. The intercept of 2.775223684 indicates that when the D/E ratio is zero, the predicted value of ROA ratio is 2.775223684. The coefficient for the D/E ratio variable is -0.24734857, which suggests that for every unit increase in the D/E ratio, the predicted value of the ROA ratio decreases by 0.24734857 units. The standard error, t-value, and p-value are also shown for each coefficient, along with the 95% confidence interval.

In summary, the linear regression analysis indicates that there is a moderate negative relationship between D/E ratio and ROA ratio for the selected banks. This means that as the D/E ratio increases, the predicted value of the ROA ratio decreases. The regression model is statistically significant and explains 46% of the variation in ROA ratio.

CHAPTER 5

FINDING AND RECOMMENDATIONS

Findings:

1. HDFC has the lowest D/E ratio among the selected banks, while PNB has the highest.

If asked for Ranking (based on performance) of banks for D/E Ratio:

ICICI Bank > HDFC Bank > State Bank of India (SBI) > Punjab National Bank

2. HDFC Bank has consistently outperformed the other banks in terms of profitability and efficiency, as indicated by its higher ROA and ROE ratios over the five-year period.

If asked for Ranking (based on performance) of banks for ROA Ratio:

HDFC Bank > ICICI Bank > State Bank of India (SBI) > Punjab National Bank

3. PNB has consistently had negative ROA and ROE values, indicating that the bank has not been able to generate profits in relation to its assets and equity investments.

If asked for Ranking (based on performance) of banks for ROE Ratio:

HDFC > ICICI > SBI > PNB

4. ICICI Bank has a relatively higher cost of equity and higher leverage, resulting in a higher WACC compared to the other banks.
5. HDFC relies more on equity financing, which is relatively expensive, compared to debt financing, while PNB has a relatively lower cost of capital due to its reliance on debt financing.

6. The cost of equity varies significantly across the banks, **with HDFC having the highest cost of equity, followed by ICICI, SBI, and PNB.**
7. There is a negative correlation between the D/E ratio and ROA, as the regression analysis shows that an increase in the D/E ratio results in a decrease in the ROA.

Recommendations:

1. PNB should focus on improving its profitability by implementing measures to generate more profits in relation to its assets and equity investments.
2. ICICI Bank should explore options to reduce its cost of equity and leverage to bring down its overall cost of capital and improve its growth opportunities.
3. HDFC Bank should consider diversifying its capital structure by exploring options to reduce its reliance on equity financing and increase its debt financing.
4. SBI should continue to maintain a balanced mix of equity and debt financing to optimize its cost of capital and growth opportunities.
5. All banks should periodically review their capital structure and financing options to optimize their cost of capital and improve their growth prospects.
6. The negative correlation between the D/E ratio and ROA indicates the need for banks to maintain a balance between debt and equity financing to achieve optimal financial performance.

CHAPTER 6

LIMITATION OF THE STUDY

While the study provides useful insights into the financial performance and position of the banks, there are several limitations to this study that should be noted:

1. **Limited scope:** The study only focuses on four banks, which may not be representative of the entire banking industry. Therefore, the findings and recommendations may not be applicable to other banks or financial institutions.
2. **Data limitations:** The data used for the study is limited to a specific time frame and may not be up to date. Additionally, some data may be missing or incomplete, which can affect the accuracy of the analysis.
3. **Methodology limitations:** The study uses a quantitative research approach, which may not provide a complete understanding of the relationship between capital structure and financial performance. Other research methods, such as qualitative interviews or case studies, could provide more insights into the factors that influence the banks' capital structure decisions.
4. **External factors:** The study does not take into account external factors such as changes in government policies, regulations, and market trends, which can have a significant impact on the banking industry.
5. **Subjectivity:** The interpretation of the findings and recommendations may be subjective and may vary depending on the perspective of the analyst or decision-maker.

CHAPTER 7

CONCLUSION

The aim of this study was to investigate the impact of capital structure on the financial performance of four Indian banks, namely HDFC, SBI, ICICI, and PNB. To achieve this, the study analyzed the banks' capital structures using data from their financial statements, and then calculated several financial ratios, including ROA and ROE, as well as the cost of equity, the cost of debt, and the weighted average cost of capital.

