

# **PERFORMANCE EVALUATION OF FIVE SELECTED PRIVATE SECTOR BANKS IN INDIA USING RATIOS OF CAMELS MODEL**

**Project Report**

Submitted by

**MENON APARNA RAVI**

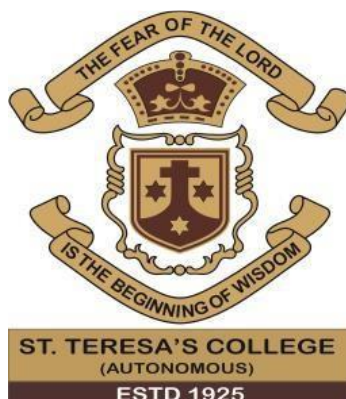
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Under the guidance of

**Ms. Bonita Clara D'souza**

*In partial fulfillment of requirements for award of the post graduate  
degree of*

**Master of Commerce and Management**



**ST. TERESA'S COLLEGE (AUTONOMOUS), ERNAKULAM**

**COLLEGE WITH POTENTIAL FOR EXCELLENCE**

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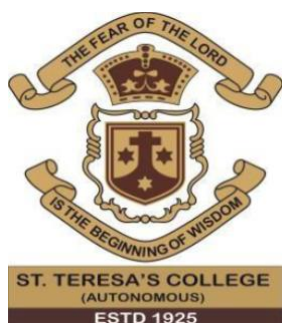
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**March 2023**

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**CERTIFICATE**

This is to certify that the project report titled '**PERFORMANCE EVALUATION OF FIVE SELECTED PRIVATE SECTOR BANKS IN INDIA USING RATIOS ODF CAMELS MODEL**' submitted by **MENON APARNA RAVI** towards partial fulfillment of the requirements for the award of post graduate degree of **Master of Commerce and Management** is a record of bonafide work carried out during the academic year 2022-23.

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**Place: Ernakulam**

**Date: 31.03.2023**

## **DECLARATION**

I, **MENON APARNA RAVI** hereby declare that this dissertation titled, **‘PERFORMANCE EVALUATION OF FIVE SELECTED PRIVATE SECTOR BANKS IN INDIA USING RATIOS OF CAMELS MODEL’**, has been prepared by me under the guidance of **Ms. .Bonita Clara D’Souza**, Assistant Professor, Department of Commerce, St Teresa’s College, Ernakulam.

I also declare that this dissertation has not been submitted by me fully or partly for the award of any Degree, Diploma, Title or Recognition before.

**Place: ERNAKULAM**

**MENON APARNA RAVI**

**Date:**

## ACKNOWLEDGEMENT

I wish to acknowledge all those who helped us to complete this study. I thank God almighty for helping me and guiding me in the right path and who made all things possible.

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**MENON APARNA RAVI**

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# **CHAPTER 1**

## **INTRODUCTION**

## **1.1 INTRODUCTION**

Ratio analysis is a common technique used by financial experts to evaluate various organizations' commercial performance and profitability. Finding trends in a specific market or investment opportunities might be aided by this. People can examine financial aspects including profitability, liquidity, and efficiency with the aid of ratio analysis. Financial professionals can conduct competitive analysis and comprehend company trends with the aid of ratio analysis. Using financial documents such as income and balance sheets, ratio analysis is an accounting technique that provides information about a company's financial situation. An organization's profitability, liquidity, and market worth can all be ascertained with the use of ratio analysis. Ratio analysis is generally rarely used by corporate insiders since they have access to far more detailed information that provides them with a better understanding of the firm's financial situation.

A regulatory framework called the CAMELS model is used to evaluate the general stability and well-being of financial institutions, especially banks. Capital adequacy, asset quality, management quality, earnings, liquidity, and sensitivity to market risk are the six main factors that are assessed. Regulators can help to safeguard the safety and soundness of the financial system by identifying potential risks, bank vulnerabilities, and possibilities for development through the analysis of these components. To assess the health and performance of banks and other financial institutions, banking authorities namely the US-Federal Reserve, Federal Deposits Insurance Corporation (FDIC) and Office Of the Comptroller of the Currency developed the CAMELS model in the late 1960s and early 1970s. The CAMELS model's main goal is to give regulators a thorough framework for evaluating the general stability, health, and risk profile of banks. This will enable them to spot any vulnerabilities, take appropriate action, and guarantee the banking system's safety and soundness.

The banking sector in India is one of the best industries to invest in. With the consistent growth of the Indian economy, the demand for banking services has increased. The Indian banking industry has seen strange developments in terms of new products and services as well as fierce rivalry ever since the country's economy opened its doors to multinational corporations. The profitability and effective management of banks are critical to their survival in a highly competitive global marketplace. The market potential of banks is directly influenced by their social profitability, growth rate, and risk exposure. Given these recent events, an examination

of the Indian banking industry's performance has been done using ratios. This study therefore focuses on the analysis of the ratios of CAMELS model of five selected banks of the private sector in India namely HDFC, ICICI Bank, Axis Bank, Kotak Mahindra Bank and IndusInd Bank. It is done mainly with the help of ten important ratios.

## **1.2 SIGNIFICANCE OF THE STUDY**

Ratio analysis is a tool used by analysts and investors to assess a company's financial health by carefully examining its recent and historical financial statements. When it comes to financial institutions, Ratios coming under the CAMELS Model are important and its analysis gives an idea of which of the selected banks performs comparatively well. With the help of ratios of the CAMELS Model, the bank's capital adequacy, asset quality, management efficiency, earnings quality, liquidity and sensitivity to risk can be analysed. Ratio analysis is indeed the most important step that needs to be followed before making an investment decision. This study focuses on the ratio analysis of selected top private sector banks of India. This helps to understand which of these banks are comparatively performing better in the market and thereby helps to make wise investment decisions. Ratio analysis is a crucial component of strategic planning and long-term decision-making. In this way, long-term decisions can be made with much clarity which helps to gain better returns in the future.

## **1.3 PROBLEM STATEMENT**

As we all know, there are plenty of banks in India both in the private and the public sector. If we consider only the private sector banks to invest, the investor still has many options making it difficult to make a decision. This study focuses on the ratio analysis of the top 5 selected private sector banks. Ratio analysis focuses more on making a long-term decision. As per the latest reports, a great number of people have started investing in the stock market, out of which the majority of the investors make their investment decisions without proper analysis or thorough research. This has resulted in the loss of money of many new investors. This study shows which of the banks are likely to be profitable with the help of ratio analysis and thus helps investors make better decisions easily. It will help investors to fetch more returns in the future and thereby create wealth.

## **1.4 OBJECTIVES OF THE STUDY**

- To analyse the components of the CAMELS Model using important ratios.
- To analyse the performance of the selected banks using ratios.
- To determine the best-performing bank or banks out of the selected banks based on ratios.
- To help investors make an investment decision.

## **1.5 SCOPE OF THE STUDY**

Ratio analysis forms an integral part of analysing the performance of a company. It helps an investor to make better decisions and earn more returns. This topic titled as 'Performance Evaluation of Five Selected Private Sector Banks in India Using Ratios of CAMELS Model'. It helps to analyse the performance of the banks and make decisions regarding investment. The scope of the study is limited to 5 private sector banks of India namely HDFC Bank, ICICI Bank, Axis Bank Kotak Mahindra Bank and IndusInd Bank The analysis is mainly done with the help of ten important ratios coming under the CAMELS Model with two ratios from each component.

## **1.6 METHODOLOGY**

### **1.6.1 RESEARCH DESIGN**

The study is both descriptive and analytical

### **1.6.2 SAMPLING DESIGN**

The ratios under the CAMELS Model are used in this study. Out of all the ratios under this model, ten important ratios are selected with two ratios from each of the components such as

Capital Adequacy- Capital adequacy ratio and Debt-Equity Ratio

Asset Quality- Gross NPA Ratio and Net NPA Ratio

Management Efficiency-Return on Net Worth and Asset Turnover Ratio

Earnings Quality- Return on Assets and Net Profit Margin

Liquidity- Liquid Assets to Total assets Ratio and Liquid assets to Total deposits Ratio

Sensitivity to Market Risk- This component is analysed with the help of 5 year Beta values of the banks.

### **1.6.3 COLLECTION OF DATA**

The process of collecting and evaluating data on relevant variables in a methodical and structured way for analysis, decision-making, research, or other objectives is known as data collection. There are primary and secondary data. To fulfil the objectives, secondary data has been used.

#### **SECONDARY DATA**

Information that has already been gathered, examined, and published by another party for a purpose unrelated to the ongoing study or analysis is referred to as secondary data. Usually, organizations, government agencies, other researchers, or other entities collect this data using primary research techniques. For this study, data has been collected from various websites related to finance, financial statements of the selected banks etc.

### **1.6.4 TOOLS OF ANALYSIS**

The data that has been collected from secondary data is analysed, interpreted and presented with the help of tables, charts, graphs like column charts, pie charts, line charts etc. This makes the analysis easier to understand and interpret it. The statistical tool used for this analysis is ANOVA.

## **1.7 HYPOTHESIS OF THE STUDY**

- H0-There is no significant difference between the capital adequacy ratios of the selected banks
- H1- There is a significant difference between the capital adequacy ratios of the selected banks

- H0- There is no significant difference between the Net NPA Ratio of the selected banks
- H1-There is a significant difference between the Net NPA of the selected banks
  
- H0-There is no significant difference between the Asset turnover Ratio of the selected banks
- H1-There is a significant difference between the Asset Turnover Ratio of the selected banks
  
- H0- There is no significant difference between Net Profit Margin of the selected banks
- H1- There is a significant difference between the Net Profit Margin of the selected banks
  
- H0-There is no significant difference in the Liquid assets to Liquid deposits ratio of the selected banks
- H1-There is a significant difference in the Liquid assets to Total assets ratios of the selected banks

## 1.8LIMITATIONS OF THE STUDY

This study suffers from the following limitations:

- A basic Ratio analysis of only ten ratios of the CAMLES MODEL has been done
- Lack of accuracy in the secondary data collected

## 1.9KEYWORDS

- **CAMELS Model-** A regulatory instrument used to evaluate the general stability and well-being of financial institutions, particularly banks, is the CAMELS model . It stands for:  
C - Capital Adequacy  
A - Asset Quality  
M - Management Quality  
E - Earnings  
L - Liquidity  
S - Sensitivity to Market Risk

- **Ratio Analysis-** Ratio analysis is a kind of financial analysis that looks at the correlations between different financial variables in a company's financial statements to assess the health and performance of its finances. It entails computing and analyzing various ratios that offer perceptions into many facets of an organization.

## **1.10 CHAPTERISATION**

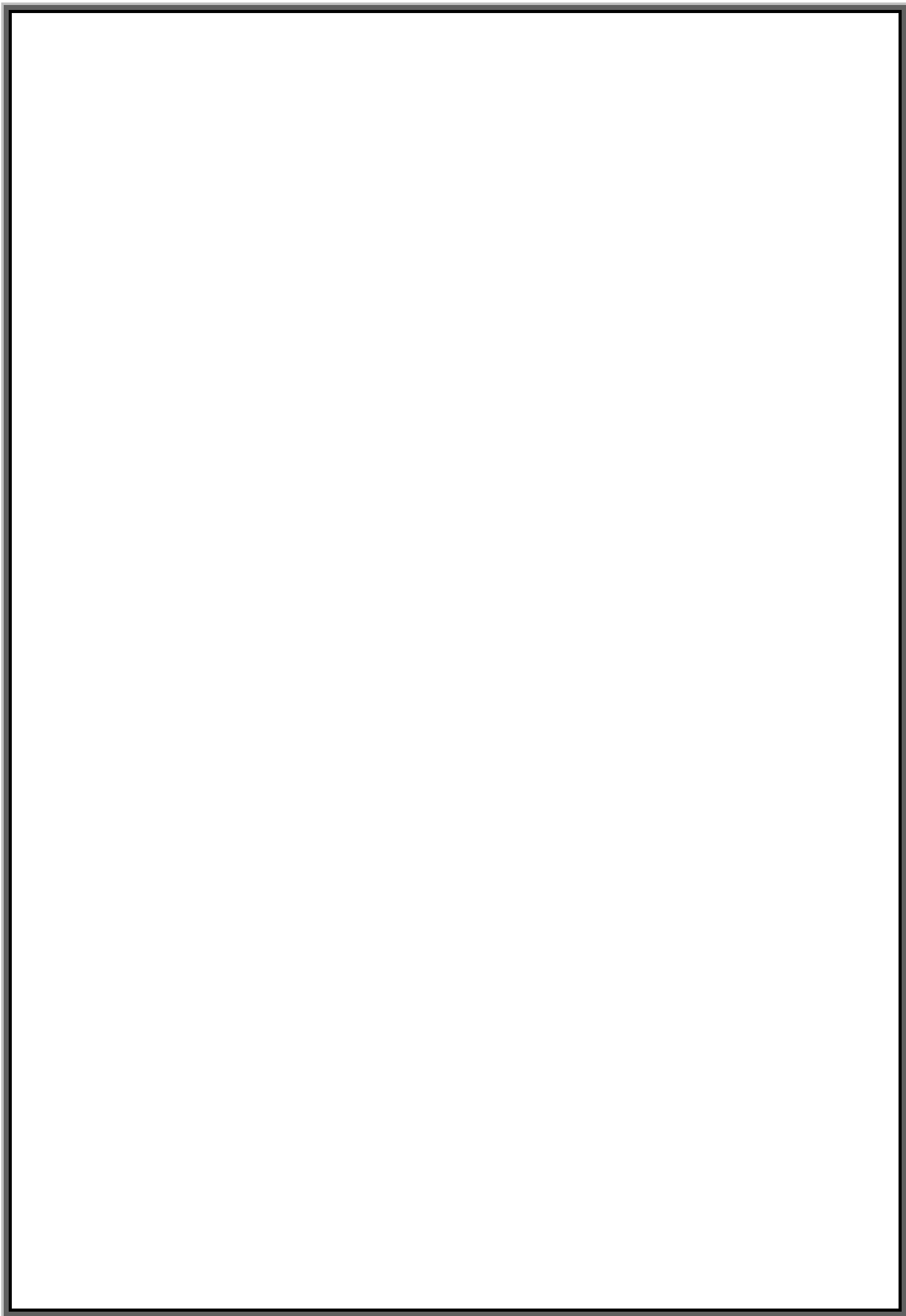
**Chapter 1 – Introduction:** This is an introduction chapter consisting of introduction, significance, problem statement, objectives, methodology, scope, limitations and chapterisation.

**Chapter 2 – Review of Literature:** This chapter deals with a literature review which is a collection of many published works

**Chapter 3 – Theoretical Framework:** This chapter deals with the theoretical works relating to the study.

**Chapter 4 – Data Analysis and Interpretation-** This chapter deals with the analysis of the secondary data collected for the study. It includes tables, figures, analysis and their interpretations.

