

Financial Performance analysis of Public Banks using Ratio Analysis

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Abstract- This study evaluates the financial performance of selected Indian public sector banks using financial ratio analysis over a five-year period. The analysis focuses on profitability, asset quality, capital adequacy, net interest margin and leverage to assess the changing financial position of SBI, PNB and Canara Bank. The findings indicate an overall improvement in profitability, with increases in Net Profit Margin (NPM), Return on Assets (ROA) and Return on Equity (ROE), while Gross NPA and Net NPA ratios declined consistently, with all three banks reducing Net NPA below 1% by FY25. SBI maintained the highest FY25 Net Interest Margin and Net Profit Margin and the lowest Gross NPA ratio, PNB recorded a significant turnaround with the lowest Net NPA ratio, and Canara Bank achieved the highest ROA and ROE. Capital adequacy remained sound, although NIM softened during FY25, indicating some pressure on funding spreads. The study concludes that ratio analysis provides a useful multidimensional framework for assessing bank performance and recommends continued focus on asset quality, capital strength, credit monitoring, operational efficiency, digital risk management and sustainable non-interest income.

Keywords: public sector banks, financial performance, ratio analysis, profitability, net profit margin, return on assets, return on equity, net interest margin, non-performing assets, capital adequacy, leverage, asset quality, sbi, pnb, canara bank.

I. INTRODUCTION

Banks occupy a central place in the economy because they collect savings, extend credit, enable payments and support investment activity. Their performance cannot be understood only by looking at the size of deposits or advances. Financial statement figures need to be related to one another so that profitability, leverage, asset quality and capital protection can be evaluated in a meaningful way. Ratio analysis provides this link. It converts large accounting

numbers into comparable measures and makes it possible to observe whether a bank is improving, weakening or remaining stable over time. For public sector banks, such an examination is especially relevant because they carry commercial responsibilities while also supporting financial inclusion, government programs and priority-sector lending. The Indian Banking System is a network of financial institutions that accepts deposits, provides loans, facilitates payments, and supports economic development. It plays a vital role in mobilizing savings and channelling funds to individuals, businesses, and government sectors. The system is regulated and supervised by the Reserve Bank of India (RBI), which ensures the stability and smooth functioning of the country's banking sector.

II. LITERATURE REVIEW

1. Praveen and Ranjitha (2026): The study found that combining liquidity, profitability, solvency, and efficiency ratios provides a reliable assessment of public sector bank performance.
2. Ashwath and Sachindra (2025): The study found that stronger capital adequacy and declining NPAs improved the financial health and performance of Indian public sector banks.
3. Venkata Rao and Vijay Kumar (2025): The study concluded that CAMELS indicators provide an effective framework for comparing the financial performance of leading public sector banks.
4. Raju and Rao (2025): The study found that financial ratio analysis combined with efficiency measures is an effective approach to evaluating the overall performance of public sector banks.
5. Chandra and Verma (2024): The study concluded that stronger capital adequacy, better asset quality, and lower NPAs contribute to higher profitability and operational efficiency.

6. Barak and Sharma (2024): The study found that intellectual capital positively contributes to profitability, operational efficiency, and overall financial performance of public sector banks.
7. Jimmy Carter (2024): The study found that SBI performed better than Indian Bank across most CAMELS parameters, indicating stronger overall financial performance.
8. Talasila and Neti (2024): The study found that public sector bank mergers resulted in only limited improvements in financial performance during the post-merger period.
9. Patra, Padhan, and Padhi (2023): The study found that banking efficiency is influenced by factors such as market share, NPAs, capital adequacy, bank size, and profitability.
10. Nalliboyina and Chalam (2023): The study found that bank size, capital adequacy, and NPA levels are significant determinants of the financial performance of Indian public sector banks.

