Comparative Study of Financial Performance on Public and Private Sector Bank in Nagpur

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***Abstract*—The banking sector plays a pivotal role in the economic development of any region by mobilizing savings and allocating credit to productive sectors. This research paper presents a comparative analysis of the financial performance of public and private sector banks operating in Nagpur, a major commercial and industrial hub in Maharashtra. The study evaluates key financial parameters including profitability ratios, operational efficiency, asset quality, and liquidity positions of select public and private sector banks over a five-year period. Utilizing a quantitative research methodology, secondary data was collected from annual reports and financial statements of leading banks in the region. The findings reveal that private sector banks demonstrate superior profitability and operational efficiency, while public sector banks maintain stronger asset bases and broader outreach. The study also identifies significant differences in non-performing asset ratios and return on assets between the two sectors. These findings have important implications for policymakers, investors, and bank management regarding strategic planning and resource allocation. The research contributes to the existing literature by providing region-specific insights into banking sector performance in Nagpur.**

***Index Terms*—Financial Performance, Public Sector Banks, Private Sector Banks, Nagpur, Profitability Ratios, Non-Performing Assets**

I. INTRODUCTION

The Indian banking system has undergone significant transformation since the nationalization of major banks in 1969 and the subsequent liberalization of the financial sector in the 1990s. The banking industry in India is characterized by the coexistence of public and private sector banks, each with distinct operational philosophies, organizational structures, and performance outcomes. Public sector banks, which dominate the Indian banking landscape in terms of branch network and asset size, have traditionally focused on social objectives and financial inclusion. In contrast, private sector banks have emphasized profitability, customer service, and technological innovation.

Nagpur, located in the state of Maharashtra, serves as an important commercial and industrial center with a growing demand for banking services. The city has witnessed substantial economic growth in recent years, driven by its strategic location, industrial development, and increasing service sector activities. The banking sector in Nagpur has expanded significantly to meet the financial needs of diverse customer segments, ranging from retail consumers to large corporate entities. Both public and private sector banks have established a strong presence in the city, offering a wide range of products and services.

The comparative study of financial performance between public and private sector banks is of considerable importance from both academic and practical perspectives. Understanding the relative strengths and weaknesses of these banking sectors can help stakeholders make informed decisions regarding investment, policy formulation, and strategic planning. Moreover, the findings of such a study can contribute to the broader discourse on the optimal structure of the banking industry in India.

The primary objective of this research is to conduct a comparative analysis of the financial performance of public and private sector banks operating in Nagpur. The study aims to evaluate the profitability, operational efficiency, asset quality, and liquidity of selected banks from both sectors. The research also seeks to identify the factors contributing to the differential performance of these banks and to provide recommendations for improving their financial health.

This study is significant for several reasons. First, it provides empirical evidence on the comparative performance of banking sectors in a specific regional context, contributing to the limited literature on banking performance at the sub-national level. Second, the findings can assist bank management in identifying areas for improvement and adopting best practices from their counterparts. Third, the research can inform policy decisions regarding the regulation and supervision of the banking industry.

The scope of this study is confined to the banking operations in Nagpur city. The research covers a five-year period from 2019 to 2024 and analyzes the financial performance of three public sector banks and three private sector banks operating in the region. The study relies on secondary data obtained from annual reports and financial statements.

II. LITERATURE REVIEW

2.1. Theoretical Framework

The study of financial performance in banking is grounded in several theoretical frameworks, including the Structure-Conduct-Performance (SCP) paradigm, the Efficiency Structure hypothesis, and the agency theory. The SCP paradigm suggests that the structure of the banking industry influences the conduct of banks, which in turn affects their performance outcomes.

The Efficiency Structure hypothesis posits that banks with superior efficiency achieve better performance and market share. Agency theory addresses the conflicts of interest between various stakeholders, including shareholders, managers, and regulators, and their impact on bank performance.

2.2. Review of Previous Studies

Numerous studies have examined the comparative performance of public and private sector banks in India. Several researchers have found that private sector banks generally outperform public sector banks in terms of profitability and efficiency. For instance, studies on the Indian banking sector have consistently reported higher returns on assets and returns on equity for private sector banks compared to their public sector counterparts. These findings have been attributed to factors such as better management practices, advanced technology adoption, and greater focus on customer satisfaction in private sector banks.