**Chapter 5 -Conclusion-** This is the conclusion chapter that consists of a summary of the study, findings, and recommendations.



**CHAPTER 2**  
**REVIEW OF LITERATURE**

## REVIEW OF LITERATURE

**Dr Sayed Mohammad Tariq Zafar (2011)** Due to the quick industrialization of all sectors, investment decisions have become increasingly important, necessitating constant vigilance on the part of investors regarding the associated risk and return. Large investments are needed to meet India's expanding economic demand, which may be made achievable with prudent saving practices and an investor mindset that accepts common market risk. This calls for a well-thought-out and comprehensive assessment of all internal and external factors influencing savings and returns. The Indian banking industry has seen strange developments in terms of new products and services as well as fierce rivalry ever since the country's economy opened its doors to multinational corporations. The profitability and effective management of banks are critical to their survival in a highly competitive global marketplace

**Bansal Rohit and Mohanty Anoop (2013)** We have talked about the CAMEL Model in this study to assess the chosen banks' performance. About the factors of capital adequacy, asset quality, management, earnings, and liquidity, this model evaluates the performance of the banks. The performance of five banks—SBI, HDFC Bank, ICICI Bank, Axis Bank, and Kotak Mahindra Bank—that were chosen based on their market capitalization has been examined. The study period spans from 2007 to 2011. We have ranked the banks under investigation from 1 to 5 based on best overall performance. The study's findings, taken as a whole, are as follows. HDFC Bank is ranked first, followed by SBI Bank, Kotak Mahindra Bank, ICICI Bank, and AXIS Bank

**Ms. Yadav Shailaja P (2014)** In essence, a "CAMEL" is a ratio-based model used to assess bank performance. It is a management tool that assesses banks' capital sufficiency, asset quality, management effectiveness, earnings quality, and liquidity position. The current study compares and measures the public sector banks' financial performance to determine which ones operate most effectively. Initially, each bank was ranked separately according to the sub-parameters of each parameter. To get the group average of individual banks for each parameter, the sum of these ranks is then calculated. After calculating the average of these group averages, the final composite rankings for the banks were determined. Banks were ordered according to the individual sub-parameter, either ascending or descending.

**Ms. Marvadi Chetana R(2015)** A more widely used, globally recognized, and ratio-based approach for assessing banks' performance is called "CAMEL." The data that represents capital adequacy (C), asset quality (A), management efficiency (M), earnings quality (E), and liquidity (L) is incorporated into this model. These elements are essential to sound banking procedures. The current study uses the CAMEL model to assess the performance of international banks operating in India. Four international banks—Standard Chartered Bank, Bank of America, DBS, and Deutsche Bank—that are present in India were chosen for this study. The banks were assessed from 2008–2009 to 2012–2013 based on the five elements of the CAMEL Model. Based on overall performance, Bank of America is placed first, followed by Standard Chartered Bank and Deutsche Bank. DBS is on the last position.

**Jasprit Kaur, Manpreet Kaur and Dr Simranjit Singh (2015)**One of the key sectors of the Indian economy is the banking sector. India is home to a large number of banking institutions. The banking sector is expanding more quickly, and with it, so is competition. The performance of banks has been continuously changing over time, which causes annual changes in the banks' rankings and positions. While comparing performance and rankings may be quite challenging, this study will assist in determining which of the top banks is the best place for clients and investors to place their money. Regression analysis, WACC, and the CAMEL model are only a few of the numerous factors used to assess the performance of banks. It is being utilized in a study to evaluate and contrast the top five public sector banks in India for the five years between 2009 and 2014 in terms of total assets and consolidated basis. Canara Bank, Punjab National Bank, State Bank of India, Bank of Baroda, and Bank of India are among the banks. The information was gathered from these banks' annual reports, and a number of ratios evaluating the characteristics of CAMEL—capital adequacy, asset quality, managerial effectiveness, earning quality, and liquidity—were computed. These ratios are computed, and the results show that Bank of Baroda is first in all CAMEL categories, followed by Punjab National Bank in capital adequacy, earning capacity, and management efficiency, and Bank of India in asset quality.

**Malihe Rostame (2015)** Banks require a mechanism to assess performance, take into account a number of crucial financial ratios, and identify their advantages and disadvantages. The "CAMELS" model is a tool for assessing the performance of banks and other financial

organizations. The main focuses of this assessment are capital sufficiency, asset quality, good management, earnings and profitability, liquidity, and sensitivity. The effects of every CAMELS category on performance are examined in this study. One type of performance indicator is the Q-Tobin's ratio. Additionally, the model is extracted from analyses after data from an Iranian bank's yearly financial reports is collected for this study. Banks might attempt to manage and mitigate potential crises by concentrating on risk and certain key ratios through the use of CAMELS research.

**Mrs. Talreja Jyoti and Dr. Shivappa (2016)** Before investing, a rational investor will evaluate the overall performance of any sector based on factors like profitability, management effectiveness, goodwill, growth rate, long-term sustainability, etc. There are several ways to assess the performance of the banking industry. One such technique is the CAMEL Model, which assesses the industry as a whole. This study uses the CAMEL model to examine the financial performance of a few Indian private and public sector banks during four years, from 2011–12 to 2014–15. According to the analysis, public sector banks have done better in terms of liquidity and management capability, while private sector banks have done better in terms of capital sufficiency, earning capability, and asset quality for the chosen period.

**Dr. Sanjay Rastogi and Ms. Vishali Singh (2017)** The current study uses the CAMEL model to conduct a longitudinal examination of the performance of banks in the public and private sectors. The study is carried out on the same sample banks as the authors' 2011 study, which was published in 2013. The study is undertaken five years after the previous study. Four significant governmental and private sector banks are included in the statistical sample. Listed among the top five banks in India were State Bank of India, Punjab National Bank, HDFC Bank, and AXIS Bank. Five years later, our findings for this survey verify that HDFC Bank has remained at the top of the list. In addition, PNB was able to hold onto its third spot while SBI and Axis Banks lost ground.

**Sharma and Vijay Kumar (2017)** As a type of financial organization, banks are crucial to the economy's capital formation process as well as the flow of resources from saving groups to deficit groups that can employ the funds to produce goods or services. For this reason, assessing

the banking industry's financial performance serves as a gauge and indicator of the health of the country's economic activity. In terms of recovery, managerial effectiveness, asset quality, earning quality, and internal control system to regulate the degree of risk and financial viability of commercial banks, there has been a significant improvement over the previous banking sector supervisory system. The CAMEL (Capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity) grading criterion has been used by regulators to enhance bank supervision by allowing them to evaluate their financial performance

**Vinod Kumar and Bhawna Malhotra (2017)** An efficient way to gauge the health of an economy's economic activity is to evaluate the banking sector's performance. An assessment of the performance and financial stability of a few Indian private banks throughout the years 2007–2017 has been attempted in this study. The CAMEL method has been employed to assess the chosen banks' financial stability. Here, a comparative and important investigation of the many CAMEL parameters has led to a conclusion through the application of Composite Rankings, Average, and Covariance. According to the CAMEL analysis, Axis Bank comes in first, followed by ICICI Bank. Third place went to Kotak Mahindra. Among the chosen banks, HDFC Bank holds the fourth rank, and IndusInd Bank holds the last position.

**Prasad, K. V. N.; Ravinder, G. (2017)** In India, the banking industry is one of the fastest-growing. The banking industry in India is growing increasingly sophisticated today. Assessing the Indian banking industry is a difficult undertaking. When separating good banks from poor ones, a lot of variables need to be taken into consideration. We have selected the CAMEL model, which assesses banks' performance based on several critical factors, including capital adequacy, asset quality, management effectiveness, earning quality, and liquidity. Following model selection, we have selected twenty nationalized banks.

**Dr. R. Mayakannan and C. Jayasankar (2020)** To ensure the financial stability of an economy, the banking sector must be evaluated. Considering the global banking crisis of recent years, the CAMEL method is a helpful instrument for assessing the stability and safety of banks. The goal of the current study is to compare the performance and financial standing of a few chosen public and private banking sectors over a five-year period, from 2015 to 2020. The top ten banks in the public and private sectors were the focus of this study, which evaluated

statistical data on net margin, total assets, and market position. Due to intense competition from private sector banks in recent years in the areas of capital adequacy, asset quality, earning capacity, management efficiency, and asset quality, CAMELS Model has been chosen.

**Mahua Biswas (2020)** The goal of the current study is to apply the CAMEL model to assess the performance of two public sector banks, Andhra Bank and Bank of Maharashtra. Maharashtra and Andhra Pradesh are two of India's top five most populous states. These are also the two states with the highest rates of farmer suicides brought on by their incapacity to pay back their loans. In light of this, these states and their individual public sector banks are taken into consideration for the comparative analysis. An analytical and descriptive research design is used in this study. The sample banks' data for the years 2011 through 2013 was gathered from the banks' annual reports. The study uses twenty variables, which are supported by the body of current literature on the CAMEL model. According to the report, Andhra Bank led in both earning quality and management efficiency. But when it came to assets quality and liquidity, Maharashtra Bank outperformed Andhra Bank. With regard to the Cash Adequacy Ratio, both banks were comparable.

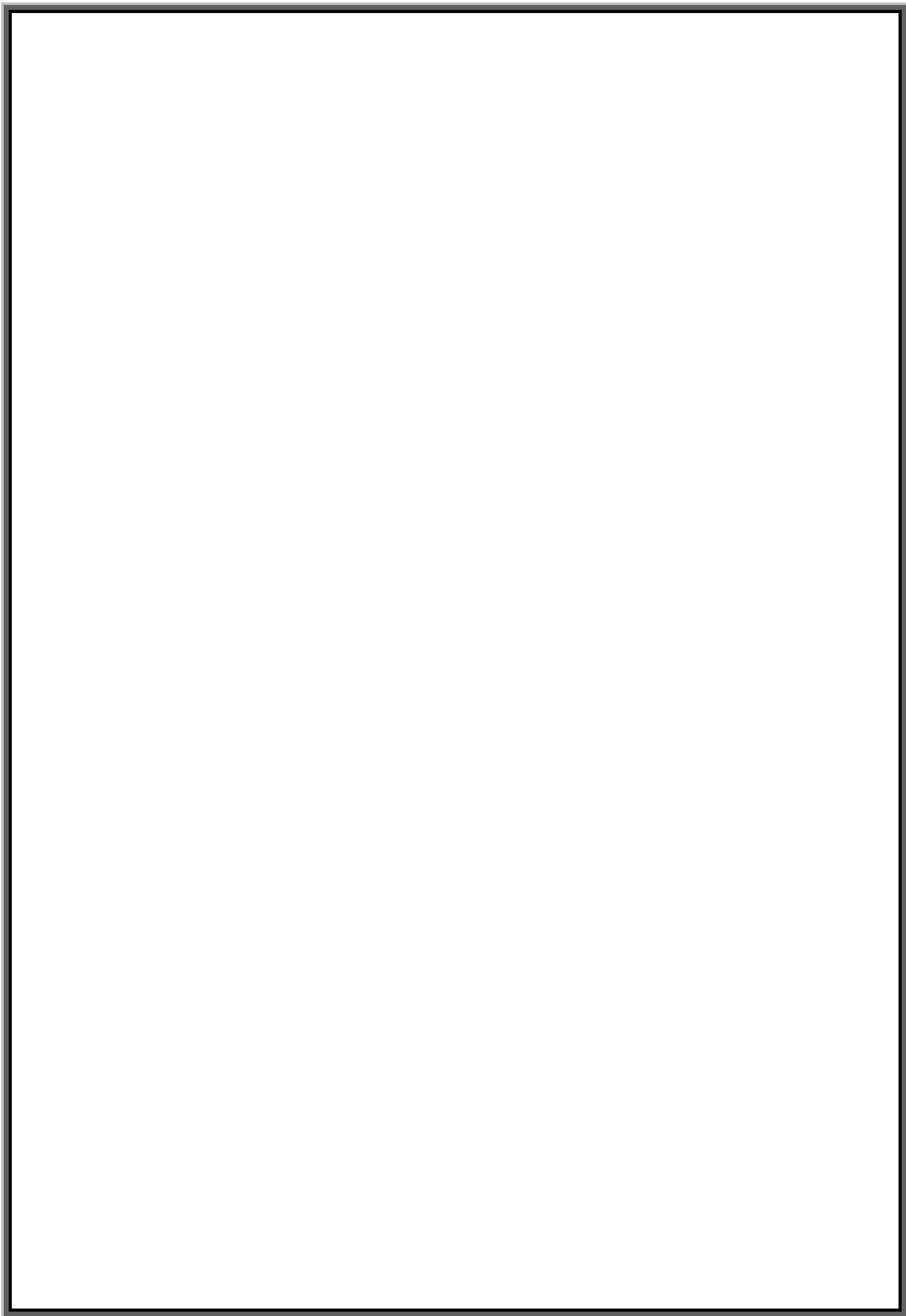
**Nishant Ghuge (2020)** Over the past few decades, India's banking industry has reached unprecedented heights. Because of the digitalization process and the increased focus on financial inclusion and the cashless economy, the banking industry as a whole has grown significantly. As a result, the banking industry continues to draw in investors. There is still a ton of room for growth in India. India's macroeconomic foundations are extremely solid. A few of the issues facing the Indian banking sector include declining asset quality brought on by a rise in nonperforming assets. Using certain financial indicators, the researcher conducted a fundamental examination of the chosen public and private sector banks in this paper. For analysis, the researcher has chosen five banks from each of the public and private sectors

**Dr C H Hymavathi (2021)** Banks are essential to the efficient and seamless operation of the financial system inside an economy. My study's goal is to evaluate and compare the management, operational, and financial health of a few public and private sector banks. Only three institutions—State Bank of India, Bank of Baroda, and Union Bank—and three banks

from the private sector—HDFC, ICICI, and Axis Bank—are taken into account for the study. The CAMEL technique is taken into consideration when analyzing and comparing bank performance. The acronym for these terms is C-Capital Adequacy, A-Quality of Assets, M-Efficiency of Management, E-Profits, and L-Liquidity.

## **CHAPTER 3**

### **THEORETICAL FRAMEWORK**



### 3.1 BANKS AND BANKING IN INDIA

The network of financial institutions, including banks and credit unions, that offer a range of financial services to private citizens, commercial clients, and governmental bodies is referred to as banking. The primary functions of a bank include taking deposits, making loans, assisting with transactions, and providing a range of financial goods, such as credit cards, loans, and savings accounts. Banking is essential to the economy because it makes money easier to move and makes economic activity possible. Banks in India offer a wide range of banking services, such as savings and checking accounts, loans (personal, business, and mortgages), credit cards, investment services, and electronic banking options like online and mobile banking. Some of the functions of bank are:

- **Accepting Deposits:** By offering consumers a secure location to keep their money, banks accept deposits from them.
- **Lending Money:** Banks lend money to people and companies for a range of uses, including property purchases, business expansion, and funding higher education.
- **Facilitating Transactions:** Banks make payments and fund transfers convenient by enabling transactions via a variety of channels, including checks, debit/credit cards, and electronic transfers.
- **Foreign Exchange Services:** Banks provide firms engaged in foreign trade as well as tourists from other countries with currency exchange services.
- **Safekeeping:** Customers can safely store valuables and crucial papers in safe deposit boxes that banks provide.
- **Investment Services:** To assist clients in increasing their wealth, banks provide investment goods such as stocks, bonds, and mutual funds.

