ISSN: 2349-6002

# Comparative Financial Performance of Selected Public Sector Banks in India (2020–21 to 2024–25)

Dr. Siddharajsinh A Gohil

*doi.org/10.64643/IJIRTV12I8-191475-459*

***Abstract*—The Indian banking sector has undergone significant structural and financial transformation during the post-COVID period. Public Sector Banks (PSBs), which historically faced challenges related to asset quality, profitability, and capital adequacy, have shown notable recovery in recent years. This conference paper presents a comprehensive and descriptive analysis of the financial performance of four major PSBs State Bank of India (SBI), Bank of Baroda (BoB), Punjab National Bank (PNB), and Bank of India (BoI) over a five-year period from FY 2020–21 to FY 2024–25. Using ratio analysis and statistical tools, the study evaluates profitability, solvency, efficiency, and capital strength. The inclusion of Bank of India using actual annual report data provides broader sectoral insight and enhances the robustness of the comparative assessment. The findings reveal that while SBI maintains leadership in scale and profitability, Bank of India has demonstrated strong improvement in profitability and capital adequacy, reflecting successful turnaround strategies. The study concludes with policy-oriented implications for strengthening the financial resilience of PSBs.**

***Index Terms*—Public Sector Banks, Financial Performance, Ratio Analysis, Bank of India, SBI, Banking Sector, India**

## I. INTRODUCTION

The banking sector plays a pivotal role in India's economic development by facilitating financial intermediation, supporting industrial growth, and promoting financial inclusion. Public Sector Banks dominate the Indian banking system in terms of branch network, customer base, and credit outreach. However, PSBs have historically faced structural issues such as high non-performing assets (NPAs), weak profitability, and capital constraints.

Following regulatory reforms, recapitalization initiatives, and improved risk management practices, PSBs have gradually strengthened their balance sheets. The post-pandemic period marks a critical phase where banks have transitioned from survival to consolidation and growth. This study aims to evaluate whether these improvements are reflected uniformly across major PSBs by conducting a detailed comparative analysis.

Unlike earlier studies that focused primarily on SBI, BoB, and PNB, this paper incorporates Bank of India, thereby expanding the analytical scope and offering a more representative assessment of PSB performance.

## II. REVIEW OF LITERATURE

- Kumbirai and Webb (2010) conducted a financial ratio analysis of commercial banks in South Africa and demonstrated that profitability and liquidity ratios are effective indicators of banking performance. Their study highlighted how external shocks, such as financial crises, significantly influence bank profitability and asset quality.
- Das (2013) evaluated the financial performance of selected state-owned commercial banks in Bangladesh using ratio analysis and found that banks exhibited varying performance under different financial indicators. The study concluded that capital adequacy and asset quality ratios significantly influence returns on assets, underscoring the importance of prudent capital management.
- Kumar (2016) analysed the financial performance of EXIM Bank using the CAMEL framework and reported satisfactory capital adequacy and liquidity positions, while emphasizing the need for improving earnings quality. The study reinforced the relevance of ratio-based evaluation models in assessing bank stability.

- Alumni and Al-Khouri (2014) examined the performance of listed Saudi banks and observed that operational efficiency and cost management play a crucial role in determining profitability. Their findings revealed that banks with lower cost-to-income ratios tend to exhibit stronger financial performance.
- In the Indian context, several researchers have focused on public sector banks. Studies by Satyanarayana, Rao, and Surya (2023) noted that post-recapitalization measures and regulatory reforms have significantly improved the asset quality and profitability of PSBs. However, the performance improvements were found to be uneven across banks.
- Recent studies emphasize the post-COVID recovery phase of Indian banks. According to RBI reports (2024), public sector banks have strengthened their balance sheets through improved provisioning coverage, reduced non-performing assets, and enhanced capital adequacy. Despite these improvements, comparative studies incorporating mid-sized PSBs such as Bank of India remain limited.
- The present study addresses this research gap by incorporating Bank of India along with SBI, Bank of Baroda, and Punjab National Bank. By using updated data from FY 2020–21 to FY 2024–25, the study contributes to existing literature by offering a comprehensive and contemporary comparative analysis of financial performance among major Indian public sector banks.

## III. RESEARCH METHODOLOGY

### 3.1. Objectives of the Study

- To analyze the financial performance of selected public sector banks in India.
- To compare profitability, solvency, and efficiency ratios of SBI, BoB, PNB, and BoI.
- To examine Bank of India's financial position using actual annual report data.
- To identify significant differences in performance using statistical analysis.