III. RESEARCH DESIGN AND METHODOLOGY

Statement of the Problem

Public sector banks operate under a common regulatory environment, yet their profitability, leverage, asset quality and capital position are not identical. A simple comparison of total business does not reveal these differences. The problem addressed in this study is therefore to examine how SBI, PNB and Canara Bank performed on selected financial ratios during the five-year period from FY2020-21 to FY2024-25.

Need for the Study

A five-year review makes it possible to separate a temporary fluctuation from a sustained trend. The study is useful for understanding whether improvements in profit are accompanied by better asset quality and adequate capital, and whether the relative position of the selected banks changes across different dimensions of performance.

Objectives of the Study

- To examine the profitability of SBI, PNB and Canara Bank through NIM, NPM, ROA and ROE.
- To study the movement of Gross NPA and Net NPA ratios during the selected period.

- To assess leverage and capital strength using the Debt–Equity Ratio and Capital Adequacy Ratio.

Research Methodology

Item	Description
Research design	Descriptive and analytical
Universe	Twelve public sector banks
Sample	State Bank of India, Punjab National Bank and Canara Bank
Study period	FY2020-21 to FY2024-25
Sampling approach	Purposive selection
Nature of data	Secondary data
Main sources	Annual reports, bank disclosures, government and RBI material, and published financial analyses
Method of analysis	Five-year trend comparison, inter-bank comparison and ratio-wise interpretation

Hypotheses

H₀: There is no significant difference in the selected financial ratios of SBI, PNB and Canara Bank during the study period.

H₁: There is a significant difference in the selected financial ratios of SBI, PNB and Canara Bank during the study period.

Ratios Used in the Study

Ratio	Formula	Use in the study
Net Interest Margin (NIM)	$\text{Net interest income} \div \text{Average interest-earning assets} \times 100$	Measures the spread earned from the core lending and investment business.
Net Profit Margin (NPM)	$\text{Net profit} \div \text{Total income} \times 100$	Shows the share of total income retained as profit.
Return on Assets (ROA)	$\text{Net profit} \div \text{Average total assets} \times 100$	Indicates how efficiently the asset base produces earnings.

Return on Equity (ROE)	$\text{Net profit} \div \text{Average equity} \times 100$	Measures the return generated on shareholders' funds.
Debt–Equity Ratio	$\text{Debt} \div \text{Equity}$	Reflects the degree of financial leverage.
Gross NPA Ratio	$\text{Gross NPA} \div \text{Gross advances} \times 100$	Shows the proportion of advances classified as gross non-performing assets.
Net NPA Ratio	$\text{Net NPA} \div \text{Net advances} \times 100$	Shows the residual stressed assets after provisions.
Capital Adequacy Ratio	$\text{Regulatory capital} \div \text{Risk-weighted assets} \times 100$	Indicates the capital cushion available against risk-weighted exposure.

- Ratio definitions may differ slightly depending on the standalone or consolidated reporting basis.
- Secondary data are accepted as reported in the sources used for the project.
- The analysis does not directly measure governance, technology quality, employee efficiency or customer experience.
- Ratio analysis indicates relationships and trends but does not, by itself, prove the cause of a change.

Approach to Analysis

This chapter compares the selected banks ratio by ratio. Each table is followed by a trend chart and an interpretation based on the movement of the reported figures. The discussion gives attention to both the direction of change and the relative position of the banks at the end of FY25.

Net Interest Margin

Bank	FY21	FY22	FY23	FY24	FY25
SBI	3.00	2.90	3.10	3.00	2.90
PNB	2.90	2.60	2.80	2.90	2.70
Canara Bank	2.70	2.70	2.80	2.90	2.60

Limitations of the Study

- The sample is limited to three public sector banks and five financial years.