- Electronic Banking: Banks provide mobile and web banking so that clients can view their accounts, make payments, and manage finances digitally.

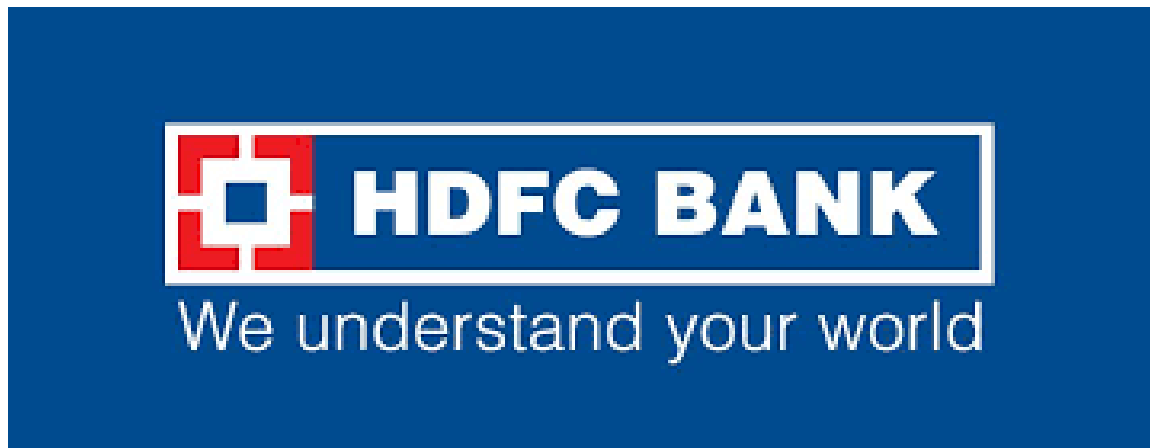
The different types of banks is classified as:

- Public Sector Banks-Public Sector Banks (PSBs) are financial institutions in which the government owns a majority (more than 50%) of the shares. They are essential in promoting financial inclusion and advancing the socioeconomic goals of the government.
- Private Sector Banks-Banks in the private sector are those that are owned and run by private persons or businesses. They offer a broad range of banking and financial services and compete with PSBs by putting a strong emphasis on innovation and client service
- Foreign Banks-Banks with foreign headquarters that have branches or subsidiaries in India are referred to as foreign banks. They serve the demands of overseas investors, high net worth individuals, and multinational organizations by bringing their experience in international banking.
- Regional Rural Banks (RRBs)- RRBs are designed to offer banking services in rural areas, emphasizing rural development and agriculture. The federal government, state governments, and sponsor banks—usually PSBs—own them jointly.
- Cooperative Banks-Members of a cooperative bank, usually individuals or small enterprises within a particular community or profession, own and run the cooperative bank. They support their members' financial needs and frequently place a high priority on community development.
- Payment Banks-A relatively new player in the Indian banking scene, payment banks offer deposit accounts, remittance services, and payment services to both individuals and small enterprises. They are unable to provide credit cards or loans.
- Small Finance Banks- They are specialized financial institutions that largely cater to the requirements of underprivileged and underserved demographic groups, such as low-

income households, small businesses, and microenterprises. They provide credit facilities in addition to standard banking services.

Five banks from the private sector have been selected. They are:

## **HDFC BANK**



HDFC Bank Limited (also known as HDFC) is an Indian banking and financial services company headquartered in Mumbai. After taking over parent company HDFC, in August 2023, it became the largest private sector bank in India in terms of assets and the sixth-largest bank globally in terms of market value. Following the RBI's "in principle" permission for the establishment of a private bank as part of the liberalization of the Indian banking system, the bank was formed in August 1994 and started operations in January 1995. "We understand your world" is the tagline of HDFC Bank.

As of January 2024, HDFC Bank holds the third-largest market capitalization among Indian stock markets, with a valuation of \$140 billion. At 1.73 lakh employees, it ranks as the sixteenth largest employer in India.

Based on data, HDFC Bank boasts an impressive branch network with 5,779 branches and 17,238 ATMs spread over 2,956 cities and towns. This bank offers services in digital format as well. Payment facilities, borrowing facilities, Investment facilities, Insurance facilities etc. HDFC Bank upholds the following five fundamental values

- People
- Product leadership
- Sustainability

- Operational excellence
- Customer focus.

## ICICI BANK



ICICI bank is an Indian Multinational bank and financial services company. It is headquartered in Mumbai, with its registered office at Vadodara. Through several delivery channels and specialized subsidiaries, it provides a broad range of banking and financial services in the fields of investment banking, life and non-life insurance, venture capital, and asset management to both corporate and retail clients. This development finance organization is present in 17 countries and has a network of 5,900 branches and 16,650 ATMs throughout India. "Hum hai na" and "Khayal Apka" are the ICICI Bank's tagline.

The bank has representative offices in the United Arab Emirates, Bangladesh, Malaysia, and Indonesia in addition to subsidiaries in the United Kingdom and Canada, branches in the United States, Singapore, Bahrain, Hong Kong, Qatar, Oman, Dubai International Finance Center, China, and South Africa. Belgium and Germany have also seen the establishment of branches by the UK component of the corporation. State Bank of India, HDFC Bank, and ICICI Bank have all been designated as Domestic Systemically Important Banks (D-SIBs) by the Reserve Bank of India (RBI). These banks are commonly referred to as being "too big to fail."

Some of the services offered by the bank are Savings accounts, Fixed deposits, Current Accounts, Investments, Insurance, Credit Cards, Wealth Management etc. Mr. Sandip Bakhshi serves as the current Managing Director and CEO. The values of the bank are:

- To offer individual financial services

- To encourage growth and development of the economy
- To advance equity and social welfare
- To give the business community a venue for gathering and cooperation
- To give Indian small enterprises financial support.
- To encourage inventiveness and entrepreneurship.
- To aid in the expansion of the Indian economy.

## **AXIS BANK**



Axis Bank Limited, formerly known as UTI Bank (1993–2007), is a multinational banking and financial services firm in Mumbai, Maharashtra. In terms of assets, it is the third-biggest private sector bank in India; in terms of market capitalization, it ranks fourth. It offers financial services to retail, small and medium-sized enterprises and SMEs. The promoters and the promoter group (United India Insurance Company Limited, Oriental Insurance Company Limited, National Insurance Company Limited, New India Assurance Company Ltd, GIC, LIC, and UTI) owned 30.81% of the shares as of June 30, 2016. Mutual funds, FIIs, banks, insurance companies, business entities, and individual investors own the remaining 69.19% of the shares.

Mr Amitabh Chaudhry is the Managing Director and Chief Executive of Axis Bank. The bank operated a network of 15,953 ATMs, 4,903 branches and extension counters, and cash recyclers as of March 31, 2023. Out of all the private banks in India, Axis Bank has the biggest ATM network. At Thegu, Sikkim, one of the highest locations in the world at 4,023

meters (13,200 feet) above sea level, it even runs an ATM. 'Badhti ka Naam Zindagi' is the tagline of Axis bank.

The vision and core values are:

Vision: To be the preferred financial solutions provider excelling in customer delivery through insight, empowered employees and intelligent use of technology

Core Values: Customer Centricity, Ethics, Transparency, Teamwork and Ownership.

Axis Bank offers a variety of products, including credit cards, consumer and corporate banking, finance and insurance, investment banking, mortgage loans, private banking, private equity, and wealth management.

In February 2010, Axis Bank also introduced the AXIS CALL and PAY on an atom. This innovative mobile payment method makes use of debit cards from Axis Bank. This bank is the first in the country to create an IVR system for safe debit card payments. On March 9, 2016, it also introduced the first Forex prepaid card in history in collaboration with Diners Club International, a division of Discover Financial Services.

## **KOTAK MAHINDRA BANK**



Kotak Mahindra Bank Limited is an Indian banking and financial services company headquartered in Mumbai. It provides corporate and retail clients with banking products and financial services in the areas of wealth management, investment banking, life insurance, and personal finance. After HDFC Bank and ICICI Bank, it is the third-largest private sector bank

in India based on market capitalisation. By March 31, 2023, the bank will have 2,964 ATMs and 1,780 branches across the country.

Mr. Uday Kotak, the bank's founder and a well-known personality in India's banking and financial industry, is in charge. With millions of customers served by its extensive network of branches and ATMs, Kotak Mahindra Bank is well-represented throughout India. The bank provides a wide range of banking and financial services and products, such as current accounts, savings accounts, fixed deposits, credit cards, loans, insurance, investment products, and wealth management services. To give consumers a convenient and smooth banking experience, Kotak Mahindra Bank has made significant investments in digital banking efforts. These initiatives include the provision of cutting-edge online and mobile banking systems. 'Let's Make Money Simple' is its tagline.

Dipak Gupta serves as the MD and CEO of the bank and it has over 73000 employees. The bank has over 830 Pan India branches with a market capitalisation of Rs. 3.63 trillion. The values of Kotak Mahindra Bank are:

- Down to earth and approachable
- Mutual Respect and Transparency
- Passion to Achieve
- Entrepreneurial Approach
- Ethical with a Governance Mindset

## **INDUSIND BANK**



In April 1994, Manmohan Singh, the Union Finance Minister at the time, officially opened IndusInd Bank, which is headquartered in Mumbai, Maharashtra. The bank was founded on April 17, 1994, and S. P. Hinduja served as its chairman. The Reserve Bank of India (RBI) granted the bank authorization in 2021 to collect direct and indirect taxes on behalf of the Central Board of Customs and Indirect Taxes (CBIC) and the Central Board of Direct Taxes (CBDT). The bank had ₹100 crores (1 billion) in capital when it first opened for business, of which ₹60 crores came from Indian citizens and ₹40 crores from non-resident Indians (NRI). Retail banking services are the bank's area of expertise.

The bank claims that its name is derived from Indus Valley Civilisation. At IndusInd Bank, Sumant Kathpalia serves as both the CEO and Managing Director. The board's current chairman is Sunil Mehta. The tagline of this bank is 'We Care Dil Se, We Make You Feel Richer'

One of the top financial services brands in India is IndusInd Bank. About 38 million clients nationwide, including private citizens, major enterprises, different governmental bodies, and PSUs, choose us as their partner and source for financial solutions. The banking network covers 1,53,000 villages throughout India with 2728 branches, banking outlets, and 2939 ATMs.

It also has representative offices in London, Dubai, and Abu Dhabi. Microfinance, personal loans, credit cards, loans for commercial and personal vehicles, and SME loans are just a few of the many services and products that the Bank provides to both individuals and businesses. The vision of IndusInd Bank are:

- An appropriate banking and business partner for its customers
- Collaborating with all of our stakeholders and delivering returns and growth that is both compliant and sustainable.
- Being sensitive to customers and always looking to work with them to provide answers for their banking needs
- A market leader in terms of efficiency, productivity, technology, and profitability

- An agent of change for India's financial inclusion
- An employer of choice and one that offers equal opportunities

## CAMELS MODEL

One of the most popular techniques for determining banking performance is the CAMELS methodology, which is used to evaluate the performance of banks. An obvious framework for assessing this shift is the CAMELS system, which mandates banks to increase capital adequacy, asset quality, management quality, and profitability, and decrease exposure to various financial risks. "Capital adequacy, quality of assets, management, earnings, and liquidity and sensitivity to market risk" is what the abbreviation CAMEL stands for. The CAMEL technique is a useful tool for evaluating a bank's relative financial strength and for recommending actions that will strengthen its areas of weakness. Based on the suggestions of the Padmanabham Working Group (1995) committee, the Reserve Bank of India (RBI) adopted this strategy in 1996.

The US-Federal Reserve, Federal Deposits Insurance Corporation (FDIC) and Office Of the Comptroller of the Currency developed the CAMELS model in the late 1960s and early 1970s developed it. The key purposes of this model are:

- **Risk assessment:** The CAMELS model offers a methodical framework for assessing the various risks that banks encounter, such as market, operational, liquidity, and credit risks. Regulators can spot possible flaws or vulnerabilities in a bank's operations and take the necessary steps to reduce risks by thoroughly evaluating these risks.
- **Financial Stability:** By evaluating elements including capital adequacy, asset quality, and earnings performance, the model assists regulators in determining the financial stability and solvency of banks. To guarantee that banks have enough capital buffers to absorb losses and preserve financial stability, especially in the face of unfavorable economic conditions, this information is essential.
- **Regulatory Supervision:** CAMELS ratings form the foundation for regulatory supervision and monitoring of financial institutions. Regulators utilize the ratings to

establish the degree of regulatory scrutiny and intervention necessary for specific banks, encompassing on-site inspections, ensuring adherence to regulatory guidelines, and enacting remedial actions as needed.

- **Market Discipline:** By helping investors, depositors, and other stakeholders evaluate the financial stability and risk profile of banks, the CAMELS model's consistency and transparency promote market discipline. Market players can use this information to make well-informed decisions on their savings, investments, and business dealings with banks.
- **Comparative Analysis:** By enabling benchmarking and the identification of industry trends and best practices, the CAMELS model makes it possible to compare banks both within and between jurisdictions. This comparison study is beneficial.

## COMPONENTS OF CAMLES MODEL AND RATIOS

### CAPITAL ADEQUACY

The term "capital adequacy" describes how well a bank's capital stacks up against its risk profile and regulatory requirements. In simple terms, it evaluates whether a bank has sufficient capital to cover possible losses and continue to be solvent during challenging economic times.

A bank's capital acts as a buffer or cushion of money to shield it against unforeseen losses brought on by loan defaults, market swings, operational calamities, and other hazards. Sustaining financial stability, safeguarding shareholder interests, and preserving depositor confidence all depend on adequate capital levels. The ratios to analyse capital adequacy are as follows:

**Capital Adequacy Ratio:** The CAR, or capital adequacy ratio, The main ratio used to assess the capital adequacy of a bank is the CAR. It is presented as a percentage and compares a bank's capital to its risk-weighted assets (RWA). The CAR formula is:

$$\text{CAR} = (\text{Total Capital} / \text{Risk-Weighted Assets}) \times 100\%$$

Tier 1 capital, or core capital, and Tier 2 capital, or supplementary capital, make up the overall capital. Meanwhile, risk-weighted assets show how risky a bank's assets are depending on

things like credit risk, market risk, and operational risk.