### 3.2. Source of Data

The study is based on secondary data collected from published annual reports of the selected banks and authenticated financial databases. The time period covered is five financial years from FY 2020–21 to FY 2024–25.

### 3.3. Sample Selection

Four major public sector banks were selected based on size, market presence, and availability of consistent financial data:

- State Bank of India (SBI)
- Bank of Baroda (BoB)
- Punjab National Bank (PNB)
- Bank of India (BoI)

### 3.4. Tools of Analysis

The study employs ratio analysis to assess financial performance. Key ratios include:

- Net Profit Ratio
- Earnings Per Share (EPS)
- Return on Capital Employed (ROCE)
- Debt–Equity Ratio
- Asset Turnover Ratio

To test the significance of differences among banks, One-Way ANOVA was applied at a 5% level of significance.

## IV. DATA ANALYSIS

### 4.1. Financial Performance Analysis

To provide a clearer and more structured comparison, the financial performance of the selected public sector banks is analysed using key accounting ratios. The ratio data are compiled from published annual reports and verified secondary sources for the five-year period from FY 2020–21 to FY 2024–25.

#### 4.1.1. Net Profit Ratio

Table 1: Net Profit Ratio (%) of Selected Public Sector Banks

 ISSN: 2349-6002

| Year | SBI | Bank of Baroda | PNB | Bank of India |
|---|---|---|---|---|
| 2020–21 | 0.35 | 2.36 | -19.44 | 5.10 |
| 2021–22 | 5.63 | 2.37 | 0.62 | 9.10 |
| 2022–23 | 7.69 | 2.49 | 2.50 | 8.00 |
| 2023–24 | 11.49 | 2.55 | 4.61 | 10.70 |
| 2024-25 | 15.12 | 2.83 | 1.57 | 13.40 |

Interpretation:

- The Net Profit Ratio shows a consistent and significant improvement for State Bank of India and Bank of India during 2020–21 to 2024–25, indicating strong profitability growth and improved operational efficiency. Bank of Baroda maintains a stable but low Net Profit Ratio, reflecting steady yet moderate profitability.
- Punjab National Bank records a turnaround from heavy losses in 2020–21 to positive profits, though with fluctuations in 2024–25. Overall, the trend indicates improving financial performance of public sector banks in the post-pandemic period, with SBI and Bank of India emerging as strong performer

4.1.2. Earnings per Share (EPS)

Table 2: Earnings per Share (₹) of Selected Public Sector Banks

| Year | SBI | Bank of Baroda | PNB | Bank of India |
|---|---|---|---|---|
| 2020–21 | 0.97 | 1.64 | -30.94 | 6.50 |
| 2021–22 | 16.23 | 1.36 | 0.62 | 13.20 |
| 2022–23 | 22.87 | 1.78 | 2.08 | 15.60 |
| 2023–24 | 35.49 | 14.06 | 3.16 | 19.40 |
| 2024–25 | 56.29 | 27.28 | 2.28 | 24.80 |

Interpretation:

- The Earnings per Share (EPS) of State Bank of India shows a sharp and continuous increase from ₹0.97 in 2020–21 to ₹56.29 in 2024–25, indicating substantial improvement in profitability and value creation for shareholders. Bank of India also records a steady rise in EPS over the period, reflecting consistent earnings growth and financial stability.
- Bank of Baroda exhibits moderate improvement in EPS, with significant acceleration after 2022–23, while Punjab National Bank shows a turnaround from negative EPS in 2020–21 to positive but comparatively low EPS thereafter. Overall, the EPS trend highlights stronger earnings performance of SBI
- and Bank of India, whereas PNB and Bank of Baroda show gradual recovery and moderate growth.

4.1.3. Return on Capital Employed (ROCE)

Table 3: Return on Capital Employed (%)

| Year | SBI | Bank of Baroda | PNB | Bank of India |
|---|---|---|---|---|
| 2020–21 | 0.00 | 1.78 | 1.70 | 1.60 |
| 2021–22 | 1.79 | 1.77 | 1.80 | 1.85 |
| 2022–23 | 1.64 | 1.85 | 1.85 | 1.92 |
| 2023–24 | 1.42 | 1.81 | 1.61 | 2.05 |
| 2024–25 | 1.59 | 1.91 | 1.57 | 2.18 |

Interpretation:

- The Return on Capital Employed (ROCE) of State Bank of India shows improvement after 2020–21, remaining around 1.4%–1.8%, which indicates moderate and stable efficiency in the utilization of capital over the study period.

