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## PERFORMANCE EVALUATION OF SELECTED PUBLIC SECTOR BANKS IN INDIA USING CAMELSC MODEL

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### ABSTRACT

*This article about the CAMELSC framework is unique and has either been overlooked or only sparsely examined within academic circles. We chose to investigate this model using the accessible data, market insights, and other pertinent information among the selected PSBs. This study evaluates the performance of five major Public Sector Banks using Composite CAMELSC score improved from 1.9–2.1 in FY2021 to 1.5–1.7 in FY2025, reflecting recovery after COVID and RBI-led reforms. Capital adequacy remained stable at a score of 2, with CRAR. Asset quality showed the strongest gains, with NNPA from 2.3% to 0.8%, thanks to IBC resolutions, write-offs, and improved ECL practices, improving the score from 3 to 2. Management score stood at 2 as the cost-to-income ratio declined slightly through branch optimization and digital efficiencies. Earnings strengthened, with ROA rising from 0.4% to 1.0%, ROE from 6% to 15%, and NIM steady at 2.8–3.1%, lifting the score from 2–3 to 1–2; net profit reached ₹1.4 lakh crore in FY2024. Liquidity stayed strong with a score of 1, supported by an LCR of 125–135% and CASA around 38–40%, further aided by a CRR cut to 3% in 2025 releasing ₹2.7 lakh crore liquidity. Sensitivity to market risk improved to 1–2 as IRRBB fell below 2.5% amid stable repo rates at 5.5%. Systems maintained a score of 2, with digital transactions rising and AI fraud detection tools, while IT spending increased fair bit of operating costs. Compliance was rated at 1, with minor penalties resolved and full conformity to Basel III, digital lending regulations, and the “.bank.in” domain mandate.*

**KEYWORDS:** CAMELSC, SBI, BoB, BoI, PNB, Canara Bank, PSBs, Composite Scores, Bank's Performance, Ratios, Capital Adequacy, Asset Quality, Management, Earnings, Liquidity, Sensitivity to Market Risk, Systems, and Compliance

### INTRODUCTION

India's banking landscape is primarily divided into scheduled and non-scheduled banks, with scheduled commercial banks playing the leading role. According to the most recent Reserve Bank of India statistics, the banking sector comprises 12 public sector banks, 21

private sector institutions, 44 foreign banks, 43 regional rural banks, 11 small finance banks, and 6 payment banks. Public sector banks, where the government maintains majority ownership of more than 50%, include major institutions such as State Bank of India, Punjab National Bank, and Bank of Baroda. These government-owned banks control approximately 60% of the market in both deposits and lending, positioning them as key vehicles for rolling out government initiatives like the Pradhan Mantri Jan Dhan Yojana and Atmanirbhar Bharat programs. Following the economic liberalization of 1991, private sector banks such as HDFC Bank, ICICI Bank, and Axis Bank have emerged as significant players, concentrating their efforts on retail and corporate lending while driving innovation and operational efficiency throughout the sector. Meanwhile, international banks like HSBC and Citibank contribute valuable global expertise to the Indian market, though they maintain a relatively modest market presence of 5-7%.

The banking sector has demonstrated remarkable growth, with total assets surpassing ₹250 lakh crore (roughly \$3 trillion) in the 2025 financial year. Public sector banks have achieved particularly impressive credit growth of 12.2% year-over-year, marking their strongest performance since 2010 and exceeding the growth rates of their private counterparts. This expansion stems from India's post-pandemic economic recovery, increasing consumer spending power, and substantial government investment in infrastructure development. Despite these positive trends, the banking sector faces several ongoing challenges. These include evolving regulatory requirements, growing cybersecurity concerns, and intensifying competition from financial technology companies such as Paytm and PhonePe. The International Monetary Fund's 2025 Financial Sector Assessment Program acknowledges the overall stability of India's banking system, recognizing improvements in capital reserves and liquidity management. However, the assessment also identifies potential risks, including climate-related challenges and geopolitical uncertainties that could impact future stability.

#### **Digitalization on PSBS and the Banking System**

The digital revolution has fundamentally transformed public sector banks in India, converting traditional brick-and-mortar institutions into technologically advanced financial hubs while simultaneously tackling their longstanding operational challenges. These government-owned banks, which previously struggled with innovation due to their bureaucratic nature, have experienced significant improvements in operational efficiency through digital adoption. A prime example is the State Bank of India's YONO platform, introduced in 2017, which has attracted 80 million users by 2025 and provides comprehensive services ranging from loans to investment options, resulting in a 40% reduction in physical branch visits. Similarly, Bank of Baroda and Punjab National Bank have successfully implemented UPI systems and artificial intelligence-powered credit assessment tools, leading to substantial reductions in non-performing assets through advanced predictive analytics. The gross non-performing asset ratio for public sector banks has dramatically improved from 9.5% in 2018 to just 3.1% in 2025, supporting the Reserve Bank of India's Basel III compliance initiatives and enhancing asset quality assessments within regulatory frameworks.

Digital transformation has revolutionized financial inclusion across the country, effectively bridging the gap between urban and rural populations. Currently, 90% of Indian adults have access to banking services through accounts linked to the Pradhan Mantri Jan Dhan Yojana program. Previously underserved groups, particularly women and rural communities, now benefit from micro-insurance products and pension schemes accessible through mobile applications, significantly improving overall financial inclusion metrics. The economic impact has been substantial, with UPI's cost-effective model featuring minimal transaction fees democratizing financial services and enabling small businesses to accept digital payments effortlessly. This transformation has contributed an estimated 1-2% annual boost to GDP growth through more efficient transaction processing.

The efficiency improvements are clearly measurable, with digital channels reducing processing costs by 30-50% compared to traditional banking methods, while public sector banks reported impressive 20% year-over-year profit growth in the 2025 financial year. Innovation initiatives, including blockchain technology for international remittances and generative artificial intelligence for fraud prevention such as the RBI's MuleHunter.ai system, have strengthened cybersecurity measures. However, challenges persist, with over 1,000 data privacy incidents reported in 2024, prompting regulatory responses including the comprehensive 2025 Digital Personal Data Protection Act that mandates stronger security frameworks.

