Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

FINANCIAL PERFORMANCE OF PUBLIC AND PRIVATE SECTOR BANKS IN INDIA: AN EMPIRICAL ANALYSIS OF GROWTH, PROFITABILITY, ASSET QUALITY AND OPERATIONAL SCALE

Mr. Kuldip Singh
Assistant Professor, Department of Commerce, Government PG College Satna, Madhya Pradesh

Article DOI: https://doi.org/10.36713/epra32077
DOI No: 10.36713/epra32077

ABSTRACT

This study compares the financial performance of public sector banks (PSBs) and private sector banks (PVBs) in India with reference to business growth, profitability, asset quality, capital adequacy and operational scale. It uses secondary data published by the Department of Financial Services, Ministry of Finance, and the Reserve Bank of India (RBI). The principal trend period is 2017-18 to 2024-25, corresponding to the comparable group-wise series available from the Government's Banking Analytics dashboard; selected profitability, capital and asset-quality indicators are examined for 2023-24 and 2024-25 using RBI's Report on Trend and Progress of Banking in India 2024-25. The analytical tools include annual growth rates, compound annual growth rates, credit–deposit ratios, gross-NPA-to-advances ratios calculated from published amounts, and comparative ratio analysis. The findings indicate that PSBs continue to hold a larger share of deposits and advances, while PVBs have expanded their business and branch networks more rapidly over the period. The credit-deposit ratio of PVBs remained above that of PSBs in the latest year. Asset quality improved substantially in both groups, although the reported GNPA ratio remained higher for PSBs than PVBs in 2024-25. Private sector banks recorded a higher net interest margin, whereas PSBs recorded a larger aggregate net profit in 2024-25. Both groups strengthened capital adequacy. The paper argues that banking performance cannot be judged through a single indicator: scale, profitability, asset quality, capital strength and intermediation efficiency produce a multidimensional picture of comparative performance.

KEYWORDS: *Public Sector Banks; Private Sector Banks; Financial Performance; Profitability; Non-Performing Assets; Capital Adequacy; Banking Efficiency; India.*

1. INTRODUCTION

The banking sector occupies a central position in the financial system because it mobilises savings, allocates credit, facilitates payments and supports investment across households, businesses and public institutions. In an economy such as India, where banks remain the principal channel of formal financial intermediation, the financial condition of banks has implications for economic growth, financial stability and the availability of credit to productive sectors. The performance of banks is therefore relevant not only to shareholders and depositors but also to borrowers, regulators and policymakers. The Indian banking system is characterised by a mixed ownership structure in which public sector banks and private sector banks operate under a common regulatory framework but differ in ownership, governance arrangements, strategic priorities, historical development and business models. Public sector banks have traditionally carried a significant responsibility for broad-based banking access, government programme delivery and priority-sector credit. Private sector banks have generally competed through product innovation, technology adoption, customer segmentation and a stronger emphasis on commercial returns. These broad institutional distinctions do not imply that one ownership group is uniformly superior; performance can vary across profitability, risk, efficiency, growth and financial resilience.

The period from 2017-18 to 2024-25 is particularly important for comparative analysis. Indian banks moved through the post-NPA clean-up phase, the consolidation of public sector banks, the COVID-19 shock and subsequent recovery, rapid digitisation, changes in deposit competition and the normalisation of credit growth. Public sector bank mergers altered the size and composition of the PSB group. The pandemic affected credit demand, asset quality recognition and provisioning, while the subsequent recovery contributed to improvements in profitability and balance-sheet growth. These developments make a multi-year comparison more informative than a single-year ranking. The Reserve Bank of India's Report on Trend and Progress of Banking in India 2024-25 describes a resilient commercial banking system with continued balance-sheet expansion, improved asset quality and comfortable capital buffers. At end-March 2025, the gross non-performing asset (GNPA) ratio of scheduled commercial banks declined to 2.2%, while the capital to risk-weighted assets ratio (CRAR) stood at 17.4%. The sector's return on assets (RoA) was 1.4% and return on equity (RoE) was 13.5% in

2024–25 (RBI, 2025). These aggregate figures, however, conceal differences between public and private sector banks, making group-wise analysis necessary.

The Ministry of Finance's Banking Analytics dashboard provides a useful longitudinal dataset for this purpose. Between March 2018 and March 2025, PSB gross loans and advances increased from ₹61.42 lakh crore to ₹109.78 lakh crore, while PVB advances increased from ₹27.26 lakh crore to ₹75.75 lakh crore. Over the same period, PSB deposits rose from ₹82.62 lakh crore to ₹141.96 lakh crore, and PVB deposits increased from ₹30.14 lakh crore to ₹85.02 lakh crore (Department of Financial Services [DFS], n.d.). The absolute scale of PSBs remains larger, but the relative growth of PVBs has been faster.

Asset quality is another major dimension of banking performance. The Indian banking system experienced a prolonged period of elevated non-performing assets, especially among public sector banks, followed by a gradual clean-up through recognition, provisioning, recovery, write-offs and resolution mechanisms. The DFS data show that the amount of gross NPAs in PSBs declined from ₹8.96 lakh crore in March 2018 to ₹2.84 lakh crore in March 2025. PVB gross NPAs, in contrast, increased from ₹1.26 lakh crore to ₹1.33 lakh crore over the same period, although the latter group also expanded its loan book substantially. The RBI's group-wise GNPA ratios for 2024–25 show a decline from 3.5% to 2.6% for PSBs and from 1.9% to 1.8% for PVBs (RBI, 2025).

Profitability presents a more nuanced picture. In 2024–25, PSBs recorded net profit of ₹1,78,364 crore, compared with ₹1,89,211 crore for PVBs. Yet PVBs continued to report a higher net interest margin (NIM): 3.6% compared with 2.6% for PSBs. The RBI also reported that PVBs had a higher median NIM, while PSBs exhibited relatively uniform NIMs across institutions (RBI, 2025). This indicates that aggregate net profit and margin-based profitability capture different aspects of performance. The larger total profit of a banking group partly reflects its size, whereas NIM reflects the relationship between net interest income and average assets.

Capital adequacy is essential for the capacity of banks to absorb unexpected losses and sustain lending. At end-March 2025, CRAR stood at 16.1% for PSBs and 18.3% for PVBs, both above the regulatory minimum of 9% (RBI, 2025). The higher group-level capital ratio of PVBs suggests a stronger capital buffer on this measure, although the distribution of capital adequacy across individual banks and the quality of capital also matter.

Operational scale provides an additional perspective. The number of functioning offices of PSBs remained relatively stable between 2017–18 and 2024–25, while the PVB network expanded substantially. The DFS dashboard records 93,365 PSB offices and 31,769 PVB offices in March 2018, compared with 93,711 PSB offices and 48,685 PVB offices in March 2025. This indicates that PVBs expanded their physical network more rapidly, while PSBs retained a substantially larger number of offices in absolute terms.

Against this background, the present study undertakes a comparative analysis of PSBs and PVBs using a set of measurable indicators. It focuses on business growth, deposits, advances, credit–deposit ratios, NPAs, profitability, NIM, capital adequacy and branch-network development. Rather than assuming that one ownership group performs better across all dimensions, the study examines where differences are observed and how these differences have evolved over time. Banking performance should therefore be understood as a multidimensional construct rather than as a single profitability outcome. Scale and growth capture the ability to mobilise deposits and extend credit; asset-quality indicators reflect the effectiveness of credit appraisal, monitoring and recovery; profitability measures the conversion of intermediation activity into sustainable earnings; and capital adequacy indicates the capacity to absorb unexpected losses. These dimensions may move in different directions. A bank can expand its loan book rapidly while experiencing pressure on asset quality, or maintain a high net interest margin while facing higher operating costs and provisioning requirements. The use of a balanced set of indicators is consequently important for interpreting ownership-group performance.

