

A Study on Profitability Analysis of Central Bank of India

Vigneshwar. M¹, Mrs. R. Keerthana²

¹Dept of Management Studies

²Assist.Professor, Dept of Management Studies

^{1,2} Sri ManakulaVinayagar Engineering College (Autonomous), Puducherry

Abstract- *The Study aims to evaluate the financial performance and profitability position of the Central Bank of India over a specific period. Profitability is a key indicator of a bank's efficiency, sustainability, and overall financial health. This research analyses various profitability ratios such as Net Profit Ratio, Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM) to assess the bank's ability to generate earnings relative to its expenses and other relevant costs. The study utilizes secondary data obtained from annual reports, financial statements, and other published sources. Through comparative and trend analysis, the research identifies factors influencing profitability, including asset quality, interest income, non-performing assets (NPAs), and operational efficiency. The findings of the study highlight the bank's strengths, weaknesses, and areas requiring improvement to enhance profitability and competitive performance.*

Keywords- Central Bank of India, profitability, ROA, ROE, Net Interest Margin, GNPA, cost-to-income, Indian banking.

I. INTRODUCTION

The Indian banking sector is a vital component of the nation's economy, serving as the foundation for money circulation, credit creation, and economic growth. In this dynamic and competitive landscape, the financial performance of banks is a critical indicator of their operational efficiency, stability, and long-term viability. The Central Bank of India, as a major public sector bank, Established in 1911. It plays a significant role in this ecosystem. Understanding its financial health is not only crucial for the bank itself but also for its stakeholders, including investors, depositors, regulators, and the public.

This study aims to conduct a comprehensive profitability analysis of the Central Bank of India over a specified period. Profitability is a key measure of a business's success and its ability to generate profits relative to its expenses, assets, and equity. The economic reforms and increasing competition in the post-liberalization era have made it imperative for banks to continuously assess and improve

their profitability. By analysing various profitability ratios, this research seeks to evaluate the bank's performance, identify its strengths and weaknesses, and provide insights into the factors that influence its profitability. The study will utilize secondary data from the bank's financial statements, such as the balance sheet and profit and loss account, to calculate and interpret key financial ratios.

Objectives of the study

- To study the overall profitability trends of Central bank of India over the past five years.
- To identify the factors affecting profitability in Central bank of India.
- To evaluate the efficiency of the bank through profitability condition of the bank.

II. REVIEW OF LITERATURE

The profitability of banks has been widely examined through multiple determinants including internal performance drivers, asset quality, risk management, technology adoption, and macroeconomic influences. Early studies such as Dash and Das (2018) identify bank-specific factors particularly net interest margin, asset utilization, and operating efficiency as primary contributors to profitability, while macroeconomic variables exert comparatively weaker effects. Asset quality emerges as a crucial determinant, with Das and Ghosh (2018) demonstrating that rising NPAs directly reduce profitability through higher provisioning and lower interest income, especially in public sector banks.

Comparative analyses between ownership groups reveal that private banks consistently outperform public sector banks. Reddy (2018) attributes this to superior technology usage, higher non-interest income, and efficient cost structures. Further, Bodla and Verma (2019) highlight the centrality of net interest margin (NIM), showing that liability mix and CASA ratios significantly shape profitability. Complementing these findings, Ramachandran and Ramesh (2019) confirm that robust credit-risk governance and provisioning frameworks enhance long-term earnings stability.

Technological advancement has also become a key profitability driver. Gupta and Kaur (2020) establish that digital adoption and fee-based services support more stable and higher profitability, particularly in private banks. Macro-level studies such as Singh and Chaudhary (2021) report that GDP growth and interest-rate cycles influence profitability by altering loan demand, NPA formation, and margin patterns. Research on capital adequacy by Sharma and Gounder (2021) finds that stronger capital buffers boost long-term stability but may compress short-term ROE, indicating non-linear capital–profit trade-offs.

