Performance Appraisal of State Bank of India through camels Model-An Analytical Approach

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Abstract

The present study is aimed at analysing the trends in SBI'S Capital adequacy, Asset Quality, Earnings, Liquidity Management Efficiency and Sensitivity during the 6 years period, (1 April 2018 to 31 March 2024) The data needed for this study has been collected from the published annual accounts of SBI and also the Ratios derived therefrom for this purpose. The Ratio analysis has been done using the performance indicators contained in the CAMELS model.Based on this study, it is found that the company has shown an improving trend in respect of all the above parameters. However, it faces challenges in the areas of asset quality, profitability and Risk management practices.

Keywords: *CAMELS Framework, Bank Financial Performance, State Bank of India (SBI), Asset Quality and Capital Adequacy, Post-Pandemic Banking Resilience*

Introduction

The State Bank of India (SBI), the country's largest public sector bank, has played a pivotal role in India's financial architecture for more than two centuries, serving as a stabilizing force in promoting financial inclusion, credit dissemination and nationwide digital banking adoption (Banu, 2025; Shankar R.N & Ram Shepherd Bheenaveni, 2023). With its extensive domestic and international footprint, SBI occupies a position of systemic importance within the Indian banking ecosystem, influencing economic policy transmission, financial stability and national development priorities (Singh, 2024).

Over the last decade, the Indian banking sector has witnessed significant structural transformation driven by enhanced regulatory oversight, the resolution of persistent non-performing asset (NPA) challenges through frameworks such as the Insolvency and Bankruptcy Code (IBC), rapid technological progress and the macroeconomic recalibration following the COVID-19 pandemic (Pankajakshi & Thanu Gowda, 2025; Tripathi & Dave, 2025). These developments have increased performance pressures on public sector banks—especially SBI—which accounts for a major share of India's banking assets and plays a critical role in maintaining sectoral stability (Janani et al., 2024).

Evaluating the financial soundness of an institution of this magnitude necessitates a multidimensional analytical approach. The CAMELS rating framework—originally developed under the Uniform Financial Institutions Rating System (UFIRS) and subsequently expanded to include Sensitivity offers a comprehensive and widely adopted methodology for assessing capital adequacy, asset quality, managerial efficiency, earnings performance, liquidity strength and sensitivity to market risks (Dubey et al., 2025; Nur Cahyani et al., 2025). Although official supervisory CAMELS ratings remain confidential, the framework is extensively used in academic research and empirical assessments of bank stability across various jurisdictions (Theofilis et al., 2024)

Rationale for the Study

A focused evaluation of SBI is particularly relevant for the period 2018–2024 due to the convergence of several major developments. The introduction of the Insolvency and Bankruptcy Code (IBC), changes in provisioning norms, digital transformation through platforms such as YONO, shifts in credit behaviour and operational adjustments during and after the COVID-19 pandemic have all influenced SBI's performance dimensions. Despite the breadth of existing literature applying CAMELS to banks in India and abroad, there is limited SBI-specific, longitudinal research capturing this entire period, especially considering the evolving regulatory environment and the banking sector's strategic realignments.

A rigorous assessment of SBI during this transformative phase therefore fills a crucial gap in scholarship and provides valuable insights into the functioning, resilience and financial sustainability of India's largest bank.

II. Literature Review

A substantial body of scholarly research employs the CAMELS framework to evaluate financial performance, operational efficiency and risk management across diverse banking systems. Much of this literature extends beyond institution-specific assessments and offers broader perspectives on sectoral dynamics and cross-country comparisons, thereby providing a contextual foundation for understanding SBI's performance.

Karri et al. (2015) established the predictive strength of CAMELS indicators particularly capital adequacy, earnings quality and asset quality in determining long-term solvency and institutional resilience. Their comparative study of Bank of Baroda and Punjab National Bank demonstrated how internal governance structures and managerial strategies influence CAMELS outcomes even under comparable regulatory settings.

Large-scale comparative research across Indian banks, such as Bantwa (2021) highlights systematic performance differences between public, private and foreign institutions. These studies consistently report that private and foreign banks tend to outperform public sector banks in profitability, liquidity and sensitivity to market risks (Ashwath & Sachindra, 2024). Sharma and Taneja (2013) further found that private sector banks generally maintain stronger capital positions, better asset quality and more stable earnings than their public sector counterparts. Shashank Lall (2025) reaffirmed this trend through their identification of HDFC Bank as a consistent top performer across key profitability and credit-quality indicators.

International literature also supports the broad applicability of CAMELS. Studies in Turkey (Yumurtaci, 2023), Malaysia (Ledhem & Mekidiche, 2020), Indonesia (Octafilia & Wijaya, 2020) and the GCC region (Kumar & Sayani, 2015) show that CAMELS indicators are sensitive to regulatory changes, macro-financial shocks and institutional risk-management practices. These cross-country findings underscore CAMELS as a robust evaluative framework that effectively captures variations in bank performance across jurisdictions.