Despite these advances, digitalization presents significant obstacles for public sector banks. They continue to struggle with outdated IT infrastructure, necessitating investments of approximately ₹50,000 crore by 2027 for comprehensive system upgrades. Cybersecurity threats have surged by 300% since 2016, with phishing attacks and ransomware particularly targeting vulnerable rural banking locations. The persistent digital divide, characterized by only 60% internet connectivity in rural areas, continues to exclude elderly populations and individuals with limited literacy skills. Additionally, intense competition from fintech companies has eroded public sector banks' retail market share from 70% in 2016 to 40% currently, forcing strategic partnerships such as SBI's collaboration with PhonePe. The transmission of monetary policy has become more effective through digital payment systems, enabling faster implementation of interest rate changes. The Reserve Bank of India's 100 basis point rate reductions in 2025 reached 80% of loan portfolios within months of implementation. However, excessive dependence on digital infrastructure could potentially amplify systemic risks, as demonstrated during the 2024 UPI system outage that affected millions of users nationwide.

#### **CAMELSC ADAPTATION IN INDIA**

The CAMELSC rating system is an extended version of the original U.S.-based CAMELS framework, specifically tailored for bank supervision in India. While CAMELS (Capital Adequacy, Asset Quality, Management, Earnings, Liquidity, and Sensitivity to Market Risk) focuses on core financial and operational risks, the Indian adaptation adds two critical components "Systems" (S) and "Compliance" (C) to address unique aspects of regulatory oversight, internal processes, and adherence to local laws. This makes CAMELSC a more comprehensive tool for evaluating the overall soundness of banks in a complex, rapidly evolving financial ecosystem like India's.

The Reserve Bank of India (RBI) introduced, in 1998, this CAMELSC system builds on the recommendations of the Padmanabhan Working Group (1995). It supplements traditional on-site inspections with off-site surveillance, enabling the RBI to monitor risks proactively and intervene early in underperforming institutions. Unlike the U.S. version, which is kept strictly confidential, CAMELSC ratings in India are also not publicly disclosed to prevent market panic but are used internally for supervisory actions, such as increased scrutiny, capital infusions, or even mergers for weaker banks.

#### **PURPOSE AND NEED FOR CAMELSC IN INDIA**

When inspecting commercial banks, cooperative banks, and non-banking financial companies (NBFCs) annually or every two years, the RBI uses CAMELSC. It aids in setting supervisory resource priorities. Under RBI's framework, weaker banks (composite 4-5) may be subject to prompt corrective actions (PCA), such as limitations on executive bonuses, branch expansion, or dividends, while stronger banks (composite 1-2) are subject to less oversight. Due to past events such as the 2018 IL&FS crisis and current NPA difficulties, where "Systems" and "Compliance" components have brought attention to governance shortcomings in public sector banks, this adaptation is especially pertinent in India.

#### **IMPORTANCE AND LIMITATIONS**

Through early risk detection, accountability, and alignment with international standards such as Basel III, CAMELSC improves financial stability while meeting the needs of India (e.g., compliance with the Banking Regulation Act, 1949). It has aided in reforms such as the push for digital compliance after COVID and the 2019 PCA exits for a number of banks.

Its backward-looking approach (depending on historical data) and possible neglect of customer-centric or ESG factors are among its drawbacks. In order to stay up with India's digital economy, recent RBI discussions (as of 2023–2024) examine additional improvements, such as incorporating AI-driven analytics into "Systems" ratings. All things considered, CAMELSC continues to be a pillar of the RBI's risk-based supervision, encouraging a robust banking industry that is essential to the expansion of India's GDP.

#### REVIEW OF LITERATURE

This research investigates how each component of the CAMELS framework influences overall banking performance. The study employs Q-Tobin's ratio as the primary performance measurement indicator, utilizing data extracted from the annual financial statements of an Iranian banking institution. Through comprehensive analysis, a predictive model has been developed to demonstrate these relationships. The CAMELS evaluation system enables banks to concentrate on risk management strategies and essential financial ratios, allowing them to proactively manage and mitigate potential financial crises. This research specifically examines and interprets the impact that each CAMELS category has on institutional performance, revealing significant correlations between all categories and the Q-Tobin's ratio as a measure of banking performance. A critical aspect of implementing this analytical model involves identifying and focusing on the most influential indicators and elements within each category. The selection of appropriate indicators can vary significantly across different industries, presenting both challenges and opportunities in terms of implementation and interpretation of results. (Malihe Rostami, 2015)

This research aims to assess the financial soundness of Bangladesh's NBFIs using the CAMELS evaluation model and to forecast their future rating performance. The CAMELS framework was selected as the primary analytical tool due to its comprehensive approach to evaluating financial institution performance across six key dimensions: Capital adequacy, Asset quality, Management efficiency, Earnings, Liquidity, and Sensitivity to market risk. The study's findings revealed the performance distribution of the 33 NBFIs as of June 2016: one institution achieved a "Strong" rating (1), fifteen received "Satisfactory" ratings (2), thirteen were classified as "Fair" (3), and three fell into the "Marginal" category (4). These results demonstrate the varying levels of financial health across the sector. The study acknowledges limitations due to insufficient available data, suggesting that enhanced information accessibility would enable more accurate performance assessments. The research concludes that government intervention through improved regulatory frameworks is necessary to strengthen this important financial sector. (Rozina Akter, et, al., 2018)

This study focuses on the main determinants influencing the performance of Vietnamese commercial banks between 2009 and 2020, within a changing economic environment that intensifies scrutiny on banking efficiency. Using the CAMELS model as a foundation, the research applies the System Generalised Method of Moments (SGMM) to ensure reliable and precise results. It analyzes ten statistically significant variables spanning all CAMELS components. Key findings highlight the relationship between ownership structures and bank performance, emphasizing improvements needed in state-owned banks' financial soundness and operational efficiency. The study identifies important performance drivers, including past performance, capital adequacy, asset quality, management efficiency, earnings, liquidity, market sensitivity, ownership traits, GDP growth, and inflation. By integrating ownership factors with CAMELS variables, the research offers valuable insights into their combined effects on different institutional types, though it notes the necessity for

further exploration of ownership's specific impacts on individual bank metrics. (Quoc Trung, N. K., 2021).