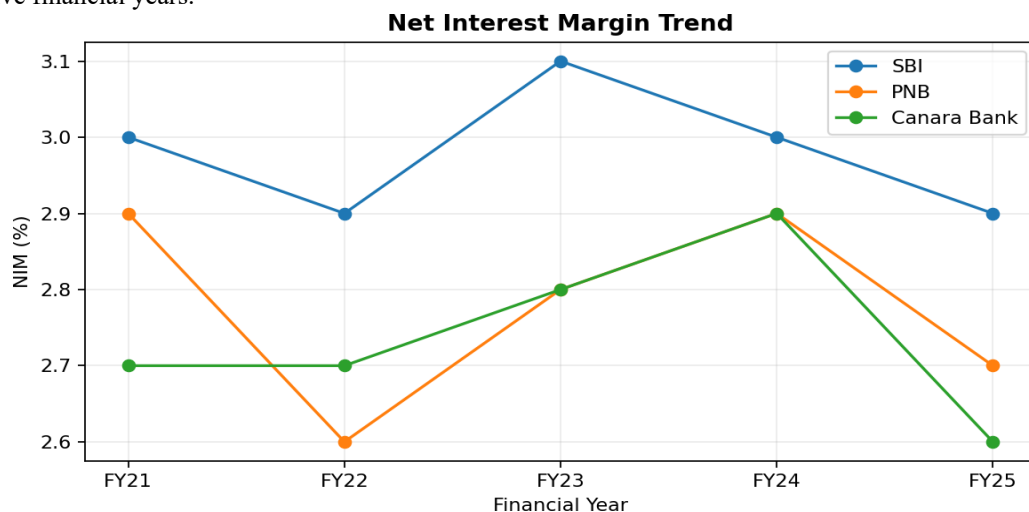


Figure 4.1: Five-year trend in Net Interest Margin

Interpretation:

NIM stayed within a narrow range for all three banks. SBI recorded the highest five-year average at about 2.98%, although its margin moved from 3.00% in

FY21 to 2.90% in FY25. PNB declined from 2.90% to 2.70%, while Canara Bank ended at 2.60% after reaching 2.90% in FY24. The FY25 decline across the group suggests pressure on the spread between

earning-asset yields and funding costs. The stability of the ratio, however, indicates that the core interest business did not experience an abrupt structural change during the period.

SBI	8.10	12.20	15.90	15.30	15.80
PNB	3.10	5.10	3.90	8.40	14.90
Canara Bank	4.10	8.70	13.10	13.80	14.40

Net Profit Margin

Bank	FY21	FY22	FY23	FY24	FY25
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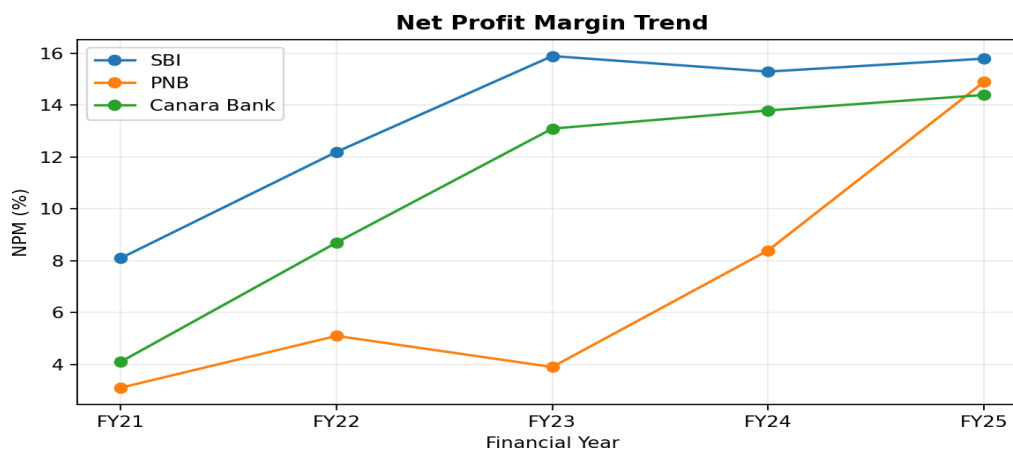


Figure 4.2: Five-year trend in Net Profit Margin

Interpretation:

The profit conversion ratio improved substantially. SBI rose from 8.10% in FY21 to 15.80% in FY25 and remained the highest at the end of the period. Canara Bank increased from 4.10% to 14.40%. PNB showed the sharpest turnaround: after a temporary decline in FY23, its margin climbed to 14.90% in FY25, an increase of 11.80 percentage points from FY21. The pattern indicates that the three banks retained a larger

portion of income as profit, with the improvement becoming especially visible during FY24 and FY25.