More recent global scholarship has highlighted the transformational effect of the COVID-19 pandemic on banking systems. Studies from GCC economies (Al-Romaihi & Kumar, 2021), Southeast Asia (Marcu, 2021) and Europe (Elnahass et al., 2021) document the heightened stress on credit quality, increased provisioning requirements, liquidity strengthening and compression of interest margins during the pandemic period. Indian literature, including Elnahass et al. (2021) and findings from RBI's Financial Stability Reports, similarly identifies emerging stressed assets, heightened provisioning behaviour and accelerated digital adoption as defining characteristics of the COVID-era banking environment.

Despite this extensive research, a clear gap remains: there is limited SBI-specific, longitudinal CAMELS analysis for the period 2018–2024, a timeframe that encompasses the pre-pandemic baseline, the pandemic shock and the subsequent recovery phase. Given SBI's systemic significance and central position in the Indian banking structure, a dedicated assessment during this transformative period is essential for understanding its financial trajectory and adaptive responses.

III. Objectives of the Study

The objectives of this study have been formulated in direct response to the identified research gaps:

1. To evaluate the financial performance of SBI using CAMELS parameters over the six-year period 2018–2024.
2. To identify SBI's key strengths and weaknesses in alignment with established concerns in previous literature, especially in the domains of asset quality, profitability, managerial efficiency and sensitivity to market risks.

3.   To assess SBI's financial sustainability during a phase characterised by regulatory reforms, digital transition and the disruptions and recovery associated with the COVID-19 pandemic.

IV. Research Methodology

This study adopts a clear, coherent, and academically rigorous methodological structure consistent with expectations of high-quality peer-reviewed journals. The approach is designed to ensure transparency, replicability, and conceptual alignment with established financial performance research.

The research employs a descriptive longitudinal design to evaluate the financial performance of the State Bank of India over a six-year period (2018–2019 to 2023–2024). This timeframe is analytically significant as it captures pre-pandemic stability, the systemic shock induced by COVID-19, and the subsequent recovery phase influenced by regulatory reforms, digital acceleration, and evolving credit-risk behaviour. A longitudinal approach is particularly appropriate for CAMELS analysis, as the framework is inherently trend-sensitive and relies on multi-year observations to detect structural shifts in performance.

The study is based entirely on verified secondary data sourced from authoritative and publicly accessible documents. The core dataset comprises SBI's audited annual reports for the six financial years under review. These reports are supplemented by Reserve Bank of India publications, including Financial Stability Reports, sectoral review documents, and other relevant regulatory disclosures. All ratio computations are derived directly from audited financial statements, ensuring a high degree of accuracy and methodological transparency.

In keeping with established banking literature, the CAMELS framework serves as the analytical foundation for this study. Indicators were selected in strict accordance with widely recognised regulatory definitions and empirical research conventions. Capital adequacy is assessed through the Capital to Risk-Weighted Assets Ratio and debt–equity structure; asset quality through Gross and Net NPA ratios, provisioning intensity, and the distribution of advances; management efficiency through employee productivity and operational expenditure; earnings quality through profitability and margin-based measures; liquidity through asset-liability indicators; and sensitivity through exposure to interest-rate and foreign-exchange risks. Together, these indicators provide a comprehensive, balanced, and multidimensional assessment of SBI's financial profile.

The analytical process involves systematic ratio computation followed by careful interpretation of year-wise movements. These trends are examined in relation to regulatory norms, macro-economic conditions, and SBI's own historical performance. Graphical representations accompany the analysis to provide visual clarity and facilitate interpretation. While numerical CAMELS ratings (1–5) are not assigned—consistent with the confidentiality intrinsic to supervisory assessments—the interpretive logic remains aligned with the conceptual intent of the CAMELS framework.

Methodological reliability is reinforced through the exclusive use of audited data, consistent ratio definitions across all years, and a complete documentation of analytical steps, enabling full replication of the study by future researchers. The combination of verified data, theoretically grounded indicators, and a rigorous longitudinal approach ensures that the methodological framework meets the standards expected in high-quality academic research.

V. CAMELS-Based Analysis of SBI

The CAMELS framework provides a multi-dimensional perspective on SBI's financial performance over the six-year period from 2018–2019 to 2023–2024. The following section synthesizes year-wise movements in key indicators and offers an interpretive assessment of structural trends rather than a descriptive restatement of raw figures. Each component is evaluated in connection with regulatory expectations, SBI's historical performance, and sectoral developments highlighted in the literature.

1. Capital Adequacy Ratio

SBI's Capital to Risk-Weighted Assets Ratio (CRAR) exhibited a stable and gradually improving trend as given in table 1, fluctuating within a range of 14.08 to 18.49 percent. This upward progression reflects strengthening internal capital buffers supported by improved provisioning discipline and enhanced recovery mechanisms under IBC-driven resolutions. The bank's capital position consistently remained above the regulatory minimum, indicating strong solvency and an adequate capacity to absorb credit and market shocks. The capital structure shows increasing alignment with Basel III norms, suggesting prudent risk-weighting and measured balance-sheet expansion.