## RESEARCH METHODOLOGY

### Period of Study & Sources of Data

The period covered from the year 2020 - 2021 to 2024 – 2025. Secondary data was collected for the selected public sector banks (SBI, BoB, BoI, PNB, Canara Bank). Data sources are gathered from and derived scores are based on public data from RBI, bank reports, Money control, ICRA, research articles, online materials and press releases.

### RESEARCH OBJECTIVES

1. To examine the public sector banks, performance among the selected banks using CAMELSC Rating model.
2. To compare performance using Composite rating among the selected banks (SBI, BoB, BoI, PNB, Canara Bank).

### LIMITATION AND SCOPE OF THE STUDY

In this article we studied only handful of public sector banks, covered for the period 2020 - 2021 to 2024 – 2025. In this article the Banks performance was investigated using CAMELSC Rating model. The CAMELSC analysis is one of its kind, this was either never analysed nor very limited analysis among the scholar fraternity. We decided to explore this model with the available data and market updates and other relevant information.

The findings of study will guide the investors, shareholders, researchers, and decision makers in their decisions over banks financial strengths and other parameters like internal controls and regulatory adherence.

### CAMELSC Model

The first six components align closely with the global CAMELS model, while the additional "S" and "C" reflect India's emphasis on robust internal controls and regulatory adherence amid challenges like high non-performing assets (NPAs), digital banking growth, and compliance with diverse statutes. The system rates banks on a scale of 1 to 5 for each component (1 being the strongest/soundest and 5 the weakest/critical), with an overall composite score determining the bank's health: scores of 1–2 indicate strong institutions, 3 suggests moderate concerns, and 4–5 flags "problem banks" requiring corrective measures.

**Table -1**

Component	Description	Key Evaluation Factors
Capital Adequacy (C)	Assesses the bank's capital buffer to absorb losses and support growth.	Risk-weighted capital ratios (e.g., CRAR under Basel norms), leverage, and stress test resilience.
Asset Quality (A)	Evaluates the risk and quality of the bank's loan/investment portfolio.	NPA levels, provisioning coverage, diversification, and recovery mechanisms.
Management (M)	Gauges the effectiveness of the board and senior leadership.	Strategic planning, risk management, governance, and response to RBI directives.
Earnings (E)	Measures profitability and its sustainability.	Return on assets/equity, net interest margins, cost-income ratios, and trend analysis.
Liquidity (L)	Reviews the ability to meet short- and long-term obligations.	Liquidity coverage ratio (LCR), funding stability, and access to interbank markets.
Sensitivity to Market Risk (S1)	Analyzes vulnerability to external shocks like interest rates or forex fluctuations.	Exposure to derivatives, equities, commodities, and scenario-based modeling.

Systems (S2)	Examines the robustness of internal operational systems and controls.	IT infrastructure, cybersecurity, fraud prevention, and process efficiency (e.g., digital banking resilience).
Compliance (C2)	Checks adherence to laws, regulations, and ethical standards.	Compliance with RBI guidelines, anti-money laundering (AML), KYC norms, and environmental/ social regulations.

## RESULTS AND DISCUSSION

Comparative CAMELSC trends and Analysis among the Public Sector Banks (FY2021–FY2025). This analysis compares public sector banks (SBI, BoB, BoI, PNB, Canara) from FY2021 to FY2025. The PSBs scores are classified with rang as 1.5–2.5 (Strong to Satisfactory), improving from legacy NPAs but lagging in efficiency and digital adoption. Basel III compliance aided GNPA declines; RBI's 2025 CRR cut (to 3%) supports FY2025 growth.

**Table - 2**

Y e a r	Compon ent	SBI	BoB	BoI	PNB	Canara	Insights
FY2021	Capital Adequacy (C)	2 (CRAR 13.74%)	2 (CRAR 14.0%)	2 (CRAR 14.5%)	2 (CRAR 13.5%)	2 (CRAR 14.2%)	PSBs at 13–14%, above 11.5% min
	Asset Quality (A)	3 (GNPA 4.98%, NNPA 1.50%)	3 (GNPA 6.0%, NNPA 1.8%)	3 (GNPA 7.5%, NNPA 2.0%)	3 (GNPA 9.7%, NNPA 3.5%)	3 (GNPA 6.9%, NNPA 2.5%)	High GNPA from COVID; avg. 7%,
	Managem ent (M)	2 (CIR 53.59%)	2 (CIR 50%)	2 (CIR 52%)	2 (CIR 46.91%)	2 (CIR 48%)	CIR ~50%, higher due to scale costs.
	Earnings (E)	2 (ROA 0.45%, NIM 2.44%)	2 (ROA 0.5%, NIM 2.7%)	3 (ROA 0.3%, NIM 2.6%)	3 (ROA 0.16%, NIM 2.41%)	2 (ROA 0.4%, NIM 2.7%)	ROA ~0.4%, provisions hit.
	Liquidity (L)	1 (LCR 156%, CASA 45.39%)	1 (LCR 130%, CASA 35%)	1 (LCR 125%, CASA 40%)	1 (LCR 140%, CASA 44.54%)	1 (LCR 135%, CASA 32%)	Strong LCR / CASA; avg. CASA 39%.
	Sensitivit y to Market Risk (S1)	2 (IRRBB ~3%)	2 (IRRBB ~2.5%)	2 (IRRBB ~2.8%)	2 (IRRBB ~3%)	2 (IRRBB ~2.7%)	Higher exposure to rates; corporate loans drag.
	Systems (S2)	2 (45% digital, IT spend 7%)	2 (50% digital, IT spend 8%)	2 (40% digital, IT spend 6%)	2 (45% digital, IT spend 7%)	2 (45% digital, IT spend 7%)	Lagging digital 45% .
	Complian ce (C2)	1 (Clean)	1 (Clean)	2 (Minor fine)	2 (KYC issues)	1 (Clean)	Mostly clean; PCA exits improve.
	Composit e	1.90	1.90	2.10	2.10	1.90	Avg. 2.0 (Satisfactory);

