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Measuring The Performance And Productivity Of Commercial Banks In The Indian Banking Sector

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ABSTRACT

The paper has concentrated on the profitability and productivity of commercial banks during the shifting paradigm of the Indian banking industry. The majority of the past study on the performance assessment of commercial banks in India was carried out before to the liberalization of the banking system, and only a few studies have been carried out after the government implemented reforms. Rarely do studies on both profitability and productivity appear in the context of efficiency measurement, particularly in commercial banks in India. During the course of economic growth, the participation of the banking sector is of utmost significance. With a clear focus on boosting productivity and expanding profitability, the majority of the reforms measures that were implemented in the banking industry were put into effects. In the post-reforms period, it is very necessary to do research on profitability and productivity analysis. This is because the reforms in the banking industry have been focused on enhancing the regulatory framework, the financial health, and the institutional infrastructure. Both the profitability and productivity of commercial banks have been the subject of a comprehensive literature study that has been carried out. India is a market that is still in the process of developing, and some people believe that commercial banks are the most important factor in economic growth. The first thing to note is that there have been very few studies that have focused

on the profitability and productivity of commercial banks in India following the reforms that have been implemented. This is a significant gap. In the second place, the banking system did not place a significant focus on structural measures and improvements in standards of disclosure and degree of openness until the banking sector reforms that took place in 1998.

Keywords: Indian Banking Sector, Commercial Banks, Profitability Analysis, Financial Health.

1 INTRODUCTION

Encouraging sustainable economic growth while maintaining social fairness is a major challenge for a developing nation like India. Such a viewpoint demands that the economy's productive potential be continuously enhanced and extended in the desired directions. Commercial banks are among the most important financial organizations and the backbone of every economy on the planet. As financial intermediaries, banks make sure that risk transformation, maturity, and liquidity—three essential economic functions—are sustained throughout time. The productivity and efficiency of the banking industry actually have a big impact on the economy's total productivity. The economy is therefore more efficient the more efficient the banking sector is. To put it briefly, they are mutually exclusive. In a financial setting like this, financial intermediation should come at the lowest possible cost. This will stimulate economic growth by directing funds into the productive sectors at a reasonable cost.

For the economy as a whole to expand and develop—and India is no exception—the banking sector must thus function in the most productive way possible. Native American banks in India operated very differently from what we observe in the present era. They were formerly organized on a small scale as privately held companies by individuals or families. Large borrowers and a specific sector were the only ones allowed to engage in banking activities back then. In addition, there wasn't much regulation of the previous financial system, which was mostly run by the private sector. Consequently, there were significant gaps in the financial inclusion and coverage as the general public had virtually no access

to banking services. In order to organize and oversee banking activities throughout the nation, the Central Banking Enquiry Committee suggested in 1931 that a central bank be established.

The Allahabad Bank, which was founded in 1865 under European management, was the nation's first joint stock bank. The Oudh Commercial Bank was the first bank to be owned and operated by Indians, having been founded in 1881. It was followed in order by the Ajodhya Bank (1884), the Punjab National Bank (1884), and the Nedungadi Bank (1899). There were therefore five significant commercial banks functioning in India in the 19th century, in addition to a few minor banks. From 1901 to 1914, there was the opening of twelve more banks. The Canara Bank (1806), the Indian Bank (1907), the Bank of India (1908), the Bank of Baroda (1906), and the Central Bank of India

India in 1911 were the most well-known. But there were significant financial and administrative problems for several Indian banks in both 1913 and 1929. A number of commercial banks failed and were liquidated as a result of this crisis, giving the financial system a severe shock. Consequently, there was a significant decline in public trust in the banking system. Actually, throughout the First World War era, not a single new commercial bank was founded. Following independence, the nation's banking sector underwent additional consolidation. Four already-existing commercial banks merged to become the United Bank of India in 1950.

The Second Schedule of the Reserve Bank of India contained a number of non-scheduled banks. The consequence was an increase of planned banks to 81. 58 Indian schedule banks remained after 23 of the 81 scheduled Indian banks were either liquidated, combined into, or amalgamated with other scheduled banks in 1968.