Efficiency studies using DEA and SFA techniques (Kumbirai & Webb, 2021) reveal that managerial efficiency and cost control significantly explain differences in ROA and ROE. Income diversification also plays a role; Sufian and Habibullah (2022) show that moderate fee-based diversification improves risk-adjusted profitability, whereas excessive reliance on volatile trading income increases earnings instability. Liquidity and liability-side differences between bank groups are highlighted by Bhattacharyya (2022), who notes that private banks' higher CASA ratios support better margins compared to public banks.

Recent studies continue to emphasize cost efficiency, asset quality, and capital adequacy as profitability determinants. Nalliboyina & Chalam (2023) find that high NPAs and cost-to-income ratios adversely affect profitability in public-sector banks, while capital adequacy and bank size exert a positive influence. Research focused on private banks (IEJSE, 2023) reiterates the significance of diversification, operating efficiency, and digital adoption in maintaining high ROA. Ratio-based performance evaluations (Pokale & Shetiya, 2024) show that profitability is interlinked with liquidity and asset quality, implying that stronger profitability accompanies robust liquidity and lower NPAs. Finally, regression-based studies by Joshi et al. (2024) indicate that operational efficiency, CASA, and margin-based indicators (NPM, OPM, OP/Total Assets) are more influential in determining ROA than capital-based measures such as ROE.

III. RESEARCH METHODOLOGY

Research Design: This study adopts an analytical research design to evaluate the profitability performance of the Central Bank of India over a selected period. Analytical research involves the critical examination of existing financial data to identify patterns, relationships, and trends. The design enables systematic comparison of profitability indicators and helps in assessing how effectively the bank utilizes its resources to generate returns.

Data Collection: The collection of will be used in Secondary Data. i.e. Academic journals, organizational reports, and case studies.

Tools Utilized for Analysis: In this study measure the profitability performance of the bank, a combination of financial tools and descriptive statistics is used in Ratio Analysis like Net Interest Margin (NIM), Net Profit Margin, Operating Profit Ratio, Return on Asset (ROA) ratio, Return on Equity (ROE) ratio, Net Interest coverage Ratio, Cost to Income Ratio, Earnings Per Share (EPS), These ratios help assess the bank's earning efficiency, asset utilization, equity performance, and interest income strength.

Descriptive Statistical Tools like Mean to determine the average performance level over the study period. Standard Deviation (SD) to measure fluctuations in profitability. Coefficient of Variation (CV) to assess relative variability and financial stability. These tools provide a detailed understanding of consistency and volatility in the bank's profitability.

IV. DATA ANALYSIS AND INTERPRETATION

4.1 Net Interest Margin

YEAR	Net Interest Income	Average Earning Assets	Net Interest Margin (NIM)
2021	824.5043	33,690.3959	2.45%
2022	954.2461	35,388.6939	2.70%
2023	1,175.1998	37,373.8804	3.14%
2024	1,296.6552	40,529.0843	3.20%
2025	1,396.7776	44,368.6079	3.15%
MEAN	1,129.48	38,270.13	0.029
SD	237.2778	4253.6516	0.0034
CV	21.00776281	11.1148077	11.5043012

Interpretation:

The above table infers that the Net Interest Margin (NIM) shows a positive and stable performance from 2021 to 2025, rising from 2.45% in 2021 to a peak of 3.20% in 2024, before slightly dropping to 3.15% in 2025, showing steady improvement in income efficiency. The five-year mean NIM is 2.9% with low volatility (SD 0.0034, CV 11.50%), reflecting stable profitability. Overall, the bank maintained

consistent and healthy margins through effective interest rate management and strong asset utilization.

4.2 Net Profit Margin

YEAR	Net Profit/ Loss After Tax	Total Income	Net Profit Margin
2021	-88.75846	2,589.7447	-3.43%
2022	107.57916	2,587.0829	4.16%
2023	167.87784	2,974.1594	5.64%
2024	266.76808	3,556.1982	7.50%
2025	393.42054	3,966.7954	9.92%
MEAN	169.38	3,134.80	0.05
SD	180.3716	610.8759	0.0506
CV	106.4909326	19.4869414 1	106.263593 6

Interpretation:

The above table infers that the Net Profit Margin moved from a net loss of -3.43% in 2021 to a profit of 9.92% in 2025, showing strong recovery. Total income rose steadily from 2021 to 2025. The mean net profit was ₹169.38, but high CV values for profit (106.49%) and margin (106.26%) indicate volatility. Overall, the bank achieved significant growth but needs to maintain stable profitability.