International banking research provides a strong basis for this multidimensional approach. Early studies identify market structure, operating costs, capitalisation and macroeconomic conditions as important influences on bank profitability (Bourke, 1989; Molyneux & Thornton, 1992; Demirgüç-Kunt & Huizinga, 1999). Later work emphasises the interaction between bank-specific characteristics and the macroeconomic environment (Athanasoglou et al., 2008; Dietrich & Wanzenried, 2011). Research on financial institutions also cautions that efficiency and profitability are related but distinct concepts; scale, cost efficiency and managerial choices can produce different performance rankings (Berger & Humphrey, 1997; Berger & Mester, 1997). In India, the comparison between public and private sector banks has additional institutional significance. Public sector banks have historically carried a substantial responsibility for financial inclusion, priority-sector lending and the provision of banking services across less commercially attractive locations. Private sector banks have generally pursued technology-led expansion, differentiated products and customer-segment strategies. These institutional differences make it inappropriate to judge the two groups exclusively by their margins or by the absolute size of their balance sheets. A comparison should recognise both commercial performance and the wider functions performed by banks within the financial system.

The post-2017 period also contains important structural developments. Public sector bank consolidation, the Insolvency and Bankruptcy Code framework, the strengthening of prudential supervision, digital payment adoption and the economic disruption associated with the COVID-19 pandemic affected bank balance sheets and operating models. The recovery in asset quality after the period of elevated stressed assets must be interpreted alongside credit growth, provisioning, capital buffers and the composition of income. The latest RBI banking report provides the regulatory and sectoral context for assessing these developments, while the DFS dashboard supplies comparable ownership-group series for the core longitudinal analysis (Reserve Bank of India, 2025; Department of Financial Services, n.d.).

Accordingly, this paper does not treat a higher value on every indicator as automatically desirable. A higher credit–deposit ratio, for example, may indicate stronger deployment of deposits but can also imply reduced liquidity headroom if funding conditions tighten. Similarly, a higher provision coverage ratio may signal a more conservative loss-absorption position, while a higher NIM may reflect pricing power, funding advantages or a different risk profile. The interpretation of each indicator is therefore linked to its economic meaning and to the other dimensions of bank performance. The present approach is also consistent with the broader empirical literature, which treats bank profitability and soundness as outcomes of interacting internal and external factors rather than as a direct consequence of ownership labels (Almaqtari et al., 2019a, 2019b; Athanasoglou et al., 2008; Demirgüç-Kunt & Huizinga, 1999).

2. REVIEW OF LITERATURE

2.1 Comparative Performance and Ownership Structure

Shukla (2016) examined the performance of 46 scheduled commercial banks in India using indicators relating to size, growth, profitability and soundness. The study found that public and private sector banks were not substantially different in terms of size and growth, but differences were more visible in profitability and business soundness. The findings suggested stronger growth prospects for private sector banks on selected indicators. This research provides an early comparative framework for examining ownership-group differences through multiple financial dimensions rather than a single profitability measure.

Agarwal and Sinha (2020) compared selected public and private sector banks over a five-year period using financial ratios and secondary data. Their analysis reported that private sector banks performed better in controlling NPAs in the selected sample, while public sector banks showed progress in financial performance. The study is relevant because it links asset quality with comparative performance, although its selected-bank design differs from the group-level approach adopted in the present paper.

2.2 Efficiency and Productivity of Indian Banks

Patra, Padhan and Padhi (2023) analysed the efficiency of Indian private and public sector banks through a two-stage framework. They used data envelopment analysis to estimate business, profit and Z-score efficiencies and applied Tobit regression to examine bank-specific determinants. Their findings indicated that average efficiency scores of public sector banks were higher under the selected measures, while Z-scores suggested that both ownership groups faced stability risks. This result is important because it cautions against assuming that private ownership automatically produces higher efficiency in every dimension.

The literature on bank efficiency demonstrates that conclusions depend on the definition of efficiency, the inputs and outputs selected, the sample of banks and the estimation method. Cost efficiency, profit efficiency, business efficiency and risk-adjusted stability are related but distinct concepts. Accordingly, the present study does not infer operational efficiency solely from growth in deposits or branches; it treats these as scale indicators and uses cost and profitability information where official group-wise data are available.

2.5 Determinants of Bank Profitability

Research on bank profitability consistently distinguishes internal determinants from external economic conditions. Bourke (1989) found that capitalisation, liquidity and operating expenses are associated with bank profitability across a cross-country sample. Molyneux and Thornton (1992) similarly identified market structure, interest rates and bank-specific conditions as relevant to European bank returns. Demirgüç-Kunt and Huizinga (1999) showed that bank margins and profitability are shaped by taxation, financial structure, regulation and macroeconomic conditions, indicating that ownership alone cannot explain performance differences. Athanasoglou, Brissimis and Delis (2008) further demonstrated that bank-specific, industry-specific and macroeconomic factors jointly influence profitability. These findings support the use of multiple indicators and caution against attributing observed differences solely to public or private ownership.

2.6 Capital, Risk and Financial Soundness

Capital adequacy is central to bank resilience because capital absorbs unexpected losses and supports confidence among depositors and counterparties. Berger (1995) examined the relationship between capital and earnings and showed that the connection can operate in both directions: stronger capital may reduce funding costs and risk, while profitable banks may accumulate capital internally. The Basel Committee on Banking Supervision (2000, 2011) places emphasis on sound credit-risk management, adequate capital and the integration

of risk governance into bank-wide decision-making. In the Indian context, the empirical relationship between NPAs, capital and profitability is especially relevant because legacy stressed assets affected the earnings and capital position of several public sector banks. The RBI's group-wise asset-quality and capital data therefore provide essential evidence for interpreting the latest comparative position.

2.7 Efficiency, Productivity and Ownership

Bank efficiency research evaluates how effectively financial institutions convert inputs such as labour, branches, deposits and operating expenditure into outputs such as loans, investments and fee-based services. Berger and Humphrey (1997) reviewed frontier-efficiency studies and highlighted the importance of methodological choices, sample composition and the definition of inputs and outputs. Berger and Mester (1997) showed that cost, profit and alternative efficiency measures can produce different assessments of financial institutions. For India, Bhattacharyya, Lovell and Sayer (1997) examined the impact of liberalisation on the productive efficiency of Indian commercial banks. Sathye (2003) assessed the efficiency of Indian banks and found that efficiency comparisons provide a useful complement to conventional accounting ratios. Das and Ghosh (2006) also investigated technical efficiency and its determinants in Indian banking, reinforcing the importance of bank size, ownership and operating conditions.

2.8 Indian Banking Reforms and Comparative Evidence

Studies of Indian banking reforms show that ownership-based performance differences have changed over time. Sensarma (2006) compared the performance of state-owned, private and foreign banks in India and demonstrated that ownership categories need to be evaluated against a range of performance dimensions. Shukla (2016) found that public and private sector banks were not substantially different in size and growth but displayed differences in profitability and soundness. Agarwal and Sinha (2020) reported progress among public sector banks while noting that private sector banks retained an advantage on selected asset-quality measures. More recent work by Almaqtari et al. (2019a, 2019b) used panel-data approaches to examine bank-specific and macroeconomic determinants of Indian bank profitability. Patra et al. (2023) applied a two-stage efficiency framework and found that the factors associated with efficiency differ across public and private banks. Singh (2026) further documents differences in performance and return volatility between ownership groups. Collectively, these studies suggest that comparative results depend on the period, sample, performance measure and analytical method.

2.3 Asset Quality and Profitability

Research on Indian banks has repeatedly identified non-performing assets as an important determinant of profitability and financial stability. Studies examining the post-merger performance of public sector banks have reported negative associations between GNPA and indicators such as return on assets, return on equity, net interest margin and capital adequacy. Such findings are consistent with the proposition that higher impaired assets increase provisioning costs, reduce interest income and constrain the capacity of banks to deploy funds.

The RBI's annual banking report provides evidence of a broad improvement in asset quality across scheduled commercial banks. In 2024–25, the GNPA ratio declined to 2.2% and the NNPA ratio to 0.5%. However, group-wise figures show that the decline was not identical across ownership categories. PSBs recorded a larger reduction in the GNPA ratio, while PVBs maintained a lower level of GNPA in both 2023–24 and 2024–25 (RBI, 2025). This distinction supports the need to analyse both the direction of improvement and the comparative level of asset quality.

