

## A STUDY OF RATIO ANALYSIS OF HDFC BANK: AN EVALUATION OF ITS FINANCIAL PERFORMANCE

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DOI: <https://www.doi.org/10.58257/IJPREMS30606>

### ABSTRACT

This research paper aims to evaluate the financial performance of HDFC Bank using ratio analysis. Ratio analysis is a tool used to evaluate a company's financial performance by comparing various financial ratios to industry averages and past performance. The study will focus on five key financial ratios. These indicators will be analyzed over a period of five years (2017-2021) to gain an overview of the bank's financial performance. The data used in the analysis will be collected from the bank's annual financial statements and will be compared to industry averages. The study will provide an in-depth understanding of the bank's financial performance, its strengths and areas for improvement. The findings of this study will be useful for investors, financial analysts and management of HDFC Bank.

### 1. INTRODUCTION

#### About HDFC Bank:

HDFC Bank Ltd is one of the largest banks in India. HDFC Bank is a new generation private bank headquartered in Mumbai, offering a wide range of banking services to both retail and wholesale customers including retail transaction and branch banking, wholesale commercial banking and investment banking. In addition, HDFC Bank has a branch in Hong Kong, he has two branches in the United Arab Emirates and Kenya, an offshore wholesale bank in Bahrain and a branch in the United Arab Emirates. The bank has two subsidiaries. HDFC Securities Ltd.

HDB Financial Services Ltd.

Bank has three main business segments.

1. Retail banking services
2. Wholesale banking services
3. Treasury

#### Retail banking services:

The Retail Banking segment provides retail banking services through its branch network and other delivery methods. This segment accepts deposits from customers, lends money and provides other services to these customers through its specialized product groups.

#### Wholesale banking services:

The Wholesale segment provides lending, nonfinancial instruments and transactional services to large corporations, government agencies, financial institutions and mid-sized businesses.

#### Treasury:

Equities, Local Currency Markets & Debt, and Foreign Exchange & Derivatives are the three main product areas for banks in this industry. The Treasury Department is responsible for managing the returns and market risks of this investment portfolio.

### 2. HISTORY

HDFC Bank Limited (Housing Development Finance Corporation) was established in August 1994 and is headquartered in Mumbai, India. In January 1995, HDFC Bank began operating as a regular commercial bank. The Reserve Bank of India (RBI) has given approval in principle to HDFC, one of the first companies to set up a private bank. The bank currently has an impressive network of over 4,805 branches spread across Indian cities. All branches are online and connected in real time.

Telephone Banking serves customers in over 500 locations. In addition, the bank operates a network of approximately 2,657 interconnected ATMs spread across towns and villages, totaling approximately 12,860. HDFC Bank offers a wide range of products and services including wholesale and retail banking, teller, auto loans, unicycle loans, personal loans, mortgage-backed loans, durable consumer goods loans, lifestyle, credit cards and other digital products. increase.

#### The bank has received the following significant honours during FY2020:

- A. Best domestic bank winner of the 2020 Asia Money Best Bank Award.
- B. The Outstanding Company of the Year category of the 2019–2020 CNBC–TV18 India Business Leader Awards (IBLA).
- C. UTI MF - Best performing bank at the CNBC TV18 Financial Advisor Awards 2018–19 (private sector).

### 3. RATIO ANALYSIS INTRODUCTION

Comparing items in a company's financial accounts is called ratio analysis. Ratio analysis is used to find problems with a company's profitability, operational efficiency, and liquidity. It is also used to show the advantages or strengths of a company. Due to all that it can teach us about finances and businesses, financial ratio analysis is an incredibly fascinating subject to study. By using ratio analysis, we may determine a company's profitability, determine whether it has enough cash on hand to cover its expenses, and even determine whether its shareholders should be satisfied. Ratio analysis can also help us determine whether a company is performing better this year than it did last year, as well as whether our company is performing better or worse than other companies that sell the same products.

Benefits and Implementations of ratio analysis:

**Calculating Profitability:** The various profitability ratios using accounting ratios enables one to determine a company's profitability. Knowing the earning potential of the company is helpful to management. Profitability ratios display the company's actual performance in this way.

**Calculating solvency:** The solvency of the company can be determined using solvency ratios. These ratios depict the connection between liabilities and assets; if external liabilities exceed the company's assets, the business is in a weak situation. In this situation, the company must make it possible for its loans to be repaid.

**Assists in comparison analysis of performance:** Ratio analysis enables a corporation to compare its performance to that of prior years. In this manner, the organisation learns about its areas for improvement.

**Work out short-term financial status:** Liquidity ratios can be used in ratio analysis to determine the company's short-term financial position. When the short-term financial situation isn't sound, attempts are taken to make it better.

**Forecasting:** Accounting ratios are useful for forecasting reasons since they show the direction of the firm. The trend can be used to predict the future. Future estimates can be made using ratios from previous years. In this manner, these ratios serve as the foundation for creating budgets and identifying potential future courses of action.

#### **Objectives:**

- To identify the strengths and areas for improvement in the financial performance of HDFC Bank and provide recommendations for improving its financial performance.
- To evaluate the liquidity position of HDFC Bank over the period of 2017-2021 using the current ratio and compare it with industry averages.
- To evaluate the profitability of HDFC Bank over the period of 2017-2021 using the return on asset ratio and compare it with industry averages.

### 4. LITERATURE REVIEW

A literature review is a summary of earlier studies that have been published and unpublished and were carried out by different academics and researchers. A literature review's sources could include books, theses, reports, magazines, journals, newspapers, etc. It may also contain discussions, methodological issues, and suggestions for additional research.

At the beginning of the nineteenth century, ratio analysis made a significant advancement. There are currently few endogenous advancements. First, many more ratios than in the past have been developed. Second, suitable ratio specifications started to emerge. The most well-known in this regard was the current ratio criterion. Third, it was felt that the relative ratio criterion was required because many analysts recognise the value of inter-firm analysis. The 1920s saw a sharp rise in interest in ratio analysis. During this time, numerous publications on the subject of ratio analysis were released. Industry data on ratio analysis was produced by various credit agencies, trade unions, universities, and individuals requesting analyses.

Ratio analysis is utilised for management and credit purposes. The main emphasis in managerial and credit approaches is on profitability and the firm's ability to pay its debts. Ratio analysis is typically employed in credit analysis.

In the eighteenth century, financial information expanded quickly. To examine this knowledge, analysts first compared related items before moving on to evaluate current assets and liabilities as well as other ratios. The current ratio was the most important ratio among all those that were available throughout that time. Dupont analysis is also used to analyse operating results. The outcome was broken into three sections and then contrasted with other businesses to highlight the issue and strong business areas.

Many countries displayed interest in ratio analysis in the 1940s. After thorough examination, current ratio is now employed in credit management in Australia. In England, data has been gathered from various organisations and sorted into a "pyramid" for use in ratio analysis and more informed decision-making. In contrast to the credit-oriented American system, the British strategy is more management-oriented. Similar ratios and criteria are employed in the Indian and Canadian systems as in the American one. Data in Japan can be grouped according to industry and business size. As a working capital and investment control metric, China and Russia both used a variety of ratios.