In order to facilitate the expansion of businesses and banking facilities across the nation, a bank endowed with government support and resources was deemed necessary back in 1921. The three former President Banks of India came together to form the Imperial Bank of India in order to achieve this goal. The objective of the Imperial Bank was to broaden banking services and increase the financial resources available to the nation's trade and industry.

This would support the financial system, which is an essential prerequisite for India's social and economic progress. Imperial Bank of India operated as a quasi-central bank until 1935, when RBI was established to serve as both the nation's central bank and the regulating body for banks. By designating it as the exclusive custodian of all its assets and adjusting the amount of its deposits with the Bank at its discretion, the Government attempted to impact the deposit base and, consequently, the generation of credit by Imperial Bank and the other financial institutions.

1.1 Importance of the Study

The vital role that banks play in financial intermediation was previously discussed, and the general health of the economy is significantly impacted by how well banks run. Over the years, Indian banking operations have placed a greater priority on allocating their resources in accordance with the needs of the society for development than they have on efficiency, which has negatively impacted their total productivity. Due to the targeted financing under the socioeconomic responsibilities of Banks have seen severe declines in profitability. The banking industry has completely changed on a global scale in the previous few decades. India continued to be no different. The government's gradual implementation of economic and financial sector reforms starting in the 1990s is intended to increase the banking industry's efficiency. The goal has been to increase the operational efficiency of banks through a plethora of procedures and regulatory initiatives.

The current study aims to investigate how the Indian banking sector has managed profitability and productivity following reform measures, with a focus on cost reduction, higher productivity, and profitability with customer satisfaction. Continuous improvement of the financial system's efficiency is also necessary in light of the new banking philosophy, which is primarily driven by the financial system's globalization. In order to reduce the cost of intermediation, the reform initiatives really placed a strong emphasis on increasing the productivity and efficiency of the banking industry. It is critical to evaluate the productivity and profitability performance of Indian commercial banks due to the shift in their social and economic goals, especially those of the scheduled commercial banks. In order to assess the effectiveness

of the banking industry during the post-reform era, the researcher divided all scheduled commercial banks in India into three groups: the SBI Group, the Nationalized Bank Group, and the Private Bank Group. Collectively, these groupings account for approximately 90% of all banking activity in India, encompassing a vast portion of banking operations.

2 LITERATURE REVIEW

Ram Mohan, and Ray (2003): As per the discoveries of their review project named "Efficiency and Proficiency of Public and Confidential Area Banks in India," the creators explored the efficiency and effectiveness of public and confidential area banks in India by utilizing non-parametric DEA throughout the time span of 1992-2000. A sum of 27 public area banks were examined. The Tornquist complete component efficiency development, the Malmquist proficiency list, and the Income augmentation effectiveness were the three factors that were used to assess 21 confidential area banks that were laid out before and 14 global banks. The intermediation approach was used, with premium expenses and running costs filling in as data sources, and advance pay, speculation pay, and non-interest pay filling in as results. A supposition that was made in regards to the innovation of CRS. A correlation between open area banks and their confidential area partners demonstrated that public area banks are more useful and effective than their confidential area reciprocals. **V. Pitrey (2003):** In the research paper titled "Measuring Bank Efficiency: Productivity Versus Profitability," an intriguing observation is made concerning the evaluation of the productivity of various banks. The study makes a particular emphasis on the performance of foreign banks in comparison to the performance of nationalized and other scheduled commercial banks. According to the findings of the study, when compared to their nationalized and commercial equivalents, international banks prove to be more productive in terms of the amount of business conducted by each person and by each office. Due to the adept application of new technology, effective operational procedures, and a deliberate focus on establishing high-value commercial connections, this exceptional performance is likely attributable to the aforementioned factors. The utilization of these characteristics appears to be utilized by

foreign banks in order to manage bigger business volumes with a comparatively smaller number of staff and offices, hence boosting their overall productivity metrics. Consideration of the number of accounts held by each employee, on the other hand, brings to a striking discrepancy. Interestingly, when it comes to this particular criteria, international financial institutions are found at the very bottom of the list. There is a possibility that the explanation for this conclusion, which appears to be contradictory, lies in the strategic focus of international banks towards quality rather than quantity in their customer network. It suggests that international banks may prioritize serving a smaller clientele with more complex financial needs or high-value accounts, which may result in a reduced number of accounts per employee. This could be a possibility. This nuanced approach highlights the priority placed on tailored and specialized services, even at the expense of raw volume, demonstrating a strategic divergence between domestic banks and their international and international competitors in terms of improving their operating efficiency.