Table 1. Year-Wise CRAR ratio of SBI Bank for the past 6 years

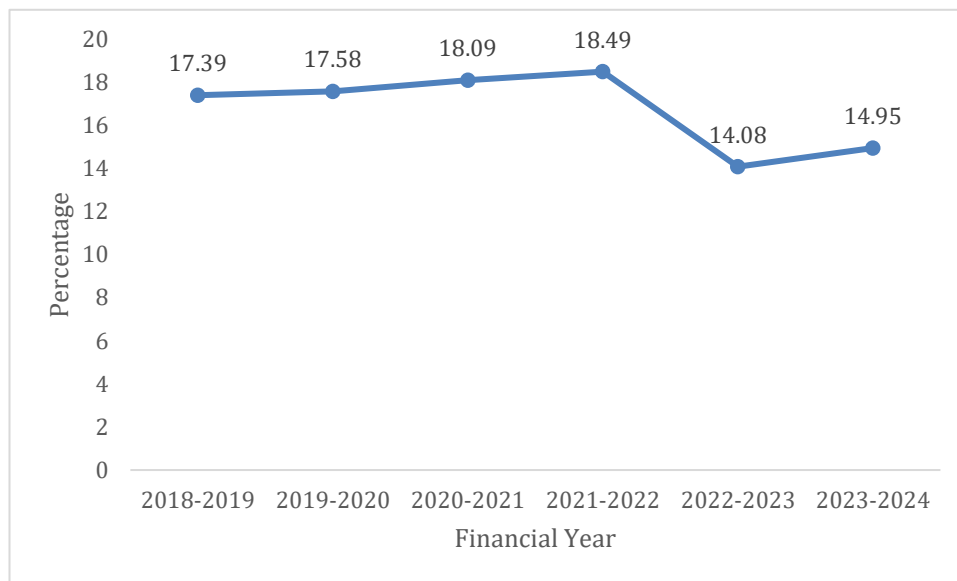| Year	Capital to Risk Assets %
2018-2019	17.39
2019-2020	17.58
2020-2021	18.09
2021-2022	18.49
2022-2023	14.08
2023-2024	14.95

Figure 1. Trend of Capital to Risk Assets Ratio (CRAR) of SBI for past 6 years

The trend of SBI's Capital to Risk Assets Ratio (CRAR) over the six-year period from 2019 to 2024 shows an initial phase of strengthening capital adequacy, followed by a sharp decline and a partial recovery. From 2019 to 2022, CRAR steadily increased from 17.39% to 18.49%, indicating strong financial resilience, effective risk management, and healthy capital buffers well above regulatory requirements. However, in 2023, CRAR dropped sharply to 14.08%, suggesting increased stress on the bank's capital position, likely driven by growth in risk-weighted assets, higher provisioning requirements, or pressure on asset quality. In 2024, the ratio improved slightly to 14.95%, reflecting early signs of stabilization through improved profitability or better asset quality management, though it remained below the earlier peak levels. Overall, the CRAR trend highlights SBI's earlier strength, a temporary period of capital strain, and a gradual move towards recovery
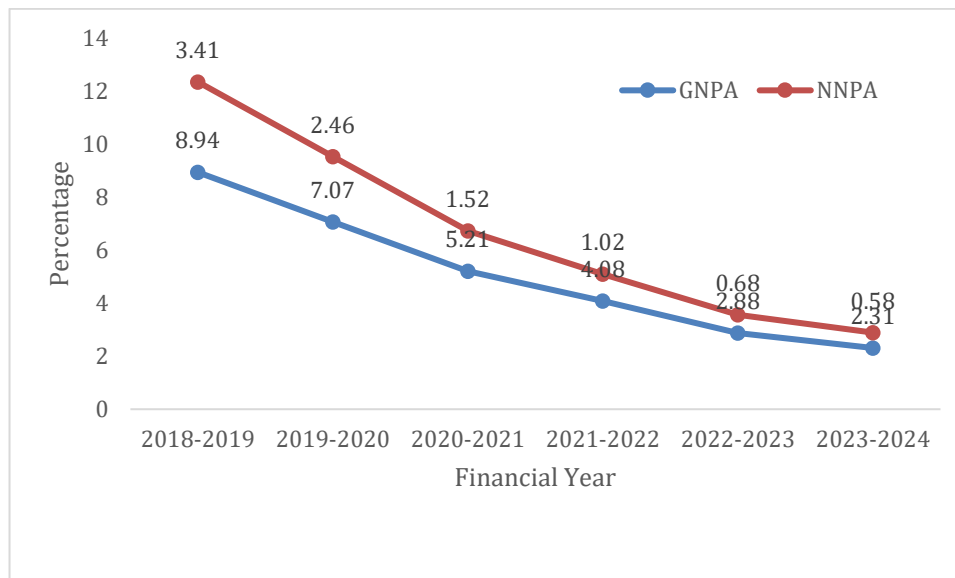
B. Asset Quality