Debt–Equity Ratio

Bank	FY21	FY22	FY23	FY24	FY25
SBI	15.10	14.80	13.90	13.50	12.40
PNB	12.60	12.40	13.20	13.20	12.60
Canara Bank	17.00	16.20	15.90	14.90	14.70

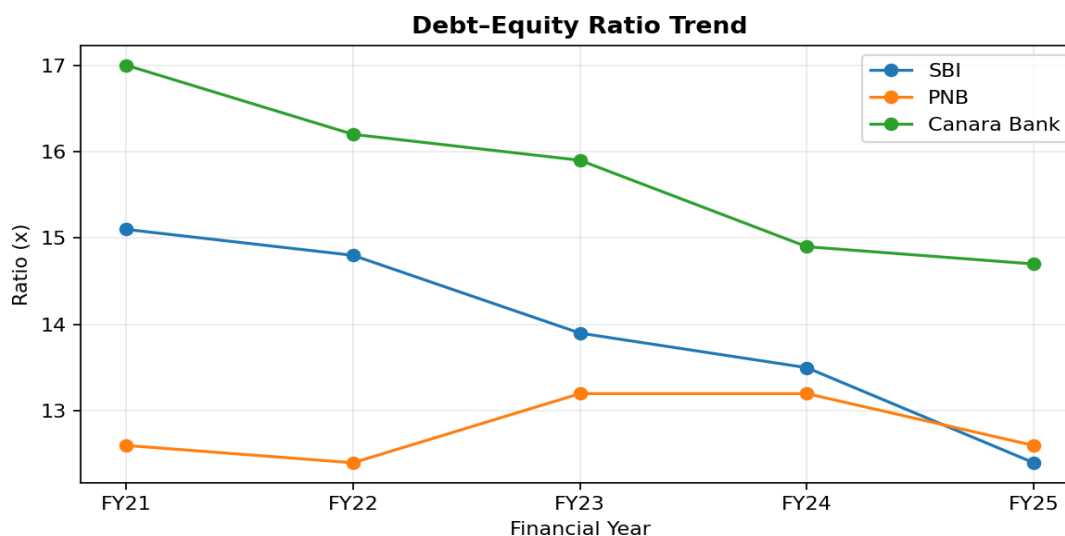


Figure 4.3: Five-year trend in Debt–Equity Ratio

Interpretation:

SBI and Canara Bank reduced leverage over the five years. SBI moved from 15.10 times to 12.40 times, while Canara Bank declined from 17.00 times to 14.70 times. PNB remained comparatively stable and finished at the same level at which it began, 12.60 times. In FY25 SBI reported the lowest ratio and Canara Bank the highest. A downward movement generally reflects a larger equity base relative to debt,

but the ratio should be read together with ROE because lower leverage can also influence shareholder returns.

Return on Assets

Bank	FY21	FY22	FY23	FY24	FY25
SBI	0.48	0.67	0.96	1.00	1.06
PNB	0.21	0.31	0.41	0.54	0.97
Canara Bank	0.48	0.52	0.81	1.01	1.09