2.4 Profitability, Margins and Capital Adequacy

The profitability of a bank is influenced by its capacity to generate interest income, manage funding costs, control operating expenditure and contain credit losses. NIM, RoA and RoE capture different aspects of this process. NIM measures the spread between interest earned and interest paid relative to average earning assets; RoA measures the earnings generated from the asset base; and RoE reflects the return to shareholders' funds. A bank group may report a larger aggregate net profit because of its size while another group reports a higher NIM or RoA.

The RBI's 2024–25 report indicates that PSBs improved their RoA and RoE during the year, while PVBs recorded moderation. The report also records a higher median NIM for PVBs, while the aggregate NIM of PSBs declined from 2.8% to 2.6% and that of PVBs declined from 3.9% to 3.6%. Capital adequacy increased for both groups, with PSB CRAR rising from 15.5% to 16.1% and PVB CRAR from 17.8% to 18.3% (RBI, 2025). These indicators provide the basis for the latest-year comparison in this paper.

Taken together, the international evidence establishes that profitability is shaped by capitalisation, operating costs, market structure, liquidity and macroeconomic conditions rather than by ownership alone (Bourke, 1989; Molyneux & Thornton, 1992; Demirgüç-Kunt & Huizinga, 1999; Athanasoglou et al., 2008; Dietrich & Wanzenried, 2011; Goddard et al., 2004; Pasiouras & Kosmidou, 2007). The efficiency literature adds that cost efficiency, profit efficiency and productivity are conceptually distinct and may yield different

assessments of bank performance (Berger & Humphrey, 1997; Berger & Mester, 1997). Capital and risk-management frameworks further emphasise the importance of adequate capital buffers and disciplined credit-risk governance (Berger, 1995; Basel Committee on Banking Supervision, 2000, 2011).

Evidence from India complements these broader findings. Research on liberalisation and productive efficiency has examined the effect of reform on commercial-bank performance (Bhattacharyya et al., 1997; Das & Ghosh, 2006), while other studies have compared the efficiency of Indian banks and the performance of institutions under different ownership structures (Sathye, 2003; Sensarma, 2006). More recent empirical work has assessed profitability through panel-data methods and considered the joint influence of bank-specific and macroeconomic factors (Almaqtari et al., 2019a, 2019b). The ownership comparison has also been revisited using selected-bank financial ratios and more recent group-level evidence (Agarwal & Sinha, 2020; Shukla, 2016; Patra et al., 2023; Singh, 2026). RBI's annual banking reports provide the official time-series and regulatory context for these comparisons (Reserve Bank of India, 2023, 2024, 2025), while the DFS Banking Analytics dashboard supplies the group-wise series used in the present analysis (Department of Financial Services, n.d.).

2.9 Research Gap

The existing literature provides useful comparisons of bank ownership groups, efficiency, profitability and asset quality. However, many studies rely on selected samples of banks, short observation periods or a narrow set of ratios. The present study contributes by combining a longer group-wise trend analysis of deposits, advances, NPAs and offices with the latest RBI group-level indicators for profitability, NIM, capital adequacy and provisioning. It also distinguishes between absolute scale and ratio-based performance, thereby avoiding the assumption that larger aggregate values necessarily indicate superior efficiency. An additional limitation concerns comparability across time. Several published comparisons focus on a small number of selected banks or use short study windows, while group-level data can reveal broader changes in the relative scale of public and private banking. The present study combines an eight-year ownership-group series for deposits, advances, gross NPA amounts and functioning offices with the latest RBI group-wise indicators for profitability, NIM, capital adequacy and reported GNPA/NNPA ratios. This design offers a current descriptive comparison while keeping the limitations of aggregate data explicit.

The study also distinguishes between reported regulatory ratios and researcher-calculated indicators. In particular, the ratio of gross NPA amount to gross advances derived from the DFS dashboard is used only as a trend proxy and is not presented as equivalent to the RBI's regulatory GNPA ratio. This distinction is important because differences in classification, reporting scope and denominator construction can affect the resulting values.

The study is descriptive and comparative rather than causal. It does not claim to identify the causal effect of ownership on performance because public and private banks differ in size, business composition, historical obligations, customer mix and risk profile. Instead, it documents observed differences and interprets them in the context of the available official statistics.

3. OBJECTIVES AND RESEARCH QUESTIONS

The objectives of the study are:

1. To compare the growth of deposits and advances of public and private sector banks in India during 2017-18 to 2024-25.
2. To examine differences in asset quality through gross and net non-performing assets and related ratios.
3. To compare profitability, net interest margin and capital adequacy of public and private sector banks.
4. To analyse changes in the operational scale of the two banking groups through their functioning office networks.
5. To identify the relative strengths and performance challenges of public and private sector banks.

4. RESEARCH METHODOLOGY

4.1 Research Design and Period

The study adopts a descriptive and comparative research design based on secondary data. The core longitudinal period is 2017-18 to 2024-25 because the Ministry of Finance provides consistent annual group-wise series for deposits, advances, gross NPA amounts and functioning offices for these years. The latest group-wise profitability, NIM, CRAR, GNPA ratio, NNPA ratio and provision coverage indicators are examined for 2023-24 and 2024-25 using RBI's Report on Trend and Progress of Banking in India 2024-25.

4.2 Sources of Data

The principal sources are: (i) Department of Financial Services, Ministry of Finance, Banking Analytics database, which reproduces RBI group-wise data for PSBs and PVBs; and (ii) RBI, Report on Trend and Progress of Banking in India 2024-25, particularly Chapter IV, Commercial Banks, including Tables IV.3, IV.4, IV.5 and IV.9 and the related charts. Academic studies are used for the literature review and interpretation.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

4.3 Variables and Operational Definitions

Dimension	Variables	Measurement / interpretation
Business size	Deposits; gross loans and advances	Amount in ₹ crore at end-March
Intermediation	Credit-deposit ratio	Gross loans and advances ÷ deposits × 100
Asset quality	Gross NPA amount; GNPA ratio; NNPA ratio	Amount and percentage of advances
Profitability	Net profit; NII; NIM	Amount in ₹ crore; NIM in per cent
Capital strength	CRAR	Capital funds as a percentage of risk-weighted assets
Operational scale	Functioning offices	Number of offices at end-March
Provisioning	Provision coverage ratio	Provisions relative to gross NPAs

4.4 Analytical Techniques

Annual growth rate is calculated as [(current-year value / previous-year value) - 1] × 100. CAGR is calculated as [(ending value / beginning value)^(1/n) − 1] × 100, where n is the number of annual intervals. Credit-deposit ratio is calculated as gross loans and advances divided by total deposits, multiplied by 100. For the long-term comparison, the gross-NPA amount-to-advances ratio is calculated as gross NPA amount divided by gross loans and advances, multiplied by 100. This is a researcher-calculated proxy based on the DFS series; it is not substituted for the RBI's official GNPA ratio, which is separately reported for 2023-24 and 2024-25.

4.5 Scope and Limitations

The study covers public and private sector scheduled commercial banks and excludes foreign banks, small finance banks, payment banks and regional rural banks from the ownership-group comparison. The DFS series starts in 2017-18 for the principal balance-sheet indicators. Group composition can change because of mergers and reclassification, particularly among public sector banks. Aggregate group data do not control for differences in bank size, business mix or risk exposure.

5. COMPARATIVE ANALYSIS OF BUSINESS GROWTH

5.1 Growth in Deposits

Deposits represent the principal funding base of commercial banks. Between March 2018 and March 2025, PSB deposits increased from ₹82.62 lakh crore to ₹141.96 lakh crore, while PVB deposits increased from ₹30.14 lakh crore to ₹85.02 lakh crore. The calculated CAGR was approximately 8.0% for PSBs and 15.9% for PVBs. Thus, PSBs continued to mobilise the larger absolute volume of deposits, but PVBs expanded their deposit base at almost twice the compound annual rate.