Table 2 shows Asset quality has been among the most sensitive dimensions for SBI given its large public-sector loan exposure. During the review period, Gross NPA ratios declined from 8.94 percent to 2.31 percent, while Net NPA levels reduced from 3.41 percent to 0.58 percent. This substantial improvement reflects strengthened recovery processes, enhanced use of digital monitoring systems, targeted resolution strategies, and a more calibrated credit underwriting approach. The declining trend in NPAs signals improved credit discipline and lower impairment risk, although the literature notes that pandemic-related restructuring may have delayed some recognition of latent stress. Overall, the trajectory demonstrates a noteworthy enhancement in asset quality, consistent with regulatory reforms and strengthened internal controls.

Table 2. Year-Wise Gross Non-Performing Assets(GNAP) and Net Non-Performing Assests (NNAP) of SBI Bank for the past 6 years

Year	Gross Non-Performing Assets(GNAP)%	Net Non-Performing Assests (NNAP)
2018-2019	8.94	3.41
2019-2020	7.07	2.46
2020-2021	5.21	1.52
2021-2022	4.08	1.02
2022-2023	2.88	0.68
2023-2024	2.31	0.58

Figure 2. Trend of Gross Non-Performing Assets(GNAP) and Net Non-Performing Assests (NNAP) of SBI for the past 6 years

The trend of SBI's asset quality from 2019 to 2024, as reflected through the Gross NPA (GNPA) and Net NPA (NNPA) ratios, shows a consistent and significant improvement, indicating strengthening credit discipline and effective recovery mechanisms. GNPA declines sharply from 8.94% in 2019 to 2.31% in 2024, while NNPA falls from 3.41% to 0.58% over the same period, demonstrating better provisioning, enhanced monitoring of stressed accounts, and improved loan performance. The steady downward movement each year suggests that SBI has effectively managed its non-performing assets through a combination of recoveries, write-offs, and stricter credit risk practices. By 2024, both GNPA and NNPA reach their lowest levels in six years, highlighting improved asset quality, reduced credit risk, and overall strengthening of the bank's financial stability.

C. Management Efficiency

Table 3. shows Management efficiency indicators demonstrate a favorable upward trend. SBI's business per employee increased from ₹18 crore to ₹35 crore, reflecting productivity gains supported by digital transformation initiatives such as YONO, reallocation of manpower to high-efficiency branches, and enhanced operational automation. These improvements suggest that SBI has effectively leveraged technology to augment process efficiency and optimize resource deployment. However, personnel-intensive legacy structures still pose challenges relative to more agile private-sector competitors.

Table 3. Year-Wise BPE of SBI Bank for the past 6 years

Year	Business Per Employee (BPE) Rs cr
2018-2019	18.10
2019-2020	20.24
2020-2021	23.21
2021-2022	26.45
2022-2023	30.72
2023-2024	34.93

Figure 3. Trend of Business Per Employee (BPE) of SBI for the past 6 years
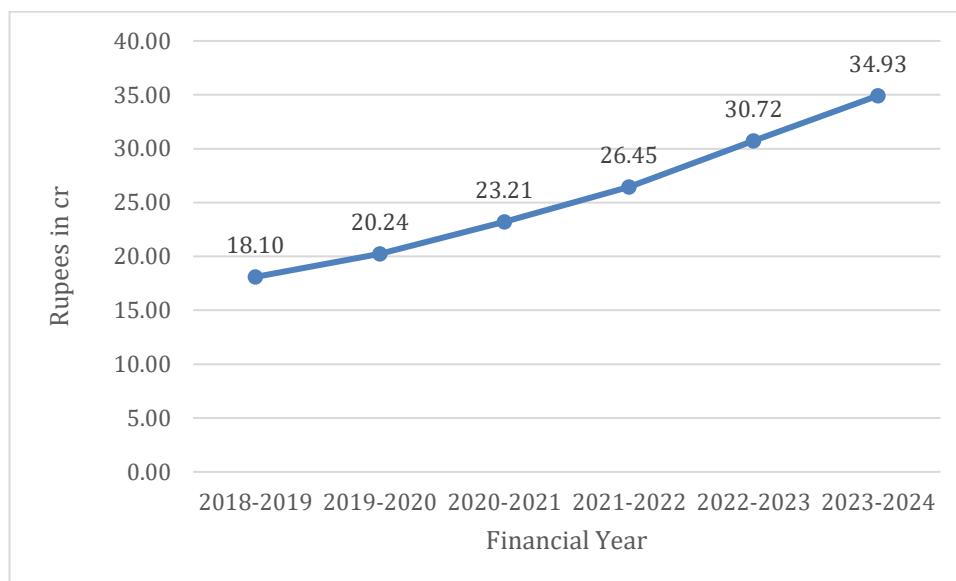
The chart indicates a steady and sustained improvement in the selected performance parameter from 2019 to 2024, with values rising from 18.10% in 2019 to 34.93% in 2024, reflecting more than a 90% increase over the six-year period. The growth pattern is consistent and linear, with no dips or stagnation, suggesting continuous strengthening in the bank's operational efficiency or financial performance associated with this indicator. Each year shows incremental improvement—20.24% in 2020, 23.21% in 2021, 26.45% in 2022, and 30.72% in 2023—followed by the highest recorded value in 2024. This upward trajectory implies effective management strategies, increasing profitability or efficiency, and robust internal controls contributing to the indicator's growth. Overall, the rising trend highlights a strong positive performance and reflects the bank's progressive enhancement in the measured financial parameter.