Mittal, and Dhade (2007): Inside the extent of the examination project named "Benefit and Efficiency in Indian Banks: A Relative Report," a thorough examination was directed on the degrees of efficiency and productivity across various sorts of banks. As far as in general benefit, they recognized the public area banks as having a lower level of productivity contrasted with the confidential area and global banks. They accepted that rising efficiency was the main figure getting more cash out of the business. It is thusly essential for public area banks to cut their unreasonable staffing levels, lay out an essential collusion with rustic territorial banks, and take on the latest mechanical progressions to support both their viability and their benefit.

Mahesh, H. P Rajeev (2009): During the period following the execution of monetary area changes, the creators of the exploration paper Delivering Monetary Administrations: A Proficiency Examination of Indian Business Banks researched the progressions that happened in the useful effectiveness of Indian business banks. Evaluations of bank-explicit store, advance, and speculation effectiveness were achieved with the help of the stochastic boondocks procedure throughout the time span of 1985-2004. The discoveries unequivocally showed that

deregulatory strategies have impacted every one of the three classes of proficiency estimations. The viability of advances has diminished marginally, while the proficiency of stores and ventures has seen an improvement. Collectively, public area banks come in top spot across every one of the three assessments of proficiency, and in spite of what the vast majority accept, PSBS are really the most proficient banks surpassing their confidential partners as far as accomplishing better. Every one of the three classes of private area banks, then again, have exhibited huge advancement over the span of the exploration time frame productivity measures and instruments.

Kumar and Gulati (2010): Explored whether the ownership of the business has an effect on the efficiency of the had a huge impact on Indian domestic banks." The scores of efficiency for both the public and private sectors DEA was utilized in the computation of sector banks during the years 2005 and 2007. Based on the findings of the study, the on the efficient frontier of the Indian banking industry, new private sector banks have taken the most prominent position. "The" The fundamental cause of total technical inefficiency is inefficiency on the part of management (as rather than scale inefficiency, which is expressed by pure technical inefficiency."

Even though the Differences in efficiency have been seen between banks operating in the public sector and those operating in the private sector. Statistical analysis revealed that these differences were not significant in the majority of the investigations. A study was conducted. A conclusion was reached that ownership patterns in the Indian banking industry are not particularly significant.

3 RESEARCH METHODOLOGY

3.1 Introduction

During the period of time spanning from 2017–18 to 2021–22, the research intends to conduct an in-depth analysis of the financial performance of the major banks in India. The Capital Adequacy Ratio (CAR), the Debt-Equity Ratio (D/E), the Advance to Assets Ratio (ADV/AST), and the Net Interest Margins (NIM) are all factors that will be investigated in this investigation.

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3.2 Aims and objectives:

a) The first step is to evaluate the financial health and stability of a few different banks.
b) The evaluation of risk management techniques should be carried out by means of the examination of capital adequacy ratios.
c) The Advance to Assets Ratios should be utilized in order to have an understanding of the lending activities and risk-taking capacities of the banks.
d) Utilizing Debt-Equity Ratios, investigate the influence that financial structures and leverage have on the organization.
e) You should conduct an analysis of the Net Interest Margins as indications of profitability and the generation of interest revenue.

3.3 The Gathering of Data:

Sources of the Data: The State Bank of India (SBI), ICICI Bank, AXIS Bank, HDFC Bank, Bank of India (BOI), Punjab National Bank (PNB), and IDBI Bank are some of the financial institutions that release yearly reports, financial statements, and official publications.