- The financial accounts of the State Bank of India were examined by **Bangaru Pushpalatha in (2020)**. Examining SBI's asset and liability portfolio is the aim. The study was limited to the seven-year period between 2011 and 2017. The researchers used the "T" test to determine each variable's relative importance. The survey indicates that SBI has more effective management and financial operations. According to the study, people favour SBI's advance financing schemes as well.
- **P Rajendran (2019)** investigated the efficiency of the HDFC Bank. The historian explained the details of HDFC Bank's past. Current ratios, cash ratios, leverage ratios and capital adequacy ratios were all above average financial metrics. The study found that long-term funding contributes to banks' working capital. According to the researchers, HDFC Bank is India's largest private bank and performed well during the study period.
- **Nagalekshmi V. S. and Vineetha S. Das (2018)** Discovered the beneficial effects of the merger of ING-Vysya Bank and Kotak Mahindra Bank Ltd. We also found significant increases in a number of budget metrics, including operating income, net income, earnings per share, interest earned, return on investment, share capital, and return on investment.
- According to **K. Dinesh Kumar and G. Venugopal (2018)**, ICICI Bank performed well in terms of balance sheet ratio and debt coverage ratio, ranking second only to HDFC Bank. Profitability metrics for SBI and Kotak Mahindra Bank are strong.
- In their article titled, Financial Performance of Indian Banking Sector: A Case Study of SBI and ICICI Bank, **Murad Mohammad Galif Al-Kaseasbah and Abdel Karim Salim Issa Albkour (2018)**. To assess SBI and ICICI Bank's financial performance. During the investigation, it was discovered that whereas ICICI successfully managed the rising tendency, SBI reported a fluctuating pattern.
- According to **Vinoth Kumar and Bhawna Malhotra (2017)**, From 2007 to 2017, we used the CAMEL methodology to assess the performance and financial strength of selected Indian private banks. According to the results of this survey, ICICI Bank ranks him second only to Axis Bank in his CAMEL analysis. Kotak Mahindra Bank was his third. Among all selected banks, HDFC Bank ranked his fourth and IndusInd Bank ranked last.
- Kotak Mahindra Bank's merger with ING Vysya Bank's financial performance was examined in **Suruchi Satsangi Prem Das Saini (2017)**. The study's conclusions demonstrated the rapid expansion seen in Kotak Mahindra Bank's financial performance following mergers and acquisitions.
- **Priyanka Jha (2017)** examined the financial results of a public sector bank (Punjab National Bank) and a private sector bank (ICICI) in India. Researchers compared PNB and ICICI Bank and found that PNB was less efficient in its operations. ICICI Bank outperforms PNB in dividend payout ratio, debt-to-equity ratio, and interest expense and interest income.
- SBI vs ICICI Bank in India financial performance comparison study by **Jaiswal and Jain (2016)**. This study uses the CAMEL model to analyze the financial performance of Indian banks. In this study, he compares the financial results of SBI and ICICI from November 2010 to 2014-15. According to the author, SBI is financially more favorable than his ICICI. Furthermore, we find that SBI holds a stronger market position than ICICI in terms of earnings per share, price per share, and dividend payout ratio. In contrast to SBI Bank, ICICI Bank has performed well in terms of NPA and NPA provisions.
- According to **Gupta (2014)**, an empirical study on the financial performance of ICICI Bank: a comparative analysis focusing on operational management, profitability and solvency, and other matters, the purpose of this study is analysis and analysis. bottom. It compares them with ICICI Bank's financial performance and makes recommendations to improve the bank's efficiency. According to this analysis, ICICI Bank's NPA is over 1%. Therefore, ICICI must manage NPAs.
- Through ratio analysis, **Tirkeyi and Salem (2013)** compared the financial statements of ICICI and HDFC and looked at the financial status using various ratios. It was discovered that ICICI's financial situation is substantially better than HDFC's.
- **Kaur (2010)** used the CAMEL method to study commercial banks operating in India. For this analysis, he divided the banks into his three groups. The researcher used his CAMEL analysis method to rank banks. Each CAMEL component of this study was analyzed using two ratios to construct the final composite index. The survey examined a sample of 28 public banks, 26 private banks and 28 foreign banks. The secondary data used for this study comes from Indian Bank Statistics Tables for the financial years from January 2000 to July 2006. According to the analysis, the two largest banks were HDFC Bank and Jammu and Kashmir Bank.
- **Uppal (2010)** looked into the reach of mobile banking in the Indian banking business between 2000 and 2007. According to the survey, mobile banking only ranks 47th among public sector banks and older institutions, while ATMs are the most successful e-channel overall. banks in the private sector. According to the poll, mobile banking is well enough for new private sector banks and multinational banks, with more than 50% of typical branches offering the service. The results show that new private sector banks follow new foreign banks in terms of mobile banking service delivery, with a much higher efficiency than other banks. The study included suggestions on how to enhance mobile banking services.
- Additionally, he studied the financial performance of nationalised banks in India and assessed the growth index value of important traits using overall profitability indicators, according to **Dangwal and Kapoor (2010)**. Four banks were revealed, they found. Performed remarkably well, five banks did okay, and six banks did not perform well. As a result, nationalised banks' performance varies widely.

- **S. Gurusamy, M.D. (2009)** One of the most crucial elements in constructing a nation's financial structure is the pension fund. A fund that contributes to the expansion of a nation's social security system is the pension fund. The fund promotes a nation's economic development by system of social security. Private companies, governmental entities, or labour unions establish funds for the provision of retirement benefits. It aims to aid in reducing poverty, regulating consumption, and other problems. It serves a bigger purpose than just rewarding past diligent service.
- **Gupta and Kaur (2008)** rated the top five and bottom five institutions after using the CAMEL model to analyse the performance of Indian private sector banks. This study rated 20 current and 10 new private sector banks using the CAMEL methodology.

The study's financial information covers a five-year period, from 2003 to 2007. The CAMEL Model placed HDFC at the top of the list of all Indian private sector banks.

The research also recognised Gobal Trust Bank and Nedungradi Banks as having subpar management. The results show that core banking, effective marketing strategies, and advanced technology have given rising private sector banks a competitive edge.

- In the Indian economy, the Reserve Bank of India is essential, according to **Vasant Desai (2007)**. It's known as the banker's bank. All banks in the nation are under the control of RBI. The RBI is in control of all money production by commercial banks. because of the difficulty. The RBI carries out all the conventional duties of a good central bank in terms of the nation's economic planning. The RBI's main responsibility is to monitor their credit. The Bank must maintain a consistent external value for the rupee. Its main responsibility should be to control the currency.
- Author **K.C. Sharma in (2007)** Banking sector has entered the technological era. This is because adjustments have been made to comply with WTO regulations. Private sector banks were allowed to set up branches across the country. They are either foreign banks or domestic banks with connections abroad. To adapt the universal banking concept used in rich countries, several were established by development financial institutions. The nation's elite can now experience the best banking methods used in Western countries, as the private sector soon adopted high-tech operations. They envisioned a digital age and an expanding electronic sector.
- According to **Medhat Tarawneh (2006)**, financial success is assessed as a dependent variable based on return on assets (ROA) and required income. A bank's total assets as a measure of size and wealth management as an indicator of utilization are one of the independent variables (operating income divided by total assets). The operational efficiency ratio, calculated as total cost of ownership divided by net profit, is a measure of operational efficiency.
- A simple regression was used to calculate the impact of wealth management, operational efficiency and bank size on the financial performance of his five commercial banks in Oman with a total of over 260 branches. According to the study, having a high total capital, deposits, loans, or total assets does not necessarily mean that a bank is profitable. **Medhat Tarawneh (2006)**
- **Manish Mittal and Arunna Dhademad (2005)** argue that the only important criterion for evaluating the performance of the banking sector from the shareholders' perspective is improved profitability. Banks have the task of finding a balance between business and social objectives. They found private banks to be more profitable than state-owned banks. Foreign banks top the list in terms of net profitability. Private sector banks generate higher non-interest income than public sector banks because they provide more fee-based services to businesses and the corporate sector. Public sector banks must have such services readily available in order to compete with private sector banks.
- According to **Saulnier (1958)**, firms with low liquidity and debt ratios are at higher risk of default than firms with high liquidity and debt ratios. The relationship between solvency ratios and financial ratios has been emphasized by Moore and Atkinson (1961), who also show how the results of ratio analysis affect firms' ability to borrow.
- **Beaver (1967)** also looked at the accuracy of ratio analysis's failure predictions, highlighting how ratios could foresee failure as early as five years before a collapse. The study's statistical method was more potent than that utilised in past studies, and fund statement data was used to determine ratio. Future studies on ratio analysis will build on the results of this study.
- **Sorter and Becker (1964)** discovered that long-established corporations maintain higher liquidity and solvency ratios. In their study of the connection between psychological models and the corporate personalities of financial ratios.
- According to **Gombola and Ketz (1983)**, the fund and income statement are generated for various purposes, and profitability ratios do not contain the data that cash flow ratios provide. In other words, both ratios provided crucial as well as distinct information.

## 5. RESEARCH METHODOLOGY

Research should be used in its technical sense because it is an academic activity. In actuality, it is a voyage of discovery. When something unexpected happens to us, we are left wondering, and our curiosity prompts us to do research to have a thorough understanding of the new.



A research technique is a strategy to approach and investigate a research topic methodically. We look at the various methods a researcher could employ to analyse a study topic and the justifications for each.

The methods used to gather, put together, and analyse data during the research process are referred to by this phrase. It alludes to the equipment utilised to gather pertinent data for a research investigation. Surveys, questionnaires, and interviews are frequently used research techniques.

The researcher developed the research technique using a scientific method because this is an empirical study. The researcher's primary source of secondary data for this study is the Annual Report, along with websites and other media.