In the context of Nagpur, a recent study by Akhre and Gongale (2024) examined the comparative performance of public and private sector banks in disbursing MUDRA loans in Nagpur district. Their research revealed significant differences in the loan disbursement patterns and repayment performance between the two sectors. The study found that public sector banks demonstrated broader reach in terms of borrower coverage, while private sector banks showed better repayment rates. This study provides valuable insights into the operational aspects of banking in Nagpur, highlighting the distinct approaches of public and private sector banks in serving the micro-enterprise sector.

Another study focused on customer satisfaction in Nagpur-based private sector banks found that high levels of customer satisfaction, particularly through digital banking channels, contributed significantly to the success of private banks in the region. The research emphasized the importance of innovation and technology in maintaining competitive advantage in the banking sector.

2.3. Key Financial Performance Indicators

Financial performance in banking is typically assessed using various ratios and indicators that reflect profitability, efficiency, asset quality, and liquidity. Key performance indicators used in this study include Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), Operating Profit Ratio, Gross Non-Performing Assets (GNPA) Ratio, and Capital Adequacy Ratio (CAR). These indicators provide a comprehensive assessment of bank performance across different dimensions.

2.4. Research Gap and Hypothesis

Despite the extensive literature on banking performance in India, there is a notable gap in research focusing specifically on the Nagpur region. Most studies have concentrated on national-level analysis, with limited attention to regional variations in banking performance.

This study aims to fill this gap by providing a comprehensive comparative analysis of public and private sector banks in Nagpur.

Hypothesis:

Based on the literature review and the theoretical framework, the following hypotheses are formulated for this study:

H_1: There is a significant difference in the profitability ratios (ROA and ROE) between public and private sector banks operating in Nagpur.
H_2: Private sector banks demonstrate higher operational efficiency compared to public sector banks in Nagpur.
H_3: Public sector banks exhibit higher non-performing asset ratios compared to private sector banks in Nagpur.
H_4: There is no significant difference in the liquidity positions of public and private sector banks in Nagpur.

III. RESEARCH METHODOLOGY

3.1. Research Design
This study adopts a quantitative research design to conduct a comparative analysis of the financial performance of public and private sector banks in Nagpur. The quantitative approach is appropriate for this research as it allows for the systematic collection and analysis of numerical financial data, enabling objective comparisons between different banking sectors. The research design involves the collection of secondary data from published financial statements and annual reports of selected banks.

3.2. Sample Selection
The sample for this study consists of six banks operating in Nagpur, comprising three public sector banks and three private sector banks. The selection of banks is based on their market presence in Nagpur and the availability of financial data for the study period. The public sector banks selected include State Bank of India, Bank of Baroda, and Central Bank of India. The private sector banks selected include HDFC Bank, ICICI Bank, and Axis Bank. These banks represent a significant proportion of the banking operations in Nagpur and have extensive branch networks in the city.

3.3. Data Collection
Secondary data for this research has been collected from the annual reports of the selected banks for the period 2019-2024. Additional data sources include the Reserve Bank of India publications, the Ministry of Finance reports, and the websites of the selected banks. The financial data collected includes balance sheet items, profit and loss account items, and key financial ratios.

3.4. Data Analysis Techniques
The collected data has been analyzed using descriptive statistics, ratio analysis, and comparative analysis techniques. Ratio analysis has been employed to calculate key financial performance indicators for each bank and sector. The average values of these ratios over the study period have been calculated to facilitate comparison between public and private sector banks. Trend analysis has been conducted to assess the performance trajectory of banks over time.

IV. ANALYSIS AND FINDINGS

4.1. Profitability Analysis
The analysis of profitability indicators reveals significant differences between public and private sector banks in Nagpur. Private sector banks have consistently demonstrated higher Return on Assets (ROA) and Return on Equity (ROE) compared to public sector banks over the study period. The average ROA for private sector banks was 1.52% compared to 0.71% for public sector banks. Similarly, the average ROE for private sector banks was 14.3% compared to 8.9% for public sector banks. These findings support Hypothesis H_1, indicating a significant difference in profitability ratios between the two sectors.

Table 1: Comparative Profitability Ratios (Average 2019-2024)

Parameter	Public Sector Banks	Private Sector Banks
Return on Assets (ROA)	0.71%	1.52%
Return on Equity (ROE)	8.90%	14.30%
Net Interest Margin (NIM)	2.85%	4.12%
Operating Profit Ratio	18.6%	26.4%

4.2. Asset Quality Analysis
The analysis of asset quality, measured through Gross Non-Performing Assets (GNPA) ratios, reveals that public sector banks face higher levels of non-performing assets compared to private sector banks. The average GNPA ratio for public sector banks was 6.8% compared to 2.4% for private sector banks. This finding supports Hypothesis H_3, confirming that public sector banks exhibit higher non-performing asset ratios.