A credible source of information, such as regulatory bodies and financial databases, should be retrieved.

- **Variables, such as:**

For each bank, you should gather information regarding the Capital Adequacy Ratios, Debt-Equity Ratios, Advance to Assets Ratios, and Net Interest Margins.

- **Samples taken:**

Major banks in India should be included, with a focus on ensuring diversity in terms of size, market share, and financial performance. The selected sample consists of the following financial institutions: SBI, ICICI, AXIS, HDFC, BOI, PNB, and IDBI.

4 DATA ANALYSIS

- **Capital Adequacy**

The last proportion of the in general monetary wellbeing of the financial framework is the capital ampleness of the foundation. It

is characterized as the proportion of a bank's cash-flow to its complete gamble weighted resources, and it is supposed to be a solitary number that was the proportion of a bank's money to its resources. It is surveyed by the Cash-flow to Hazard - Weighted Resources Proportion (CRAR), which is additionally the name of the proportion. Merging the sufficiency and dependability of the financial framework is the essential mission of this association. Its essential objective is to safeguard investors and breaking point the flowing results of monetary area emergencies that are unforeseen and eject. Level one capital, which can retain misfortunes without requiring a bank to stop business, and Level two capital, which can retain misfortunes in case of a twisting up and consequently gives a lesser level of security to store account holders, are the two kinds of capital that are estimated in the financial business.

- **Capital Adequacy Ratio**

The capital proportion of hazard to resources is alluded to as the capital proportion (CRAR). It is an impression of a bank's ability to manage the chance of reimbursement disappointments on credits. The limit of banks to meet their liabilities and different dangers, for example, credit risk, functional gamble, and a few others, not entirely set in stone by this component. By separating the capital from Level I and Level II by the gamble weighted resources, one can show up at this arrangement. Level I capital comprises of both proclaimed stores and value capital inside the association. Saves that are not announced, general misfortune holds, and subjected term obligation are instances of things that fall under the class of Level II capital.

Table 1 : Capital Adequate Ratio

Banks	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
SBI	10.78	11.26	12.45	12.25	12.3
ICICI	11.23	10.6	12.35	14.32	12.41
AXIS	10.3	10.5	10.23	12.45	10.15
HDFC	11.6	10.45	10.32	12.5	11.3
BOI	9.75	10.24	11.35	11.3	14.3
PNB	10.53	11.24	12.30	11.3	14.32
IDBI	11.2	10.54	13.3	10.5	13.23

This data presents an overview of the Return on Assets (ROA) for a number of India's most prominent financial institutions over the course of the fiscal years spanning from 2017-2018 to 2021-22. Beginning at 10.78% in 2017-18 and progressively growing to 12.3% in 2021-22, the Return on Assets (ROA) of State Bank of India (SBI) exhibits a positive and increasing trend. The fact that SBI has been able to generate profits in relation to its whole asset base is indicated by this. On the other hand, the return on assets (ROA) of ICICI Bank is subject to a number of variations, beginning at 11.23% in 2017-18 and persisting through consecutive years, culminating in a remarkable peak of 14.32% in 2020-21. Over the course of its history, AXIS Bank has demonstrated a ROA tendency that is quite consistent, with only small changes seen. The return on assets (ROA) of HDFC Bank follows a moderate range, reaching its highest point of 12.5% in 2019-20. Different return on assets (ROA) trajectories are displayed by the Bank of India (BOI), Punjab National Bank (PNB), and IDBI Bank, which are all indicative of the dynamic character of their profitability performances within the Indian banking sector. Over the course of the chosen time period, the data allows for a better understanding of the various degrees of profitability that these banks were able to attain in relation to their total assets.