As a quantitative examination, this one concentrates on the financial accounts for the previous five years of the HDFC Bank. The secondary data and annual reports used in this study were found on bank websites. The data were examined using the ratio, and it was simple to understand the Bank's output for the sample period.

#### Data Collection:

Given that the information gathered is dependent on what was intended to be discovered, effort should be taken to minimise data collecting errors. The accuracy of the data gathered is impacted by the factory's availability of time, money, and labour.

Data for the study will be collected from the bank's annual financial statements for the years 2017 to 2021 using quantitative research. The current ratio is used to evaluate the data. In order to gain insight into the bank's financial performance, these ratios will be compared to industry averages.

## 6. DATA ANALYSIS

#### Liquidity Ratios:

Financial indicators called liquidity ratios assess a company's capacity to pay short-term debts. They serve as crucial gauges of a company's solvency and financial health. These measures are crucial instruments for assessing a company's short-term solvency and financial stability. A company's liquidity ratios can be used to determine if it has enough assets to cover its liabilities as they become due. In general, a high current ratio, quick ratio, or cash ratio denotes sound liquidity, but a low ratio could be a sign of possible problems with liquidity.

**Current Ratio:** It measures the bank's ability to repay its short-term debts using its current assets. The formula is  $\text{Current Ratio} = \text{Current Assets} / \text{Current Liabilities}$ .

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | 1.5  | 1.5  | 1.4  | 1.5  | 1.4  |

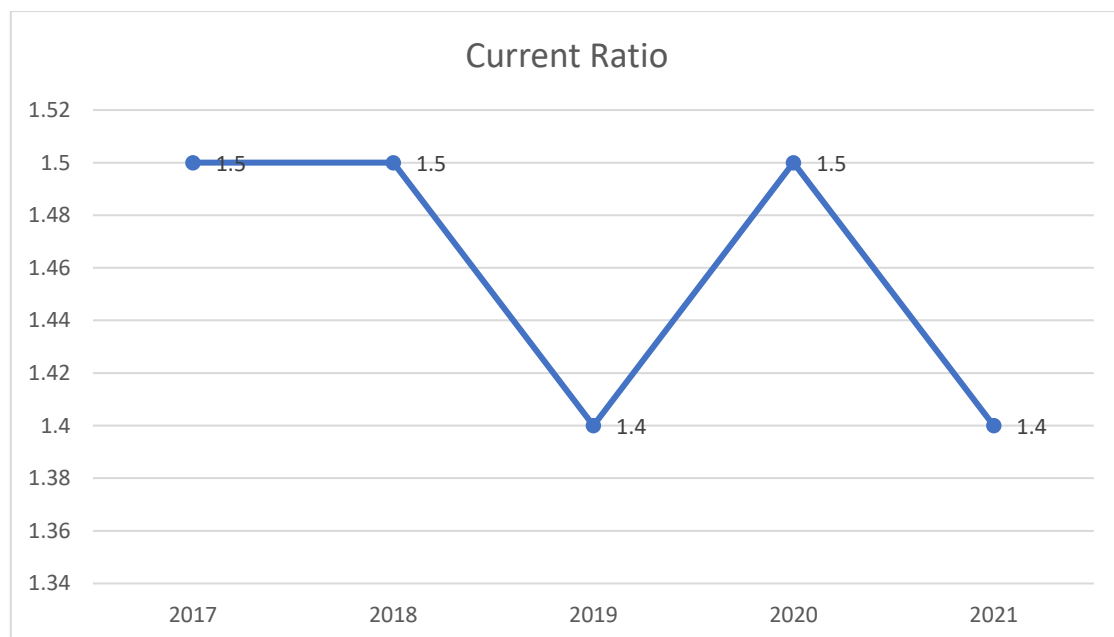


Fig. 1

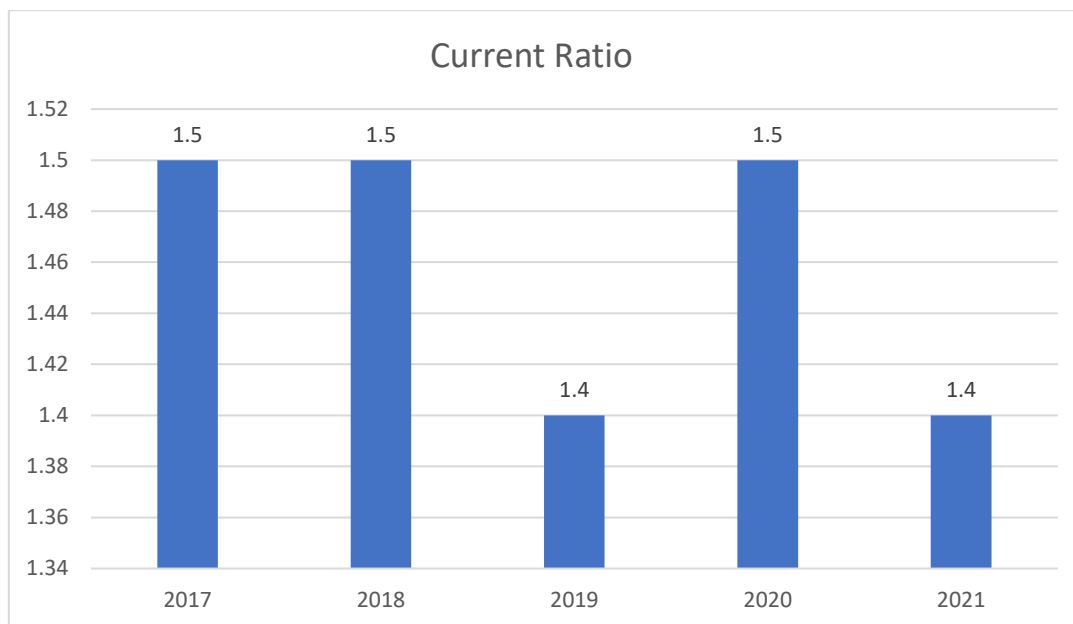


Fig .2

#### Interpretation:

For the years 2017–18 and 2021, HDFC Bank's current ratio was 1.5; for the years 2019–2020, it was 1.4. A current ratio between 1.5 and 1.4 is indicative of the bank's short-term solvency because it shows that its current assets are sufficient to meet its current liabilities. The ability of the bank to satisfy its immediate financial obligations is demonstrated by a greater current ratio, which is typically viewed as a favorable indicator. In this instance, the drop from 1.5 to 1.4 is quite minimal, indicating that the bank's financial stability has barely changed during the relevant time period.

#### Quick Ratio:

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | 1.3  | 1.3  | 1.3  | 1.2  | 1.2  |