**Tier 1 Capital Ratio:** This ratio expresses the percentage of a bank's risk-weighted assets divided by its Tier 1 capital, or core capital. It gives a clue as to how well a bank can absorb losses without endangering its continuous operations. For the Tier 1 capital ratio, the formula is:

$$\text{Tier 1 Capital Ratio} = (\text{Tier 1 Capital} / \text{Risk-Weighted Assets}) \times 100\%$$

**Tier 2 Capital Ratio:** This ratio evaluates how well a bank's supplemental capital, or Tier 2 capital, fits in with its risk-weighted assets. As a second layer of capital, tier 2 capital has a greater capacity to withstand losses. For the Tier 2 capital ratio, the formula is:

$$\text{Tier 2 Capital Ratio} = (\text{Tier 2 Capital} / \text{Risk-Weighted Assets}) \times 100\%$$

**Debt Equity ratio:** The total amount of debt (liabilities) and equity (net worth or shareholders' equity) of a bank are contrasted using the debt-equity ratio. It shows how much a bank depends on borrowed money to fund its operations and activities and quantifies the percentage of debt financing compared to equity. If the bank experiences unfavourable circumstances, a higher debt-to-equity ratio in the CAMELS model may be indicative of increased financial leverage, which can boost returns on equity but also raise the danger of financial failure. A smaller debt-to-equity ratio, on the other hand, can indicate less risk and less leverage. The formula for the equity ratio is:

$$\text{Debt-to-Equity Ratio} = \text{Total Equity} / \text{Total Debt}$$

Other ratios under capital adequacy are

- **Total assets to Total Advances ratio**
- **Government securities to total investment ratio**

## ASSET QUALITY

"Asset Quality" in the context of the CAMELS model denotes one of the elements that is utilized to evaluate the general state and efficacy of a financial institution, especially a bank. Asset quality assesses the calibre and level of risk associated with the bank's holdings, with a particular emphasis on its investments and loan portfolio. Since asset quality sheds light on a

bank's total balance sheet health and credit risk exposure, it is an essential part of the CAMELS model. While banks with poor asset quality may be more vulnerable to losses and regulatory scrutiny, those with strong asset quality are better positioned to weather economic downturns and preserve financial stability.

Non-performing assets, or NPAs, are assets that no longer bring in money for the bank. NPAs rise in response to a decline in asset quality. Loans that become non-performing assets when borrowers miss payments have a detrimental effect on the asset quality of the bank. Banks that have a high percentage of non-performing assets (NPAs) in comparison to their overall loan portfolio may encounter difficulties in recouping the delinquent loans, necessitating provisions and impairments that could reduce their profitability and capital adequacy.

The ratios analysed under Asset Quality are:

**Gross NPA Ratio:** A financial indicator known as the Gross Non-Performing Assets (NPA) Ratio is used to calculate the percentage of a bank's total loans that are written off or designated as non-performing assets, net of write-offs and allowances. It shows the degree of exposure to credit risk as well as the calibre of the bank's loan portfolio. For banks and regulators to evaluate the well-being and stability of the banking industry, spot possible problems with asset quality, and put the right risk management strategies in place to reduce credit risk, they must keep a close eye on the gross nonperforming assets ratio. Additionally, because larger NPA ratios can negatively affect profitability, capital adequacy, and investor trust, investors and stakeholders use this ratio to assess the performance and financial health of banks. The formula is

$$\text{Gross NPA Ratio} = \text{Gross Advances} / \text{Gross Non-Performing Assets} \times 100\%$$

**Net NPA Ratio:** A financial indicator known as the Net Non-Performing Assets (NPA) Ratio is used to determine the percentage of a bank's total loans that are designated as non-performing assets after provisions for possible loan losses have been subtracted. When it comes to asset quality, it offers a more cautious evaluation than the Gross NPA Ratio. A percentage is used to represent the resultant ratio. Even after taking provisions into account, a greater net non-performing ratio implies lower asset quality and higher credit risk because it represents a bigger percentage of non-performing assets compared to the bank's net loan portfolio. On the other hand, a lower Net NPA Ratio denotes reduced credit risk and better asset quality. The formula is:

$$\text{Net NPA Ratio} = \text{Net Advances} / \text{Net Non-Performing Assets} \times 100\%$$

Some other ratios of asset quality are:

- **Percentage change in NPA**
- **Provision Coverage Ratio**

## **MANAGEMENT EFFICIENCY**

"Management Efficiency" is one of the CAMELS model's components that is used to evaluate a financial institution's overall performance and condition, especially banks. Management efficiency measures how well the bank's management directs activities, puts plans into action, and handles obstacles and hazards. The CAMELS model places great importance on management efficiency, which is the capacity of the bank's management to successfully manage risks while navigating obstacles and seizing opportunities to propel the organization towards its strategic goals. Strong managerial efficiency puts banks in a better position to succeed over the long run, preserve their financial stability, and add value for stakeholders.

The ratios under management efficiency analysed in this study are:

**Return on Networth:** Return on Equity (ROE), sometimes referred to as Return on Net Worth (RONW), is a financial ratio that assesses how profitable a business is in relation to the equity held by its owners. It shows the efficiency with which a business uses its equity to produce profits for its owners. Return on Net Worth is a crucial performance indicator that analysts, investors, and management use to evaluate the long-term profitability, financial performance, and development of shareholder value in a company. It helps assess management's efficiency in using shareholders' money to create profits and offers insights into the company's capacity to provide returns for its owners. The formula is

$$\text{RONW} = \text{Net Worth} / \text{Net Profit After Tax (NPAT)} \times 100\%$$

**Asset Turnover Ratio:** One financial measurement that assesses a company's capacity to make money off of its assets is the asset turnover ratio. It shows the effectiveness with which a business uses its resources to produce sales or income. The resulting ratio shows the amount of revenue that a business makes relative to the monetary value of its assets. In contrast, a lower ratio denotes inefficient asset utilization, while a larger ratio implies that the business is more

effective at producing income from its assets. Depending on elements including asset intensity, industry dynamics, and business style, the asset turnover ratio differs between organizations and industries. The formula is:

$$\text{Asset Turnover Ratio} = \text{Average Total Assets} / \text{Net Sales (Revenue)}$$

The other ratios of management efficiency are:

- **Credit-Deposit ratio**
- **Business per Employee**
- **Profit per employee**
- **Diversification ratio**

## **EARNINGS QUALITY**

The degree to which a company's reported earnings accurately represent its underlying financial performance and economic reality is referred to as earnings quality. It evaluates the consistency, openness, and longevity of a business's profits. A company with high earnings quality is one whose reported earnings are reliable, unadulterated, and fairly depict its actual state of affairs both financially and operationally. Low earnings quality, on the other hand, raises questions about the consistency and veracity of reported results and may be a sign of aggressive accounting methods, abnormalities in accounting, or transient circumstances that artificially inflate earnings. Evaluating the quality of profits is crucial for stakeholders, analysts, and investors to make well-informed choices regarding the financial stability, market value, and prospects of a company. Businesses with strong earnings quality are typically viewed more positively by the market, which raises investor confidence, lowers capital costs, and increases shareholder value over the long run.

The ratios analysed of earnings quality in this study are:

**Return on Assets:** A financial ratio called return on assets (ROA) gauges a company's capacity to produce a profit from its total assets. It shows the effectiveness with which a

business uses its resources to produce profits. A percentage is used to represent the resultant ratio. An organization that has a higher return on assets (ROA) is making more money compared to its assets, which is good news for shareholders. On the other hand, a lower ROA indicates that the business is not making as good a use of its resources to produce revenue. An important profitability statistic that analysts, investors, and management use to evaluate a company's financial performance and operational effectiveness is the return on assets. Investors can find organizations with superior operational performance and efficiency by comparing return on assets (ROA) across different industries and companies. The formula is:

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

**Net profit margin:** A financial term known as net profit margin calculates a company's profitability by expressing net profit as a proportion of total revenue. It shows the percentage of every dollar of income that, after all costs, taxes, and other deductions, is converted into profit. A percentage is used to represent the resultant ratio. As a higher percentage of each dollar of revenue is kept as profit, a higher net profit margin shows that the business is more effective at making money from its sales. On the other hand, a reduced net profit margin denotes a less efficient and profitable conversion of income into profit. Investors, analysts, and management utilize net profit margin as a crucial profitability indicator to evaluate the financial performance and profitability of a company. The formula is:

$$\text{Net Profit Margin} = \text{Total Revenue} / \text{Net Profit} \times 100\%$$

Some other ratio of this component are:

- **Dividend Payout Ratio**
- **Interest Income to Total Income**
- **Other income to Total income**
- **Net Interest Margin**

## **LIQUIDITY**

One of the elements in the CAMELS model used to evaluate the general health and performance of a financial institution, especially a bank, is “liquidity”. The ability of the bank to satisfy its immediate financial obligations and funding requirements without interfering with its business operations is referred to as liquidity. Because it represents the bank’s capacity to

resist shocks to its liquidity, preserve financial stability, and carry on with business as usual in a variety of market scenarios, liquidity is a crucial element of the CAMELS model. Strong liquidity levels give banks more ability to handle liquidity issues and meet their commitments to creditors and depositors, which boosts public confidence in the financial system. The ratios used for this study are:

**Liquid Assets to Total Assets ratio:** A financial measure used to evaluate the liquidity condition of a financial organization, especially a bank, is the Liquidity Assets to Total Assets Ratio. It calculates the percentage of all assets owned by a bank that are liquid—that is, easily convertible into cash without suffering a large loss in value. The ratio that is obtained is given as a percentage. A greater percentage of the bank's total assets are held in liquid form, which implies a stronger liquidity position, according to higher liquidity assets to total assets ratio. A lower ratio, on the other hand, suggests a smaller percentage of liquid assets compared to total assets, which can be a sign of possible liquidity risk. The formula is:

$$\text{Liquidity Assets to Total Assets Ratio} = \text{Total Assets} / \text{Liquidity Assets} \times 100\%$$

**Liquid Assets to Total deposits ratio:** One financial statistic used to assess a financial institution's liquidity position—especially a bank's—is the Liquid Assets to Total Deposits ratio. It indicates a bank's capacity to satisfy depositor withdrawal requests by calculating the percentage of total deposits that are supported by liquid assets. A percentage is used to represent the resultant ratio. A higher ratio of liquid assets to total deposits means that a bigger share of the bank's total deposits is supported by liquid assets, indicating a better liquidity position and a higher capacity to fulfil client requests for deposit withdrawals. In contrast, if the bank's liquid assets are inadequate to support deposit withdrawals, a smaller ratio would suggest possible liquidity risk. The formula is:

$$\text{Liquid Assets to Total Deposits Ratio} = \text{Total Deposits} / \text{Liquid Assets} \times 100\%$$

Other ratios of liquidity are:

- **Government securities to Total Assets ratio**
- **Liquid Assets to Demand Deposit ratio**

## **SENSITIVITY TO MARKET RISK**

"Sensitivity to Market Risk" is one of the CAMELS model's components that is used to evaluate a financial institution's overall performance and condition, especially banks.

Sensitivity to market risk assesses the possible effects on the bank's performance and financial situation of changes in market variables such as interest rates, currency rates, and asset values.

Evaluating several facets of the bank's exposure to market risks is part of the process of determining sensitivity to market risk. A crucial element of the CAMELS model is sensitivity to market risk, which represents the bank's capacity to control and reduce risks brought on by shifts in the state of the market. Strong risk management procedures and successful hedging techniques put banks in a better position to weather market turbulence, uphold their financial stability, and protect shareholder value. In order to make sure that banks have sufficient risk management frameworks in place to properly identify, measure, monitor, and control market risks, regulators utilize sensitivity to market risk.

**CHAPTER 4**  
**DATA ANALYSIS AND INTERPRETATION**

## CAPITAL ADEQUACY

Two ratios used to calculate capital adequacy are analysed below.

### 4.1 CAPITAL ADEQUACY RATIO

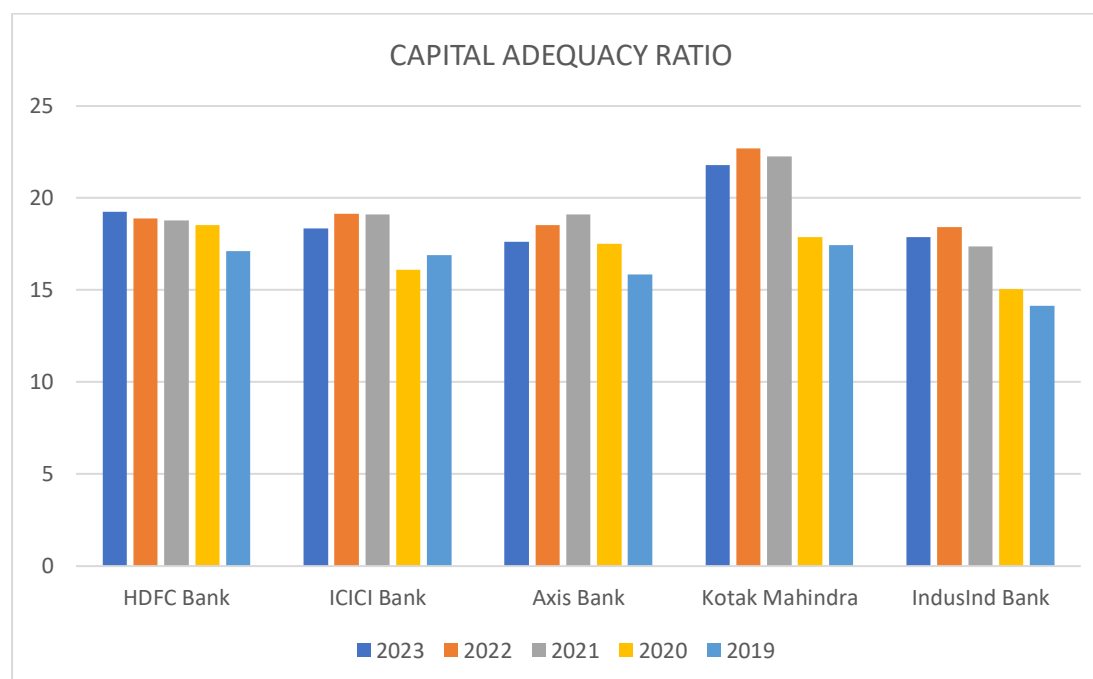
One measure of a bank's ability to fulfil its responsibilities is the capital adequacy ratio or CAR. Regulators use this ratio, the capital-to-risk weighted assets ratio (CRAR), which assesses a bank's failure risk by comparing capital to risk-weighted assets. Protecting depositors and advancing the global financial systems' efficiency and stability are its dual purposes.