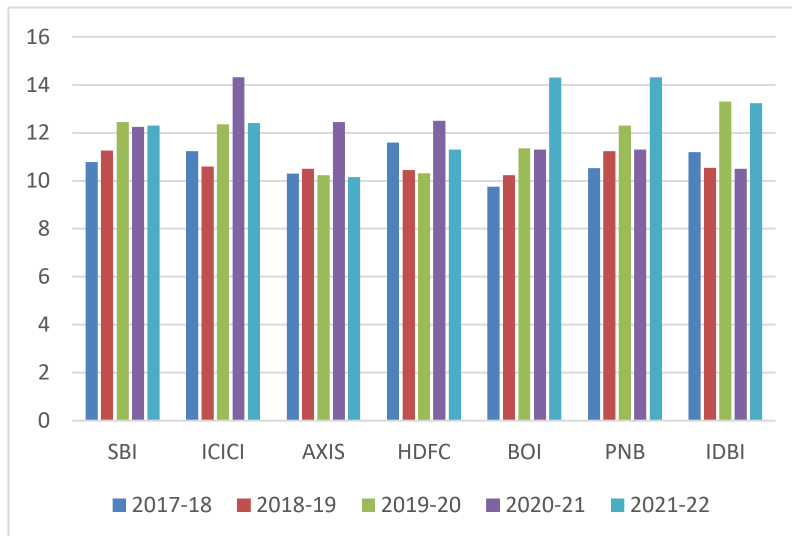

Figure 1 : Graphical representation Capital Adequate Ratio

- **Debt-Equity Ratio (D/E).**

The debt-to-equity ratio is an important financial indicator that is used to evaluate the ability of banks to secure money over lengthy periods of time. It is also used to evaluate the financial structure and leverage of banks specifically. In order to determine this ratio, divide the whole amount of the bank's borrowings and deposits, which constitute the bank's financial liabilities, by the total net worth of the shareholders. The numerator, which is referred to as "Total Borrowings and Deposits," includes a wide range of financial obligations, such as loans, bonds, and deposits made by business customers. As a result of the bank's efforts to facilitate its operations and investments, this total figure indicates the complete pool of financial resources that the bank has collected.

The denominator, which is referred to as "Shareholders' Net Worth," is an essential component that is formed from the accumulation of certain elements. Shareholders contribute funds in the form of ordinary and preferred stock to equity capital, which is the major factor that determines a company's net worth. It is also important to note that reserves and surpluses, which are accumulated over time via retained earnings and other sources, are a contributor to the net worth. After removing the bank's liabilities, the shareholders' net worth is essentially the amount of interest that remains in the bank's physical assets.

When compared to the bank's equity capital and reserves, the Debt to Equity Ratio is a statistic that effectively gives a comparative analysis of the bank's reliance on acquired money. As a warning sign, a ratio that is greater than forty percent to fifty percent may indicate that there is a potentially significant level of financial leverage, which may result in difficulties with liquidity. A further in-depth investigation is required in order to guarantee the bank's financial health and its capacity to carefully handle its long-term debt commitments in the event that such a situation arises. Because it provides significant insights into the risk profile and financial health of the bank, monitoring this ratio is essential for stakeholders, regulators, and management. This ratio also helps in the process of making informed decisions and developing risk management strategies.

Table 2: Debt Equity Ratio

Banks	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
SBI	11.35	11.23	9.63	11.32	11.17
ICICI	6.23	7.6	4.25	3.32	2.89
AXIS	11.65	15.4	8.23	10.23	7.71
HDFC	9.50	9.5	14.56	8.53	6.32
BOI	12.60	11.45	13.23	12.65	12.19
PNB	12.15	11.55	12.23	11.56	10.65
IDBI	15.23	13.5	9.54	10.35	3.04

Return on Equity (ROE) values for numerous major banks in India are included in the data that has been supplied. These figures cover the fiscal years extending from 2017-18 to 2021-22. With a return on equity (ROE) that begins at 11.35% in 2017-18 and experiences marginal changes, the State Bank of India (SBI) ultimately settles at 11.17% in 2021-22. This indicates that the ROE is variable. The return on equity (ROE) of ICICI Bank, on the other hand, has been continuously declining during the same time period, commencing at 6.23% and increasing to 2.89% in 2021-22. This indicates that the bank is having difficulty maintaining profitability in relation to the equity of its shareholders. AXIS Bank has a mixture of high and low profitability periods, as evidenced by its shifting ROE patterns, which include a substantial increase to 15.4% in 2018-19 followed by a dip to 7.71% in 2021-22. During the period of 2019-20, HDFC Bank achieved a return on equity (ROE) of 14.56%, which was followed by a decline to 6.32% in 2021-22. The Bank of India (BOI) follows a similar pattern of varying return on equity, reaching its highest point of 12.60% in 2021-22 and arriving at its lowest point of 12.19%. As a whole, the dynamic character of profitability performances within the Indian banking sector is brought to light by the fact that Punjab National Bank (PNB) and other banks included in the dataset exhibit a variety of ROE trajectories.