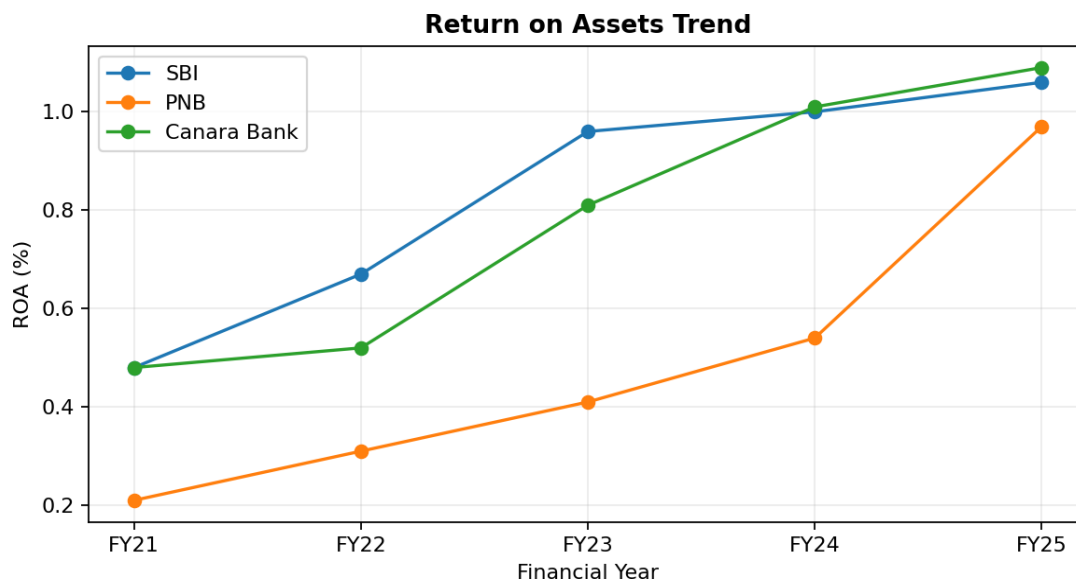


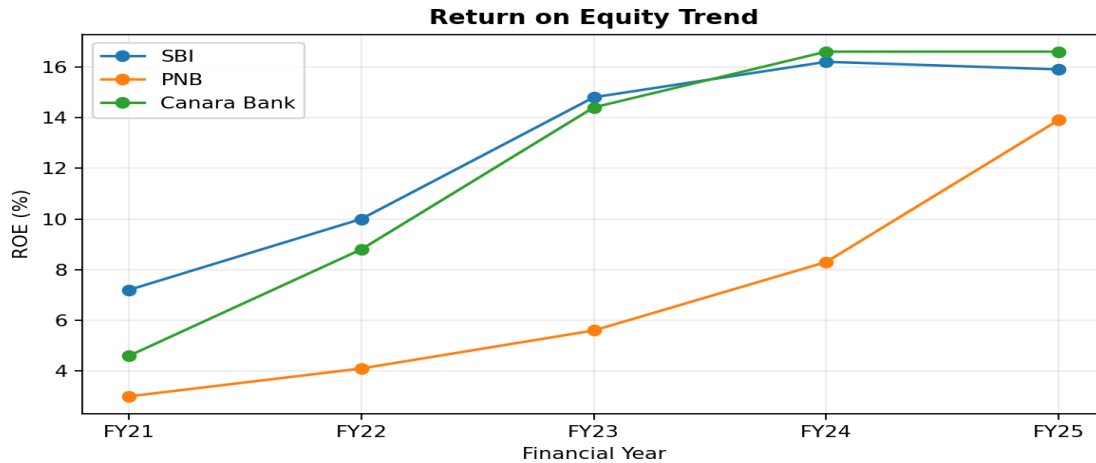
Figure 4.4: Five-year trend in Return on Assets

Interpretation:

ROA improved in every bank. SBI increased from 0.48% to 1.06%, and Canara Bank from 0.48% to 1.09%. PNB started from a lower base of 0.21% but reached 0.97% in FY25, showing the largest absolute improvement of 0.76 percentage points. Canara Bank recorded the highest FY25 ROA, followed closely by SBI. The movement indicates that the banks generated more profit from each unit of assets than they did at the beginning of the study period.