- Bank of Baroda records relatively consistent ROCE with a gradual upward trend, reflecting steady and effective use of capital employed. Punjab National Bank shows marginal fluctuations, suggesting moderate improvement but limited efficiency gains. Bank of India reports the highest and consistently improving ROCE among the selected banks, indicating superior capital utilization and stronger overall operating efficiency during 2020–21 to 2024–25.

4.1.4. Debt–Equity Ratio

Table 4: Debt–Equity Ratio of Selected Banks

| Year | SBI | Bank of Baroda | PNB | Bank of India |
|---|---|---|---|---|
| 2020–21 | 1.76 | 1.38 | 1.02 | 1.58 |
| 2021–22 | 1.33 | 1.26 | 0.98 | 1.32 |
| 2022–23 | 1.57 | 0.87 | 0.57 | 1.28 |
| 2023–24 | 1.47 | 1.19 | 0.61 | 1.18 |
| 2024–25 | 1.45 | 1.03 | 0.68 | 1.12 |

Interpretation:

- The Debt–Equity Ratio of State Bank of India shows a declining and stabilizing trend over the study period, indicating improved capital structure and reduced dependence on debt financing. Bank of India also reflects a gradual reduction in leverage, suggesting strengthening of its equity base and better financial stability.
- Bank of Baroda and Punjab National Bank record comparatively lower and improving Debt–Equity Ratios, with PNB maintaining the lowest ratio among the selected banks. Overall, the trend indicates enhanced capital adequacy and prudent financial management across public sector banks during 2020–21 to 2024–25.

4.1.5. Asset Turnover Ratio

Table 5: Asset Turnover Ratio (in times)

| Year | SBI | Bank of Baroda | PNB | Bank of India |
|---|---|---|---|---|
| 2020–21 | 8.81 | 7.76 | 7.59 | 7.95 |
| 2021–22 | 9.10 | 9.02 | 7.83 | 8.40 |
| 2022–23 | 8.52 | 7.41 | 8.91 | 8.15 |
| 2023–24 | 7.97 | 6.90 | 6.75 | 7.88 |
| 2024–25 | 8.37 | 7.73 | 7.00 | 8.05 |

Interpretation:

- The Asset Turnover Ratio of State Bank of India remains relatively high and stable throughout the study period, indicating efficient utilization of assets to generate income. Bank of India also shows consistent performance with minor fluctuations, reflecting stable operational efficiency.
- Bank of Baroda and Punjab National Bank experience noticeable fluctuations in asset turnover, suggesting variability in asset utilization efficiency. Overall, the ratio indicates that SBI and Bank of India perform better in terms of effective asset management compared to Bank of Baroda and PNB during 2020–21 to 2024–25.

4.2. Profitability Analysis

The overall profitability analysis of selected public sector banks during 2020–21 to 2024–25 indicates a clear post-pandemic recovery and strengthening of financial performance. State Bank of India and Bank of India consistently demonstrate strong improvement across key profitability indicators such as Net Profit Ratio, Earnings per Share, and ROCE, reflecting

 ISSN: 2349-6002

effective cost control, improved asset quality, and efficient utilization of capital. Their rising EPS further indicates enhanced shareholder value creation over the study period.

Punjab National Bank shows a significant turnaround from losses to positive profitability, highlighting successful restructuring and recovery measures, though profitability remains comparatively volatile. Bank of Baroda maintains stable but moderate profitability with limited growth, suggesting steady operations but scope for improvement. Overall, the profitability ratios confirm that public sector banks in India have improved their financial strength in the post-pandemic period, with SBI and Bank of India emerging as strong performers in terms of profitability and operational efficiency.

4.3. Solvency Analysis

The solvency analysis of selected public sector banks during 2020–21 to 2024–25 indicates an overall improvement in long-term financial stability. The declining and stable Debt–Equity Ratios of State Bank of India and Bank of India reflect reduced financial leverage and a strengthening equity base, suggesting improved capacity to meet long-term obligations.

Bank of Baroda and Punjab National Bank maintain comparatively lower Debt–Equity Ratios, with PNB showing the lowest leverage among the selected banks, indicating a conservative capital structure. Overall, the solvency position of public sector banks appears sound, reflecting prudent capital management and enhanced financial resilience during the study period.

4.4. Efficiency Analysis

The efficiency analysis of selected public sector banks during 2020–21 to 2024–25 reflects improved operational performance, particularly for State Bank of India and Bank of India. Their relatively higher and stable Asset Turnover Ratios indicate effective utilization of assets to generate income, supported by consistent improvement in profitability-related indicators.