**Capital Adequacy Ratio = (Tier 1 Capital + Tier 2 Capital) / Risk-Weighted Assets.**

**Table 4.1.1:** CAR of selected banks of the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	19.26	18.90	18.79	18.52	17.11
ICICI Bank	18.34	19.16	19.11	16.11	16.89
Axis Bank	17.64	18.54	19.12	17.53	15.84
Kotak Mahindra	21.80	22.69	22.26	17.89	17.45
IndusInd Bank	17.86	18.42	17.38	15.04	14.16

**Figure 4.1.1**



## INTERPRETATION

HDFC Bank's capital ratios vary from 17.11 in 2019 to 19.26 in 2023. There is a consistent increase trend in capital over time, indicating improved financial stability. ICICI Bank's capital ratios range from 16.11 in 2020 to 19.16 in 2022. Like HDFC Bank, the bank's capital has fluctuated over time, suggesting possible alterations to its financial standing. Axis Bank's capital ratios vary from 15.84 in 2019 to 19.12 in 2021; the bank's capital seems to have grown with time. Kotak Mahindra's capitalization rates vary from 17.45 in 2019 to 22.69 in 2022. The bank's capital has grown steadily over time, indicating a better state of affairs financially. The range of IndusInd Bank's capital numbers is 14.16 in 2019 to 17.86 in 2023. Like other banks, ours has experienced capital fluctuations throughout time, which point to shifts in the bank's financial standing.

### Hypothesis 1

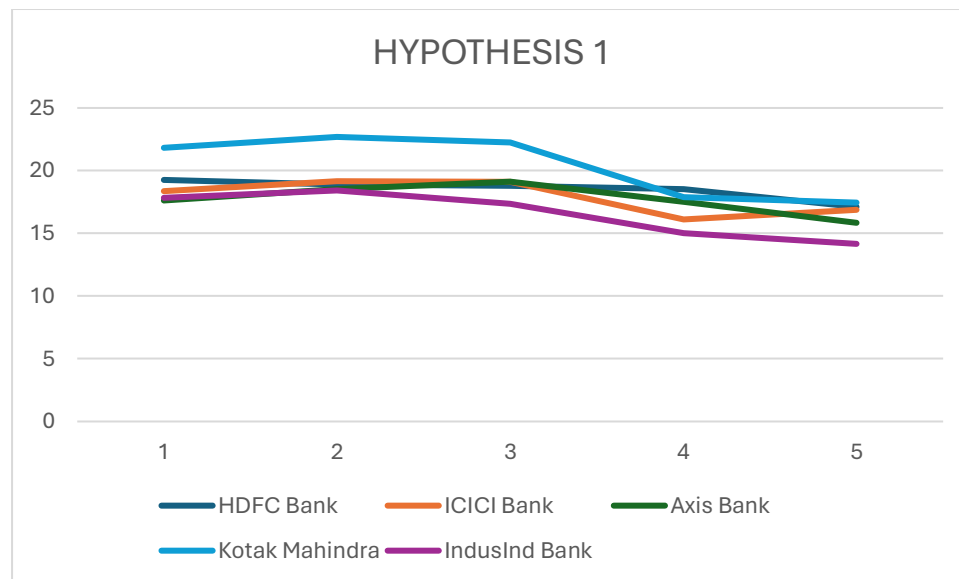
- H0-There is no significant difference between the capital adequacy ratios of the selecte banks
- H1- There is a significant difference between the capital adequacy ratios of the selected banks

**Table 4.1.2- ANOVA TABLE**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	39.79478	4	9.948694	3.554077	0.023998	2.866081
Within Groups	55.98468	20	2.799234			
Total	95.77946	24				

From Table 4.1.2, it can be seen that the P-value is less than 0.05. Therefore null hypothesis can be rejected. This indicates that there is a significant difference between the capital adequacy ratios of the selected banks.

**Figure 4.1.2**



## 4.2 DEBT EQUITY RATIO

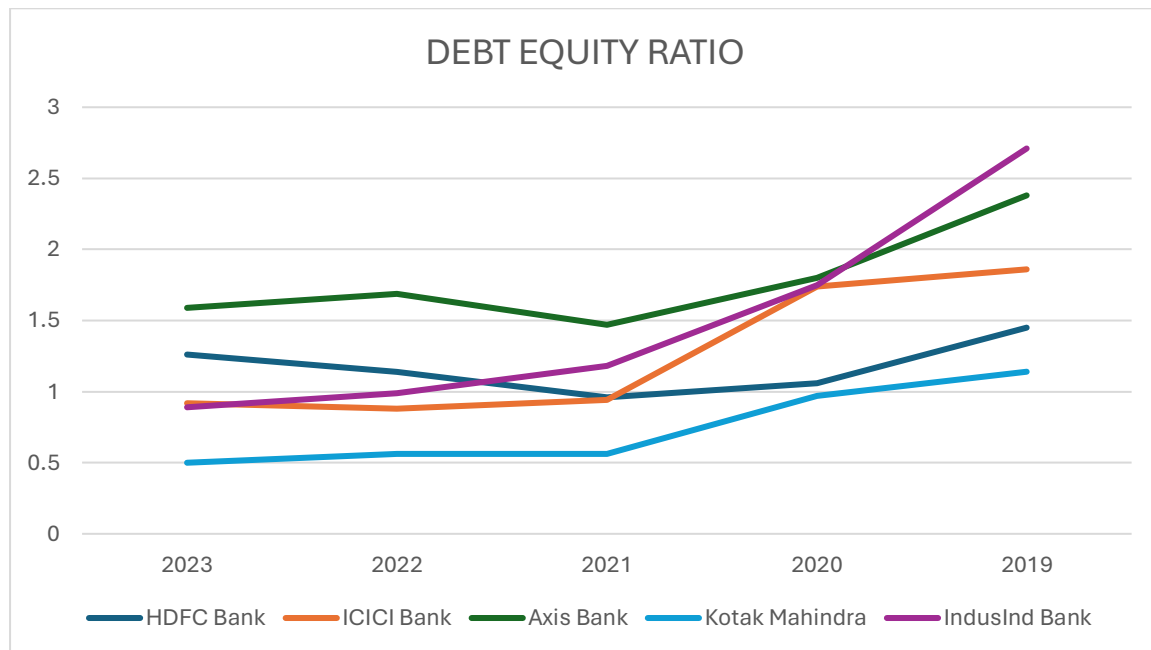
An indicator of a company's financing mix that shows how much of its funding is provided by debt as opposed to equity is the debt-to-equity (D/E). As a company employing less debt to support its operations has a lower D/E ratio, it is considered to be less risky financially. It implies that the business depends more on equity financing, which might offer stability in times of economic uncertainty. An organization may be more indebted and so rely more heavily on debt funding if its D/E ratio is higher. In prosperous times, debt can boost returns; nevertheless, it also raises financial risk, particularly if the company finds it difficult to pay off its debts while the economy is struggling.

**Debt-to-Equity Ratio=Shareholders Equity/Total Debt**

**Table 4.2.1-** Debt Equity Ratio of the selected banks of the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	1.26	1.14	0.96	1.06	1.45
ICICI Bank	0.92	0.88	0.94	1.74	1.86
Axis Bank	1.59	1.69	1.47	1.80	2.38
Kotak Mahindra	0.50	0.56	0.56	0.970	1.14
IndusInd Bank	0.89	0.99	1.18	1.75	2.71

**Figure 4.2.1**



#### INTER PRETATION

Over time, HDFC Bank's D/E ratios have varied from 0.96 to 1.45. This suggests that the bank relies less on debt for financing, mostly through equity-based methods. The D/E ratios of ICICI Bank vary from 0.88 to 1.86. Variations in the ratio over time indicate a moderate to high degree of leverage and different degrees of reliance on debt funding. The D/E ratios of Axis Bank vary from 1.47 to 2.38. This shows a strong reliance on debt funding, as evidenced by the ratio's constant above-1 status. The D/E ratios for Kotak Mahindra vary from 0.50 to 1.14. In comparison to equity, the ratios show a low to moderate reliance on borrowed financing. The D/E ratios of IndusInd Bank range from 0.89 to 2.71. This demonstrates notable swings and a high dependence on debt funding, particularly in 2019 when the D/E ratio was 2.71.

#### ASSET QUALITY

Two ratios related to Asset Quality are analysed below.

### 4.3 GROSS NPA RATIO

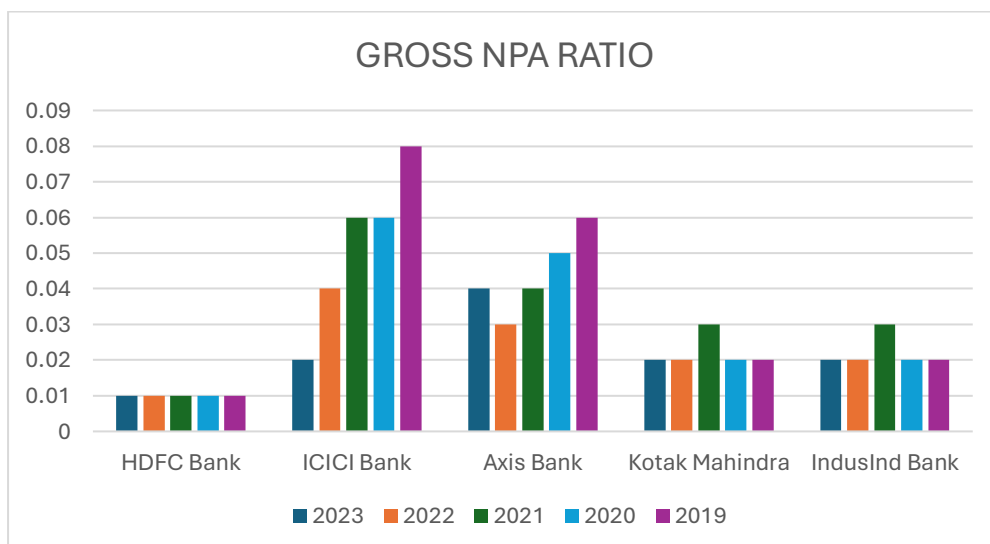
The percentage of loans in a bank's portfolio that are deemed non-performing is shown by the gross non-performing ratio, or GNP ratio. An elevated Gross Non-Performing Asset Ratio implies substandard asset quality and signifies a noteworthy proportion of the bank's loans being vulnerable to default. On the other hand, a lower gross non-performing ratio implies better asset quality and implies that the bank has a smaller percentage of non-performing loans in comparison to its whole loan portfolio.

$$\text{Gross NPA Ratio} = \frac{\text{Total Gross Advances}}{\text{Total Gross Non-Performing Assets}} \times 100\%$$

**Table 4.3.1**-Gross NPA Ratio fo the selected banks in the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	0.01	0.01	0.01	0.01	0.01
ICICI Bank	0.29	0.04	0.06	0.06	0.08
Axis Bank	0.04	0.03	0.04	0.05	0.06
Kotak Mahindra	0.02	0.02	0.03	0.02	0.02
IndusInd Bank	0.02	0.02	0.03	0.02	0.02

**Figure 4.3.1**



## INTERPRETATION

From 2019 to 2023, the Gross NPA Ratio is consistently low at 0.01%. This shows that, in comparison to its overall advances, HDFC Bank has kept a very robust loan portfolio with a very low percentage of non-performing assets. It implies careful lending procedures and efficient risk management on the part of HDFC Bank. For ICICI Bank over time, there have been variations in the Gross NPA Ratio, which has ranged from 0.04% to 0.29%. Although the ratio is often within regulatory requirements, a closer examination may be necessary in light of the 2023 rise to 0.29%. The asset quality of ICICI Bank appears adequate overall, but the growth in 2023 can point to new credit risks that require monitoring. The Gross NPA Ratio, which ranges between 0.03% to 0.06%, is comparatively steady. About its overall advances, Axis Bank consistently maintains a low to moderate level of non-performing assets. The ratio's constancy points to Axis Bank's consistent performance in terms of asset quality. For Kotak Mahindra, the Gross NPA Ratio, which ranges between 0.02% to 0.03%, is continuously low. Like HDFC Bank, Kotak Mahindra has a low percentage of non-performing assets in comparison to the total amount of loans it has. This indicates exceptional asset quality. For IndusInd, the Gross NPA Ratio, which ranges between 0.02% to 0.03%, is constantly low. IndusInd Bank has a low percentage of non-performing assets about its total advances, maintaining a consistent asset quality profile.

### 4.4 NET NPA RATIO

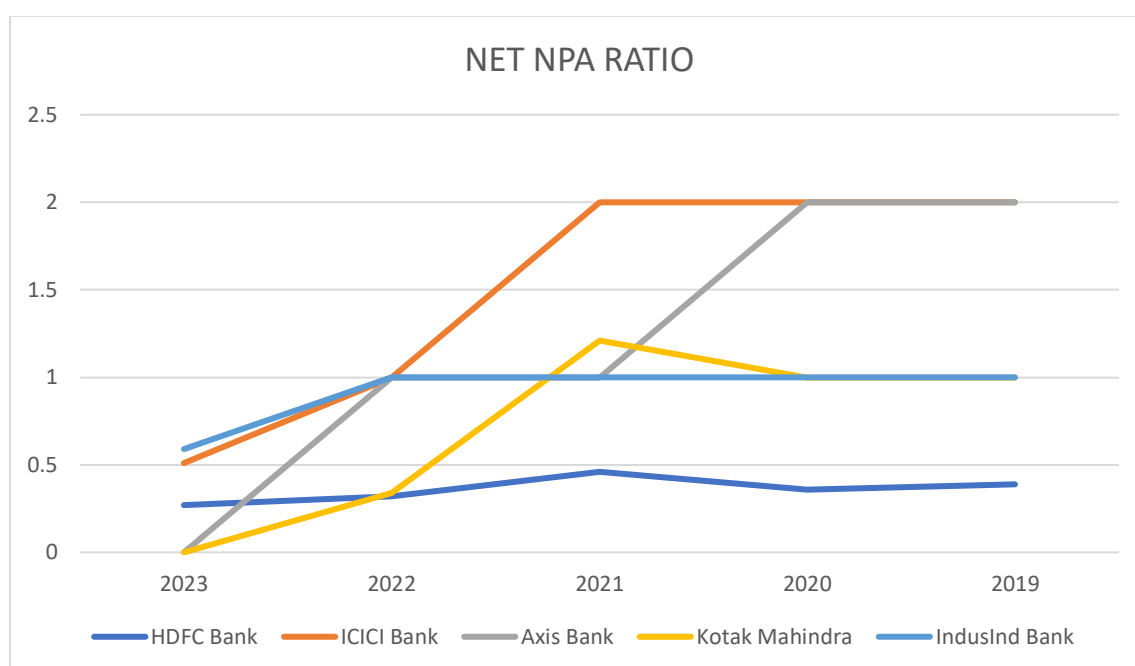
The part of a bank's loans that are deemed non-performing after accounting for provisions made against probable losses are referred to as net non-performing assets, or NPAs. Essentially, it is the total amount of non-performing loans that a bank has after deducting the amount allocated to losses. The bad debt provision is subtracted from the gross non-performing assets (NPAs) to determine the Net NPA. After taking into account the provision established to cover probable losses, it shows the actual quantity of bad loans that the bank possesses.