Return on Equity

Bank	FY21	FY22	FY23	FY24	FY25
SBI	7.20	10.00	14.80	16.20	15.90
PNB	3.00	4.10	5.60	8.30	13.90
Canara Bank	4.60	8.80	14.40	16.60	16.60



Interpretation:

The return earned on equity strengthened across the sample. Canara Bank moved from 4.60% to 16.60%, the largest five-year increase and the highest FY25 result. SBI rose from 7.20% to 15.90%, although it eased slightly from its FY24 level. PNB improved from 3.00% to 13.90%, with much of the rise occurring in the last two years. The trend is consistent with the improvement seen in net profit margin and ROA, suggesting that the stronger earnings were reflected in returns to the equity base.

Gross NPA Ratio

Bank	FY21	FY22	FY23	FY24	FY25
SBI	4.98	3.97	2.78	2.24	1.82
PNB	14.12	11.78	8.74	5.73	3.95
Canara Bank	8.83	7.51	5.35	4.23	2.94

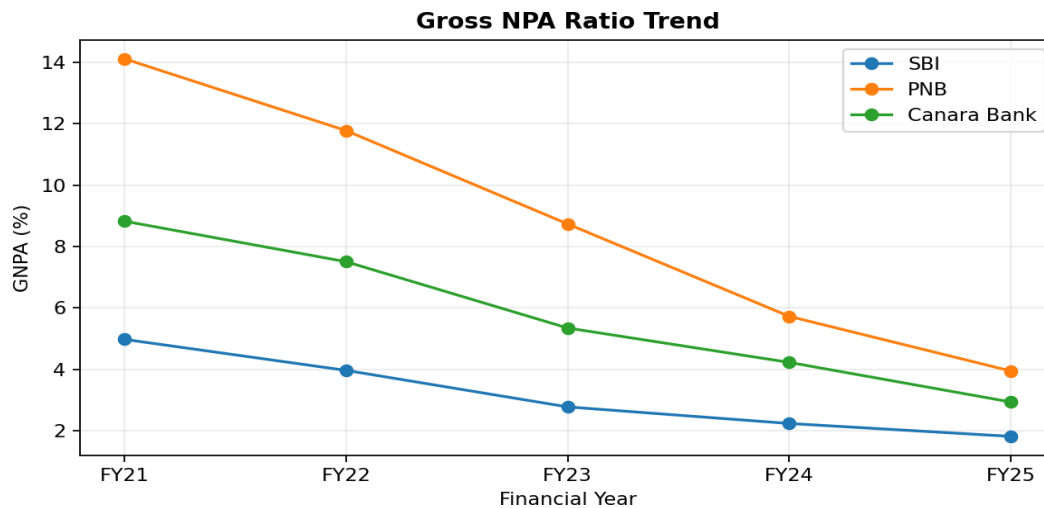


Figure 4.6: Five-year trend in Gross NPA Ratio

Interpretation: Gross NPA ratios declined every year for all three banks. SBI reduced the ratio from 4.98% to 1.82% and retained the lowest FY25 level. PNB recorded the largest decline, from 14.12% to 3.95%, while Canara Bank moved from 8.83% to 2.94%. Although PNB still had the highest GNPA ratio in FY25, the gap between the banks narrowed

considerably. The continuous fall indicates a broad improvement in the quality of the loan book over the study period.