							COVID impact.
FY2022	Capital Adequacy (C)	2 (CRAR 13.83%)	2 (CRAR 14.2%)	2 (CRAR 15.0%)	2 (CRAR 14.0%)	2 (CRAR 14.5%)	Slight improvement.
	Asset Quality (A)	3 (GNPA 3.97%, NNPA 1.02%)	3 (GNPA 4.7%, NNPA 1.4%)	3 (GNPA 6.2%, NNPA 1.6%)	3 (GNPA 8.3%, NNPA 2.8%)	3 (GNPA 5.4%, NNPA 1.9%)	GNPA down ~20%; avg. 5.7%.
	Management (M)	2 (CIR 57.91%)	2 (CIR 48%)	2 (CIR 51%)	2 (CIR 49.37%)	2 (CIR 50%)	CIR stable ~50%.
	Earnings (E)	2 (ROA 0.63%, NIM 2.42%)	2 (ROA 0.8%, NIM 2.8%)	2 (ROA 0.5%, NIM 2.7%)	3 (ROA 0.26%, NIM 2.18%)	2 (ROA 0.6%, NIM 2.8%)	ROA ~0.6%, improving but low.
	Liquidity (L)	1 (LCR 147%, CASA 44.51%)	1 (LCR 128%, CASA 36%)	1 (LCR 122%, CASA 41%)	1 (LCR 142%, CASA 46.55%)	1 (LCR 130%, CASA 33%)	CASA avg. 40%; strong buffers.
	Sensitivity to Market Risk (S1)	2 (IRRBB ~2.8%)	2 (IRRBB ~2.3%)	2 (IRRBB ~2.5%)	2 (IRRBB ~2.8%)	2 (IRRBB ~2.5%)	Moderate improvement.
	Systems (S2)	2 (47% digital, IT spend 7%)	2 (52% digital, IT spend 8%)	2 (42% digital, IT spend 6%)	2 (47% digital, IT spend 7%)	2 (47% digital, IT spend 7%)	Gradual digital push.
	Compliance (C2)	1 (Clean)	1 (Clean)	1 (Resolved)	1 (Improved)	1 (Clean)	PCA exits for some.
	Composite	1.80	1.80	1.90	2.00	1.80	Avg. 1.90; recovery phase.
FY2023	Capital Adequacy (C)	2 (CRAR 14.68%)	2 (CRAR 15.0%)	2 (CRAR 15.5%)	2 (CRAR 14.5%)	2 (CRAR 15.0%)	CRAR ~15%; closing gap.
	Asset Quality (A)	2 (GNPA 2.78%, NNPA 0.67%)	2 (GNPA 3.8%, NNPA 1.0%)	3 (GNPA 5.0%, NNPA 1.2%)	3 (GNPA 6.5%, NNPA 2.0%)	2 (GNPA 4.9%, NNPA 1.5%)	GNPA avg. 4.6%; down 20%.
	Management (M)	2 (CIR 53.86%)	2 (CIR 47%)	2 (CIR 50%)	2 (CIR 51.69%)	2 (CIR 49%)	CIR ~50%.
	Earnings (E)	2 (ROA 0.91%, NIM 2.62%)	2 (ROA 0.9%, NIM 3.0%)	2 (ROA 0.6%, NIM 2.8%)	3 (ROA 0.17%, NIM 2.35%)	2 (ROA 0.7%, NIM 2.9%)	ROA ~0.7%; provisions ease.
	Liquidity (L)	1 (LCR 137%, CASA 42.66%)	1 (LCR 125%, CASA 37%)	1 (LCR 120%, CASA 42%)	1 (LCR 135%, CASA 41.99%)	1 (LCR 128%, CASA 34%)	CASA avg. 39%.

	Sensitivity to Market Risk (S1)	2 (IRRBB ~2.5%)	2 (IRRBB ~2.0%)	2 (IRRBB ~2.3%)	2 (IRRBB ~2.5%)	2 (IRRBB ~2.3%)	Rate cycle impact.
	Systems (S2)	2 (50% digital, IT spend 8%)	2 (55% digital, IT spend 8%)	2 (45% digital, IT spend 7%)	2 (50% digital, IT spend 8%)	2 (50% digital, IT spend 8%)	50% digital; catching up.
	Compliance (C2)	1 (Clean)	1 (Clean)	1 (Clean)	1 (Clean)	1 (Clean)	Strong adherence.
	Composite	1.70	1.70	1.80	20	1.70	Avg. 1.80; asset quality gains.
FY2024	Capital Adequacy (C)	2 (CRAR 14.28%)	2 (CRAR 16.3%)	2 (CRAR 17.0%)	2 (CRAR 15.5%)	2 (CRAR 15.5%)	CRAR avg. 15.7%; BoI/BoB stronger.
	Asset Quality (A)	2 (GNPA 2.21%, NNPA 0.57%)	2 (GNPA 2.9%, NNPA 0.7%)	3 (GNPA 5.0%, NNPA 1.2%)	3 (GNPA 5.7%, NNPA 1.5%)	2 (GNPA 3.3%, NNPA 0.9%)	GNPA avg. 3.8%; down 17%.
	Management (M)	2 (CIR 59.01%)	2 (CIR 47.7%)	2 (CIR 51.7%)	2 (CIR 53.37%)	2 (CIR 52%)	CIR ~52%; operational costs.
	Earnings (E)	2 (ROA 0.98%, NIM 2.58%)	1 (ROA 1.13%, NIM 3.2%)	2 (ROA 0.71%, NIM 2.9%)	2 (ROA 0.52%, NIM 2.56%)	2 (ROA 1.00%, NIM 2.9%)	ROA ~0.9%; BoB leads.
	Liquidity (L)	1 (LCR 136%, CASA 39.89%)	1 (LCR 121%, CASA 38%)	1 (LCR 116%, CASA 43%)	1 (LCR 119%, CASA 40.33%)	1 (LCR 123%, CASA 31%)	LCR avg. 123%; CASA 38%.
	Sensitivity to Market Risk (S1)	2 (IRRBB ~2.3%)	2 (IRRBB ~2%)	2 (IRRBB ~2.5%)	2 (IRRBB ~2.7%)	2 (IRRBB ~2.5%)	Moderate; stress tests passed.
	Systems (S2)	2 (50% digital, IT spend 8%)	2 (55% digital, IT spend 8%)	2 (45% digital, IT spend 7%)	2 (50% digital, IT spend 8%)	2 (50% digital, IT spend 8%)	Digital 50%; investments rising.
	Compliance (C2)	1 (Clean)	2 (₹61L fine)	1 (Clean)	2 (₹2 Cr fine)	1 (Clean)	Minor fines for some.
	Composite	1.70	1.60	1.80	1.90	1.70	Avg. 1.70; profitability up.
FY2025	Capital Adequacy (C)	2 (CRAR 14.5%)	2 (CRAR 16.8%)	2 (CRAR 16.7%)	2 (CRAR 15.8%)	2 (CRAR 16.0%)	CRAR avg. 16%; capital infusions.