**Net NPA Ratio=Total Loans Outstanding Net NPAs×100%**

**Table 4.4.1-** Net NPA Ratio of the selected banks in the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	0.27	0.32	0.46	0.36	0.39
ICICI Bank	0.51	1.00	2.00	2.00	2.00
Axis Bank	0.00	1.00	1.00	2.00	2.00
Kotak Mahindra	0.00	0.34	1.21	1.00	1.00
IndusInd Bank	0.59	1.00	1.00	1.00	1.00

**Figure 4.4.1**



#### INTERPRETATION

Over the years, HDFC Bank has continuously maintained a low Net NPA ratio, which is indicative of strong asset quality and effective risk management. For Axis Bank, Kotak Mahindra, IndusInd Bank, and ICICI Bank, Net NPA ratios vary, and there have been some variations over time. Higher Net NPA ratios than HDFC Bank are displayed by ICICI Bank, Axis Bank, Kotak Mahindra, and IndusInd Bank, indicating relative increases in non-performing assets within their loan portfolios. Out of all the listed banks, HDFC Bank seems to have the best asset quality overall, with the other banks showing different levels of asset quality performance.

## Hypothesis 2

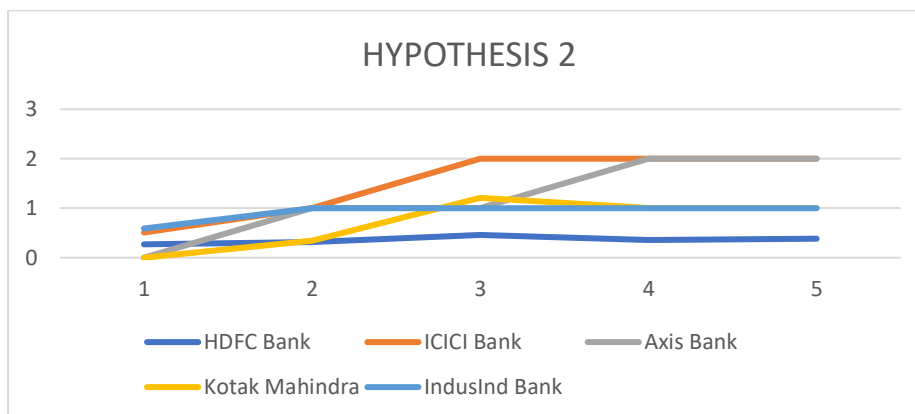
- H0- There is no significant difference between the Net NPA Ratio of the selected banks
- H1-There is a significant difference between the Net NPA of the selected banks

**Table 4.4.2-ANOVA TABLE**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3.86604	4	0.96651	3.224731	0.033925	2.866081
Within Groups	5.99436	20	0.299718			
Total	9.8604	24				

It is evident from Table 4.4.2 that the P-value is less than 0.05. As a result, the null hypothesis is rejectable. This suggests that the Net NPA ratios of the chosen banks differ significantly from one another.

**Figure 4.4.2**



## MANAGEMENT EFFICIENCY

Two ratios are analysed below to measure the management efficiency of the banks.

### 4.5 RETURN ON NEWORTH

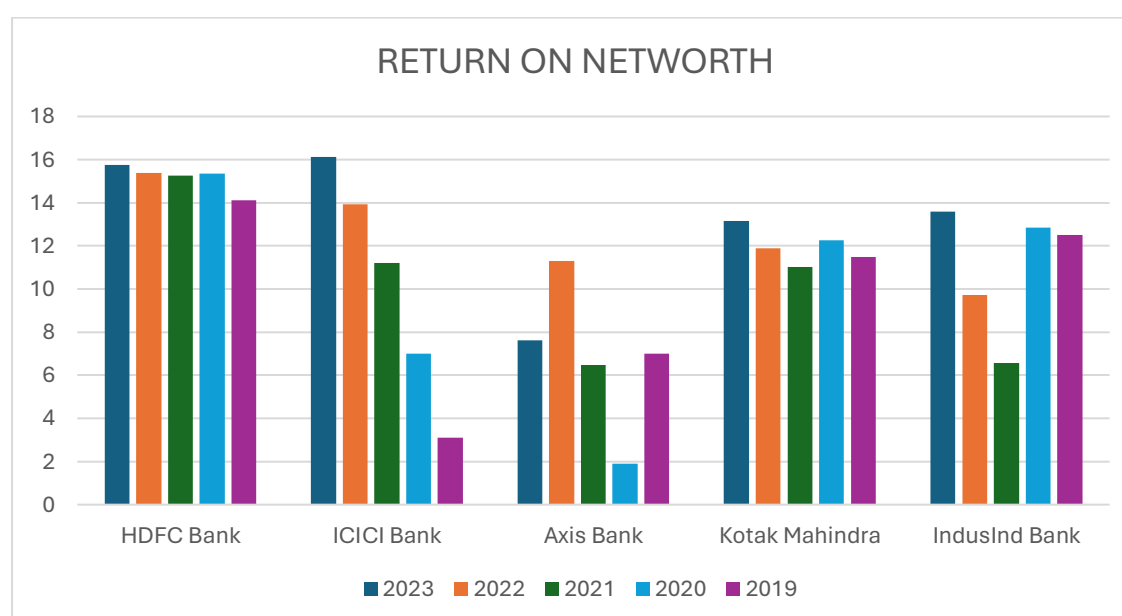
A financial ratio called return on net worth (RONW), sometimes referred to as return on equity (ROE), gauges a company's profitability in relation to the equity held by its shareholders. It shows how well a business is generating profits using its equity capital.

$$\text{RONW} = \text{Average Shareholders' Equity} / \text{Net Income} \times 100\%$$

**Table 4.5.1**-RONW of the selected banks of the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	15.74	15.39	15.27	15.35	14.12
ICICI Bank	16.13	13.94	11.21	6.99	3.11
Axis Bank	7.63	11.30	6.48	1.91	7.01
Kotak Mahindra	13.17	11.90	11.01	12.25	11.47
IndusInd Bank	13.60	9.73	6.58	12.84	12.52

**Figure 4.5.1**



#### INTERPRETATION

The RONW of HDFC Bank varies throughout time, ranging from 14.12% to 15.74%. In terms of profitability about shareholders' equity, the bank consistently maintains a healthy and steady return on net worth (RONW). The RONW of ICICI Bank varies greatly, from 3.11% to 16.13%. Between 2019 and 2023, the bank's RONW significantly improved, demonstrating a shift in profitability and efficient use of shareholders' equity. The RONW of Axis Bank varies, falling between 1.91% and 11.30%. The bank's return on net worth (RONW) increased significantly in 2023 over 2022, indicating increased profitability in shareholders' equity. The RONW range for Kotak Mahindra is 11.01% to 13.17%. The bank's RONW has been comparatively constant throughout time, demonstrating steady profitability about shareholders' equity. The RONW of IndusInd Bank varies, falling between 6.58% and 13.60%. Over time,

the bank's return on net worth (RONW) fluctuated, but in 2023 it increased noticeably from 2022 to 2023, a sign of increasing profitability about shareholders' equity. In summary, HDFC Bank and Kotak Mahindra exhibit a comparatively steady and robust return on net worth (RONW), signifying steady profitability about shareholders' equity.

#### 4.6 ASSET TURNOVER RATIO

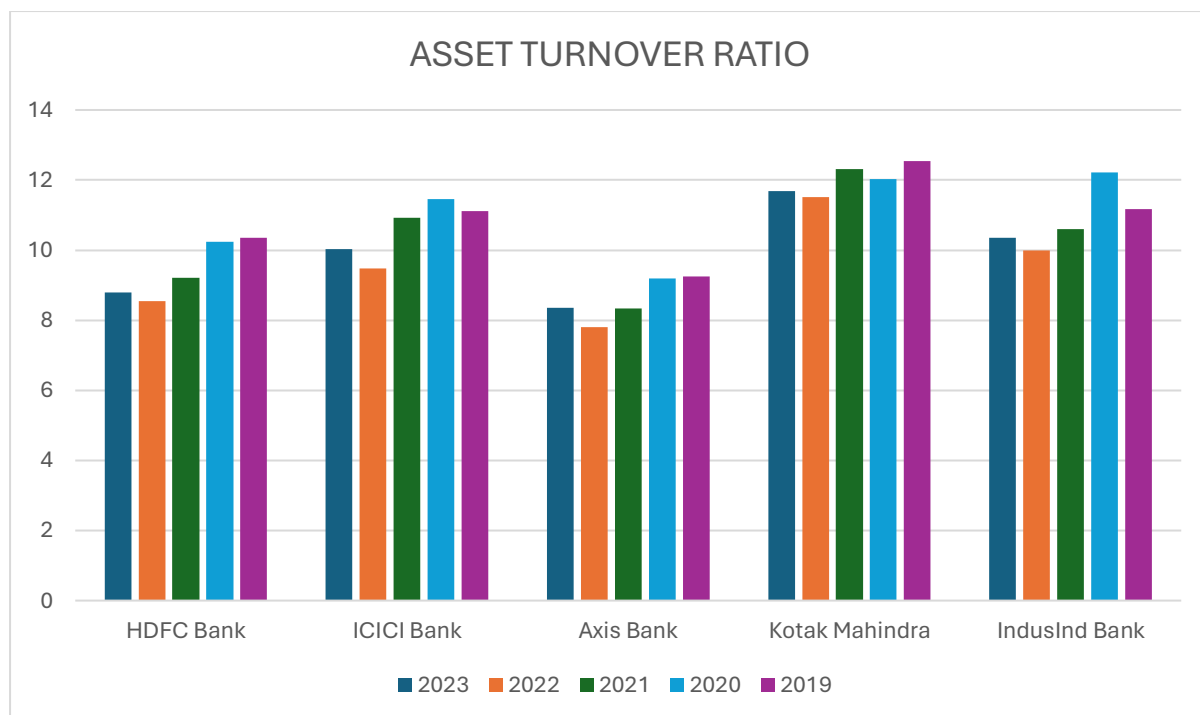
A financial indicator called the Asset Turnover Ratio (ATO) is used to assess how well a business uses its assets to generate sales revenue. It assesses how well a business uses its resources to produce revenue. One can compute the Asset Turnover Ratio by dividing the net sales of a company by the average total assets.

**Asset Turnover Ratio (ATO)=Average Total Assets/Net Sales**

**Table 4.6.1**-ATO of the selected banks of the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	8.80	8.55	9.22	10.24	10.36
ICICI Bank	10.03	9.47	10.92	11.45	11.11
Axis Bank	8.36	7.81	8.34	9.19	9.25
Kotak Mahindra	11.68	11.52	12.32	12.02	12.55
IndusInd Bank	10.36	10.00	10.60	12.22	11.18

**Figure 4.6.1**



### INTERPRETATION

The ATO of HDFC Bank varies over time, ranging from 8.55 to 10.36. All things considered, HDFC Bank's ATO is comparatively stable, indicating a steady efficiency in using its resources to produce sales income. Over time, ICICI Bank's ATO has varied from 9.47 to 11.45. Additionally, ICICI Bank exhibits a reasonably stable ATO, indicating a steady efficiency in the use of assets for revenue production. The ATO of Axis Bank varies over time, ranging from 7.81 to 9.25. Although it varies, Axis Bank's ATO often shows effective asset use for revenue production. Over time, Kotak Mahindra's ATO has varied between 11.52 and 12.55. Kotak Mahindra suggests effective asset usage for revenue generation by maintaining a relatively steady ATO. The ATO for IndusInd Bank is between 10.00 and 11.68. Additionally, IndusInd Bank has a comparatively steady level of asset utilization efficiency for revenue production. Throughout the years, all of the banks have shown very stable ATOs, demonstrating constant efficiency in using assets to create sales revenue.

### Hypothesis 3

- H0-There is no significant difference between the Asset turnover Ratio of the selected banks

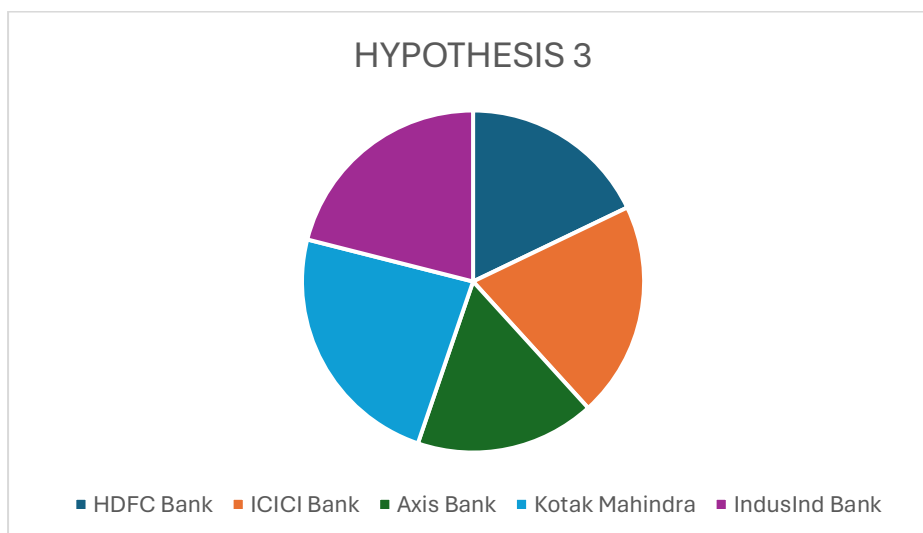
- H1-There is a significant difference between the Asset Turnover Ratio of the selected banks

**Table 4.6.2 - ANOVA TABLE**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	53.224576	4	13.30614	8.638783	0.000322	2.8660814
Within Groups	30.8056	20	1.54028			
Total	84.030176	24				

The P-value is less than 0.05, as shown in Table 4.6.2. Thus, it is possible to reject the null hypothesis. This suggests that the chosen banks' Asset Turnover ratios differ significantly from one another.

**Figure 4.6.2**



## EARNINGS QUALITY

Two Ratios are analysed below to measure the earnings quality of banks.