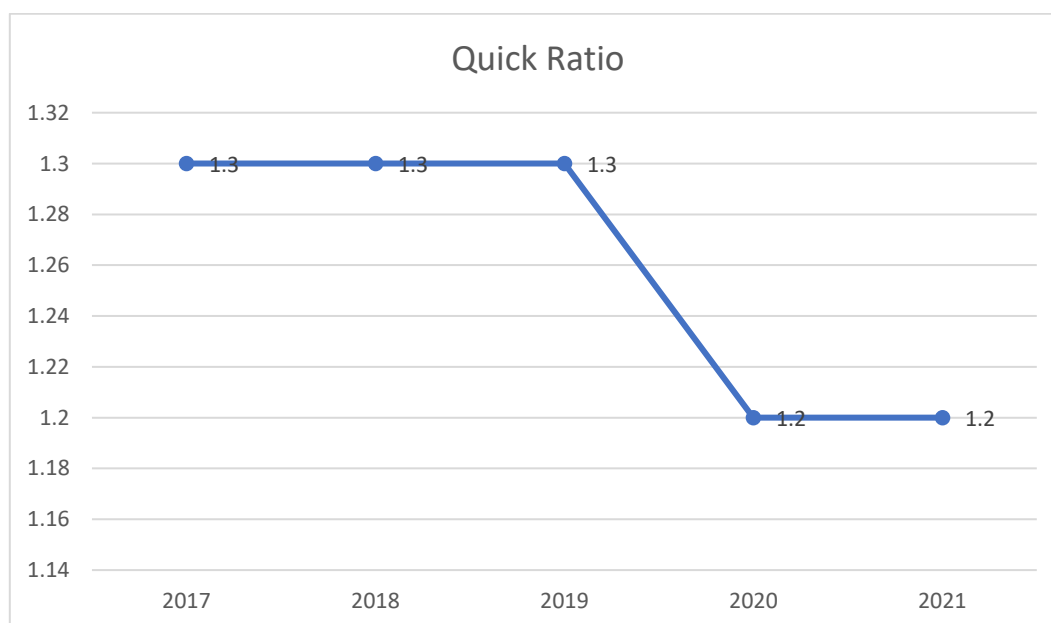


Fig. 3

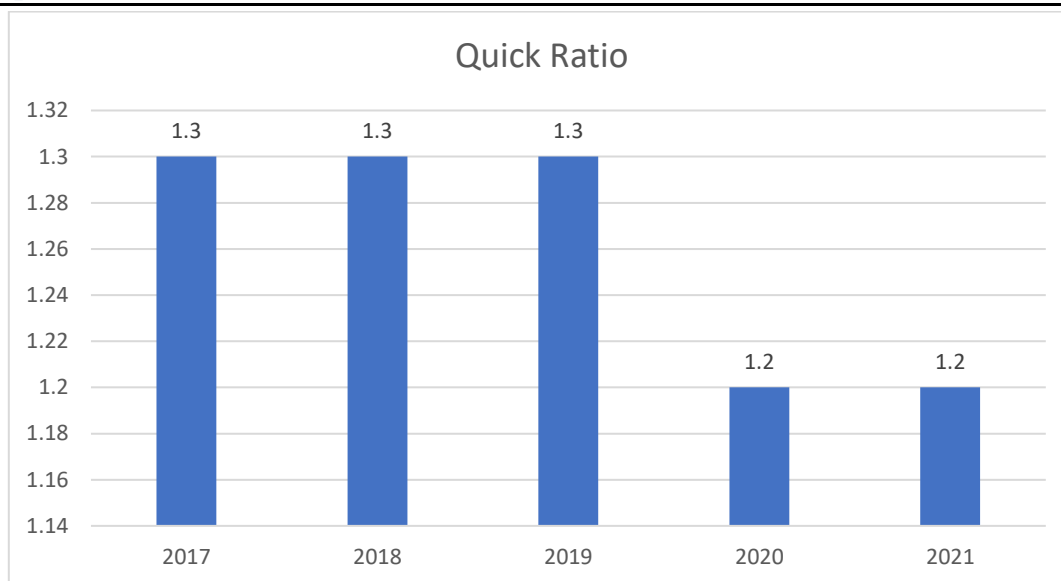


Fig. 4

#### Interpretation:

The quick ratio for HDFC Bank was 1.3 from 2017 to 2019 before falling to 1.2 from 2020 to 21. A quick ratio of 1.2 indicates that the bank has enough liquid assets to satisfy its short-term obligations, but it would find it difficult to settle its debts in an emergency. This drop in the quick ratio can be a sign that the bank's liquidity and financial health are perhaps deteriorating.

#### Asset Quality Ratios:

The quality and makeup of a company's assets are evaluated using a set of financial measurements called asset quality ratios. These ratios shed light on the risk connected to an organization's assets and its capacity to produce future cash flows. Since lending and investing in financial assets constitute the bulk of banks' and financial institutions' core businesses, asset quality ratios are particularly crucial to them.

Asset quality ratios are crucial in assessing a company's financial stability. They aid in determining the risk attached to a company's assets and its capacity to produce future cash flows for investors, creditors, and other stakeholders. Companies should periodically check their asset quality ratios and, if necessary, take action to raise them.

**Non-Performing Assets (NPA) Ratio:** It measures the proportion of loans that are not generating income for the bank. A high NPA ratio indicates that a significant portion of a bank's loan portfolio is at risk of default, which may affect its overall financial performance. The formula is  $\text{NPA Ratio} = (\text{Gross NPAs}) / (\text{Gross Advances})$ .

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | 0.9  | 0.8  | 0.7  | 1.33 | 1.33 |

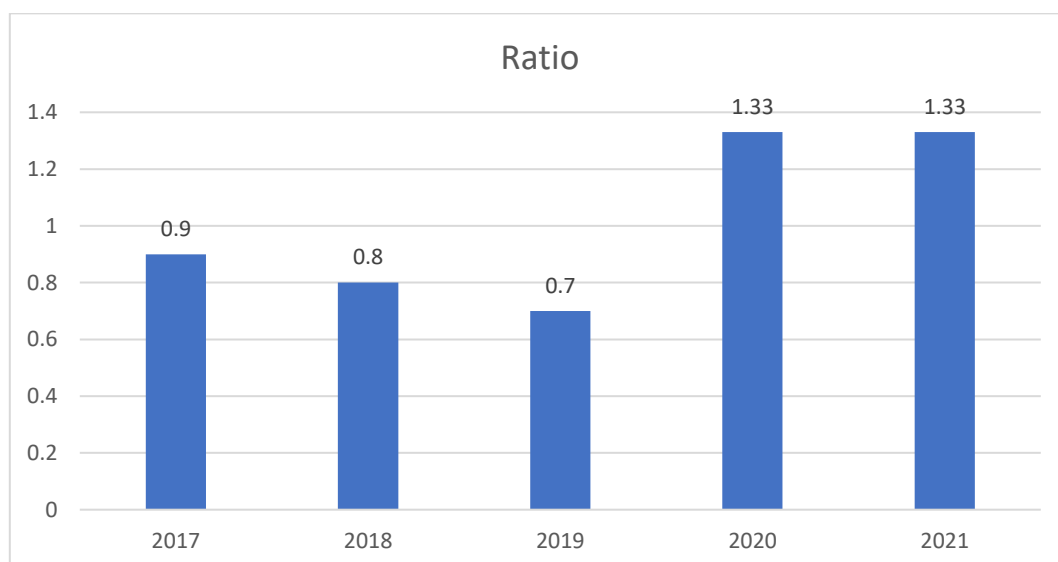


Fig. 5

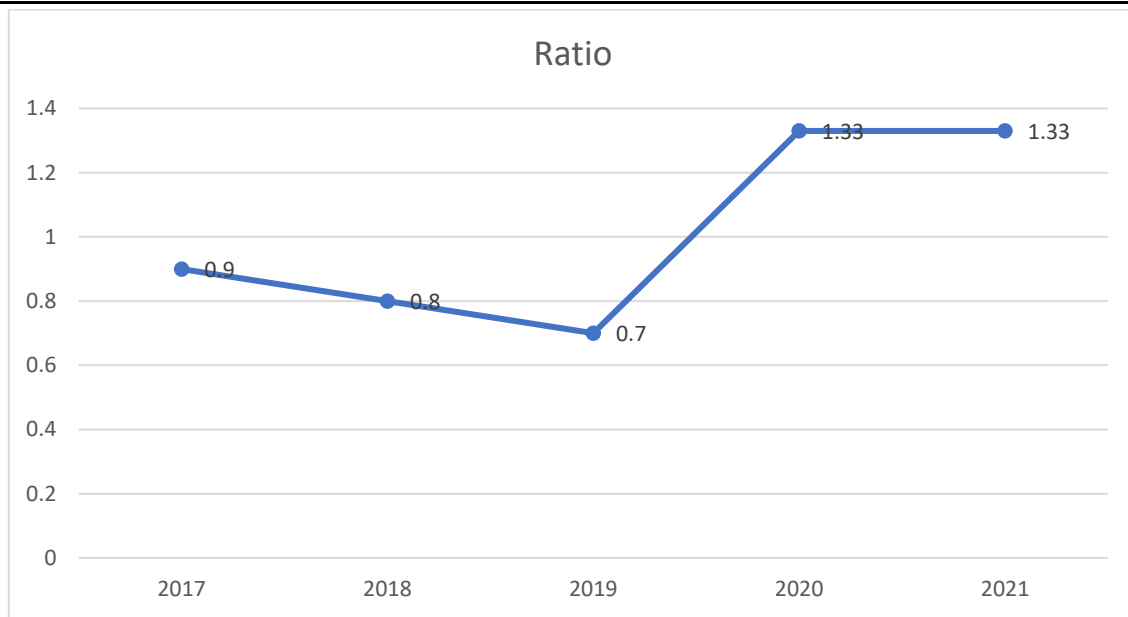


Fig. 6

#### Interpretation:

In the years 2017, 2018, and 2019, the Non-Performing Asset (NPA) ratio for HDFC Bank has values of 0.9, 0.8, and 0.7, respectively. However, the NPA ratio dramatically increased to 1.33 in the next year, 2020–2021. This shows that a greater proportion of the bank's loan portfolio has defaulted, increasing the bank's risk.