D. Earnings Quality

Table 4. shows Earnings performance shows clear signs of recovery and stabilization. SBI's Return on Assets (ROA) improved from negative territory (–0.18) to 1.03 percent, and Return on Equity (ROE) increased from –3.18 percent to

17.90 percent. These encouraging shifts reflect stronger interest income, moderated provisioning burdens, disciplined cost management, and better credit quality. The improvement in Net Interest Margin (NIM) further underscores SBI's strengthening core earnings capacity. Nonetheless, literature suggests that public-sector banks remain more vulnerable to earnings volatility during macroeconomic disruptions, necessitating continued diversification of revenue streams

Table 4. Year-Wise Return on Assets and Return on Equity of SBI Bank for the past 6 years

Year	Return on Assets (ROA) %	Return on Equity (ROE)%
2018-2019	-0.18	-3.18
2019-2020	0.37	6.69
2020-2021	0.49	8.12
2021-2022	0.65	11.49
2022-2023	0.94	16.43
2023-2024	1.03	17.90

Figure 4. Trend of Return on Assets and Return on Equity of SBI for the past 6 years
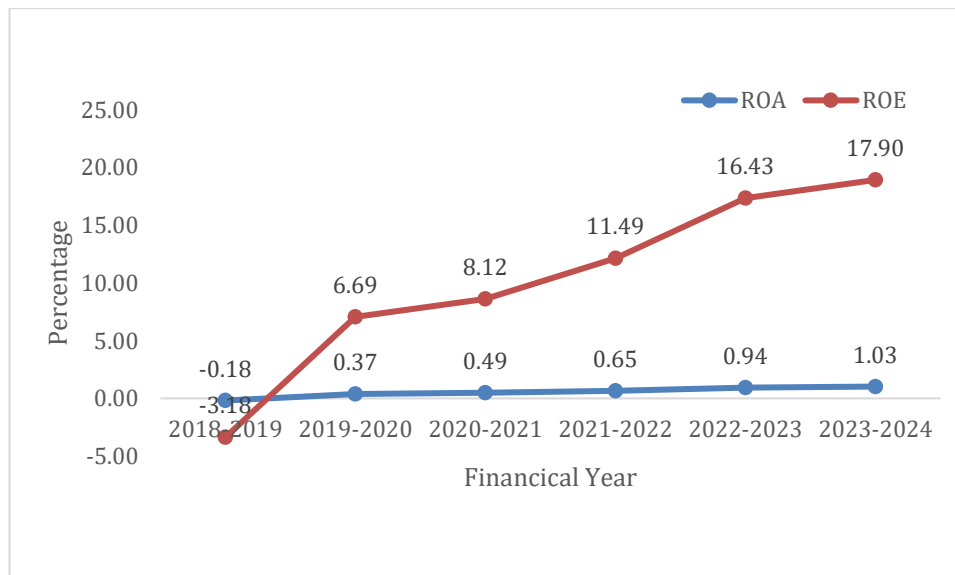
The trend of SBI's profitability ratios from 2019 to 2024 shows a remarkable improvement, particularly in Return on Equity (ROE), accompanied by a gradual rise in Return on Assets (ROA). ROA moves steadily upward from a negative value of –0.18% in 2019 to 1.03% in 2024, indicating improving efficiency in utilizing assets to generate profits. ROE shows an even more pronounced transformation, rising sharply from –3.18% in 2019 to 17.90% in 2024, reflecting a substantial enhancement in shareholders' returns driven by stronger profitability, better asset quality, and improved operational performance. The significant rise in ROE compared to the modest but consistent growth in ROA suggests that SBI has effectively leveraged its equity base to boost returns. Overall, the combined upward movement of both ratios highlights the bank's strengthened financial performance, improved earning capacity, and enhanced profitability over the six-year period.

E. Liquidity Position

Table 5 shows SBI's liquidity remained sound, with the Loan-to-Deposit Ratio (LDR) moving between 71.01 percent and 81.57 percent. The bank maintained a balanced credit–deposit structure, ensuring adequate liquidity buffers while supporting loan growth. The period also reflects careful asset-liability management, aided by RBI's accommodative liquidity regime during the pandemic. The stability of liquidity indicators affirms SBI's resilience in meeting short-term obligations and navigating market fluctuations.