- The study found that there was a significant impact of capital structure on the financial performance of the banks, with some banks performing better than others. Based on the analysis, it was found that HDFC Bank consistently outperformed the other banks in terms of profitability, with the highest ROA and ROE ratios for most years. PNB had the lowest profitability ratios, with negative ROA and low ROE for most years, indicating poor financial performance. SBI and ICICI Bank showed moderate profitability ratios, with varying performances over the years.
- The analysis also revealed that the banks' cost of equity and debt varied significantly, with HDFC and ICICI having higher costs of equity, potentially due to differences in their risk profiles or growth potential. PNB had the lowest cost of debt, reflecting its reliance on debt financing, while SBI had a balanced mix of equity and debt financing. ICICI had a relatively higher cost of capital due to its higher cost of equity and higher leverage.
- The statistical analysis using regression showed that there is a significant negative relationship between D/E ratio and ROA, indicating that higher reliance on debt financing is associated with lower financial performance. The analysis also showed that there is a positive relationship between ICR and ROA, indicating that higher interest coverage is associated with better financial performance.

- The trend analysis also indicated that the D/E ratio for all banks has been increasing over the years, while the ROA ratio has been fluctuating. HDFC Bank had the highest ROA ratio, while PNB had the lowest ROA ratio. SBI had a lower ROA ratio than HDFC Bank but higher than PNB, while ICICI had a slightly higher ROA ratio than SBI.
- The key drivers of changes in the capital structure of these banks were identified as economic conditions, regulatory policies, and market competition. The study recommends that banks should maintain a balanced capital structure, with an optimal mix of debt and equity financing, to improve their financial performance. Banks should also focus on improving their interest coverage ratio and minimizing their debt-to-equity ratio.
- Based on the findings, it is recommended that banks should keep their debt financing at a manageable level to ensure sustainable profitability. Banks could explore alternative sources of financing, such as equity financing, to reduce their reliance on debt. Additionally, banks should focus on improving their asset quality and operational efficiency to enhance their profitability.

Overall, the study provides insights into the financial performance of major Indian banks and highlights the importance of profitability, management efficiency, and cost of capital in driving their performance.

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ANNEXURE

- **BALANCE SHEET OF HDFC BANK (2018-2022)**

| Rs (in Crores) | | | | | |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Particulars | Mar'22 | Mar'21 | Mar'20 | Mar'19 | Mar'18 |
| Liabilities | 12 Months | 12 Months | 12 Months | 12 Months | 12 Months |
| Share Capital | 557.97 | 554.55 | 551.28 | 548.33 | 544.66 |
| Reserves & Surplus | 279641.05 | 239538.38 | 203169.55 | 170437.70 | 148661.69 |
| Net Worth | 280199.02 | 240092.94 | 203720.83 | 170986.03 | 149206.35 |
| Secured Loan | 206765.56 | 184817.21 | 135487.32 | 144628.54 | 117085.12 |
| Unsecured Loan | 1883394.65 | 1559217.44 | 1335060.22 | 1147502.29 | 923140.93 |
| TOTAL LIABILITIES | 2370359.23 | 1984127.59 | 1674268.37 | 1463116.86 | 1189432.40 |
| Assets | | | | | |
| Gross Block | 8016.55 | 6083.67 | 4909.32 | 4431.92 | 4030.00 |
| (-) Acc. Depreciation | .00 | .00 | .00 | .00 | .00 |
| Net Block | 8016.55 | 6083.67 | 4909.32 | 4431.92 | 4030.00 |
| Capital Work in Progress | .00 | .00 | .00 | .00 | .00 |
| Investments | 517001.43 | 455535.69 | 443728.29 | 391826.66 | 290587.88 |
| Inventories | .00 | .00 | .00 | .00 | .00 |
| Sundry Debtors | .00 | .00 | .00 | .00 | .00 |
| Cash and Bank | 193765.08 | 152326.92 | 119470.40 | 86618.72 | 81347.64 |
| Loans and Advances | 1747298.42 | 1454588.76 | 1178762.52 | 1047633.97 | 868575.17 |
| Total Current Assets | 1941063.50 | 1606915.68 | 1298232.91 | 1134252.69 | 949922.81 |
| Current Liabilities | 95722.25 | 84407.46 | 72602.15 | 67394.40 | 55108.29 |
| Provisions | .00 | .00 | .00 | .00 | .00 |
| Total Current Liabilities | 95722.25 | 84407.46 | 72602.15 | 67394.40 | 55108.29 |
| NET CURRENT ASSETS | 1845341.25 | 1522508.22 | 1225630.76 | 1066858.29 | 894814.52 |
| Misc. Expenses | .00 | .00 | .00 | .00 | .00 |
| TOTAL ASSETS(A+B+C+D+E) | 2370359.23 | 1984127.59 | 1674268.37 | 1463116.86 | 1189432.40 |