Year	PSB deposits (₹ crore)	PVB deposits (₹ crore)	PSB annual growth (%)	PVB annual growth (%)
2017–18	8,262,322	3,013,688	—	—
2018–19	8,486,215	3,770,013	2.7	25.1
2019–20	9,048,420	4,159,044	6.6	10.3
2020–21	9,900,766	4,819,469	9.4	15.9
2021–22	10,717,362	5,464,181	8.2	13.4
2022–23	11,709,581	6,299,332	9.3	15.3
2023–24	12,896,766	7,561,502	10.1	20.0
2024–25	14,196,270	8,502,193	10.1	12.4

Over the seven annual intervals, PSB deposits expanded by approximately 8.0% per annum, compared with 16.0% for PVBs. The faster private-sector growth reduced the gap in relative scale, although PSBs still held a substantially larger deposit base at the end of the period.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

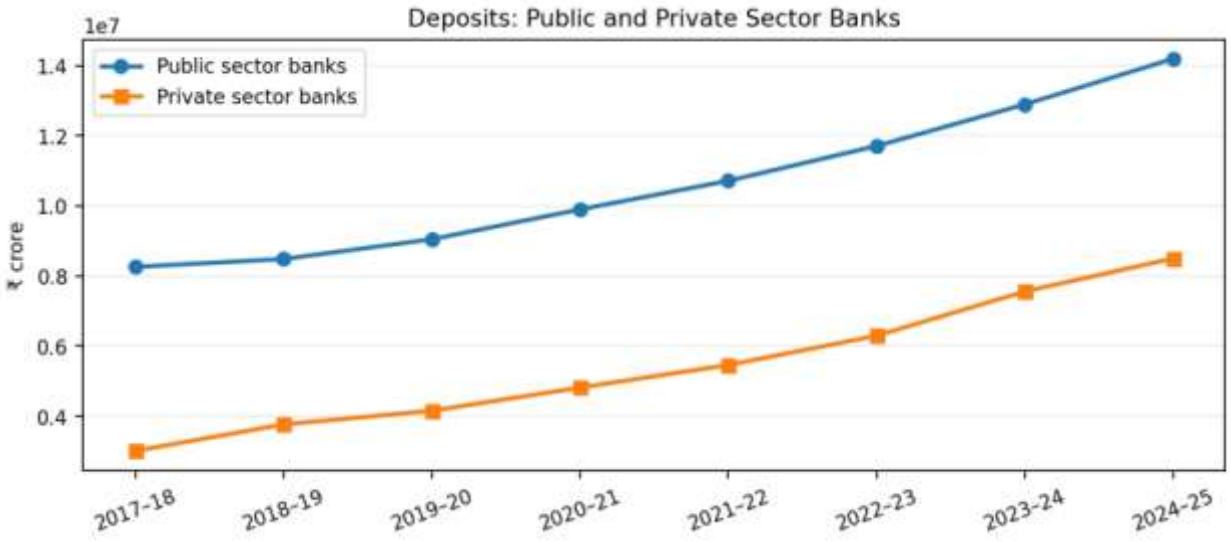


Figure 1. Deposits of Public and Private Sector Banks, 2017–18 to 2024–25.

Source: DFS Banking Analytics dashboard; source series attributed to RBI. Amounts in ₹ crore.

5.2 Growth in Advances

Advances reflect the deployment of bank funds into credit. PSB gross loans and advances increased from ₹61.42 lakh crore in March 2018 to ₹109.78 lakh crore in March 2025. PVB advances increased from ₹27.26 lakh crore to ₹75.75 lakh crore. The calculated CAGR was approximately 8.7% for PSBs and 15.7% for PVBs. As with deposits, private banks recorded faster proportional growth, while public sector banks retained a larger absolute lending base.

Year	PSB advances (₹ Crore)	PVB advances (₹ Crore)	PSB annual growth (%)	PVB annual growth (%)
2017-18	6,141,698	2,725,891	—	—
2018-19	6,382,461	3,442,347	3.9	26.3
2019-20	6,615,112	3,776,023	3.6	9.7
2020-21	6,770,363	4,097,040	2.3	8.5
2021-22	7,433,006	4,700,912	9.8	14.7
2022-23	8,610,115	5,462,976	15.8	16.2
2023-24	9,773,488	6,954,334	13.5	27.3
2024-25	10,977,762	7,574,750	12.3	8.9

The difference in growth rates suggests that PVBs increased their share in the combined lending business of the two groups. However, growth rates do not by themselves indicate superior credit quality or risk-adjusted returns. A more complete evaluation requires comparison of credit deployment with asset quality, capital and profitability.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

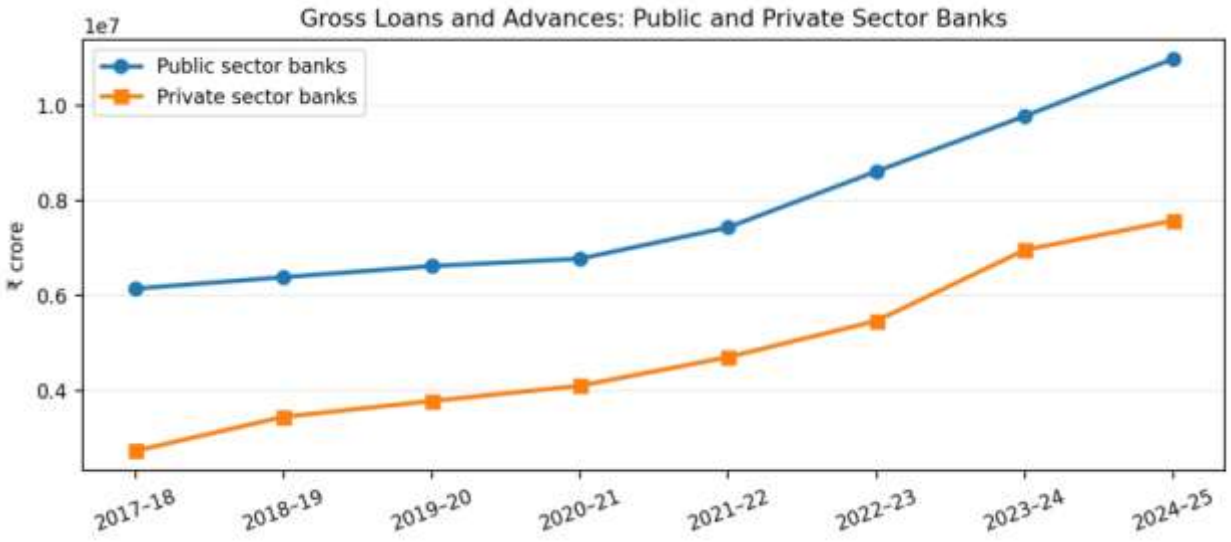


Figure 2. Gross Loans and Advances of Public and Private Sector Banks, 2017-18 to 2024-25.

Source: DFS Banking Analytics dashboard; source series attributed to RBI. Amounts in ₹ Crore.

5.3 Credit-Deposit Ratio

The credit-deposit ratio indicates the extent to which deposits are deployed as loans. It is calculated here using the gross loans and advances and total deposits reported for each ownership group. The ratio for PSBs rose from approximately 74.4% in 2017-18 to 77.3% in 2024-25. For PVBs, it increased from approximately 90.4% to 89.1%, after reaching a high level in the intervening years.