It is important to note that the COVID-19 pandemic and its effects on the economy have presented difficulties for the banking industry as a whole recently. It's probable that these more general economic difficulties are reflected in the increasing NPA ratio for HDFC Bank in 2020–21.

**Gross NPA to Gross Advances Ratio:** It measures the proportion of total loans that are NPA. The total amount of loans that a bank has disbursed to its clients is referred to as gross advances. The value of loan assets that are not producing interest or principal repayments is referred to as gross non-performing assets (GNPA).

The percentage of a bank's loan portfolio that is at risk of default is quantified by the GNPA to Gross Advances Ratio. A high ratio shows that the bank's loan portfolio has a sizable number of non-performing loans, which can negatively affect the bank's overall financial performance. A low ratio, on the other hand, shows that the bank has a loan portfolio that is functioning well and has little risk of default.

This ratio is used by banks and other financial organizations to evaluate the quality of their loan portfolio and pinpoint opportunities for development. This ratio is also used by regulators to check on the stability of banks' finances and make sure they adhere to ethical lending standards.

As a result, the Gross NPA to Gross Advances Ratio is crucial for assessing the risk involved with a bank's loan portfolio and its capacity to produce future cash flows.

The formula is  $\text{Gross NPA to Gross Advances Ratio} = (\text{Gross NPAs}) / (\text{Gross Advances})$ .

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | 0.9  | 0.8  | 0.7  | 1.33 | 1.33 |



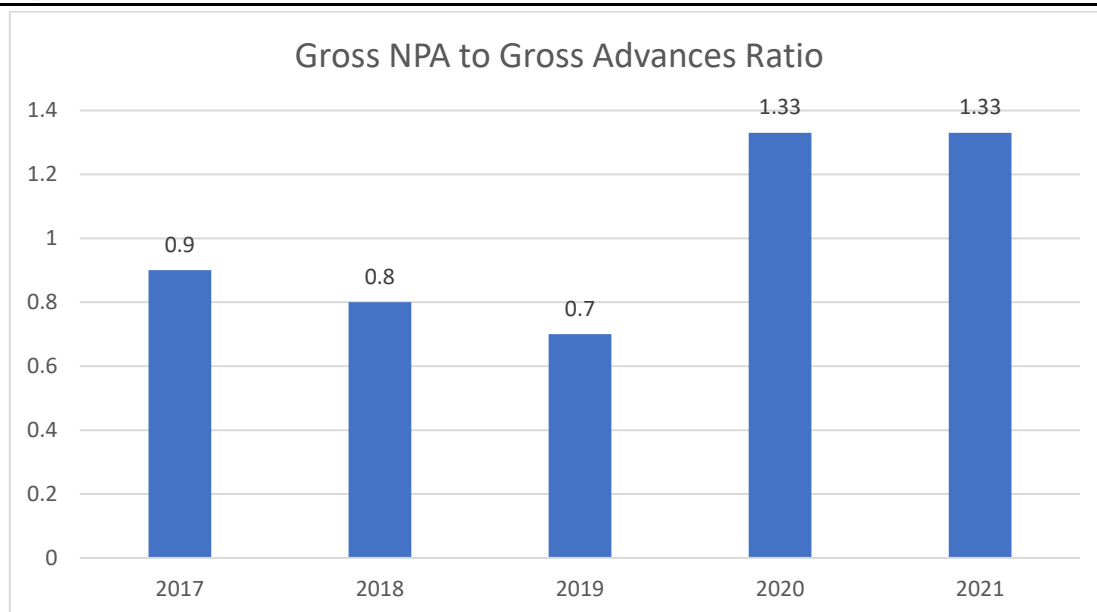


Fig. 7

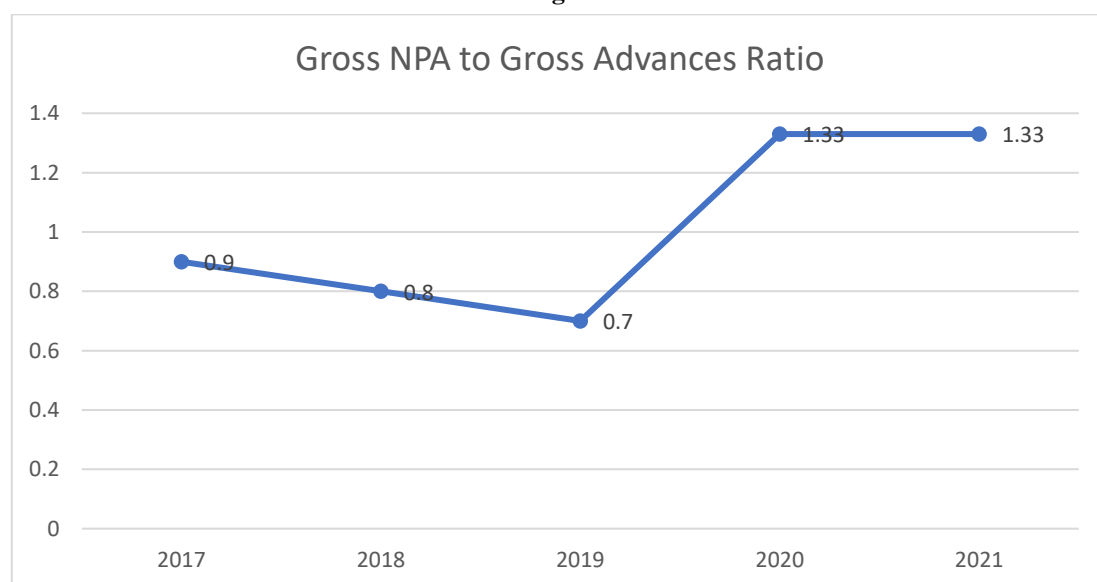


Fig. 8

#### Interpretation:

With values of 0.9, 0.8, and 0.7, respectively, the Gross Non-Performing Asset (NPA) to Gross Advance ratio for HDFC Bank in the years 2017, 2018, and 2019 demonstrated a declining trend. This shows that the bank was managing its loan portfolio successfully and lowering the percentage of loans that were defaulting. However, the ratio dramatically climbed to 1.33 in the next year, 2020–2021. This shows that the bank's loan portfolio's quality has declined as a greater proportion of its loans are now non-performing. The COVID-19 pandemic's effects on the economy and the banking industry may be to blame for the rise in the Gross NPA to Gross Advance ratio in 2020–21.

#### Capital Adequacy Ratios:

The amount of capital a bank or other financial institution has in relation to its assets is determined by a set of financial indicators called capital adequacy ratios. These ratios are intended to make sure that banks have enough capital to withstand potential losses and to maintain stability in the event of a financial crisis or other downturn.

A minimum level of capital adequacy must be maintained by banks and other financial institutions in accordance with the rules established by their individual central banks. This minimum amount is designed to make sure they have enough cash to cover potential losses and keep things stable during difficult financial times.

By ensuring that banks have enough capital to absorb potential losses and sustain stability during periods of financial stress, capital adequacy ratios play a significant role in preserving the stability of the financial system. Regulators, investors, and other stakeholders can learn a lot from these measures about the stability and health of a bank's finances.

**Capital Adequacy Ratio (CAR):** This measures the proportion of a bank's total capital, which includes Tier 1 capital and Tier 2 capital, to its risk-weighted assets.

Tier 2 capital includes undisclosed reserves, revaluation reserves, general reserves and subordinated debt.

The formula is  $CAR = (Tier\ 1\ Capital + Tier\ 2\ Capital) / Risk\text{-}Weighted\ Assets$ .