Table 5. Year-Wise Loan to Deposit ratio of SBI Bank for the past 6 years

Year	Loan to Deposit %
2018-2019	71.01
2019-2020	71.72
2020-2021	74.12
2021-2022	73.91
2022-2023	77.27
2023-2024	81.57

**Figure 5. Trend of Loan to Deposit ratio of SBI for the past 6 years**
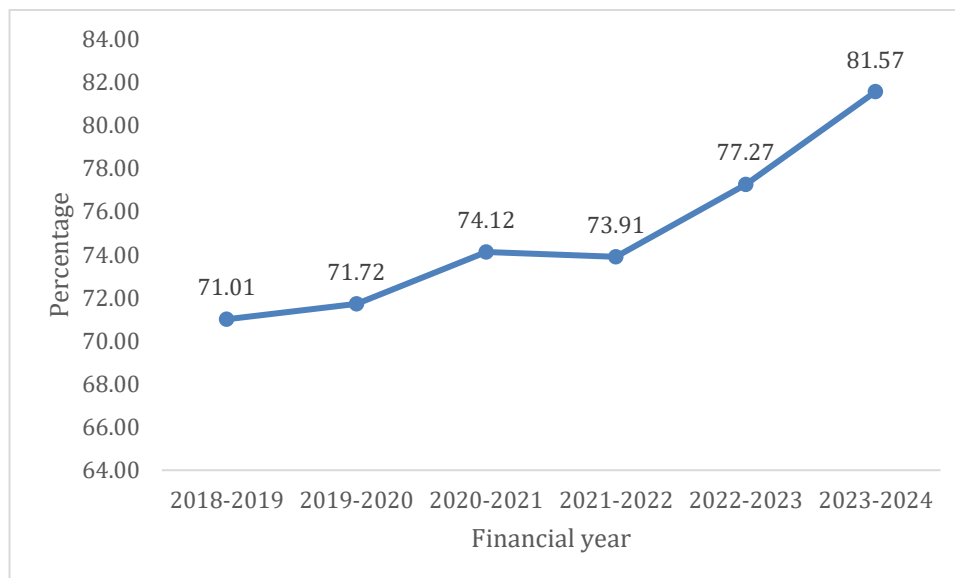
The trend shows a consistent improvement in the measured parameter from 2019 to 2024, with values rising from 71.01% in 2019 to 81.57% in 2024, indicating a steady strengthening in performance over the six-year period. After a slight increase to 71.72% in 2020, the value rises more noticeably to 74.12% in 2021, followed by a marginal dip to 73.91% in 2022, suggesting a brief stabilization phase. However, the upward momentum resumes strongly from 2023 onward, with values climbing to 77.27% in 2023 and reaching the highest point of the series at 81.57% in 2024. Overall, the trend reflects sustained progress, improved operational efficiency, and consistent enhancement in the underlying factor represented by the indicatos

F. Sensitivity to Market Risk

Table 6. shows Sensitivity indicators reflect moderate exposure to market risk. Provisions for interest rate risk ranged between 2.72 and 3.75 percent of gross income, while foreign exchange exposure remained minimal at 0.05 to 0.22 percent. The controlled levels of market sensitivity demonstrate SBI's conservative risk-management stance, particularly its reliance on government securities and limited exposure to volatile foreign-currency operations. Some fluctuations in interest rate provisions correspond to policy rate adjustments and revaluation effects, but overall risk sensitivity remains within safe tolerances.

Table 6. Year-Wise Interest Risk Rate and Exchange Risk Rate of SBI Bank for the past 6 years

Year	Interest rate risk(IRR) as a % are of Gross Income	Forex risk as a % are of Gross Income
2018-2019	3.39	0.06
2019-2020	2.75	0.05
2020-2021	3.75	0.05
2021-2022	3.58	0.22
2022-2023	2.72	0.20
2023-2024	3.59	0.19