Year	PSB CD ratio (%)	PVB CD ratio (%)
2017–18	74.3	90.5
2018–19	75.2	91.3
2019–20	73.1	90.8
2020–21	68.4	85.0
2021–22	69.4	86.0
2022–23	73.5	86.7
2023–24	75.8	92.0
2024–25	77.3	89.1

PVBs maintained a higher credit-deposit ratio throughout the observed period. This suggests a greater proportion of their deposit base was represented by gross loans and advances. A higher ratio can indicate more intensive credit deployment, but it can also imply a narrower liquidity buffer if funding is not diversified. The ratio must therefore be interpreted alongside liquidity, capital adequacy and asset quality.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

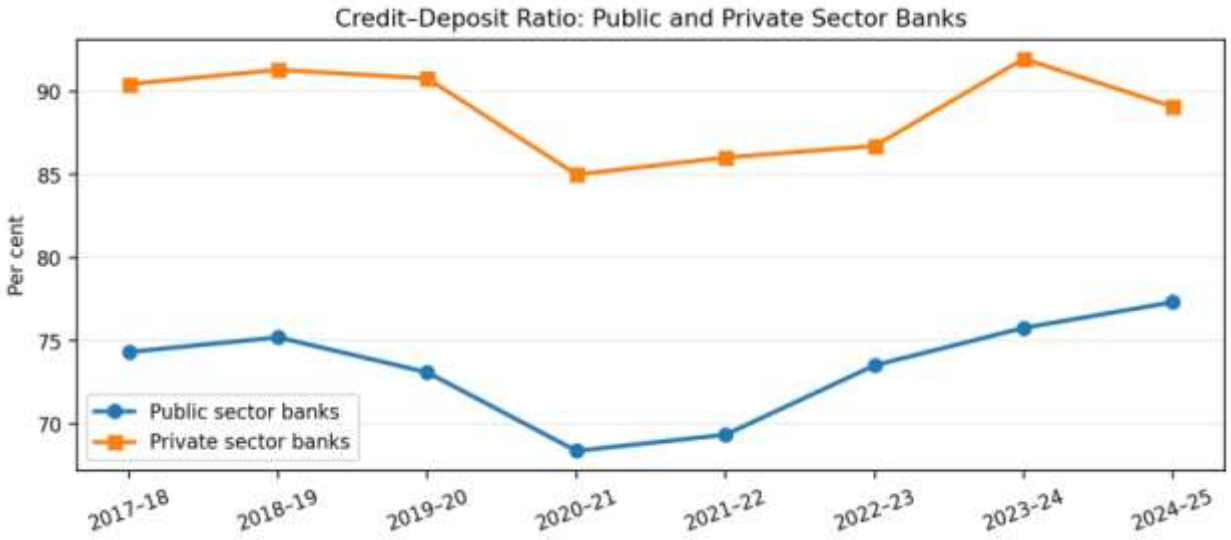


Figure 3. Credit-Deposit Ratio of Public and Private Sector Banks.

Source: Researcher calculations from DFS Banking Analytics data.

6. COMPARATIVE ANALYSIS OF ASSET QUALITY

6.1 Trend in Gross NPA Amounts

Gross NPAs represent loans classified as non-performing before deducting provisions. The DFS series shows a substantial reduction in PSB gross NPA amounts from ₹8,95,601 crore in March 2018 to ₹2,83,650 crore in March 2025. This represents a decline of approximately 68.3%. PVB gross NPA amounts increased from ₹1,25,863 crore to ₹1,32,646 crore over the same period, although they fluctuated and declined after the peak recorded in 2019-20.

Year	PSB GNPA (₹ crore)	PVB GNPA (₹ crore)	PSB GNPA/advances proxy (%)	PVB GNPA/advances proxy (%)
2017-18	895,601	125,863	14.58	4.62
2018-19	739,541	180,872	11.59	5.25
2019-20	678,317	205,848	10.25	5.45
2020-21	616,616	202,266	9.11	4.94
2021-22	540,958	180,742	7.28	3.84
2022-23	428,197	124,925	4.97	2.29
2023-24	339,541	129,039	3.47	1.86
2024-25	283,650	132,646	2.58	1.75

PSBs have a much larger loan book, absolute NPA amounts should not be used alone to compare asset quality. The calculated GNPA amount-to-advances proxy declined from 14.58% to 2.58% for PSBs and from 4.62% to 1.75% for PVBs. These ratios are calculated from the dashboard's gross NPA amount and gross loans and advances series and may differ slightly from RBI's reported GNPA ratios because of coverage and reporting definitions.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

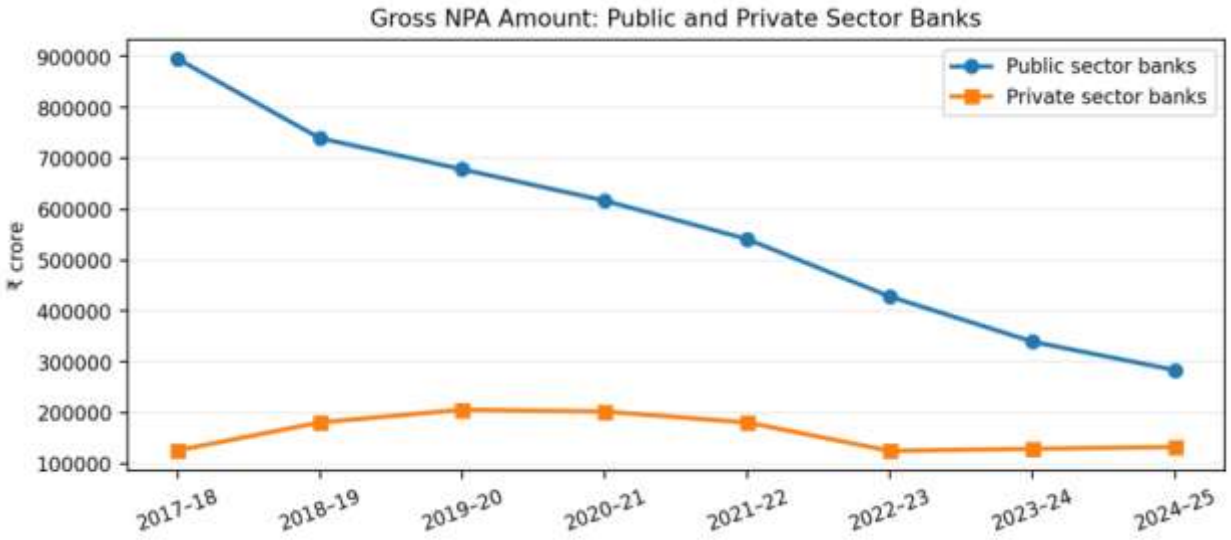


Figure 4. Gross NPA Amounts of Public and Private Sector Banks.

Source: DFS Banking Analytics dashboard; source series attributed to RBI.

6.2 Latest RBI GNPA and NNPA Ratios

The RBI's bank-group data provide a direct comparison of reported asset-quality ratios. Between 2023-24 and 2024-25, the GNPA ratio of PSBs declined from 3.5% to 2.6%, while that of PVBs declined from 1.9% to 1.8%. The NNPA ratio of PSBs declined from 0.8% to 0.5%, while the PVB ratio remained at 0.5%. Thus, PSBs recorded a larger annual improvement, but PVBs continued to have a lower GNPA ratio.

Indicator	PSBs 2023-24	PSBs 2024-25	PVBs 2023-24	PVBs 2024-25
GNPA / gross advances (%)	3.5	2.6	1.9	1.8
NNPA / net advances (%)	0.8	0.5	0.5	0.5
Provision coverage ratio (%)	—	78.5	—	72.6

The NPA data in the RBI report shows that PSBs reduced gross NPAs by ₹1,38,653 crore during 2024-25, compared with additions of ₹82,762 crore. PVBs reduced gross NPAs by ₹1,18,224 crore, compared with additions of ₹1,21,735 crore. The net movement was therefore more favourable for PSBs in that year. The composition of NPA reduction also differed: write-offs were a substantial component for both groups, while recoveries and upgradations contributed to the overall reduction. The provision coverage ratio was 78.5% for PSBs and 72.6% for PVBs at end-March 2025. This indicates a higher level of provisioning coverage in PSBs on the RBI's reported measure. A higher PCR provides a buffer against losses from impaired assets, although it should be interpreted alongside the gross and net NPA ratios and the quality of collateral.

6.3 Interpretation

The evidence suggests that asset quality improved in both ownership groups. PSBs experienced a more pronounced reduction in gross NPA amounts and reported GNPA ratios, consistent with the post-recognition clean-up of stressed assets. PVBs maintained lower GNPA ratios, but their gross NPA amount increased slightly between March 2024 and March 2025. The two groups therefore display different patterns: a stronger recent reduction in the PSB group and a lower overall GNPA ratio in the PVB group.