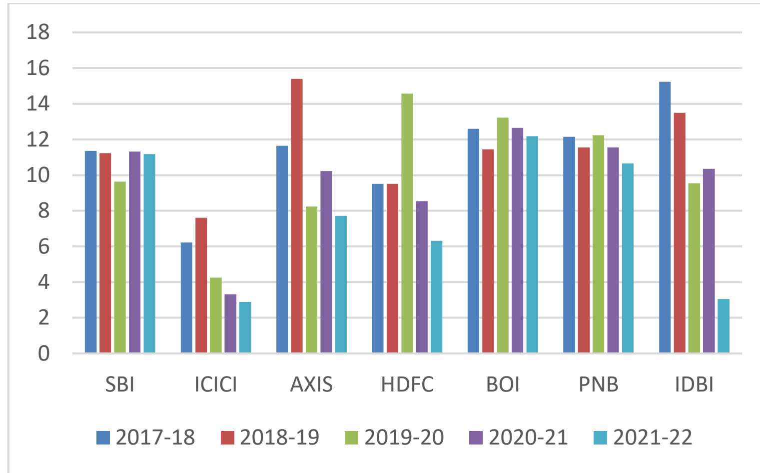

Figure 2: Graphical Representation on Debt Equity Ratio

Advance to Assets (ADV/AST): There is a critical monetary measurement known as the proportion of all out advances to add up to resources, which offers experiences into the loaning exercises of a bank as well as its ability to face challenges. Partition the all out progresses (advances and credit conceded) by the complete resources, which incorporate credits as well as other receivables and resources possessed by the bank. This proportion is determined by partitioning the complete advances by the all out resources. The proportion fills in as a significant proportion of how much the bank will adopt dangers and how it strategies loaning. Considering that the bank is effectively and forcefully putting its cash in loaning exercises, a higher Advances/Resource proportion proposes that the bank is taking a proactive situation on the lookout. Then again, a more modest proportion demonstrates a more safe position towards the circumstance.

When calculating this ratio, it is essential to keep in mind that the value of Total Assets does not take into account any revaluations of any assets. Taking into account any potential market-driven variations in asset values is not taken into consideration by this exclusion, which guarantees that the calculation is centered on the intrinsic worth of assets.

An aggressive lending strategy and a willingness to take on additional risk are typically seen as being indicated by a higher Advances/Asset ratio. The expansion of a bank's advances is often

indicative of the expansion of the bank's loan portfolio as well as its investments by the bank. This expansion of lending activities has the potential to contribute to an increase in interest income for the bank, which in turn drives profitability via the bank. As the bank continues to extend more loans, it has the opportunity to collect interest on those loans, which will ultimately lead to an increase in the bank's overall revenue and, consequently, its profitability will increase.

Table3: Advance to Assets

Banks	2017-18	2018-19	2019-20	2020-21	2021-22
SBI	0.45	0.55	0.55	0.49	0.50
ICICI	0.32	0.40	0.52	0.55	0.59
AXIS	0.15	0.50	0.40	0.23	0.60
HDFC	0.35	0.45	0.35	0.54	0.56
BOI	0.55	0.42	0.33	0.43	0.61
PNB	0.40	0.32	0.60	0.44	0.65
IDBI	0.56	0.54	0.51	0.63	0.50