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | 17.3 | 17.3 | 17.4 | 16.1 | 16.1 |

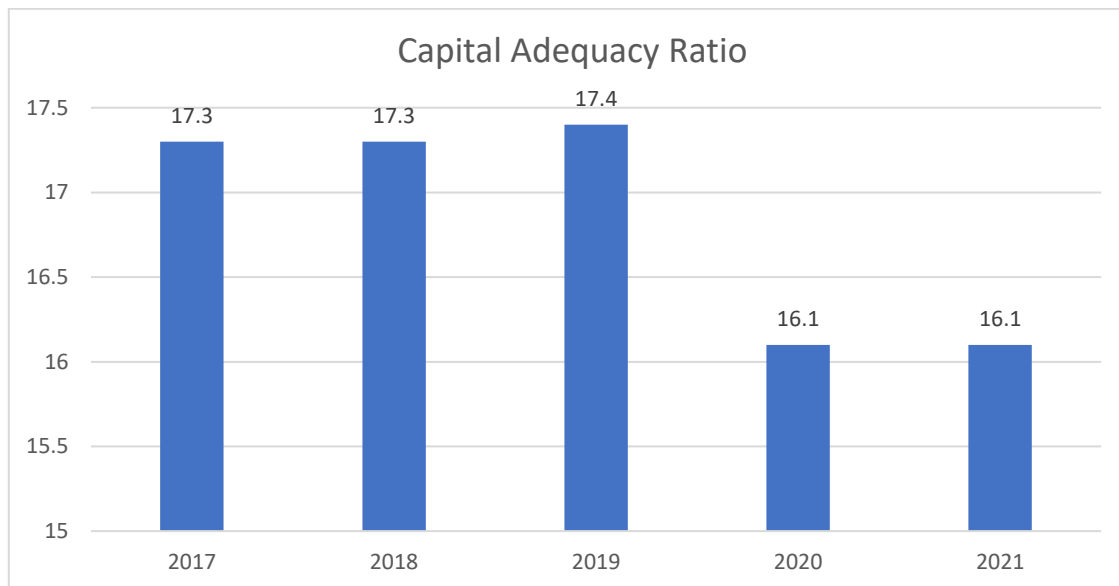


Fig. 9

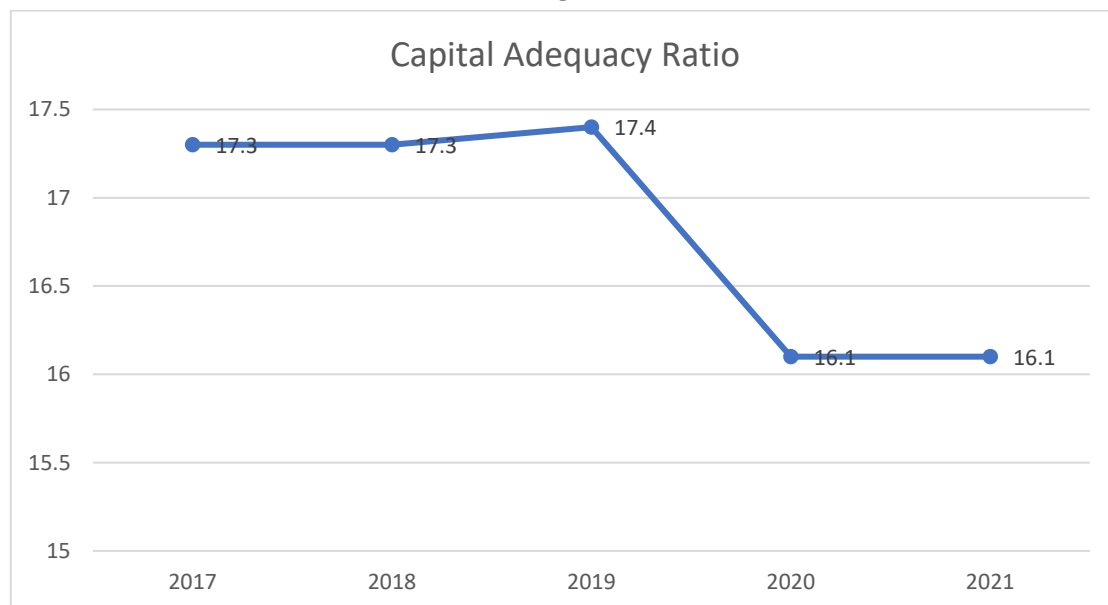


Fig. 10

#### Interpretation:

With values of 0.9, 0.8, and 0.7, respectively, the Gross Non-Performing Asset (NPA) to Gross Advance ratio for HDFC Bank in the years 2017, 2018, and 2019 demonstrated a declining trend. This shows that the bank was managing its loan portfolio successfully and lowering the percentage of loans that were defaulting. However, the ratio dramatically climbed to 1.33 in the next year, 2020–2021. This shows that the bank's loan portfolio's quality has declined as a greater proportion of its loans are now non-performing. The COVID-19 pandemic's effects on the economy and the banking industry may be to blame for the rise in the Gross NPA to Gross Advance ratio in 2020–21.

**Tier 1 Capital Ratio:** This measures the proportion of a bank's Tier 1 capital, which is its core capital, to its risk-weighted assets. Tier 1 capital includes common stock, disclosed reserves, and non-cumulative perpetual preferred stock.

The formula is  $Tier\ 1\ Capital\ Ratio = Tier\ 1\ Capital / Risk\text{-}Weighted\ Assets$ .

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | 14.1 | 14.3 | 14.4 | 12.2 | 12.2 |

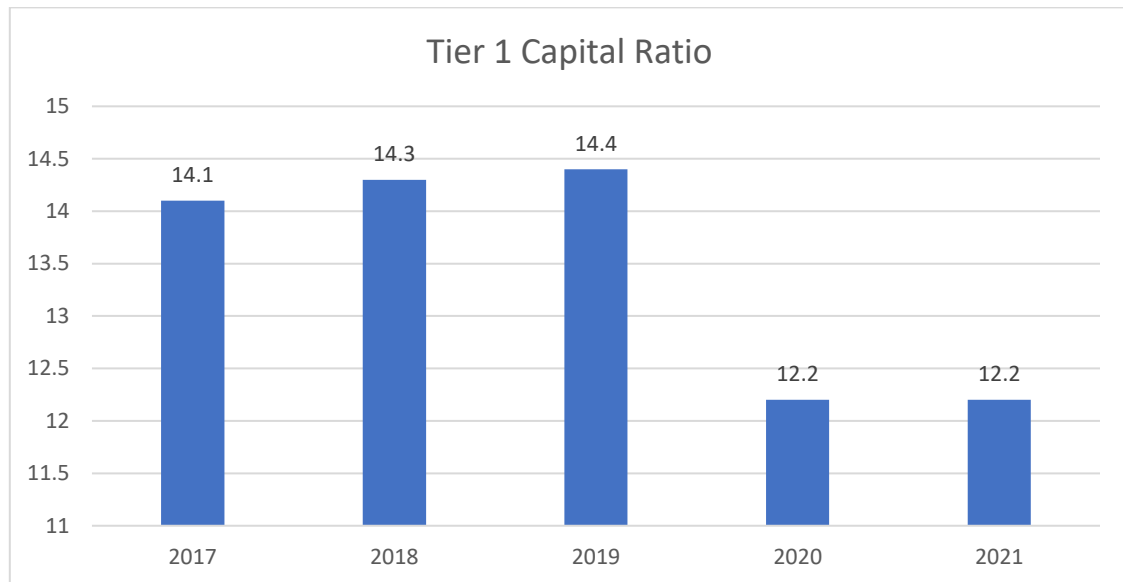


Fig. 11

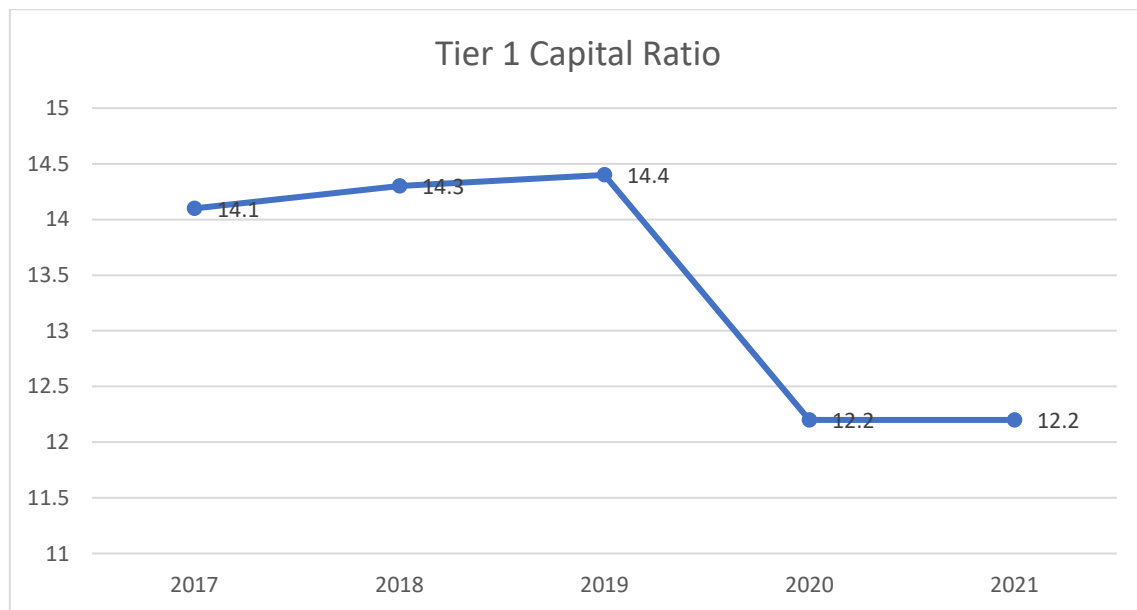


Fig. 12

#### Interpretation:

From 2017 to 2019, the HDFC Bank's Tier 1 Capital Ratio increased, reaching a value of 14.4 in 2019. The ratio dropped to 12.2 in 2020–21, though, pointing to a potential deterioration in the bank's capital situation. This decline may represent difficulties the banking industry is experiencing as a result of the COVID-19 outbreak and its effects on the economy.