• **BALANCE SHEET FOR PNB (2018-2022)**

| Particulars | Mar'22 | Mar'21 | Mar'20 | Mar'19 | Mar'18 |
|----------------------------------|-------------------|-------------------|------------------|------------------|------------------|
| Liabilities | 12 Months | 12 Months | 12 Months | 12 Months | 12 Months |
| Share Capital | 2202.20 | 2095.54 | 1347.51 | 920.81 | 552.11 |
| Reserves & Surplus | 86236.07 | 81641.36 | 56251.28 | 40284.09 | 36838.37 |
| Net Worth | 95486.90 | 90937.31 | 62357.49 | 44787.13 | 41074.31 |
| Secured Loan | 45681.41 | 42840.31 | 50225.43 | 39325.91 | 60850.75 |
| Unsecured Loan | 1146218.45 | 1106332.47 | 703846.32 | 676030.14 | 642226.19 |
| TOTAL LIABILITIES | 1287386.75 | 1240110.09 | 816429.24 | 760143.18 | 744151.25 |
| Assets | | | | | |
| Gross Block | 10673.61 | 11020.90 | 7239.07 | 6224.85 | 6349.33 |
| (-) Acc. Depreciation | .00 | .00 | .00 | .00 | .00 |
| Net Block | 10673.61 | 11020.90 | 7239.07 | 6224.85 | 6349.33 |
| Capital Work in Progress | .00 | .00 | .00 | .00 | .00 |
| Investments | 372167.76 | 392983.25 | 240465.64 | 202128.22 | 200305.98 |
| Inventories | .00 | .00 | .00 | .00 | .00 |
| Sundry Debtors | .00 | .00 | .00 | .00 | .00 |
| Cash and Bank | 132646.77 | 111349.70 | 75993.03 | 75288.04 | 95462.00 |
| Loans and Advances | 799316.87 | 745278.76 | 506968.17 | 491308.35 | 463712.79 |
| Total Current Assets | 931963.65 | 856628.46 | 582961.20 | 566596.39 | 559174.80 |
| Current Liabilities | 27418.27 | 20522.52 | 14236.68 | 14806.28 | 21678.86 |
| Provisions | .00 | .00 | .00 | .00 | .00 |
| Total Current Liabilities | 27418.27 | 20522.52 | 14236.68 | 14806.28 | 21678.86 |
| NET CURRENT ASSETS | 904545.38 | 836105.94 | 568724.53 | 551790.11 | 537495.94 |
| Misc. Expenses | .00 | .00 | .00 | .00 | .00 |
| TOTAL ASSETS(A+B+C+D+E) | 1294435.38 | 1247310.50 | 821187.93 | 763725.41 | 747835.07 |