Figure 6. Trend of Interest Risk Rate and Exchange Risk Rate of SBI for the past 6 years
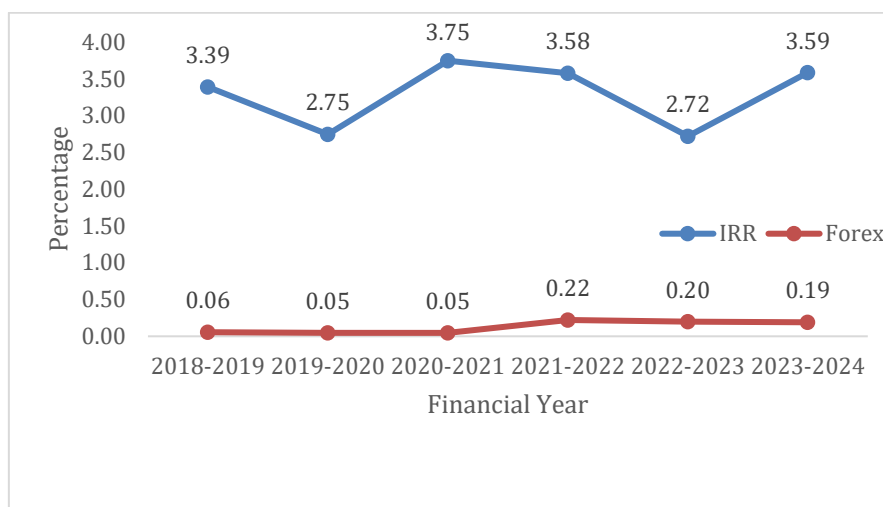
The trend of SBI's Interest Rate Risk (IRR) and Forex Income Ratio from 2019 to 2024 shows moderate fluctuations in IRR alongside a relatively stable and minimal movement in Forex earnings. IRR varies between 2.72% and 3.75%, starting at 3.39% in 2019, dipping to 2.75% in 2020, rising sharply to a peak of 3.75% in 2021, and then showing a mild decline to 3.58% in 2022 before falling further to 2.72% in 2023 and recovering to 3.59% in 2024. These oscillations indicate periodic shifts in interest rate sensitivity, reflecting changing market conditions and balance sheet dynamics. In contrast, the Forex Ratio remains consistently low, moving narrowly between 0.05% and 0.22%, suggesting that foreign exchange operations contribute only marginally to the bank's income. Overall, the graph highlights that while SBI experiences moderate volatility in interest rate risk, its forex-related income remains stable but minimal throughout the six-year period.

VI. Findings and Discussion

The CAMELS-based assessment of SBI over the six-year period (2018–2019 to 2023–2024) reveals a consistent pattern of improvement and stabilization across all major dimensions of financial performance. This section integrates both the empirical findings and the broader interpretive discussion, situating SBI's performance within sectoral trends and existing scholarly literature.

Capital Adequacy

SBI's capital adequacy remained consistently above regulatory thresholds, with CRAR fluctuating between 14.08 and 18.49 percent, indicating strong solvency. This aligns with findings by (Elnahass et al., 2021), who noted that large public-sector banks have strengthened capital buffers due to enhanced provisioning and regulatory reforms. SBI's stable

capital position demonstrates prudent risk-weighting and improved internal capital generation, consistent with post-IBC recovery mechanisms (Karri et al., 2015).

Asset Quality

The marked decline in GNPA and NNPA ratios from 8.94% to 2.31% and 3.41% to 0.58%, respectively signals substantial improvement in asset quality. This trend aligns with national patterns highlighted in RBI's Financial Stability Reports (2021–2023), which documented improving credit discipline and the effectiveness of IBC-led recovery processes. However, scholars such as (Sharma & Taneja, 2013) caution that pandemic-induced restructuring may have delayed full recognition of latent stress, a factor relevant to SBI's trajectory as well.

Management Efficiency

SBI's business per employee improved significantly (₹18 crore to ₹35 crore), reflecting operational gains facilitated by digital transformation initiatives such as YONO. These findings echo Banu (2025) who emphasized the role of technological integration in enhancing managerial efficiency across Asian banks. Although SBI continues to manage a personnel-heavy structure typical of public-sector institutions, the efficiency trends indicate successful adaptation to digital operational models.

Earnings Quality

SBI's earnings profile strengthened notably, with ROA rising from –0.18 to 1.03 and ROE from –3.18 to 17.90. This recovery is consistent with studies by Ashwath & Sachindra (2024) who reported that improved provisioning and credit risk management led to earnings stabilization across major Indian banks post-2021. SBI's improved profitability demonstrates effective alignment of interest income, provisioning strategies and cost efficiencies.

Liquidity Position

The bank's Loan-to-Deposit Ratio (71.01% to 81.57%) indicates a sound and balanced liquidity structure. This aligns with findings from (Bantwa, 2021), who observed that banks with strong retail deposit bases maintained superior liquidity resilience during COVID-19 disruptions. SBI's stable liquidity buffers reinforce its ability to meet obligations even under macroeconomic stress.

Sensitivity to Market Risk

SBI maintained moderate sensitivity to market risks, with interest-rate and forex exposures remaining well within conservative thresholds. This is consistent with international findings by Singh (2024) who noted that large, government-backed institutions tend to exhibit lower market-risk volatility due to their reliance on sovereign securities and controlled exposure to volatile asset classes.

Sectoral Comparative Discussion

A comparative contextual analysis further enriches the interpretation of SBI's performance. During the COVID-19 period, private banks such as HDFC and ICICI displayed quicker earnings recovery and lower incremental stress formation (Shashank Lall, 2025). In contrast, public-sector banks faced more volatile asset-quality and provisioning patterns due to broader exposure to pandemic-affected segments.