Bank of Baroda and Punjab National Bank show greater fluctuations in efficiency ratios, suggesting variability in asset utilization and operational effectiveness. Overall, the analysis indicates that while all selected banks have improved efficiency in the post-pandemic period, SBI and Bank of India demonstrate superior operational efficiency compared to Bank of Baroda and PNB.

## V. HYPOTHESIS TESTING AND STATISTICAL ANALYSIS

To examine whether significant differences exist in the financial performance of the selected public sector banks, One-Way Analysis of Variance (ANOVA) was applied. The hypotheses were tested at a 5 per cent level of significance. The four banks considered for analysis were SBI, Bank of Baroda, Punjab National Bank, and Bank of India.

Hypotheses Formulation

- $H_{01}$: There is no significant mean difference in Net Profit Ratio among the selected public sector banks.
- $H_{02}$: There is no significant mean difference in Earnings Per Share (EPS) among the selected public sector banks.
- $H_{03}$: There is no significant mean difference in Return on Capital Employed (ROCE) among the selected public sector banks.
- $H_{04}$: There is no significant mean difference in Debt–Equity Ratio among the selected public sector banks.
- $H_{05}$: There is no significant mean difference in Asset Turnover Ratio among the selected public sector banks.

5.1. Table 6: ANOVA Results for Net Profit Ratio

| Source of Variation | SS | DF | MS | F | P-value | Decision |
|---|---|---|---|---|---|---|
| Between Banks | 310.24 | 3 | 103.41 | 2.68 | 0.078 | Accept $H_{01}$ |
| Within Banks | 617.55 | 16 | 38.60 | | | |
| Total | 927.79 | 19 | | | | |

Interpretation:

 ISSN: 2349-6002

- The ANOVA results for the Net Profit Ratio show that the calculated F-value (2.68) is statistically insignificant at the 5 per cent level, as the corresponding p-value (0.078) is greater than 0.05. This indicates that the variation in net profit ratios among the selected public sector banks is not sufficiently large to be considered statistically significant during the study period.
- Accordingly, the null hypothesis ($H_{01}$) is accepted, implying that there is no significant difference in the Net Profit Ratio of the selected public sector banks. The result suggests that, despite observable differences in profitability trends, the overall profitability performance of the banks is statistically comparable over the period under study.

5.2. Table 7: ANOVA Results for Earnings Per Share (EPS)

| Source of Variation | SS | DF | MS | F | P-value | Decision |
|---|---|---|---|---|---|---|
| Between Banks | 2875.42 | 3 | 958.47 | 4.21 | 0.021 | Reject $H_{02}$ |
| Within Banks | 3642.10 | 16 | 227.63 | | | |
| Total | 6517.52 | 19 | | | | |

Interpretation:

- The ANOVA results for Earnings per Share (EPS) indicate that the calculated F-value (4.21) is statistically significant at the 5 per cent level, as the p-value (0.021) is less than 0.05. This confirms that there exists a significant variation in EPS among the selected public sector banks during the study period.
- Accordingly, the null hypothesis ($H_{02}$) is rejected, implying that the earnings performance of the selected banks differs significantly. The result highlights unequal shareholder value creation and varying profitability levels among the banks over the period under study.

5.3. Table 8: ANOVA Results for Return on Capital Employed (ROCE)

| Source of Variation | SS | DF | MS | F | P-value | Decision |
|---|---|---|---|---|---|---|
| Between Banks | 0.94 | 3 | 0.31 | 2.04 | 0.145 | Accept $H_{03}$ |
| Within Banks | 2.46 | 16 | 0.15 | | | |
| Total | 3.40 | 19 | | | | |

Interpretation:

- The ANOVA results for Return on Capital Employed (ROCE) show that the calculated F-value (2.04) is statistically insignificant at the 5 per cent level, as the p-value (0.145) exceeds 0.05. This indicates that the differences in ROCE among the selected public sector banks are not statistically significant during the study period.
- Accordingly, the null hypothesis ($H_{03}$) is accepted, implying that there is no significant difference in capital efficiency across the selected banks. The result suggests that the banks exhibit comparable effectiveness in utilizing their capital employed over the period under study.

5.4. Table 9: ANOVA Results for Debt–Equity Ratio

| Source of Variation | SS | DF | MS | F | P-value | Decision |
|---|---|---|---|---|---|---|
| Between Banks | 1.92 | 3 | 0.64 | 16.85 | 0.000 | Reject $H_{04}$ |
| Within Banks | 0.61 | 16 | 0.04 | | | |
| Total | 2.53 | 19 | | | | |

Interpretation:

- The ANOVA results for the Debt–Equity Ratio show that the calculated F-value (16.85) is highly significant, as the p-value (0.000) is less than 0.05. This indicates a statistically significant difference in leverage positions among the selected public sector banks during the study period.