4.3 Operating Profit Ratio

YE AR	Operating Profit	Total Income	Operating Profit Ratio
2021	463.0024	2,589.7447	17.88%
2022	523.2878	2,587.0829	20.23%
2023	692.6494	2,974.1594	23.29%
2024	740.4718	3,556.1982	20.82%
2025	817.5104	3,966.7954	20.61%
MEAN	647.3844	3,134.7961	0.2057
SD	149.2093	610.8759	0.0192
CV	23.04803024	19.4869414 1	9.3598684 4

Interpretation:

The above table infers that the Operating Profit Ratio from 2021 to 2025 shows a positive and stable financial performance, with the ratio increasing from 17.88% in 2021 to a peak of 23.29% in 2023, before stabilizing above 20% in the following two years. The average operating profit ratio over the five-year period stands at 20.57%, indicating strong profitability from core operations. Additionally, the low SD (1.92%) and CV (9.36%) reflect consistency and minimal fluctuation in operational efficiency..

4.4 Return on Asset (ROA)

YEAR	Net Profit / Loss After Tax	Total Assets	Return on Assets (ROA)
2021	-88.75846	36,921.499 4	-0.24%
2022	107.57916	38,743.526 8	0.28%
2023	167.87784	40,707.971 5	0.41%
2024	266.76808	44,777.157 2	0.60%
2025	393.42054	48,045.684 2	0.82%
MEAN	169.38	41,839.17	0.0037
SD	180.3716	4533.1746	0.00399
CV	106.490932 6	10.8347628 6	106.88535 07

Interpretation:

The above table infers that the Return on assets saw a major turnaround, moving from a net loss of -0.24% in 2021 to a profit of 0.82% in 2025. Total assets consistently grew from 2021 to 2025, and ROA improved each year. Net profit showed high variability (CV 106.49%), while assets remained relatively stable (CV 10.83%). Overall, the bank demonstrated strong profitability growth and better asset utilization.

4.5 Return on Equity (ROE)

YEAR	Net Profit / Loss After Tax	Shareholder Equity	Return on Equity (ROE)
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YEAR	Net Interest Income	Interest Expended	Net Interest Coverage Ratio
2021	-88.75846	2,170.5090	-4.09%
2022	107.57916	2,760.7106	3.90%
2023	167.87784	2,928.4044	5.73%
2024	266.76808	3,245.0574	8.22%
2025	393.42054	3,696.6644	10.64%
MEAN	169.38	2,960.27	0.049
SD	180.3716	567.4378	0.0562
CV	106.4909326	19.16845135	115.225623

Interpretation:

The above table infers that the ROE improved markedly from – 4.09% to 10.64%, reflecting a strong recovery in profitability. The turnaround began in 2022, with steady growth each year driven by better capital utilization and operational efficiency. The five-year average ROE is 4.9%, though the high CV of 115.23% indicates volatility due to the 2021 loss. Overall, the bank shifted from negative returns to solid double-digit ROE by 2025.

4.6 Net Interest Coverage Ratio

YEAR	Net Interest Income	Interest Expended	Net Interest Coverage Ratio
2021	824.5043	1,448.5190	0.57
2022	954.2461	1,336.0879	0.71
2023	1,175.1998	1,390.5102	0.85
2024	1,296.6552	1,788.2369	0.73
2025	1,396.7776	1,982.9671	0.70
MEAN	1,129.48	1,589.26	0.71
SD	237.2778	281.9587	0.0979
CV	21.0077628	17.7414589	13.7606075

Interpretation:

The above table infers that the Central Bank of India's Net Interest Coverage Ratio improved from 0.57 in 2021 to a peak of 0.85 in 2023 before slightly declining to 0.70 in 2025. The five-year average ratio is 0.71 with low volatility (CV 13.76%). Despite improvement, the NICR remained below 1.0 throughout, indicating net interest income alone was insufficient to fully cover interest expenses, necessitating reliance on other income sources.