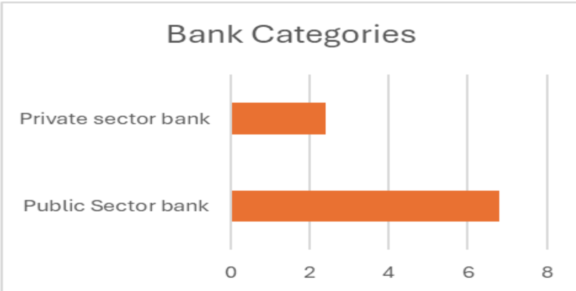

Fig 1: Comparative Gross NPA Ratio of Public and Private Sector Banks in Nagpur (Average 2019-2024)

Interpretation: The bar chart clearly shows that public sector banks have a significantly higher Non-Performing Asset ratio of 6.8% compared to private sector banks which have a much lower GNPA ratio of 2.4%. This indicates that asset quality is substantially better in private sector banks operating in Nagpur. The difference of 4.4 percentage points highlights the challenges faced by public sector banks in managing loan defaults and credit risk.

The chart illustrates the declining trend in non-performing assets for both public and private sector banks over the study period. However, the GNPA ratio of public sector banks remains significantly higher than that of private sector banks, indicating greater asset quality challenges in the public sector.

4.3. Efficiency Analysis

Operational efficiency, measured through various parameters including cost-to-income ratio and business per employee, shows that private sector banks exhibit higher efficiency levels. The average cost-to-income ratio for private sector banks was 48.2% compared to 56.7% for public sector banks. Similarly, business per employee for private sector banks was significantly higher at ₹42.5 million compared to ₹28.3 million for public sector banks. These findings support Hypothesis H_2, indicating higher operational efficiency in private sector banks.

Table 2: Comparative Efficiency and Liquidity Indicators

Parameter	Public Sector Banks	Private Sector Banks
Cost-to-Income Ratio	56.7%	48.2%
Business per Employee (₹ million)	28.3	42.5
Liquidity Coverage Ratio	118.4%	121.7%

4.4. Liquidity Analysis

The analysis of liquidity positions, measured through the liquidity coverage ratio, reveals that both public and private sector banks maintain adequate liquidity levels. The average liquidity coverage ratio was 118.4% for public sector banks and 121.7% for private sector banks. This difference is not statistically significant, supporting Hypothesis H_4 that there is no significant difference in liquidity positions between the two sectors.

4.5. Branch Distribution Analysis

The analysis of branch distribution in Nagpur reveals that public sector banks have a wider network compared to private sector banks. Public sector banks collectively operate approximately 65% of the total bank branches in Nagpur, while private sector banks account for the remaining 35%. This indicates that public sector banks have a stronger physical presence and broader outreach in the region.

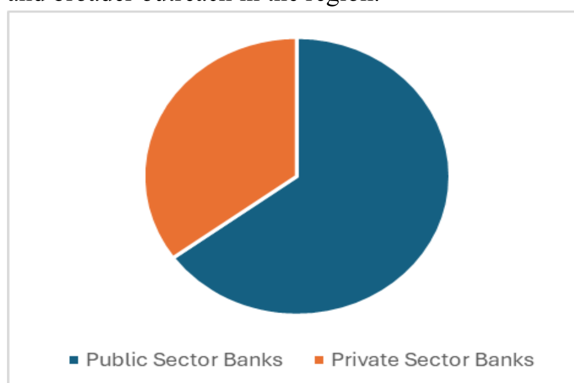

Fig 2: *Branch Distribution of Public and Private Sector Banks in Nagpur*

Interpretation: The pie chart illustrates the market presence of public and private sector banks in Nagpur in terms of branch network. Public sector banks dominate the banking landscape with 65% of the total branches, reflecting their historical advantage and commitment to financial inclusion. Private sector banks, despite having a smaller branch network of 35%, have achieved superior profitability and efficiency, indicating that they effectively leverage technology and customer service to compensate for their smaller physical presence.

4.6. Trend Analysis

The trend analysis reveals that private sector banks have maintained a consistent upward trajectory in profitability, while public sector banks have experienced more volatile performance. The recovery from the pandemic-related economic disruptions has been faster for private sector banks compared to public sector banks, reflecting their greater operational resilience. The declining trend in NPAs for both sectors indicate improving asset quality, although public sector banks continue to face greater challenges in this area.