7. PROFITABILITY AND INTEREST MARGIN ANALYSIS

7.1 Net Profit

The RBI's group-wise income and expenditure data show that PSBs generated net profit of ₹1,41,202 crore in 2023-24 and ₹1,78,364 crore in 2024-25. PVB net profit increased from ₹1,75,297 crore to ₹1,89,211 crore. PSBs recorded a higher growth rate in net profit during 2024-25, at 26.3%, compared with 7.9% for PVBs. The absolute profit of PVBs remained higher in the latest year, but the gap narrowed considerably.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

Indicator (₹ crore unless stated)	PSBs 2023–24	PSBs 2024-25	PVBs 2023-24	PVBs 2024-25
Total income	12,12,665	13,65,244	9,41,870	10,70,709
Total expenditure	10,71,463	11,86,881	7,66,573	8,81,498
Operating profit	2,58,964	3,01,979	2,72,986	3,00,362
Net profit	1,41,202	1,78,364	1,75,297	1,89,211
Net interest income	4,07,632	4,29,128	3,66,839	4,01,683
NIM (%)	2.8	2.6	3.9	3.6

The difference between operating profit and net profit reflects the influence of provisions and contingencies, taxes and other items. PSBs reported higher operating profit in 2024-25, while PVBs reported higher net profit. This illustrates why net profit should not be interpreted without examining provisioning and other expenditure.

7.2 Net Interest Income and Net Interest Margin

Net interest income increased for both groups in 2024-25. PSB NII rose from ₹4,07,632 crore to ₹4,29,128 crore, while PVB NII increased from ₹3,66,839 crore to ₹4,01,683 crore. Nevertheless, NIM moderated in both groups: from 2.8% to 2.6% for PSBs and from 3.9% to 3.6% for PVBs. The private sector group maintained a margin advantage of one percentage point in 2024-25. The RBI attributes the moderation in aggregate banking-sector NIM partly to an increase in the interest expense to interest income ratio. The report notes that this ratio increased to 59.4% in 2024-25 from 57.4% in the previous year. Higher deposit costs and changes in the return on funds can therefore place pressure on net interest margins.

7.3 Cost of Funds and Spread

Indicator (%)	PSBs 2023-24	PSBs 2024-25	PVBs 2023-24	PVBs 2024-25
Cost of deposits	4.8	5.0	4.8	5.1
Cost of borrowings	7.3	7.3	9.2	8.2
Cost of funds	5.0	5.2	5.4	5.5
Return on advances	8.5	8.5	10.4	10.0
Return on investments	6.7	6.8	6.8	6.8
Return on funds	8.0	8.0	9.5	9.2
Spread	3.0	2.8	4.1	3.7

PVBs recorded a higher spread than PSBs in both years, although the spread narrowed from 4.1% to 3.7%. PSB spread also narrowed from 3.0% to 2.8%. The higher return on advances in PVBs was partly offset by a higher cost of funds. These indicators point to differences in funding and asset pricing structures across the ownership groups.

8. CAPITAL ADEQUACY AND FINANCIAL SOUNDNESS

Capital adequacy measures the extent to which banks hold capital against risk-weighted assets. The RBI reported that CRAR increased from 15.5% to 16.1% for PSBs and from 17.8% to 18.3% for PVBs between March 2024 and March 2025. Both groups therefore strengthened their capital ratios, while PVBs retained a higher group-level CRAR.

Capital indicator	PSBs 2023-24	PSBs 2024-25	PVBs 2023-24	PVBs 2024-25
Capital funds (₹ crore)	11,74,245	13,55,864	12,83,455	14,64,071
Risk-weighted assets (₹ crore)	75,59,396	84,23,011	72,14,513	80,03,960
CRAR (%)	15.5	16.1	17.8	18.3
Tier 1 capital ratio (%)	13.2	13.8	16.0	16.8
Tier 2 capital ratio (%)	2.4	2.2	1.8	1.5

The increase in capital funds for both groups was accompanied by growth in risk-weighted assets. The Tier 1 capital ratio increased for both PSBs and PVBs, suggesting that the improvement was supported by core capital. The regulatory minimum CRAR in India is 9%, excluding the capital conservation buffer. Both groups remained comfortably above this requirement.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

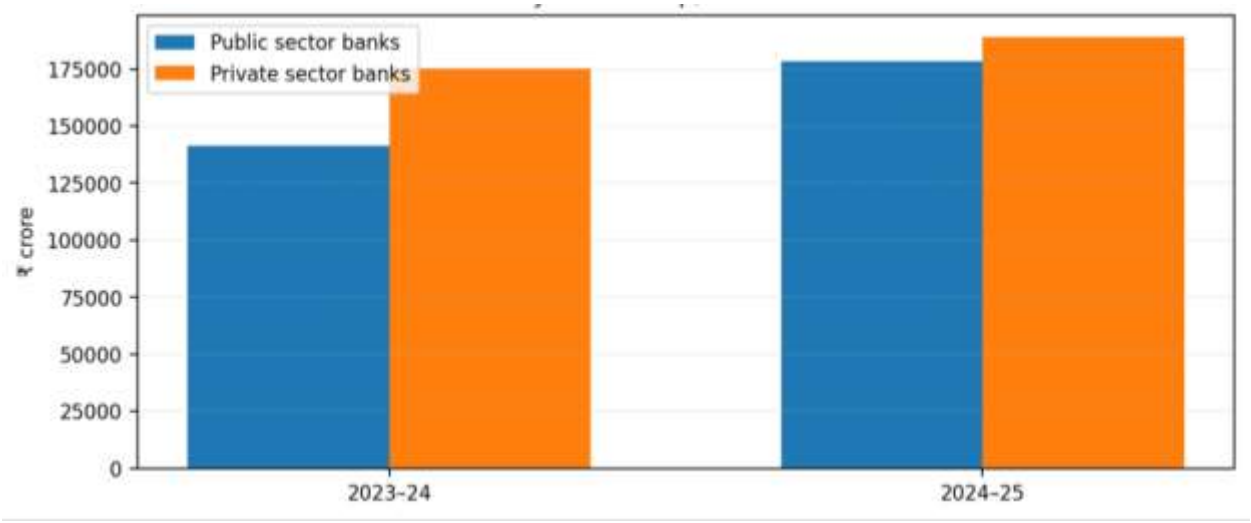


Figure 6. Capital Adequacy Ratio (CRAR) of Public and Private Sector Banks.
Source: RBI, Report on Trend and Progress of Banking in India 2024-25, Tables IV.5 and IV.9.

9. OPERATIONAL SCALE: BRANCH AND OFFICE NETWORK

The functioning office network provides a measure of the physical operating scale of banks. PSBs had 93,365 functioning offices in March 2018 and 93,711 in March 2025, indicating a relatively stable network. PVB offices increased from 31,769 to 48,685 over the same period. The PVB network therefore grew much faster in proportional terms, although PSBs continued to maintain nearly twice as many offices in absolute terms.

Year	PSB offices	PVB offices	PSB share of two-group total (%)	PVB share of two-group total (%)
2017-18	93,365	31,769	74.6	25.4
2018-19	92,832	33,408	73.5	26.5
2019-20	93,197	35,932	72.2	27.8
2020-21	93,104	36,932	71.6	28.4
2021-22	90,902	39,034	70.0	30.0
2022-23	91,282	42,547	68.2	31.8
2023-24	91,992	46,048	66.6	33.4
2024-25	93,711	48,685	65.8	34.2

The data show that the private sector expanded its physical network while public sector offices remained broadly stable. The RBI's 2024-25 report also notes that public sector banks accelerated new branch openings during the year and that 67.3% of new PSB branches were opened in rural and semi-urban centres, compared with 37.5% for PVBs. This indicates that the geographic orientation of branch expansion differs across the groups: PSBs remain important for broader territorial coverage, while PVBs have expanded their office network from a smaller base.