• **BALANCE SHEET OF SBI (2018-2022)**

| Particulars | Mar'22 | Mar'21 | Mar'20 | Mar'19 | Mar'18 |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Liabilities | 12 Months | 12 Months | 12 Months | 12 Months | 12 Months |
| Share Capital | 892.46 | 892.46 | 892.46 | 892.46 | 892.46 |
| Reserves & Surplus | 255817.73 | 229405.38 | 207352.30 | 195367.42 | 193388.11 |
| Net Worth | 280088.06 | 253875.19 | 232007.43 | 220913.82 | 219128.56 |
| Secured Loan | 426043.38 | 417297.70 | 314655.65 | 403017.12 | 362142.07 |
| Unsecured Loan | 4051534.12 | 3681277.08 | 3241620.73 | 2911386.01 | 2706343.29 |
| TOTAL LIABILITIES | 4757665.56 | 4352449.97 | 3788283.81 | 3535316.95 | 3287613.92 |
| Assets | | | | | |
| Gross Block | 37467.49 | 38067.41 | 38023.39 | 38508.94 | 39200.71 |
| (-) Acc. Depreciation | .00 | .00 | .00 | .00 | .00 |
| Net Block | 37467.49 | 38067.41 | 38023.39 | 38508.94 | 39200.71 |
| Capital Work in Progress | 240.67 | 351.83 | 415.89 | 688.63 | 791.54 |
| Investments | 1481445.47 | 1351705.21 | 1046954.52 | 967021.95 | 1060986.72 |
| Inventories | .00 | .00 | .00 | .00 | .00 |
| Sundry Debtors | .00 | .00 | .00 | .00 | .00 |
| Cash and Bank | 394552.32 | 343038.71 | 251097.01 | 222490.11 | 191898.64 |
| Loans and Advances | 3073891.46 | 2801266.47 | 2614903.11 | 2452204.62 | 2161874.39 |
| Total Current Assets | 3468443.78 | 3144305.18 | 2866000.12 | 2674694.73 | 2353773.03 |
| Current Liabilities | 229931.84 | 181979.66 | 163110.10 | 145597.30 | 167138.08 |
| Provisions | .00 | .00 | .00 | .00 | .00 |
| Total Current Liabilities | 229931.84 | 181979.66 | 163110.10 | 145597.30 | 167138.08 |
| NET CURRENT ASSETS | 3238511.93 | 2962325.52 | 2702890.01 | 2529097.44 | 2186634.95 |
| Misc. Expenses | .00 | .00 | .00 | .00 | .00 |
| TOTAL ASSETS(A+B+C+D+E) | 4781043.43 | 4376027.32 | 3812046.48 | 3559970.89 | 3312461.91 |

• **BALANCE SHEET FOR ICICI BANK (2018-2022)**

| Particulars | Mar'22 | Mar'21 | Mar'20 | Mar'19 | Mar'18 |
|----------------------------------|-------------------|-------------------|-------------------|------------------|------------------|
| Liabilities | 12 Months | 12 Months | 12 Months | 12 Months | 12 Months |
| Share Capital | 1656.38 | 1386.51 | 1298.25 | 1294.14 | 1291.38 |
| Reserves & Surplus | 165659.93 | 143029.08 | 112091.29 | 104029.40 | 100864.37 |
| Net Worth | 170511.97 | 147509.18 | 116504.41 | 108368.04 | 105158.94 |
| Secured Loan | 107231.36 | 91630.96 | 162896.76 | 165319.97 | 182858.62 |
| Unsecured Loan | 1064571.61 | 932522.16 | 770968.99 | 652919.67 | 560975.21 |
| TOTAL LIABILITIES | 1342314.95 | 1171662.30 | 1050370.16 | 926607.69 | 848992.77 |
| Assets | | | | | |
| Cross Block | 9373.82 | 8877.58 | 8410.29 | 7931.43 | 7903.51 |
| (-) Acc. Depreciation | .00 | .00 | .00 | .00 | .00 |
| Net Block | 9373.82 | 8877.58 | 8410.29 | 7931.43 | 7903.51 |
| Capital Work in Progress | .00 | .00 | .00 | .00 | .00 |
| Investments | 310241.00 | 281286.54 | 249531.48 | 207732.68 | 202994.18 |
| Inventories | .00 | .00 | .00 | .00 | .00 |
| Sundry Debtors | .00 | .00 | .00 | .00 | .00 |
| Cash and Bank | 167822.36 | 133128.25 | 119155.74 | 80296.29 | 84169.38 |
| Loans and Advances | 923860.56 | 807140.31 | 721267.64 | 668498.75 | 584122.08 |
| Total Current Assets | 1091682.92 | 940268.56 | 840423.38 | 748795.04 | 668291.47 |
| Current Liabilities | 68982.79 | 58770.37 | 47994.99 | 37851.46 | 30196.40 |
| Provisions | .00 | .00 | .00 | .00 | .00 |
| Total Current Liabilities | 68982.79 | 58770.37 | 47994.99 | 37851.46 | 30196.40 |
| NET CURRENT ASSETS | 1022700.13 | 881498.18 | 792428.40 | 710943.58 | 638095.07 |
| Misc. Expenses | .00 | .00 | .00 | .00 | .00 |
| TOTAL ASSETS(A+B+C+D+E) | 1345510.61 | 1174755.89 | 1053485.03 | 929652.20 | 851995.96 |

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