#### Profitability Ratios:

The ability of a business to make profits and its financial success are measured by a set of financial indicators called profitability ratios. These ratios shed light on how well a business uses its resources to bring in money, keep costs under control, and boost profits.

Profitability ratios are a crucial instrument for assessing a company's financial performance and its capacity for profit for investors, creditors, and other stakeholders. These ratios are used by businesses to track their financial performance, evaluate it against that of their rivals, and pinpoint opportunities for development.

**Return on Assets (ROA):** This gauges a company's profitability in relation to the sum of its assets. It shows how effectively a business uses its resources to produce profits. It measures the bank's profitability by calculating the return earned on its total assets.

The formula is  $ROA = (\text{Net Income}) / \text{Total Assets}$ .

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | 2.3  | 2.4  | 2.3  | 2.16 | 2.16 |

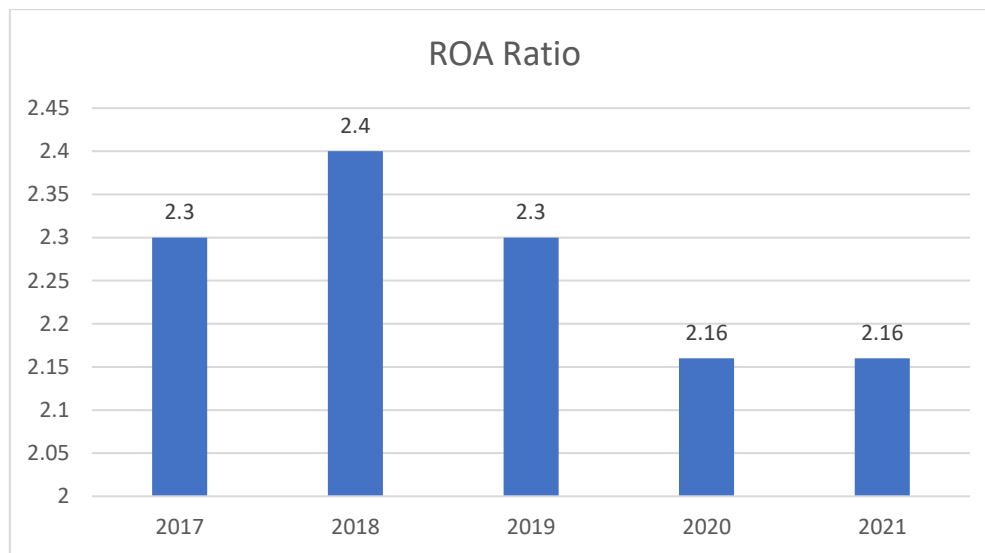


Fig. 13

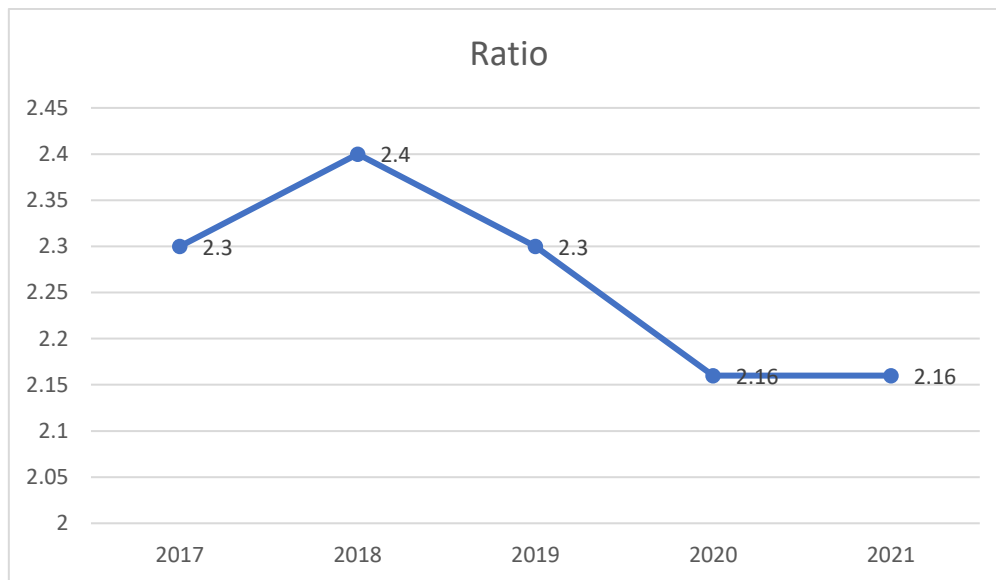


Fig. 14

#### Interpretation:

From 2017 through 2019, the Return on Assets (ROA) ratio for HDFC Bank shown consistency, with values between 2.3 and 2.4. However, the ROA ratio dropped to 2.16 in 2020–21. Due to rising loan losses or other financial constraints, this reduction in ROA could be a sign of declining bank profitability. The decline in HDFC Bank's ROA in 2020–21 might be a reflection of the difficulties the banking industry is experiencing as a result of the COVID–19 pandemic and its effects on the economy.

**Net Interest Margin (NIM):** The profitability of a bank or other financial institution is gauged using the financial indicator known as net interest margin (NIM). It stands for the difference between the interest received on a bank's liabilities, such as deposits, and its assets, such as loans and investments.

A high NIM shows that a bank is more lucrative since it is making more money from its assets than it is losing on interest payments on its liabilities. On the other hand, a low NIM shows that the bank is earning less from its assets and paying more in interest on its obligations, which may have a detrimental effect on its profitability.

NIM is used by banks and other financial organisations to evaluate their profitability and track alterations in their margins over time. NIM is another tool used by regulators to keep tabs on the financial stability of banks and make sure they are conducting business safely and soundly.

NIM is a helpful indicator for assessing the profitability of a bank or financial institution, and it offers crucial details about a bank's capacity to make money from its lending and investment activities.

It measures the difference between the interest earned by the bank on its loans and the interest paid on its deposits.

The formula is  $NIM = (\text{Net Interest Income}) / \text{Total Earning Assets}$ .

| Year  | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|------|------|------|------|------|
| Ratio | -    | 4.3  | 4.2  | 4.19 | 4.19 |