Journal DOI: 10.36713/epra1013 | SJIF Impact Factor (2026): 8.748 ISSN: 2347-4378
EPRA International Journal of Economics, Business and Management Studies (EBMS)
Volume: 13 | Issue: 11 | November 2026 -Peer-Reviewed Journal

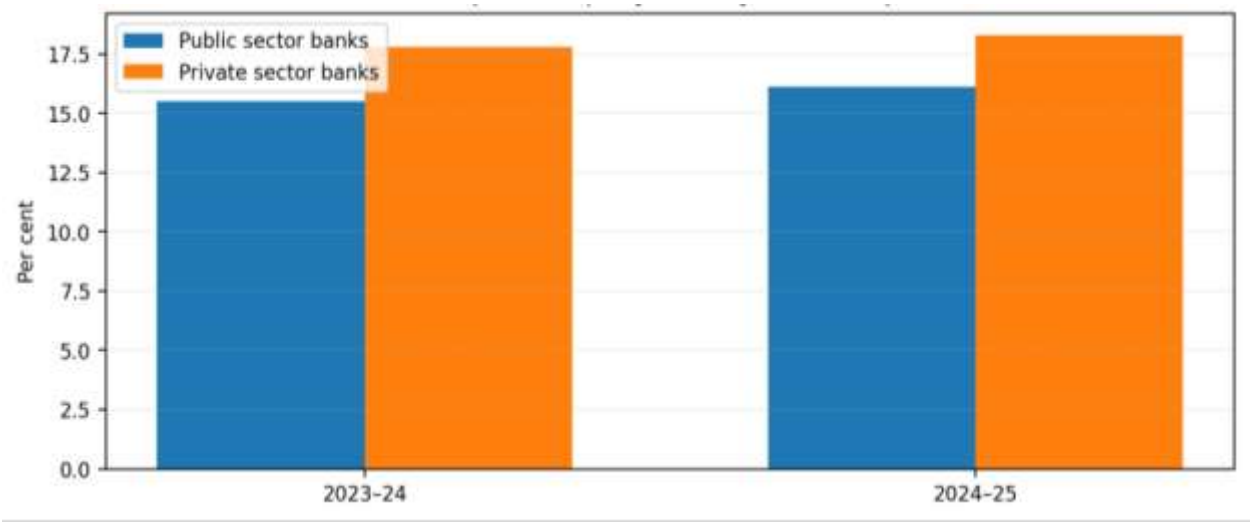


Figure 7. Functioning Banking Offices of Public and Private Sector Banks.

Source: DFS Banking Analytics dashboard; source series attributed to RBI.

10. COMPARATIVE SUMMARY AND DISCUSSION

Performance dimension	Public sector banks	Private sector banks	Comparative interpretation
Business scale	Larger deposits and advances	Smaller absolute scale but faster growth	PSBs remain dominant in size; PVBs are catching up
Deposit growth CAGR, 2017-18 to 2024-25	About 8.0%	About 15.9%	PVBs grew faster proportionally
Advance growth CAGR, 2017-18 to 2024-25	About 8.7%	About 15.7%	PVBs expanded lending faster
Credit-deposit ratio, 2024-25	About 77.3%	About 89.1%	PVBs deploy a higher share of deposits as advances
GNPA ratio, 2024-25	2.6%	1.8%	PVBs retain lower GNPA ratio; PSBs improved more
Net profit, 2024-25	₹1,78,364 crore	₹1,89,211 crore	PVBs higher in absolute net profit
NIM, 2024-25	2.6%	3.6%	PVBs maintain higher interest margin
CRAR, 2024-25	16.1%	18.3%	PVBs have higher capital ratio
Functioning offices, 2024-25	93,711	48,685	PSBs retain larger physical network

The comparative evidence indicates that public and private sector banks occupy different but complementary positions in India's banking system. PSBs continue to command a larger deposit base, a larger advances portfolio and a substantially wider physical network. Their balance-sheet scale and extensive reach remain important for financial inclusion, public programmes and the provision of banking services across regions. PVBs, however, recorded faster growth in deposits and advances over the observed period and maintained a higher credit–deposit ratio. This pattern is consistent with a more rapid expansion of private banking business from a smaller initial base, although growth rates alone do not establish superior efficiency or lower risk.

Asset-quality trends provide a particularly important qualification to the comparison. The long-run decline in PSB gross NPA amounts and the sharper reduction in the RBI-reported GNPA ratio during 2024-25 indicate a substantial improvement in the public sector group. PVBs retained a lower GNPA ratio in the latest year, but their gross NPA amount did not decline over the full dashboard period to the same extent. The provision coverage ratio was higher for PSBs in 2024-25, suggesting stronger coverage on this aggregate measure. These observations should be interpreted together rather than treating either the absolute NPA amount or one ratio as a complete measure of credit risk.

Profitability also displays a mixed pattern. PVBs reported higher net profit in 2024-25 and continued to maintain higher NIM and spread, while PSBs recorded faster annual growth in net profit. The narrowing of NIM and spread for both groups points to pressure from funding costs and competitive pricing. PSBs' improved earnings demonstrate that public ownership does not preclude strong profitability, particularly when asset quality and provisioning improve. At the same time, PVBs' higher margins should be assessed alongside their funding structure, credit growth and risk profile.

Capital adequacy strengthened in both groups, with PVBs maintaining the higher CRAR. The difference may reflect variations in capital structure, risk-weighted asset composition and retained earnings, and should not be interpreted in isolation as a direct measure of management quality. Likewise, the relatively stable PSB office network and expanding PVB network show different distribution strategies rather than a simple ranking of operational performance. Physical offices remain important for access and relationship banking, while digital channels increasingly shape service delivery and cost structures.

Taken together, the results support a multidimensional interpretation of bank performance. PSBs demonstrate scale, improving asset quality, stronger provision coverage and a broad service network. PVBs demonstrate faster business growth, higher credit deployment relative to deposits, higher NIM and a higher capital adequacy ratio. Neither group dominates every dimension. This interpretation is consistent with the broader literature, which finds that profitability, efficiency, risk and soundness are influenced by multiple bank-specific and macroeconomic factors (Athanasoglou et al., 2008; Almaqtari et al., 2019a; Patra et al., 2023).

The differences reflect distinct business models and institutional roles. PSBs have a broad legacy branch network and a larger balance sheet, while PVBs have expanded from a smaller base and have generally maintained higher interest margins. However, the comparative analysis is not risk-adjusted and does not control for differences in borrower composition, geographic exposure, bank size or operating strategy. Accordingly, the findings should be treated as group-level performance patterns rather than proof of an ownership effect.

The results are consistent with the mixed findings in the literature. Shukla (2016) reported differences in profitability and soundness, while Patra et al. (2023) found that public banks could perform better under selected efficiency measures. This reinforces the need to distinguish between profitability, efficiency, outreach and stability. The present data similarly show that PVBs lead on some ratios while PSBs remain larger in scale and have improved asset quality substantially.

11. POLICY IMPLICATIONS

For public sector banks, the priority is to sustain the improvement in asset quality while strengthening operating efficiency and profitability. The reduction in GNPA ratios is encouraging, but the large absolute loan book means that effective monitoring, early warning systems, recovery mechanisms and prudent underwriting remain essential. Greater use of data analytics and risk-based pricing can support improved credit allocation without weakening the developmental role of PSBs. These comparative patterns also suggest that performance targets should be calibrated to the institutional role and risk profile of each bank group. A single ranking based on net profit, NIM or branch count would conceal the trade-offs between outreach, funding, credit deployment, provisioning and resilience. A more balanced supervisory and managerial scorecard should therefore combine profitability with asset quality, capital strength, cost control, customer access and service reliability.