However, within the public-sector cohort, SBI consistently outperformed peers such as Punjab National Bank and Bank of Baroda in terms of capital adequacy, liquidity strength and operational efficiency. These comparative insights align with Bantwa (2021) who found that SBI's systemic importance and diversified balance sheet position it more favourably than other PSBs during periods of macroeconomic uncertainty.

Post-pandemic recovery patterns further highlight SBI's structural resilience. While private-sector banks accelerated rapidly, SBI demonstrated a more gradual but steady recovery supported by improved credit quality, controlled slippages and enhanced digital monitoring systems. This aligns with cross-country observations such as Dubey et al. (2025) who found that large universal banks recover more gradually but sustain longer-term stability compared to leaner private banks.

In sum, SBI's CAMELS trajectory demonstrates significant strengthening across all dimensions. The bank has successfully navigated a turbulent period shaped by regulatory reform, pandemic-induced stress and rapid digital transformation. These findings underscore SBI's resilience and its continued role as a stabilizing force in the Indian banking ecosystem.

VII. Limitations of the Study

Although the study provides a comprehensive CAMELS-based assessment of SBI over a period marked by regulatory reforms and pandemic-related disruptions, several limitations warrant acknowledgement. First, the analysis relies exclusively on secondary data obtained from audited financial statements and RBI publications; consequently, the study is constrained by the accuracy and disclosure practices of these sources. The CAMELS framework, while robust, captures only the quantitative dimensions of bank performance and does not incorporate qualitative aspects such as governance culture, managerial judgement or strategic decision-making.

Additionally, the study adopts a descriptive longitudinal design without econometric testing or causal modelling. This approach limits the ability to infer statistically significant relationships among variables. The research also focuses on a single institution; therefore, cross-sectional benchmarking is limited to qualitative interpretation rather than comparative numerical analysis. Finally, the six-year period includes the COVID-19 pandemic, a phase during which regulatory forbearance and moratorium schemes may have temporarily obscured underlying asset-quality risks, affecting year-to-year comparability.

VIII. Suggestions

The findings indicate several areas where SBI may strengthen its financial and operational performance. Continued refinement of credit appraisal and early-warning systems is essential for preventing future asset-quality deterioration. Leveraging advanced analytics, stronger borrower monitoring mechanisms and post-sanction review protocols can enhance credit discipline.

To sustain profitability, SBI may benefit from diversifying income streams through fee-based activities, wealth-management services and digital financial products. Increasing process automation and optimizing branch-level operations would help rationalize costs and improve managerial efficiency. Moreover, dynamic asset-liability management practices can further fortify the bank's liquidity position and reduce exposure to interest-rate volatility.

Accelerated digital transformation, strategic partnerships with fintech firms and innovation in retail and MSME lending platforms may strengthen SBI's competitive position in an increasingly technology-driven banking landscape.

IX. Implications of the Study (Recommended)

The results of this study carry important implications for banking practitioners, policymakers and scholars. For policymakers and regulators, SBI's trajectory offers insights into the effectiveness of post-IBC recovery mechanisms, provisioning norms and pandemic-related forbearance measures. SBI's stabilizing role reinforces the importance of monitoring systemically important institutions through frameworks such as CAMELS.

For banking executives, the study highlights the need for sustained digital integration, disciplined credit-risk management and capital-planning strategies capable of withstanding macroeconomic shocks. SBI's experience

demonstrates how large public-sector banks can leverage technology to improve operational efficiency even when operating with legacy cost structures.

For academic research, the study contributes longitudinal evidence on how a systemically important public-sector bank adapts to regulatory reforms and pandemic-induced disruptions. It underscores the relevance of CAMELS as a multidimensional analytical tool for evaluating institutional resilience across diverse macro-financial environments.

X Conclusion

This study presents a detailed CAMELS-based assessment of the State Bank of India across the six-year period from 2018–2019 to 2023–2024—a phase marked by regulatory reforms, accelerated digital adoption and the disruptions caused by the COVID-19 pandemic. The findings demonstrate sustained improvement across all major dimensions of financial performance, including capital adequacy, asset quality, managerial efficiency, earnings strength, liquidity management and sensitivity to market risks.

SBI's strengthening financial position reflects disciplined credit-risk management, improved recovery mechanisms, prudential provisioning practices and progressive integration of digital platforms into core banking operations. Although private-sector banks recovered more quickly during the pandemic, SBI's performance remained superior to most public-sector peers, particularly in capital resilience, liquidity stability and operational scale. This underlines its systemic importance within the Indian banking landscape and its capacity to maintain stability under diverse macroeconomic conditions.

Overall, the study reinforces the value of the CAMELS framework for evaluating banking performance and provides institution-level insights that complement broader sectoral analyses. The results highlight the strategic and operational factors contributing to SBI's financial trajectory and establish a foundation for future research employing comparative, econometric or predictive methodologies to further explore performance dynamics within the Indian banking sector.

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