Asset Quality (A)	2 (GNPA 2.0%, NNPA 0.5%)	2 (GNPA 2.9%, NNPA 0.7%)	2 (GNPA 3.7%, NNPA 0.9%)	2 (GNPA 4.0%, NNPA 1.0%)	2 (GNPA 2.9%, NNPA 0.8%)	GNPA avg. 3.1%; Q2 improvements.
Management (M)	2 (CIR 51.63%)	2 (CIR 46%)	2 (CIR 50%)	2 (CIR 53%)	2 (CIR 50%)	CIR ~50%; efficiency gains.
Earnings (E)	1 (ROA 1.06%, NIM 2.50%)	1 (ROA 1.2%, NIM 3.1%)	2 (ROA 0.8%, NIM 2.8%)	2 (ROA 0.91%, NIM 2.35%)	1 (ROA 1.1%, NIM 2.8%)	ROA ~1.0%.
Liquidity (L)	1 (LCR 135%, CASA 38.71%)	1 (LCR 119%, CASA 37%)	1 (LCR 128%, CASA 42%)	1 (LCR 120%, CASA 40%)	1 (LCR 125%, CASA 32%)	LCR avg. 125%; CRR cut aids.
Sensitivity to Market Risk (S1)	1 (IRRBB ~2%)	1 (IRRBB ~1.8%)	2 (IRRBB ~2.2%)	2 (IRRBB ~2.4%)	1 (IRRBB ~2.0%)	Lower with rate cuts.
Systems (S2)	2 (52% digital, IT spend 8%)	2 (56% digital, IT spend 9%)	2 (46% digital, IT spend 7%)	2 (51% digital, IT spend 8%)	2 (51% digital, IT spend 8%)	Digital ~50%; AI push.
Compliance (C2)	1 (Clean)	1 (Clean)	1 (Clean)	1 (Clean)	1 (Clean)	No major issues.
Composite	1.50	1.50	1.60	1.70	1.50	Avg. 1.60; best year for PSBs.

During the financial year 2021, public sector banks in India experienced a phase of careful steadiness while dealing with the unprecedented challenges brought by the COVID-19 pandemic, as revealed through their CAMELS assessment. These banks maintained reasonably strong capital positions, keeping their capital adequacy ratios between 13.5% and 14.5%, which comfortably exceeded the required minimum of 11.5%. The quality of their loan portfolios remained deeply troubling throughout this period. Every bank received concerning ratings due to their high levels of bad loans, which averaged around 7%. This troublesome situation clearly demonstrated how the pandemic continued to impact their lending businesses long after the initial crisis began.

When it came to operational efficiency, these banks maintained steady but unremarkable performance. Their operational costs consumed roughly 50% of their income. This difference largely stemmed from their massive scale and the burden of outdated cost structures that had accumulated over decades of operation.

Profitability proved to be another significant challenge during this period. The banks struggled with extremely low asset returns of approximately 0.4%, with their earnings performance receiving mixed ratings. The primary culprit behind these weak profits was the substantial amount of money they needed to set aside for potential loan losses, which severely limited their ability to generate healthy returns.

On a more positive note, these banks demonstrated exceptional strength in maintaining adequate cash flows and funding. They earned top marks across the board for liquidity management, supported by liquidity coverage ratios well above 100% and current account

savings account ratios averaging 39%. This strong position ensured they had reliable access to low-cost funding sources.

Their exposure to market risks appeared manageable, with interest rate risk measures falling between 2.5% and 3%, indicating they could reasonably handle fluctuations in market conditions. The banks also made steady progress in embracing digital technology, achieving 40-50% digital adoption rates and maintaining consistent investments in information technology.

Regulatory compliance remained largely solid, with most banks maintaining clean records except for minor issues. Several banks even managed to successfully exit the regulatory oversight framework known as Prompt Corrective Action, demonstrating improved financial health.

The financial year 2022 marked a turning point for India's public sector banks, demonstrating steady improvement and early indicators of recovery following several challenging years. This comprehensive assessment reveals a banking sector that was beginning to regain its footing while still working through persistent structural challenges.

Capital strength showed modest but meaningful improvement during this period, with banks maintaining capital adequacy ratios between 13.83% and 15%. While this represented cautious progress in building financial buffers. Nevertheless, this improvement provided a more solid foundation for absorbing potential future losses.

Perhaps most encouragingly, the quality of loan portfolios showed significant enhancement throughout the year. Bad loans, which had plagued these banks for years, declined dramatically by nearly 20% compared to the previous year, bringing the average down to 5.7%. This substantial improvement reflected better lending practices, more effective recovery efforts, and stronger credit discipline across the sector. However, some institutions like Punjab National Bank continued to face higher stress levels, with bad loan ratios reaching 8.3%, indicating that challenges persisted unevenly across different banks.