#### 4.7 RETURN ON ASSETS

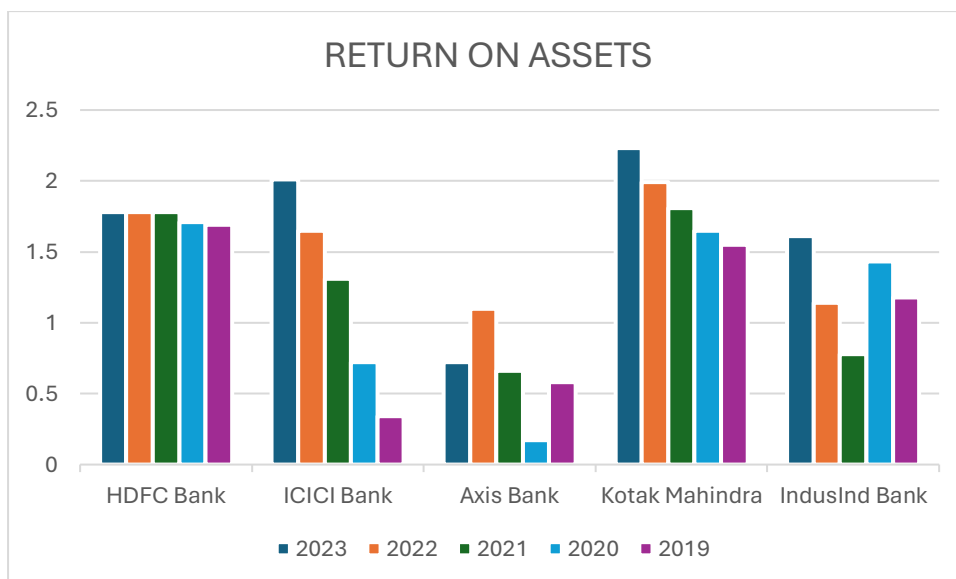
A financial ratio called return on assets (ROA) gauges an organization's profitability in relation to its total assets. It shows how effectively a business is making money out of its assets. One important indicator of a business's financial health and asset usage effectiveness is return on assets (ROA).

**ROA=Average Total Assets/Net Income**

**Table 4.7.1**-ROA of the five selected banks of the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	1.78	1.78	1.78	1.71	1.69
ICICI Bank	2.01	1.65	1.31	0.72	0.34
Axis Bank	0.72	1.10	0.66	0.17	0.58
Kotak Mahindra	2.23	1.99	1.81	1.65	1.55
IndusInd Bank	1.61	1.14	0.78	1.43	1.18

**Figure 4.7.1**



## INTERPRETATION

Over time, HDFC Bank's return on assets (ROA) has remained consistent, fluctuating between 1.69% and 1.78%. The bank's annual return on total assets is usually between 1.69% and 1.78%. The return on assets (ROA) of ICICI Bank varies throughout time, ranging from 0.34% to 2.01%. The rising trend in ROA between 2019 and 2023 points to increased asset usage efficiency and profitability. The ROA of Axis Bank varies over time, ranging from 0.17% to 1.10%. The bank's return on assets (ROA) varies, which suggests that the profitability of its total assets varies. In contrast to prior years, Axis Bank's return on assets (ROA) decreased in 2023. Kotak Mahindra's ROA varies over time, ranging from 1.55% to 2.23%. The bank has a comparatively steady return on assets, indicating steady profitability among its total assets. The ROA of IndusInd Bank varies throughout time, ranging from 0.78% to 1.61%. The bank's return on assets (ROA) varies, which is indicative of changes in the profitability about total assets. Compared to prior years, IndusInd Bank's return on assets (ROA) increased in 2023, indicating increased profitability and effective asset use. Over time, HDFC Bank and Kotak Mahindra have shown comparatively steady and robust return on assets (ROAs), demonstrating effective asset use to produce profits.

## 4.8 NET PROFIT MARGIN

A financial term known as net profit margin (NPM) calculates a company's profitability by expressing net profit as a proportion of total revenue. It shows the percentage of profit that is generated from each dollar of revenue after deducting all costs, such as interest, taxes, operating expenditures, and depreciation.

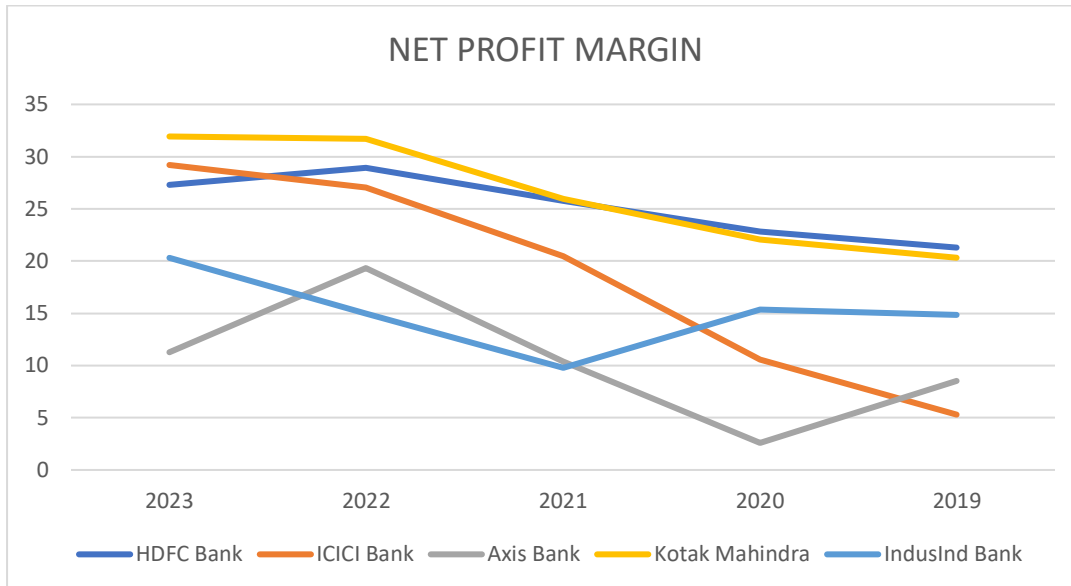
**Net Profit Margin (NPM) = (Total Revenue/Net Profit) × 100%**

**Table 4.8.1-NPM of the selected banks of the past five years**

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	27.29	28.93	25.74	22.86	21.29
ICICI Bank	29.20	27.02	20.46	10.60	5.30
Axis Bank	11.24	19.33	10.35	2.59	8.50

Kotak Mahindra	31.93	31.70	25.94	22.08	20.32
IndusInd Bank	20.31	14.96	9.78	15.34	14.82

**Figure 4.8.1**



#### INTERPRETATION

Over time, HDFC Bank's NPM has fluctuated between 21.29% and 28.93%. The bank continuously keeps its NPM at a comparatively high level, which suggests great profitability in its whole income. Over time, ICICI Bank's NPM has varied from 5.30% to 29.20%. Compared to other years, ICICI Bank's profitability significantly increased in 2023, a sign of improved cost control and operational efficiency. Over time, Axis Bank's NPM has varied from 2.59% to 19.33%. The bank's net profit margin (NPM) exhibits variability, with a notable uptick noted in 2023, indicating enhanced operational and financial success. Over time, Kotak Mahindra's NPM fluctuates between 20.32% and 31.93%. Like HDFC Bank, the bank continuously maintains a comparatively high NPM, demonstrating significant profitability in its total revenue. Over time, IndusInd Bank's NPM has varied between 9.78% and 20.31%. The bank's NPM fluctuates, with 2023 showing a significant increase. High net profit margins (NPM) are consistently shown by HDFC Bank and Kotak Mahindra, showing good profitability in their overall sales.

#### Hypothesis 4

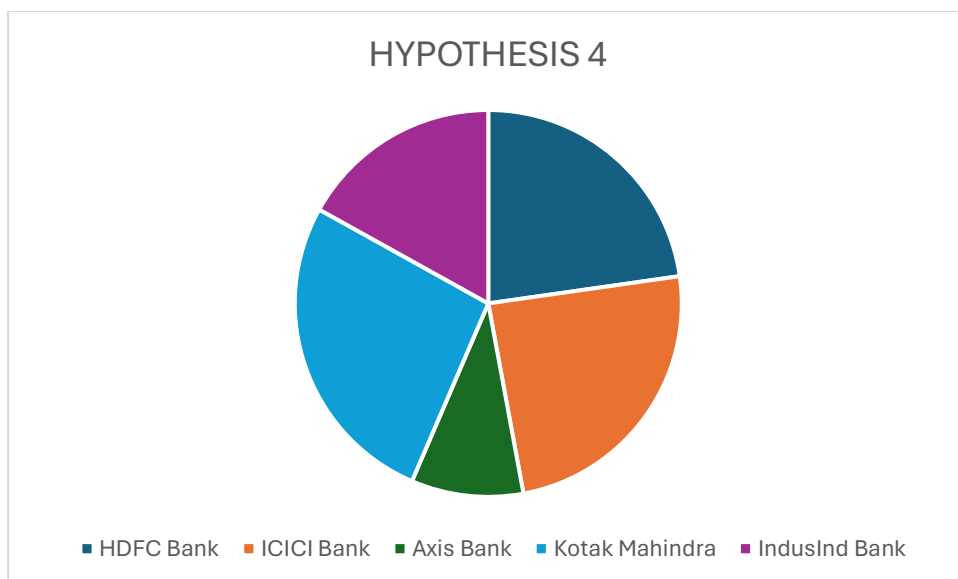
- H0- There is no significant difference between Net Profit Margin of the selected banks
- H1- There is a significant difference between the Net Profit Margin of the selected banks

**Table 4.8.2- ANOVA TABLE**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	915.7189	4	228.9297	5.854531	0.00275003	2.866081
Within Groups	782.0601	20	39.103			
Total	1697.779	24				

Table 4.8.2 indicates that the P-value is less than 0.05. Thus, the null hypothesis can be disproved. This implies that there are notable differences in the selected banks' Net Profit Margin.

**Figure 4.8.2**



## LIQUIDITY

Two ratios related to the liquidity indicators of CAMELS Model are analysed below

### 4.9 LIQUID ASSETS

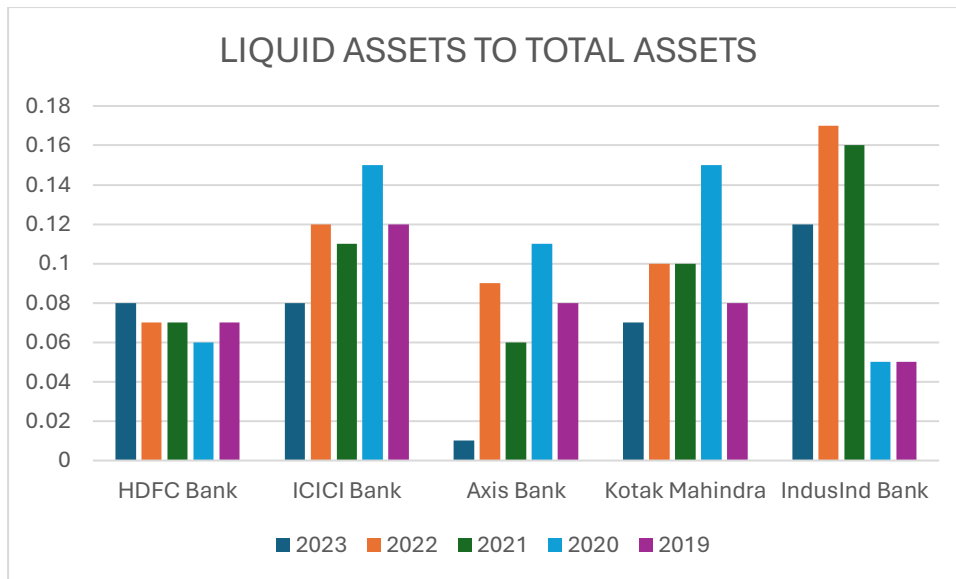
A financial indicator called the Liquid Assets to Total Assets Ratio compares a company's liquid assets to its total assets to determine how liquid it is. Assets classified as liquid can be quickly and readily turned into cash without having a substantial impact on their value. All of a company's assets, both liquid and illiquid, are included in total assets.

**Liquid Assets to Total Assets Ratio=Total Assets/ Liquid Assets**

**Table 4.9.1**-Liquid assets to total assets ratio of the selected banks in the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	0.08	0.07	0.07	0.06	0.07
ICICI Bank	0.08	0.12	0.11	0.15	0.12
Axis Bank	0.01	0.09	0.06	0.11	0.08
Kotak Mahindra	0.07	0.10	0.10	0.15	0.08
IndusInd Bank	0.12	0.17	0.16	0.05	0.05

**Figure 4.9.1**



### INTERPRETATION

The ratio varies throughout time, ranging from 0.06 to 0.08. It shows that between 6 and 8 per cent of HDFC Bank's total assets are liquid. About its overall asset base, HDFC Bank maintains a very constant yet moderate level of liquid assets. For ICICI Bank The ratio varies across time, ranging from 0.08 to 0.15. It shows that between 8% and 15% of all of ICICI Bank's assets are liquid. Although there is some fluctuation in the ratio, ICICI Bank typically keeps a moderate to high level of liquid assets to its total assets. For Axis Bank the ratio varies throughout time, ranging from 0.01 to 0.11. It shows that between 1% and 11% of Axis Bank's total assets are liquid. The ratio for Axis Bank will increase in 2023. For Kotak Mahindra Bank, the ratio varies throughout time, ranging from 0.07 to 0.15. It demonstrates that liquid assets make up between 7% and 15% of Kotak Mahindra's total assets. In comparison to its total assets, Kotak Mahindra keeps a moderate to high amount of liquid assets. For IndusInd The ratio varies throughout time, ranging from 0.05 to 0.17. It indicates that between 5% and 17% of all of IndusInd Bank's assets are liquid. The ratio of IndusInd Bank exhibits notable fluctuations, with the greatest ratio recorded in 2022.

### Hypothesis 5

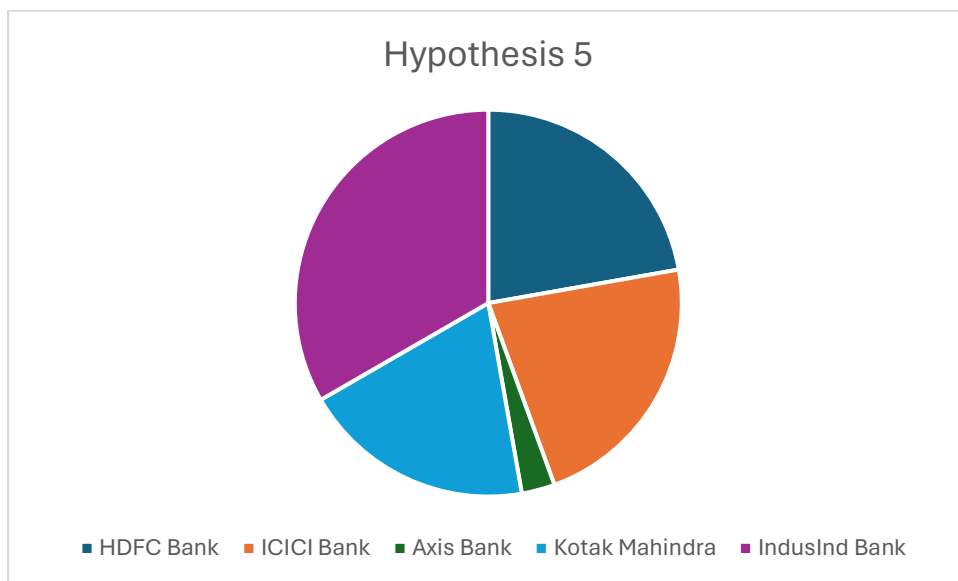
- H0-There is no significant difference in the Liquid assets to Total assets ratio of the selected banks
- H1-There is a significant difference in the Liquid assets to Total assets ratios of the selected banks

**Table 4.9.2- ANOVA TABLE**

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.009624	4	0.002406	1.870918	0.155039	2.866081
Within Groups	0.02572	20	0.001286			
Total	0.035344	24				

From Table 4.9.2 , it can be seen that the P-value is more than 0.05. This indicates that the null hypothesis is acceptable, Therefore, it can be said that there is no significant difference in the liquid assets to total assets ratios of the selected banks.