4.7 Cost to Income Ratio

YEAR	Operating Cost	Total Income	Cost to Income Ratio
2021	678.2233	2,589.7447	26.19%
2022	727.7073	2,587.0829	28.13%
2023	890.9998	2,974.1594	29.96%
2024	1,027.4895	3,556.1982	28.89%
2025	1,166.3171	3,966.7954	29.40%
MEAN	898.15	3,134.80	0.29
SD	203.7841	610.8759	0.0146
CV	22.6893862	19.4869414	5.13410545

Interpretation:

The above table infers that the Cost to Income Ratio rising from 26.19% to around 30%, showing gradually increasing operating costs relative to income. Operating costs and total income grew steadily, averaging ₹898.15 and ₹3,134.80 respectively. The ratio peaked at 29.96% in 2023 before slightly easing to 29.40% in 2025. A low CV of 5.13% indicates stability, with the ratio consistently near 30%, reflecting controlled yet rising expenses.

4.8 Earnings Per Share (EPS)

YEAR	Net Profit	Total No of Shares	Earnings Per Shares (EPS)
2021	-88.75846	58.755625	-1.51
2022	107.57916	86.809394	1.24
2023	167.87784	86.809394	1.93
2024	266.76808	86.809394	3.07
2025	393.42054	90.514012	4.35
MEAN	169.38	81.94	1.82
SD	180.3716	13.0591	2.2021
CV	106.490932	15.9374961	121.232922

Interpretation:

The above table infers that the EPS saw a major turnaround from a net loss of EPS – 1.51 in 2021 to a profit of EPS 4.35 in 2025. Net profit and EPS rose consistently, reflecting stronger shareholder value. The mean net profit was 169.38, but high variability (CV 106.49%) indicated fluctuations. Shares increased from 2021 to 2025, showing both expansion and improved profitability. Overall, the bank achieved steady recovery and growth despite early volatility.

V. FINDINGS

The study reveals that the Central Bank of India has shown a strong recovery in profitability over the study period. Net Interest Margin improved to a healthy level, and Net Profit Margin turned positive with significant growth, though high volatility persists. Operating efficiency remains sound, reflected in a stable operating profit ratio and acceptable cost-to-income levels. Key return metrics such as ROA and ROE have improved, indicating better resource utilization and capital efficiency, although ROA remains slightly below ideal standards. Despite these gains, the Net Interest Coverage Ratio remains weak, signalling limited ability to cover interest expenses through operating income alone. EPS has increased substantially, showing shareholder value creation, but earlier fluctuations highlight residual financial instability.

VI. CONCLUSION AND SUGGESTIONS

The research concludes that the Central Bank of India has moved from a loss-making phase to a profitable and financially stronger institution. The upward trend in profitability ratios, especially ROE and EPS, demonstrates successful strategic reforms and operational improvements. However, challenges remain in the form of profit fluctuations and a low interest coverage ratio. Continued efforts toward cost control, risk management, and income diversification are crucial for sustaining growth. Overall, the bank is progressing on a positive trajectory and, with focused efficiency and innovation-driven strategies, can strengthen its competitive position within the Indian banking sector.

Recommendations

- **Stabilize NIM and reduce profit volatility** through income diversification and increased fee-based revenue.
- **Improve asset productivity and NPA recovery** to support stronger ROA.
- **Maintain ROE above benchmark levels** by ensuring consistent and sustainable profit growth.

- **Strengthen interest coverage** by reducing operational costs and enhancing operating income.
- **Enhance operational efficiency** using digital solutions, optimized branch operations, and a robust risk-management system to support stable EPS and long-term financial growth.

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