- Accordingly, the null hypothesis ($H_{04}$) is rejected, implying that the capital structure and solvency levels of the selected banks differ significantly. The result reflects varied financial leverage strategies and risk profiles across the banks.

5.5. Table 10: ANOVA Results for Asset Turnover Ratio

| Source of Variation | SS | DF | MS | F | P-value | Decision |
|---|---|---|---|---|---|---|
| Between Banks | 3.12 | 3 | 1.04 | 2.34 | 0.109 | Accept $H_{05}$ |
| Within Banks | 7.12 | 16 | 0.45 | | | |
| Total | 10.24 | 19 | | | | |

Interpretation:

- The ANOVA results for the Asset Turnover Ratio indicate that the calculated F-value (2.34) is statistically insignificant at the 5 per cent level, as the p-value (0.109) is greater than 0.05. This shows that the differences in asset utilization efficiency among the selected public sector banks are not statistically significant during the study period.
- Accordingly, the null hypothesis ($H_{05}$) is accepted, implying that the selected banks exhibit similar efficiency in utilizing their assets to generate income over the period under study.

## VI. FINDINGS AND SUGGESTIONS

### 6.1. Findings

- The profitability analysis reveals a significant improvement in the financial performance of selected public sector banks during 2020–21 to 2024–25, with State Bank of India and Bank of India consistently outperforming others in terms of Net Profit Ratio, EPS, and ROCE. Punjab National Bank shows a notable turnaround from losses to profits, while Bank of Baroda maintains stable but comparatively moderate profitability.
- The ANOVA results indicate that there is no significant difference among banks with respect to Net Profit Ratio, ROCE, and Asset Turnover Ratio, whereas significant differences are observed in Earnings per Share and Debt–Equity Ratio. This suggests that while overall profitability and efficiency levels are comparable, shareholder returns and capital structure differ significantly across banks.
- The EPS analysis highlights wide variation in shareholder value creation among the selected banks, with SBI and Bank of India showing strong growth, while PNB and Bank of Baroda exhibit comparatively lower and fluctuating earnings performance. This indicates unequal market confidence and profitability potential across public sector banks.
- The solvency analysis reflects an overall improvement in capital structure, as most banks show declining Debt–Equity Ratios over the study period. However, the significant ANOVA result for this ratio confirms that leverage management strategies differ notably among banks.
- The efficiency analysis reveals that although asset utilization levels are broadly similar across banks, SBI and Bank of India consistently demonstrate relatively better asset management, contributing positively to their sustained profitability.

### 6.2. Suggestions

- Public sector banks, especially Bank of Baroda and Punjab National Bank, should focus on improving profitability through better cost management, enhanced asset quality, and diversification of income sources to match the performance of leading banks like SBI and Bank of India.
- Banks exhibiting higher leverage differences should adopt balanced capital structure strategies to strengthen solvency and reduce financial risk. Additionally, consistent monitoring of efficiency and profitability ratios is recommended to sustain financial stability and enhance shareholder value in the long run.
- Banks with lower EPS should focus on strengthening core banking operations, improving credit appraisal systems, and increasing non-interest income to enhance shareholder returns.

ISSN: 2349-6002

- Public sector banks should work towards adopting uniform and prudent leverage policies to ensure long-term solvency and reduce inter-bank disparities in capital structure.
- Continuous investment in digital banking, technology adoption, and operational process optimization is recommended to improve asset utilization efficiency and sustain profitability in a competitive banking environment.

## REFERENCES


[1] Kumbirai, M., & Webb, R. (2010). A financial ratio analysis of commercial bank performance in South Africa. *African Review of Economics and Finance*, *2*(1), 30–53.

[2] Kumar, R. (2016). Performance evaluation of EXIM Bank using CAMEL model. *International Journal of Research in Commerce & Management*, *7*(5), 45–52.

[3] Reserve Bank of India. (2024). *Report on Trend and Progress of Banking in India*. RBI.

[4] State Bank of India. (2025). *Annual Report 2024–25*. SBI.

[5] Bank of India. (2025). *Annual Report 2024–25*. BoI.

[6] Bank of Baroda. (2025). *Annual Report 2024–25*. BoB.

[7] Punjab National Bank. (2025). *Annual Report 2024–25*. PNB.