Insights into the Net Interest Margin (NIM) figures for numerous major banks in India are provided by the data that has been published. These figures cover the fiscal years 17-18 to 2021-22. A fairly fluctuating net interest margin (NIM) is displayed by State Bank of India (SBI), which starts at 0.45 in 2017-18, reaches a peak of 0.55 in future years, and then gradually decreases to 0.50 in 2021-22. On the other hand, ICICI Bank exhibits a steady and favorable upward trend in its net interest margin (NIM), which began at 0.32 in 2017-18 and slowly increased to 0.59 in 2021-22, indicating that the bank's capacity to create net interest revenue has gradually improved. Variations in AXIS Bank's net interest income over the years are reflected in the bank's NIM, which exhibits oscillations, including a substantial increase from 0.15 in 2017-18 to 0.60 in 2021-22. The Net Interest Margin (NIM) of HDFC Bank is subject to fluctuations, although it generally follows a consistent pattern, with a range that extends from 0.35 in 2017-18 to 0.56 in 2021-22. The dynamic character of the net interest income performances of the Bank of India (BOI), Punjab National Bank (PNB), and IDBI Bank within the banking sector is reflected in the different NIM trajectories that these three banks share.

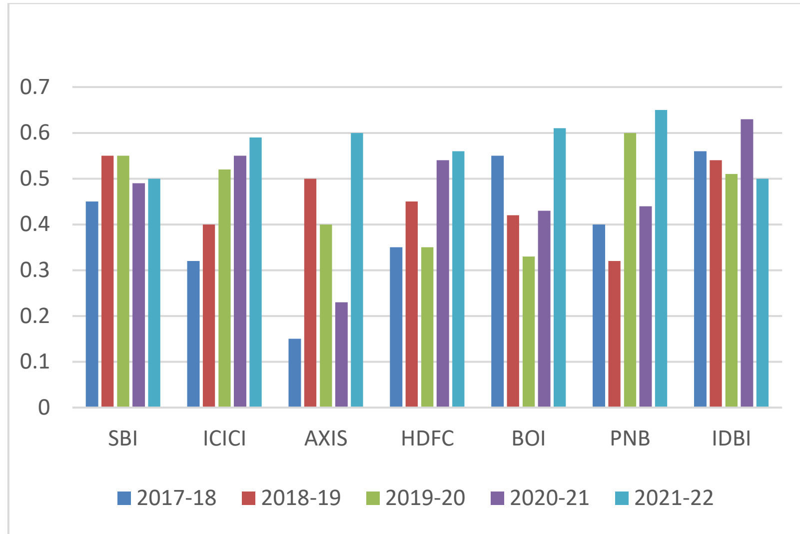

Figure 3: Graphical Representation of Advance to Assets

5 CONCLUSION

At the conclusion of the study, the author emphasizes how important it is to investigate the profitability and productivity of commercial banks within the context of the changing landscape of the Indian banking industry. Only a small amount of research has been carried out after the reforms that were started by the government, and the vast bulk of the previous studies that evaluated the performance of commercial banks in India take place before the liberalization of the banking system. Specifically with regard to Indian commercial banks, the paper draws attention to the fact that there is a dearth of research that concurrently evaluates profitability and productivity in the context of efficiency assessment. Both the requirement of continuous research in the post-reforms period and the emphasis placed on the importance of boosting productivity and profitability through a variety of reform initiatives are emphasized. In the course of economic expansion, the banking sector is recognized as playing a key role, particularly in a growing market such as India, according to the survey. There should be a sustained focus on research to evaluate the impact that the reforms that have been enacted have had on both profitability and productivity. These reforms were conducted with the intention of strengthening the regulatory framework, boosting financial health, and enhancing institutional infrastructure. It sheds light on the current gap in literature and

emphasizes the need for more comprehensive studies that especially delve into the post-reform era, analyzing the performance of commercial banks in India. The research also sheds insight on the presence of the gap. In addition, the conclusion places an emphasis on the historical trajectory, pointing out that the reforms that took place in 1998 were the first time that structural measures and improvements in disclosure requirements and openness in the financial sector received notable attention. The significance of ongoing research in guiding future policies and plans for sustained economic growth is shown by this historical viewpoint, which highlights the dynamic character of the banking sector in India and the necessity of that research.

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