Operational efficiency remained an area requiring attention, as these banks continued to struggle with cost management. Their operational expenses consumed between 50% and 58% of their income. This persistent gap highlighted the ongoing need for substantial operational reforms and streamlining of legacy processes that had accumulated over decades. Profitability showed modest but positive signs of recovery during this period. Returns on assets improved to 0.6%, while net interest margins remained stable between 2.18% and 2.8%. Although these improvements were encouraging.

Liquidity management continued to be a standout strength for these institutions throughout 2022. They maintained exceptional performance in this area, supported by liquidity coverage ratios exceeding 120% and current account savings account ratios around 40%. This strong position ensured reliable access to stable, low-cost funding sources, providing a crucial competitive advantage.

Risk management capabilities also showed gradual improvement, with interest rate risk measures falling between 2.3% and 2.8%. This indicated better control over exposure to market fluctuations and more sophisticated risk management practices across the sector.

The digital transformation journey progressed steadily, though at a measured pace. Digital adoption rates ranged from 42% to 52%, supported by consistent information technology investments representing 6-8% of operational spending. While this demonstrated ongoing commitment to modernization.

Regulatory compliance performance remained largely positive throughout the year, with most banks maintaining clean records and several successfully resolving long-standing issues. Notably, multiple institutions managed to exit the Prompt Corrective Action framework, demonstrating improved governance standards and stronger regulatory discipline.

The financial year 2023 represented a significant milestone for India's public sector banks, showcasing a period of sustained recovery and notable strengthening across multiple performance dimensions. This comprehensive evaluation reveals institutions that were successfully building on the foundation laid in previous years while demonstrating measurable progress toward financial stability and operational effectiveness.

Capital strength reached encouraging levels during this period, with all banks maintaining robust capital adequacy ratios around 15%. This consistent performance across the sector, reflected in uniform ratings, demonstrated adequate financial buffers to handle potential risks and uncertainties. This indicating that public sector banks were becoming more competitive in terms of financial resilience.

Asset quality showed particularly impressive enhancement throughout 2023, emerging as one of the standout success stories of the year. Bad loans continued their downward trajectory, with the average gross non-performing assets declining to 4.6% representing another substantial 20% reduction from the previous year's levels. This remarkable improvement signaled that banks had successfully implemented better credit assessment practices, enhanced recovery mechanisms, and more effective resolution of problematic loans. While institutions like Bank of India and Punjab National Bank still reported somewhat elevated levels of stressed assets, the overall sector trend was unmistakably positive.

Operational efficiency remained relatively stable during this period, though it continued to present challenges for the sector. Cost-to-income ratios maintained their position near 50%, indicating that while banks had achieved consistency in cost management, they still faced relatively high operational expenses. This persistent gap suggested that further structural reforms and process optimization remained necessary priorities.

Profitability demonstrated modest but meaningful improvement throughout 2023. Returns on assets climbed to approximately 0.7%, supported by reduced provisioning requirements and stronger core income generation. This enhancement reflected the positive impact of improved asset quality, as banks needed to set aside less money for potential loan losses, thereby freeing up resources for profit generation.

Liquidity management continued to be a cornerstone strength for these institutions. They maintained exceptional performance in funding stability, supported by current account savings account ratios between 39% and 42%, and liquidity coverage ratios well above 120%. This strong position provided crucial operational flexibility and ensured access to stable, cost-effective funding sources, giving these banks a significant competitive advantage in uncertain market conditions.

Risk management capabilities showed steady refinement, with interest rate exposure measures falling within the 2% to 2.5% range. This controlled level of sensitivity indicated that banks had developed more sophisticated approaches to balance sheet management, enabling them to navigate changing interest rate environments more effectively while maintaining appropriate risk levels. Digital transformation efforts gained significant momentum during 2023, marking a notable acceleration in modernization initiatives. Approximately half of all banking transactions became digital, representing a substantial shift in customer behavior and service delivery capabilities. This progress was supported by sustained investments in information technology infrastructure, demonstrating management's commitment to long-term technological advancement and customer service enhancement.

Regulatory compliance remained exemplary across the sector, with all banks maintaining strong adherence to regulatory norms and governance standards. This consistent performance indicated robust internal controls, effective risk management frameworks, and strong institutional discipline in meeting supervisory expectations.

The CAMELS analysis for FY2024 indicates that India's major public sector banks SBI, Bank of Baroda, Bank of India, Punjab National Bank, and Canara Bank delivered steady

performance with notable improvements in capital strength, profitability, and efficiency, though differences remain in asset quality and compliance. All banks sustained strong capital adequacy, averaging a CRAR of about 15.7%, with Bank of India and Bank of Baroda showing the strongest capital positions, reflecting effective risk management. Asset quality improved overall, with an average GNPA of 3.8%, a 17% decline year-on-year; SBI and Bank of Baroda reported the healthiest portfolios, while Punjab National Bank and Bank of India continued to carry relatively higher NPAs. Operational efficiency saw moderate gains, reflected in an average cost-to-income ratio near 52%, with Bank of Baroda leading in cost control and SBI having room for further optimization. Earnings were solid average ROA stood at 0.9% and NIM at 2.8% with Bank of Baroda outperforming peers and Punjab National Bank trailing. Liquidity remained comfortable, supported by a high average LCR of 123% and stable CASA levels around 38%, led by SBI and Bank of India. Market risk sensitivity was moderate, with IRRBB roughly between 2% and 2.7%, indicating resilience to rate fluctuations. Technology adoption progressed steadily about half of transactions are now digital and IT spending is around 7–8% pointing to ongoing modernization efforts. Compliance was generally strong, with most banks maintaining clean records aside from minor fines at Bank of Baroda and Punjab National Bank.