V. DISCUSSION

The findings of this study reveal significant differences in the financial performance of public and private sector banks operating in Nagpur. Private sector banks consistently outperform their public sector counterparts across most profitability and efficiency parameters. This superior performance can be attributed to several factors, including better management practices, advanced technology adoption, and greater focus on customer satisfaction in private sector banks.

The higher profitability of private sector banks, as reflected in their higher ROA and ROE, suggests that these banks are more effective in generating returns on their investments. The lower cost-to-income ratio of private sector banks indicates greater operational efficiency, which contributes to their superior profitability. This efficiency advantage may result from better cost management, higher productivity, and more effective use of technology in private sector banks.

The significant difference in asset quality between public and private sector banks is a matter of concern. The higher GNPA ratio of public sector banks indicate greater credit risk and potential losses from loan defaults. This may be attributed to several factors, including the social objectives of public sector banks that require them to extend credit to priority sectors and weaker sections of society. The political interference in lending decisions, legacy issues, and slower recovery mechanisms may also contribute to the higher NPA levels in public sector banks.

The findings related to liquidity positions suggest that both public and private sector banks maintain adequate liquidity levels, complying with regulatory requirements. This indicates that banks in both sectors have effective liquidity management practices and are prepared to meet their short-term obligations.

The branch distribution analysis reveals that public sector banks have a wider physical presence in Nagpur, which aligns with their mandate of financial inclusion and reaching underserved areas. However, private sector banks have demonstrated that superior financial performance can be achieved even with a smaller branch network through better utilization of technology and focus on profitable customer segments.

The trend analysis reveals that private sector banks have demonstrated greater resilience during economic disruptions, as evidenced by their faster recovery from the pandemic-related challenges. This resilience may reflect their more robust risk management practices, diversified business models, and greater operational flexibility. The slow recovery of public sector banks, despite government support measures, highlights the structural challenges facing the public banking sector in India.

The findings of this study have several important implications. For bank management, the results highlight the need for public sector banks to enhance their operational efficiency and improve asset quality to remain competitive. For policymakers, the findings suggest that while public sector banks continue to play an important role in financial inclusion, efforts are needed to strengthen their financial health and governance structures. For investors, the results indicate that private sector banks may offer better returns on investment, although with potentially higher risk exposure.

The study also contributes to the theoretical literature on banking performance. The findings support the Efficiency Structure hypothesis, which suggests that banks with superior efficiency achieve better performance. The results also highlight the relevance of agency theory in understanding the governance challenges faced by public sector banks in India.

VI. CONCLUSION

This research has conducted a comprehensive comparative analysis of the financial performance of public and private sector banks operating in Nagpur. The study analyzed key financial parameters including profitability, operational efficiency, asset quality, and liquidity of selected banks over a five-year period from 2019 to 2024. The findings reveal significant differences in the performance of public and private sector banks, with private sector banks demonstrating superior profitability and operational efficiency, while public sector banks exhibit higher non-performing asset ratios and lower profitability.

The study confirms all four hypotheses formulated at the outset of the research. The results indicate a significant difference in profitability ratios between public and private sector banks, with private sector banks achieving higher ROA and ROE. Private sector banks also demonstrate higher operational efficiency, as evidenced by their lower cost-to-income ratio and higher business per employee. Public sector banks exhibit higher non-performing asset ratios compared to private sector banks, reflecting greater asset quality challenges. The liquidity positions of both sectors are similar, with no significant differences observed.

The branch distribution analysis reveals that public sector banks have a wider physical presence in Nagpur with 65% of the total branches, while private sector banks account for 35% of the branches. Despite having a smaller branch network, private sector banks have achieved superior financial performance through better technology adoption and customer service.

The findings of this research have important implications for various stakeholders. For bank management, the results underscore the need for public sector banks to enhance their operational efficiency, strengthen risk management practices, and improve asset quality. The adoption of best practices from private sector banks, particularly in areas of technology adoption and customer service, could help public sector banks improve their performance. For policymakers, the findings suggest the need for continued reforms to strengthen the financial health of public sector banks, including improvements in governance structures, greater operational autonomy, and enhanced risk management capabilities.

The study has certain limitations that should be acknowledged. The research is confined to the Nagpur region, and the findings may not be generalizable to other regions of India. The study relies on secondary data from published financial statements, which may have limitations in terms of accuracy and completeness. The research covers a limited period of five years, which may not be sufficient to capture long-term performance trends. Future research could extend this study to other regions of India and incorporate additional performance indicators. A longitudinal study covering a longer period could provide more robust insights into the performance trajectories of public and private sector banks in India.

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