Net NPA Ratio

Bank	FY21	FY22	FY23	FY24	FY25
SBI	1.50	1.02	0.67	0.57	0.47

PNB	5.73	4.80	2.72	0.73	0.40
Canara Bank	3.82	2.65	1.73	1.27	0.70

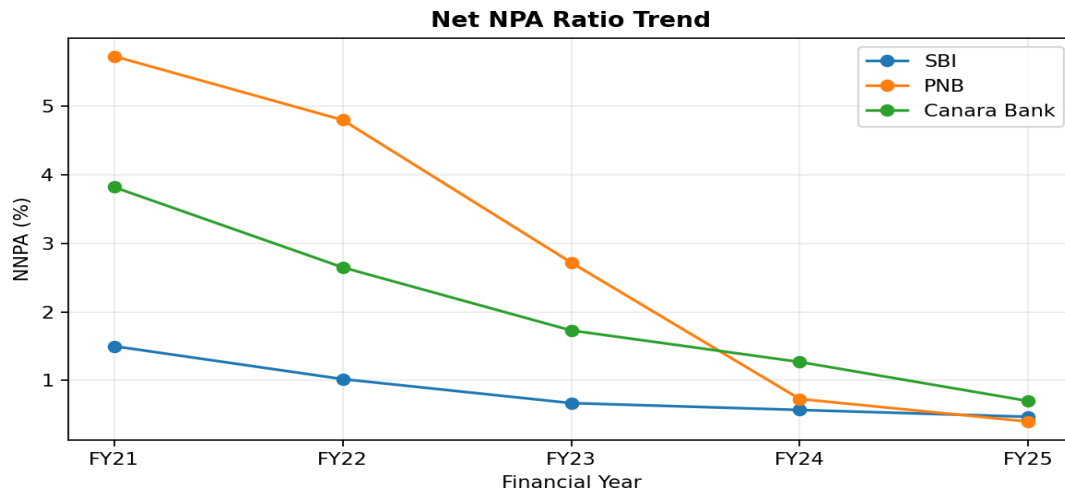


Figure 4.7: Five-year trend in Net NPA Ratio

Interpretation: The reduction in Net NPA was even more pronounced. By FY25 every bank was below 1%. PNB fell from 5.73% to 0.40% and ended with the lowest ratio in the group. SBI moved from 1.50% to 0.47%, while Canara Bank declined from 3.82% to 0.70%. The result suggests that, after provisions, the remaining stressed portion of net advances became much smaller. The difference between GNPA and NNPA also points to the role of provisioning in absorbing identified credit losses.

Capital Adequacy Ratio

Bank	FY21	FY22	FY23	FY24	FY25
SBI	13.74	13.83	14.68	13.64	14.25
PNB	14.14	14.50	15.50	15.97	17.01
Canara Bank	13.20	14.90	16.70	16.31	16.28

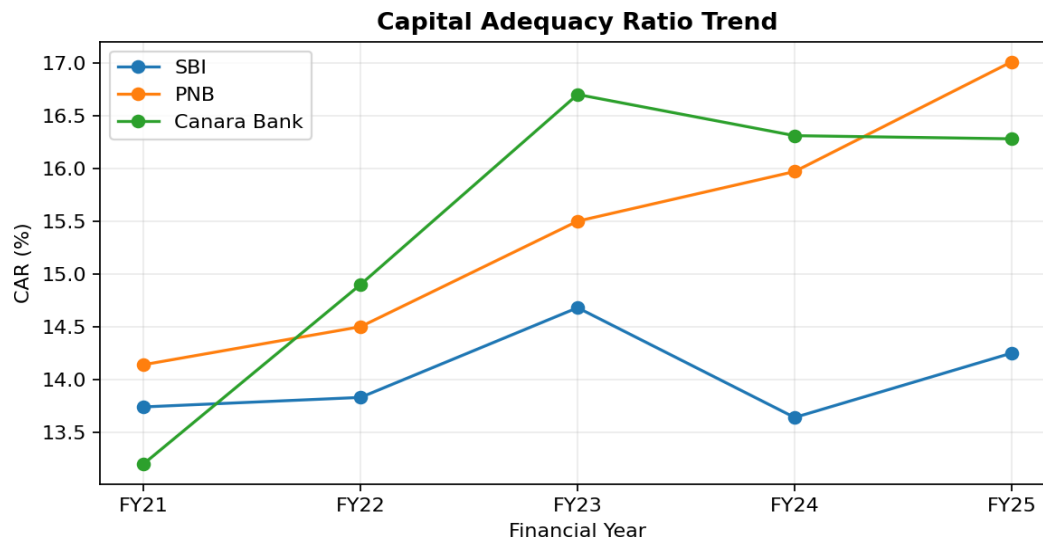


Figure 4.8: Five-year trend in Capital Adequacy Ratio

Interpretation:

Capital adequacy remained at comfortable levels throughout the period. PNB improved from 14.14% to 17.01% and recorded the highest FY25 ratio. Canara Bank rose from 13.20% to 16.28%, despite a mild easing after FY23. SBI showed a narrower range and ended at 14.25%, slightly above its FY21 level. The higher ratios of PNB and Canara Bank in FY25 indicate a larger capital cushion relative to risk-weighted assets, while SBI maintained a comparatively stable position.