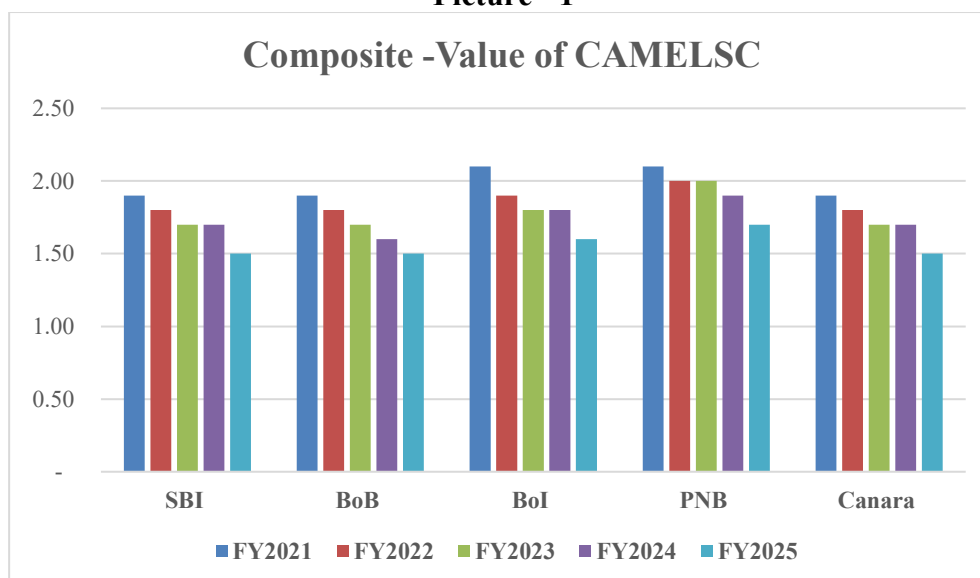
The FY2025 CAMELS review shows a strong, stable performance across India's five major public sector banks SBI, Bank of Baroda, Bank of India, Punjab National Bank, and Canara Bank making it one of the better years for PSBs in recent memory. Capital adequacy remained robust, with an average CRAR of about 16%, supported by steady internal accruals and capital injections. Asset quality improved further, with average GNPA falling to 3.1%, reflecting effective recoveries and prudent credit management. Management efficiency strengthened, evidenced by a lower average cost-to-income ratio near 50%, indicating tighter operational control and higher productivity. Earnings improved notably average ROA rose to roughly 1% bringing public banks profitability, led by Bank of Baroda and SBI. Liquidity conditions stayed comfortable, with an average LCR of 125% and stable CASA ratios aided by favorable monetary conditions. Market-risk sensitivity moderated amid lower interest-rate volatility, while digital transformation accelerated about half of transactions are now digital and IT investments continued to grow. Compliance standards were strong across the board, with no major regulatory issues reported.

#### Composite – Values of CMELSC

Table - 3

Year	SBI	BoB	BoI	PNB	Canara	Insights
FY2021	1.90	1.90	2.10	2.10	1.90	Avg. 2.0 (Satisfactory); COVID impact.
FY2022	1.80	1.80	1.90	2.00	1.80	Avg. 1.9; recovery phase.
FY2023	1.70	1.70	1.80	2.00	1.70	Avg. 1.8; asset quality gains.
FY2024	1.70	1.60	1.80	1.90	1.70	Avg. 1.7; profitability up.
FY2025	1.50	1.50	1.60	1.70	1.50	Avg. 1.6; best year for PSBs.

Picture - 1



The composite values of CAMELSC for major public sector banks, SBI, BoB, BoI, PNB, and Canara bank show a clear and consistent improvement from FY2021 to FY2025. During FY2021, the average composite score was 2.0, indicating a satisfactory performance level amid the challenging economic conditions caused by the COVID-19 pandemic. With the gradual recovery in FY2022, the average improved slightly to 1.9, reflecting early signs of stabilization. The trend continued in FY2023, with the average score declining to 1.8, highlighting notable gains in asset quality and reduced stress on balance sheets. By FY2024, profitability strengthened further, driving the average down to 1.7. The best performance was recorded in FY2025, with an average score of 1.6, signifying robust financial health, improved management efficiency, and strong operational resilience across public sector banks. Overall, the data underscores a progressive enhancement in performance, signaling effective reforms, prudent risk management, and the successful consolidation of the banking sector post-pandemic.

### CONCLUSION

India's banking system is set for rapid expansion, aligned with the country's goal of reaching a \$7 trillion GDP by 2030. This growth will be fueled by digital advancements such as the global scaling of UPI, e-Rupee pilot programs, and AI-powered personalized services. Public sector banks (PSBs) need to fast-track technology investments, address talent shortages, and form strategic partnerships with fintech firms to match the agility of private banks. Ongoing privatization and governance reforms will boost operational efficiency, while the Reserve Bank of India's Payments Vision 2025 aims to create a seamless and inclusive payments ecosystem. Comparative CAMELSC trends reveal PSBs demonstrate notable resilience, achieving their best performance in a decade with a composite score of approximately 1.6 in FY2025. As India advances toward the vision of 'Atmanirbhar Bharat', PSBs and the entire banking sector face a pivotal moment blending tradition with innovation, poised to drive a digitally empowered and inclusive economic future. For continuous updates, RBI's Financial Stability Reports and official bank disclosures serve as key references.

Public sector banks achieved composite performance scores averaging around 2.0, indicating satisfactory yet moderate results. The year 2021 highlighted their ability to maintain stability in capital strength and cash management while continuing to face ongoing challenges in profit generation, loan quality management, and digital infrastructure modernization areas requiring strategic focus for sustainable long-term growth and competitiveness.

The financial year 2022 was marked by consolidation and gradual recovery for these banks. Although issues with operational efficiency and digital modernization remained, significant

improvements in asset quality, modest profitability gains, and strong liquidity created a solid foundation for improved performance in the years ahead. This period signaled the start of a recovery path that gained momentum as transformation efforts progressed.

Composite score averaging 1.80 demonstrated meaningful progress from earlier years, reflecting sustained recovery momentum. This improved rating particularly showcased notable advances in asset quality management, steady liquidity, and better earnings. The year 2023 showed that public sector banks had moved from stress and recovery into consolidation and growth, establishing a stronger base for future competitiveness in the changing banking environment.

CAMELS composite scores ranged between 1.6 and 1.9, averaging 1.7, indicating strong to satisfactory performance. Bank of Baroda, SBI, and Canara Bank stood out as top performers, while Bank of India and Punjab National Bank needed improvements, especially in asset quality and profitability. By FY2025, the sector exhibited broad financial strength, enhanced efficiency, and improved digital and compliance frameworks, signaling a more resilient and competitive phase for India's public sector banking industry.