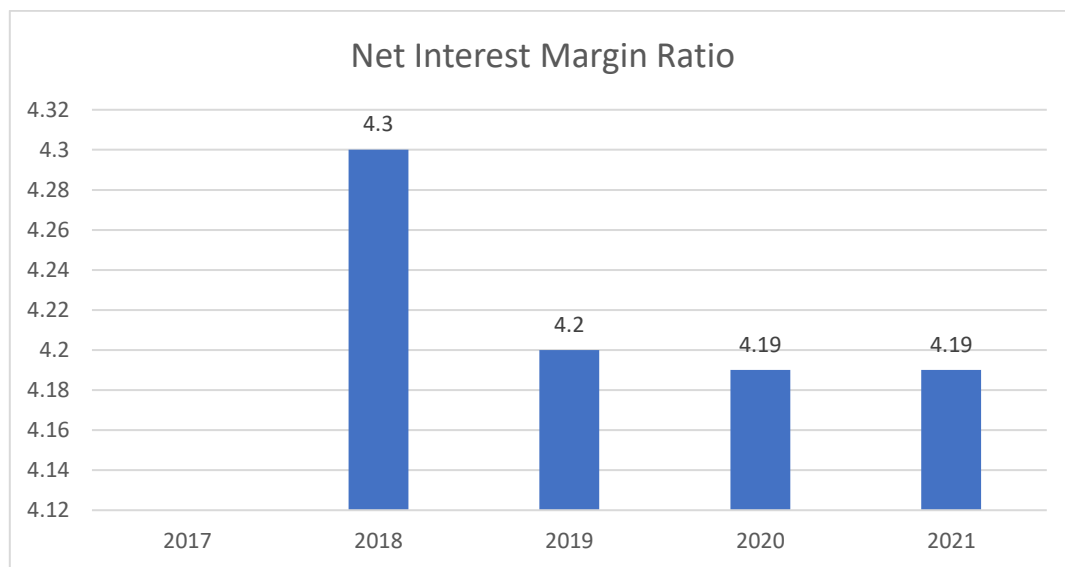


Fig. 15

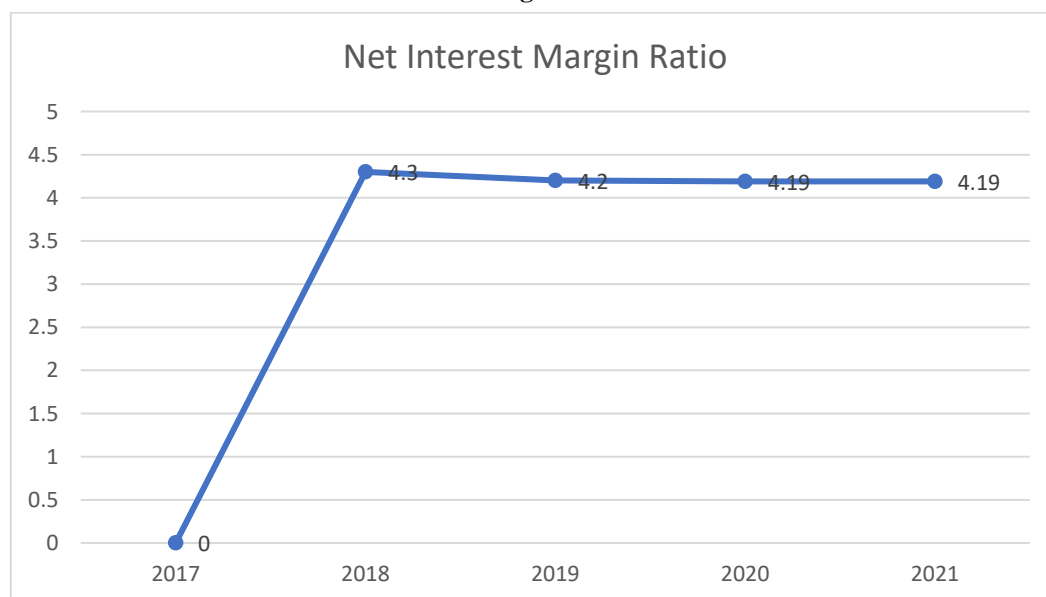


Fig. 16

#### Interpretation:

Between 2018 and 2020–21, the Net Interest Margin (NIM) ratio for HDFC Bank exhibited consistency, with values between 4.2 and 4.3. The consistency of NIM ratios between 2018 and 2020-21 implies that HDFC Bank was able to keep its lending operations profitable over that time.

Low interest rates, high funding costs, or other issues may be to blame for the bank's low or "NIL" NIM ratio, which shows that the bank is making little to no profit from its lending activities. However, the "NIL" NIM ratio in 2017 illustrates the difficulties the bank would have encountered in that year, and more investigation may be required to comprehend the causes of this outcome.

## 7. FINDINGS

The HDFC Bank's current ratio and quick ratio point to a good liquidity position and the bank's capacity to fulfil its short-term commitments.

As evidenced by the rise in the Non-Performing Asset (NPA) ratio from 0.7 in 2019 to 1.33 in 2020–21 and the rise in the Gross NPA to Gross Advance ratio from 0.7 in 2019 to 1.33 in 2020–21, the asset quality of HDFC Bank deteriorated.

The NPA ratio for HDFC Bank showed a deterioration, rising from 0.7 in 2019 to 1.33 in 2020-21, indicating a decline in the quality of the bank's loan portfolio.

By growing more and more non-performing, this ratio demonstrates a decline in the quality of the bank's loan portfolio. The COVID-19 pandemic's effects on the economy and the banking industry may be to blame for the rise in the Gross NPA to Gross Advance ratio in 2020–21.

While the Net Interest Margin (NIM) ratio remained largely stable, moving from 4.2 to 4.3 over the same time period, the Return on Assets (ROA) ratio for HDFC Bank showed a decline, decreasing from 2.3 in 2019 to 2.16 in 2020–21, indicating a decline in the bank's overall profitability, while its profitability from lending activities remained stable.

COVID-19 has put a major impact on financial stability of the bank.

## 8. SUGGESTIONS

It is advised that HDFC Bank continue to preserve its financial stability by monitoring and properly managing its short-term obligations and conserving its liquidity in light of the bank's good liquidity position as demonstrated by its current and quick ratios.

To maximise earnings and ensure the security of its assets, the bank could also think about Putting its excess liquidity in short-term, low-risk financial instruments.

Putting in place a thorough debt recovery strategy to deal with the rise in non-performing assets.

Enhancing its financial position by raising more cash or taking less risks to make sure it has enough resources to withstand possible losses.

Maintaining constant vigilance on potential dangers to its loan portfolio by routinely monitoring and evaluating its NPA ratio.

Enhancing risk management and loan underwriting procedures to better spot and handle possible issue loans.

Increasing the diversity of its loan portfolio will help it better manage potential loan losses and reduce concentration risk.

Enhancing its financial position by raising more cash or taking less risks to make sure it has enough resources to withstand possible losses.

Strengthening its capital position by issuing new equity or debt to raise more money.

Maintaining constant vigilance on potential threats to its capital position by regularly reviewing and evaluating its capital adequacy metrics.

Increasing operational effectiveness to cut costs and boost profits.

Expanding into new markets or product categories to diversify its sources of income and lessen reliance on conventional lending activities.

Maintaining constant vigilance over potential threats to company profitability and margins by regularly monitoring and evaluating its profitability ratios.

## 9. LIMITATIONS

- This study is only limited to five financial years from i.e., 2017-2021.
- This study is completely based on the secondary data sourced through the annual reports, websites, and literature review.
- This study might not be sufficiently thorough to encompass all the ratios that should be taken into account when appropriately assessing the bank's financial soundness.

## 10. CONCLUSION

The largest private sector bank in India is HDFC Bank. The researcher found financial results for the previous five fiscal years ranging from 2017 to 21. Information gathered from the bank's website and annual reports. the data were examined using different ratios. The current ratio and quick ratio of HDFC Bank show that the bank is in a healthy liquidity position, suggesting that it can fulfil its short-term obligations and has the potential to quickly turn its assets into cash if necessary. A healthy asset portfolio and a low level of non-performing assets are indicated by the bank's asset quality ratios, such as the Gross NPA to Gross Advances ratio. The bank has enough capital, as evidenced by its capital adequacy ratios like the Tier 1 Capital Ratio and the Total Capital Adequacy Ratio, to withstand potential losses and preserve stability during trying financial times. Furthermore, the bank's Net Interest Margin shows that it is making more money from its assets than it is losing on interest payments on its



obligations, which is a sign that it is profitable. The increase in the bank's Gross NPA ratio to Gross Advance ratio and NPA ratio show that the asset quality of the institution has been negatively impacted. Additionally, the bank's capital situation has deteriorated, as shown by the reduction in both its Capital Adequacy Ratio and Tier 1 Capital Ratio (CAR). While the bank's Net Interest Margin (NIM) ratio remained largely unchanged, its Return on Asset (ROA) ratio revealed a deterioration in the bank's profitability. The HDFC bank could take a number of actions to address these issues, such as raising more capital to bolster its capital position, reducing risk-taking behaviours, enhancing risk management procedures, diversifying into new product lines or markets, enhancing operational effectiveness, and reviewing pricing strategies for loans and other products. To make sure it maintains a stable financial position, the bank must regularly monitor and review its performance while remaining alert about its financial ratios. The HDFC bank could take a number of actions to address these issues, such as raising more capital to bolster its capital position, reducing risk-taking behaviours, enhancing risk management procedures, diversifying into new product lines or markets, enhancing operational effectiveness, and reviewing pricing strategies for loans and other products. To make sure it maintains a stable financial position, the bank must regularly monitor and review its performance while remaining alert about its financial ratios.

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