**Figure 4.9.2**



#### **4.10 LIQUID DEPOSITS**

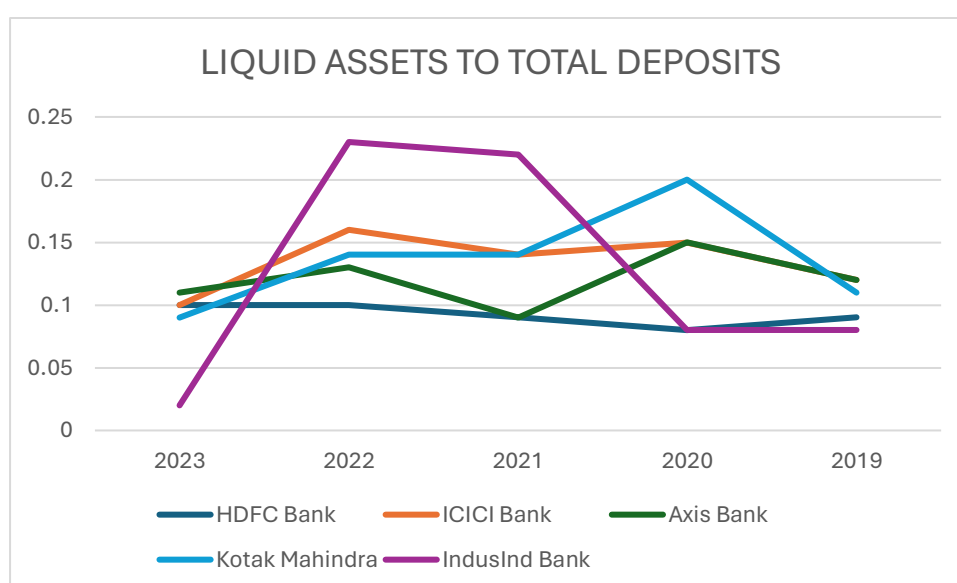
A financial indicator called the Liquid Assets to Total Deposits ratio compares a bank's liquid assets to its total deposits in order to evaluate its liquidity status. It assesses how well the bank can meet its deposit obligations using liquid assets—assets that can be easily turned into cash without suffering a major loss in value.

**Liquid Assets to Total Deposits Ratio=Total DepositsLiquid Assets**

**Table 4.10.1**-Liquid assets to total deposits ratio of the selected banks in the past five years

COMPANIES	2023	2022	2021	2020	2019
HDFC Bank	0.10	0.10	0.09	0.08	0.09
ICICI Bank	0.10	0.16	0.14	0.15	0.12
Axis Bank	0.11	0.13	0.09	0.15	0.12
Kotak Mahindra	0.09	0.14	0.14	0.20	0.11
IndusInd Bank	0.02	0.23	0.22	0.08	0.08

**Figure 4.10.1**



#### INTERPRETATION

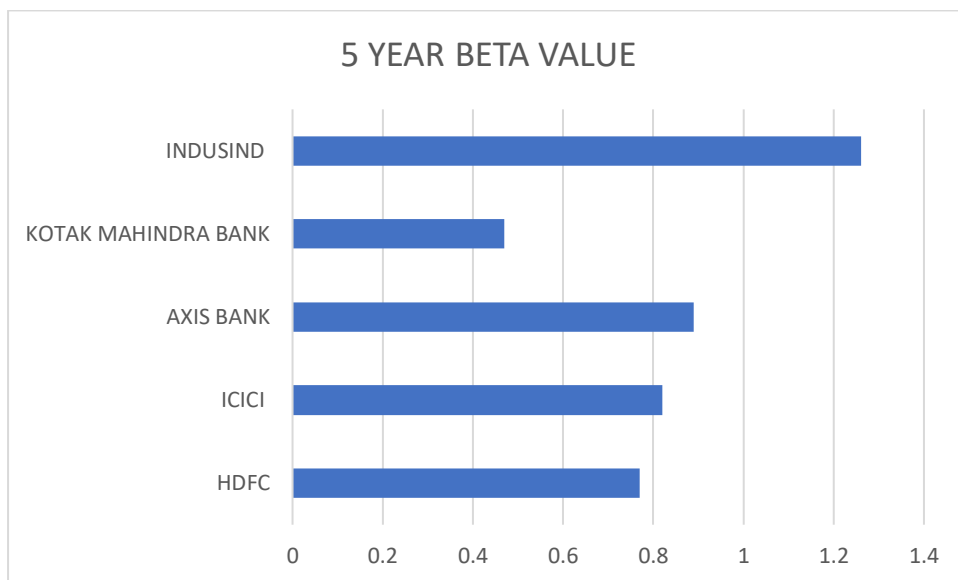
The ratio varies throughout time, ranging from 0.08 to 0.10. It demonstrates that liquid assets cover between 8% and 10% of HDFC Bank's total deposits. For ICICI Bank, the ratio varies throughout time, ranging from 0.10 to 0.16. It shows that liquid assets cover between 10% and 16% of ICICI Bank's total deposits. The ratio varies throughout time, ranging from 0.09 to 0.15. It indicates that liquid assets cover between 9% and 15% of Axis Bank's total deposits. The ratio varies throughout time, ranging from 0.09 to 0.20. It demonstrates that liquid assets make up between 9% and 20% of Kotak Mahindra's total deposits. The ratio varies throughout time, ranging from 0.02 to 0.23 for IndusInd Bank. It indicates a considerable range in the ratio, with the maximum ratio found in 2022.

#### 4.11 SENSITIVITY TO RISK

One way to define "sensitivity to risk management" is the capacity of an organization to recognize, evaluate, track, and control risks that could have an effect on its goals, stakeholders, or operations. The ability of an organization to foresee, respond to, and adapt to changes and uncertainties in both its internal and external environment is encompassed by this concept. This is calculated with the help of beta in this study.

**Table 4.11.1**

COMPANIES	5 YEAR BETA VALUE
HDFC	0.77
ICICI	0.82
AXIS BANK	0.89
KOTAK MAHINDRA BANK	0.47
INDUSIND	1.26



#### INTERPRETATION

With a beta score of 0.77, HDFC's stock price is less volatile than the market as a whole. ICICI's beta rating of 0.82 indicates that, compared to the market as a whole, its stock price is somewhat more volatile than that of HDFC. Compared to HDFC and ICICI, AXIS BANK's stock price is

somewhat more volatile, with a beta rating of 0.89 which suggests the company is generally close to the market's level of volatility. The beta value of Kotak Mahindra Bank is 0.47, indicating that the company's stock price is comparatively less volatile than the market as a whole. In comparison to the other banks on this list, investors may view it as a more stable investment. The beta value of 1.26 for IndusInd Bank suggests that the company's stock price is more erratic than the market as a whole. IndusInd Bank's stock price fluctuates more than the overall market , therefore investors can anticipate higher volatility.

**CHAPTER 5**  
**FINDINGS, SUGGESTIONS AND CONCLUSION**

## FINDINGS

- Kotak Mahindra bank has the best capital adequacy ratio ranging from 17.45% to 22.69% as compared with other selected banks indicating better financial status of the bank. It is followed by HDFC bank with the last being IndusInd Bank as it ranges from 14.16% to 17.86%.
- It is found that Kotak Mahindra bank has the least dependency on Debt Financing as its debt-equity ratio ranges from 1.14% to 0.50% and Axis bank depends mostly on Debt Financing among the selected banks with a range of 2.38% to 1.59%.
- HDFC Bank has the lowest Gross NPA Ratio over the past five years indicating better financial affairs than other banks as its ratio is continuously low at 0.01% over the past five years. ICICI Bank has the highest Gross NPA thereby indicating their weak asset quality ranging from 0.08% to 0.29%. It had a sudden increase in the year 2023.
- HDFC Bank again shows the best Net NPA Ratio ranging from 0.39% to 0.27% indicating the asset quality of HDFC is the strongest among the selected banks. ICICI Bank comes last indicating an increased level of Non-performing asset as its Net NPA Ratio ranges from 2.00% to 0.51%.
- HDFC Bank has the highest Return on Net worth ranging from 14.12% to 15.74% over the past five years showing better profitability for shareholder's. Axis bank has the least return on net worth over the past five years as its Return on Net Worth ranges from 7.01% to 7.63%.
- Kotak Mahindra Bank has the best asset turnover ratio ranging from 11.52% to 12.55% indicating its better use of resources to increase its income. Axis bank comes last with least management efficiency as its Asset Turnover Ratio ranges from 7.81% to 9.25%.
- Kotak Mahindra Bank has the return on assets ranging from 1.55% to 2.23% showing its effective utilization of assets. Axis bank has the least return on assets ranging from 0.17% to 1.10%.
- In case of return on assets, Kotak Mahindra shows the highest ratio ranging from 1.55% to 2.23% followed by HDFC Bank indicating better use of its assets. Axis bank ranging from 0.58% to 0.72% shows the least level of ratio.
- Kotak Mahindra and HDFC Bank shows the highest Net Profit Margin ranging from 20.32% to 31.90% and 21.29% to 27.29%. Axis bank shows the least amount of

profitability among the selected banks as its net profit margin ranges from 8.50% to 11.24% and 10% to 16% and HDFC Bank shows has only 8% to 10% liquid assets.

- In case of sensitivity to market risk HDFC and Kotak Mahindra has a Beta score of 0.77 and 0.47 respectively making them less volatile than the market. IndusInd bank shows the highest Beta score of 1.26 showing higher volatility.
- It is also found that there is a significant difference between Capital adequacy ratio, Net NPA Ratio, Asset Turnover Ratio and Net Profit Margin of the selected Banks.
- It is also found that there is no significant difference in the Liquid Assets to Total Assets Ratio among the five selected banks.

### **Objective 1: To analyze the components of the CAMELS Model using ratios**

The components of CAMELS Model were analyzed using two ratios per component.

**Capital Adequacy**-Kotak Mahindra followed by HDFC Bank gave the best performance.

**Asset Quality**-HDFC Bank had strong asset quality than other banks

**Management Efficiency**-Both Kotak Mahindra Bank and HDFC Bank performed well

**Earnings Quality**-Both HDFC Bank and Kotak Mahindra gave steady and robust returns

**Liquidity**-Kotak Mahindra Bank had higher liquidity than other banks

**Sensitivity To Risk**-Both HDFC Bank and Kotak Mahindra had less volatility

### **Objective 2: To analyze the performance of selected banks using ratios**

**HDFC Bank**-It gave an overall good performance with good capital adequacy, strong asset quality, better management efficiency, good earnings quality, moderate liquidity and less volatility with stable returns throughout the past five years

**ICICI Bank**-It had a moderate level of performance with moderate capital adequacy, weak asset quality, good management efficiency, moderate level of earnings quality and good level of liquidity and volatility.

**Axis Bank**-It had an overall weak performance than other banks. It showed insufficient capital adequacy, weak asset quality, poor management efficiency and earnings quality and moderate level of liquidity and volatility.

**Kotak Mahindra Bank**-Similar to HDFC Bank, Kotak Mahindra Bank also showed better performance than other banks with best capital adequacy, strong asset quality, good management efficiency and earnings quality, good level of liquidity and less volatility.

**IndusInd Bank**-It showed overall weak performance with insufficient capital adequacy, weak asset quality, moderate level of management efficiency, poor earnings quality and liquidity and high level of volatility with unstable returns.

**Objective 3:** To determine the best performing bank or banks

Out of the five selected banks analyzed through the selected ratios it can be determined that Kotak Mahindra Bank and HDFC Bank are the best performing banks. Both the banks showed overall best performance in all the aspects analyzed. Therefore,, it can be determined the Kotak Mahindra Bank and HDFC Bank are the best performing banks.

**Objective 4:** To help investors take an investment decision

All the banks analyzed are popular banks with good market capitalisation. Therefore, investors may tend to invest in any of these banks. However, it is seen that other than Kotak Mahindra Bank and HDFC Bank banks, all other banks have unstable returns over the past few years with Axis bank and IndusInd bank showing poor performance. Therefore, it can be reliable to invest in these banks for long term as their returns are unstable. It can be said that it is ideal to invest in HDFC Bank or Kotak Mahindra Bank on the basis of the ratios analysed.

## **SUGGESTIONS**

- HDFC Bank and Kotak Mahindra Bank show stable returns, all other bank show fluctuating results and they must take strategies to stabilize their returns.
- The selected banks being the top private banks of India, an investor tends to invest in any of these banks without proper analysis however it was found that there is a

significant difference in the ratios of the selected banks, therefore an investor should analyse thoroughly before investing.

- An investor should analyse the past performance of the banks along with its current performance as most of the banks has fluctuating returns.

## CONCLUSION

The study, “Performance Evaluation of Five Selected Private Sector Banks in India Using Ratios of CAMELS Model” shows the evaluation of HDFC Bank, ICICI Bank, Axis Bank, Kotak Mahindra Bank and IndusInd Bank. The ratios of CAMELS Model were used for the analysis. All the components of the CAMELS Model were analysed. It was found that Kotak Mahindra Bank and HDFC Bank shows the best performance. The two banks mentioned had stable and appropriate ratios over the past five years indicating better financial performance.

The other selected banks had fluctuating ratios that are not reliable for long term. The risk factor analysed showed that Kotak Mahindra and HDFC bank has the least volatility and other banks are more volatile. Therefore, Kotak Mahindra and HDFC Bank can be chosen for stable investment. Non-Performing Assets were the highest for ICICI Bank indicating weak asset quality and the need to build strategies to decrease such assets and improve the financial affairs of the business. HDFC Bank had the best asset quality and both HDFC and Kotak Mahindra Bank showed better management efficiency and earnings quality than other banks.

Kotak Mahindra had the best Capital Adequacy followed by HDFC Bank. Kotak Mahindra Bank and ICICI Bank had higher liquidity than other banks. Axis Bank had poor financial performance with the highest dependency on debt financing, poor asset quality, low return on net worth, poor earnings quality. It showed the least performance in six out of ten ratios indicating overall poor financial performance.

This study will therefore help investors to decide which banks are to be considered for investment. It helps them to know the best performing banks and invest wisely. It will also help the investor to know which banks have fluctuating returns and be cautious while investing. This study will therefore help investor to make an investment decision.

## **CHAPTER 6**

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