For private sector banks, faster business growth and higher credit–deposit ratios should be accompanied by careful liquidity and asset-liability management. The increase in gross NPA amounts during 2024-25, despite a lower GNPA ratio, demonstrates the importance of monitoring both the absolute stock of stressed assets and the ratio relative to advances. Continued growth should not lead to relaxed credit standards. For regulators, group-wise reporting should maintain consistent definitions across deposits, advances, NPAs, profitability and capital indicators. Greater transparency in cost-to-income ratios, employee productivity, branch productivity and digital transaction costs would allow a more complete comparison of operational efficiency. In addition, the effects of public sector bank mergers should be evaluated over sufficiently long periods, separating scale effects from genuine improvements in productivity and service quality. For bank management, performance assessment should integrate profitability with financial stability and customer outcomes. A higher NIM or credit–deposit ratio is not sufficient evidence of superior performance if it is accompanied by elevated credit risk or liquidity pressure. Similarly, a larger branch network should be assessed in relation to business generated, access provided and service quality.

12. LIMITATIONS AND FUTURE RESEARCH

The study is based on aggregate public and private sector bank data. It does not control for individual bank characteristics, merger effects, regional composition or differences in customer segments. The eight-year group-level time series is not sufficient for robust causal regression or dynamic panel estimation. For this reason, the paper uses descriptive and ratio analysis and does not report inferential tests that would require bank-level observations.

Future research may construct a bank-level panel for all PSBs and a comparable sample of PVBs over 2010-2025. Such a dataset could support fixed-effects or dynamic panel estimation of the determinants of RoA, RoE and NIM. A separate study could examine the effect of PSB mergers on productivity, cost efficiency and branch rationalisation. Another extension could combine financial performance with customer service, digital transaction intensity, complaint ratios and financial inclusion indicators.

13. CONCLUSION

The study compared the financial performance of public and private sector banks in India using business growth, asset quality, profitability, capital adequacy and operational scale. The evidence shows that PSBs continue to dominate the banking system in terms of deposits, advances and functioning offices. At the same time, PVBs have expanded their business and office networks at faster proportional rates and have maintained higher credit–deposit ratios and net interest margins. Asset quality improved in both groups, with PSBs recording a stronger reduction in GNPA ratios during 2024-25 while PVBs retained a lower ratio. Both groups strengthened capital adequacy. Net profit was higher for PVBs in absolute terms in 2024-25, although PSBs recorded a faster growth rate during the year. These findings demonstrate that comparative banking performance depends on the indicator selected and the time horizon considered. The study concludes that public and private sector banks perform complementary roles in India's banking system. PSBs remain important for scale, broad-based access and large-volume intermediation, while PVBs contribute through rapid business expansion, higher margins and competitive service models. A sustainable banking system requires both groups to maintain sound asset quality, adequate capital, efficient operations and responsible credit growth. Future evaluations should therefore move beyond ownership-based rankings and adopt a multidimensional approach to banking performance.

REFERENCES

1. *Agarwal, P., & Sinha, R. (2020). Analysis of financial performance of selected public and private sector banks. Indian Journal of Finance, 14(1). https://doi.org/10.17010/ijf/2020/v14i1/149856*
2. *Almaqtari, F. A., Al-Homaidi, E. A., Tabash, M. I., & Farhan, N. H. S. (2019a). The determinants of profitability of Indian commercial banks: A panel data approach. International Journal of Finance & Economics, 24(1), 168–185. https://doi.org/10.1002/ijfe.1655*
3. *Almaqtari, F. A., Al-Homaidi, E. A., Tabash, M. I., & Farhan, N. H. S. (2019b). Bank-specific and macro-economic determinants of profitability of Indian commercial banks: A panel data approach. Cogent Economics & Finance, 7(1), 1548072. https://doi.org/10.1080/23322039.2018.1548072*
4. *Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. Journal of International Financial Markets, Institutions and Money, 18(2), 121–136. https://doi.org/10.1016/j.intfin.2006.07.001*
5. *Basel Committee on Banking Supervision. (2000). Principles for the management of credit risk. Bank for International Settlements. https://www.bis.org/publ/bcbs75.htm*
6. *Basel Committee on Banking Supervision. (2011). Basel III: A global regulatory framework for more resilient banks and banking systems. Bank for International Settlements. https://www.bis.org/publ/bcbs189.htm*
7. *Berger, A. N. (1995). The relationship between capital and earnings in banking. Journal of Money, Credit and Banking, 27(2), 432–456. https://doi.org/10.2307/2077877*
8. *Berger, A. N., & Humphrey, D. B. (1997). Efficiency of financial institutions: International survey and directions for future research. European Journal of Operational Research, 98(2), 175–212. https://doi.org/10.1016/S0377-2217(96)00342-6*
9. *Berger, A. N., & Mester, L. J. (1997). Inside the black box: What explains differences in the efficiencies of financial institutions? Journal of Banking & Finance, 21(7), 895–947. https://doi.org/10.1016/S0378-4266(97)00010-1*
10. *Bhattacharyya, A., Lovell, C. A. K., & Sahay, P. (1997). The impact of liberalization on the productive efficiency of Indian commercial banks. European Journal of Operational Research, 98(2), 332–345.*
11. *Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. Journal of Banking & Finance, 13(1), 65–79. https://doi.org/10.1016/0378-4266(89)90020-4*
12. *Das, A., & Ghosh, S. (2006). Financial deregulation and efficiency: An empirical analysis of Indian banks during the post-reform period. Review of Financial Economics, 15(3), 193–221.*
13. *Department of Financial Services, Ministry of Finance, Government of India. (n.d.). Banking analytics. Retrieved November 5, 2026, from https://www.financialservices.gov.in/banking-analytics*
14. *Demirgüç-Kunt, A., & Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability: Some international evidence. The World Bank Economic Review, 13(2), 379–408. https://doi.org/10.1093/wber/13.2.379*
15. *Dietrich, A., & Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. Journal of International Financial Markets, Institutions and Money, 21(3), 307–327. https://doi.org/10.1016/j.intfin.2010.11.002*
16. *Goddard, J., Molyneux, P., & Wilson, J. O. S. (2004). The profitability of European banks: A cross-sectional and dynamic panel analysis. The Manchester School, 72(3), 363–381. https://doi.org/10.1111/j.1467-9957.2004.00397.x*
17. *Molyneux, P., & Thornton, J. (1992). Determinants of European bank profitability: A note. Journal of Banking & Finance, 16(6), 1173–1178. https://doi.org/10.1016/0378-4266(92)90065-8*

18. *Patra, B., Padhan, P. C., & Padhi, P. (2023). Efficiency of Indian banks – private versus public sector banks: A two-stage analysis. Cogent Economics & Finance, 11(1), 2163081. https://doi.org/10.1080/23322039.2022.2163081*
19. *Pasiouras, F., & Kosmidou, K. (2007). Factors influencing the profitability of domestic and foreign commercial banks in the European Union. Research in International Business and Finance, 21(2), 222–237. https://doi.org/10.1016/j.ribaf.2006.03.007*
20. *Reserve Bank of India. (2023). Report on trend and progress of banking in India 2022–23. Reserve Bank of India. https://www.rbi.org.in/*
21. *Reserve Bank of India. (2024). Report on trend and progress of banking in India 2023–24. Reserve Bank of India. https://www.rbi.org.in/*
22. *Reserve Bank of India. (2025). Report on trend and progress of banking in India 2024–25. Reserve Bank of India. https://www.rbi.org.in/*
23. *Sathye, M. (2003). Efficiency of banks in a developing economy: The case of India. European Journal of Operational Research, 148(3), 662–671.*
24. *Sensarma, R. (2006). Are foreign banks always the best? Comparison of state-owned, private and foreign banks in India. Economic Modelling, 23(4), 717–735. https://doi.org/10.1016/j.econmod.2006.02.003*
25. *Shukla, S. (2016). Performance of the Indian banking industry: A comparison of public and private sector banks. Indian Journal of Finance, 10(1), 41–55. https://doi.org/10.17010/ijf/2016/v10i1/85843*
26. *Singh, K. (2026). Performance and returns volatility of banks in India: Public versus private sector. Journal of Economic and Administrative Sciences, 42(1), 68–87. https://doi.org/10.1108/JEAS-07-2023-0181*
27. *Reserve Bank of India. (2025). Statistical tables relating to banks in India 2024–25. Reserve Bank of India. https://www.rbi.org.in/*