#### REFERENCE:

1. Brindha Natarajan, S Rajarajeswari, R Subbhammal, P Niranjana Devi.,(2025), 'Analyzing The Performance Of Private And Public Sector Banks In India' European Economic Letters, ISSN 2323-5233, Vol 15, Issue 3 (2025), <http://eelet.org.uk>.
2. Dhanasekar Dhamotharan, Brindha Natarajan, S Soundarya, S Rajarajeswari, K Kavyashree. Analyzing valuation dynamics in non-banking financial companies: A Tobin's Q approach. Int J Res Finance Manage 2025;8(2):151-156. DOI: 10.33545/26175754.2025.v8.i2b.540
3. Forbes India, Jul 21, 2025; Public sector banks in India 2025; <https://www.forbesindia.com/article/explainers/public-sector-banks-in-india/89933/1>
4. Husam Mostafa, Duraisamy Arumugasamy, 01 October 2025; Impact of digital payments on monetary policy transmission in India: evidence from the post-demonetization era; <https://doi.org/10.3389/fhumd.2025.1673850>
5. Jeff Kearns and Ashlin Mathew, October 27, 2022; How India's Central Bank Helped Spur a Digital Payments Boom; <https://www.imf.org/en/News/Articles/2022/10/26/cf-how-indias-central-bank-helped-spur-a-digital-payments-boom>
6. Kanishk Sarkar, Rahul Chemburkar, Aakanksha Rathod, Aishwary Gupta & Mohd Ali,
7. Lucy Ingham, July 7th, 2025; Is UPI taking over from cash in India? ; <https://www.fxcintel.com/research/analysis/upi-atv-june-2025>
8. Malihe Rostami, Oct 2015; Determination of Camels model on bank's performance; International Journal of Multidisciplinary Research and Development, Volume: 2, Issue: 10, 652-664 Oct 2015;
9. <https://www.allsubjectjournal.com/archives/2015/vol2/issue10/123>
10. Mayashree Acharya, Jul 28th, 2025; Government Banks in India: List of Public Sector Banks in India 2025; <https://cleartax.in/s/government-banks-in-india>
11. Mohd Imran, Mohd Shahid Ali, Sai Nithin Nallapati, Dedeepya Kothapalli, Shaik Mohammad Ishaq, July 2025; Unveiling the Impact of Digitalization on Indian Banking Operations; [https://www.researchgate.net/publication/393947285\\_Unveiling\\_the\\_Impact\\_of\\_Digitalization\\_on\\_Indian\\_Banking\\_Operations](https://www.researchgate.net/publication/393947285_Unveiling_the_Impact_of_Digitalization_on_Indian_Banking_Operations)
12. Pallavi Pandey, Feb. 11, 2025; Transforming Indian Banking: A Study of Digitalization, Customer Experience and Operational Efficiency; <https://acr-journal.com/article/transforming-indian-banking-a-study-of-digitalization-customer-experience-and-operational-efficiency-883/>

13. Piyush Gupta, Jun 26, 2023; India's digital leap: the Unified Payment Interface's unprecedented impact on the financial landscape; <https://www.weforum.org/stories/2023/06/india-unified-payment-interface-impact/>
14. Quoc Trung, N. K. (2021). Determinants of bank performance in Vietnamese commercial banks: an application of the camels model. *Cogent Business & Management*, 8(1); <https://doi.org/10.1080/23311975.2021.1979443>
15. S Rajarajeswari, H Lakshmipriya, GA Vaakshi, Brindha Natarajan, S Jayaraman, Central Bank Digital Currency (CBDC)—A Global Outlook, *International Journal of Innovative Research and Technology*, Volume 12, Issue 3, ISSN: 2349-6002, PP. 1672-1684.
16. Rajarajeswari, S., Amutha, K., Brindha Natarajan., Subbammal, R., Nagarajan, S., (2025) Financial Analysis for Corporates -Tools and Techniques. *International Journal of Innovative Research In Technology (IJIRT)*, 12(3), 925-948.
17. Rozina Akter, Shakil Ahmad, Md. Sariful Islam, February, 2018; CAMELS MODEL APPLICATION OF NON-BANK FINANCIAL INSTITUTION: BANGLADESH PERSPECTIVE; *Academy of Accounting and Financial Studies Journal* Volume 22, Issue 1, 2018; <https://www.abacademies.org/articles/camels-model-application-of-nonbank-financial-institution-bangladesh-perspective-6980.html>
18. Shikha and Dr. Pragya Singh, 10-03-2024; Digital banking: It's role, impact & challenges; DOI: <https://doi.org/10.33545/26175754.2024.v7.i1f.365>
19. Shishta Dutta, Oct 16, 2025; UPI: India's Digital Payment System Goes Global; <https://hdfcsky.com/news/upi-indias-digital-payment-system-goes-global>
20. Singh, K., 2023. Enhanced CAMELSC Guidance Notes for Rural Co-operative Banks: Capital Adequacy - Quantitative Subparameters, National Bank for Agriculture and Rural Development. India. Retrieved from <https://coilink.org/20.500.12592/wc996v> on 24 Oct 2025. COI: 20.500.12592/wc996v.
21. The Indian Payments Handbook 2025-2030 October 2025; <https://www.pwc.in/assets/pdfs/indian-payments-handbook-2025-2030.pdf>
22. Brindha Natarajan, and A. Ramkumar, 2004; "Financial Technology during and beyond Covid-19 Era -An Evaluation" *Shanlax International Journal of Management*, Vol.12, No. 1, 2024, pp. 7-13.
23. Rajarajeswari Sanjeevinathan & Srinivasan Krishnan, Jan 2021; Financial Performance of Selected Banks using Camels Model; *International Journal of Advance Research in Computer Science and Management* VOLUME NO. 11 (2021),(ISSUE NO. 02 (FEBRUARY)):1
24. <https://lakshmishree.com/blog/government-banks-in-india/>.