Net NPA (%)	0.47	0.40	0.70	PNB recorded the lowest NNPA
Capital Adequacy (%)	14.25	17.01	16.28	PNB recorded the highest CAR

IV. FINDINGS

FY25 Comparative Position

Ratio	SBI	PNB	Canara Bank	Relative position in FY25
NIM (%)	2.90	2.70	2.60	SBI recorded the highest margin
NPM (%)	15.80	14.90	14.40	SBI recorded the highest profit margin
Debt–Equity (times)	12.40	12.60	14.70	SBI reported the lowest leverage
ROA (%)	1.06	0.97	1.09	Canara Bank recorded the highest ROA
ROE (%)	15.90	13.90	16.60	Canara Bank recorded the highest ROE
Gross NPA (%)	1.82	3.95	2.94	SBI recorded the lowest GNPA

- Profitability improved across the selected banks, particularly in Net Profit Margin, ROA and ROE.
- SBI maintained the highest FY25 NIM and NPM and reported the lowest Gross NPA ratio.
- PNB showed the largest turnaround in profit margin and achieved the lowest FY25 Net NPA ratio.
- Canara Bank recorded the highest FY25 ROA and ROE, indicating strong return generation from assets and equity.
- Gross NPA and Net NPA ratios declined consistently in all three banks during the study period.
- All three banks reduced Net NPA to below 1% by FY25.
- Capital adequacy remained sound, with PNB and Canara Bank reporting higher FY25 ratios than SBI.
- NIM softened in FY25 across the sample, which may indicate pressure on funding spreads.
- Leverage declined in SBI and Canara Bank, while PNB remained broadly stable.
- The relative ranking changes from one ratio to another, confirming the need for a multi-dimensional assessment.

Suggestions

- Continue strengthening credit appraisal, account monitoring and early-warning systems so that fresh slippages remain under control.
- Maintain the focus on recovery and resolution of stressed assets, even after the sharp fall in NPA ratios.
- Protect Net Interest Margin through stable low-cost deposits, careful loan pricing and disciplined asset–liability management.

- Use analytics for credit monitoring and fraud detection, while retaining appropriate human review for material lending decisions.
- Preserve adequate capital buffers to support growth and absorb unexpected risk.
- Improve operating efficiency by simplifying processes and using automation where it creates measurable savings.
- Expand sustainable fee-based income so that profitability is not excessively dependent on interest spreads.
- Strengthen cybersecurity, business continuity and operational risk controls as digital transactions grow.
- Present ratio definitions and reporting bases clearly to improve comparability across years and banks.
- Use a regular management dashboard combining profitability, asset quality, capital and efficiency indicators.

V. CONCLUSION

The five-year evidence shows a broad strengthening of the selected public sector banks. Earnings improved, asset quality became healthier and capital adequacy remained supportive. The improvement is not uniform, but each bank displays a distinct area of strength. SBI combines steady profitability with comparatively low gross NPA and leverage. PNB demonstrates a strong recovery from its earlier position and finishes the period with a high capital ratio and low net NPA. Canara Bank produces the highest FY25 returns while continuing to reduce stressed assets.

The study also confirms that ratio analysis is most useful when several indicators are considered together. A bank may lead in returns but not in leverage, or may have the lowest net NPA without having the highest margin. The overall conclusion is therefore based on the pattern across profitability, risk and capital measures rather than on one isolated ranking.

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