

“CAMEL Framework for Assessing Indian Banks: A Conceptual Analysis”

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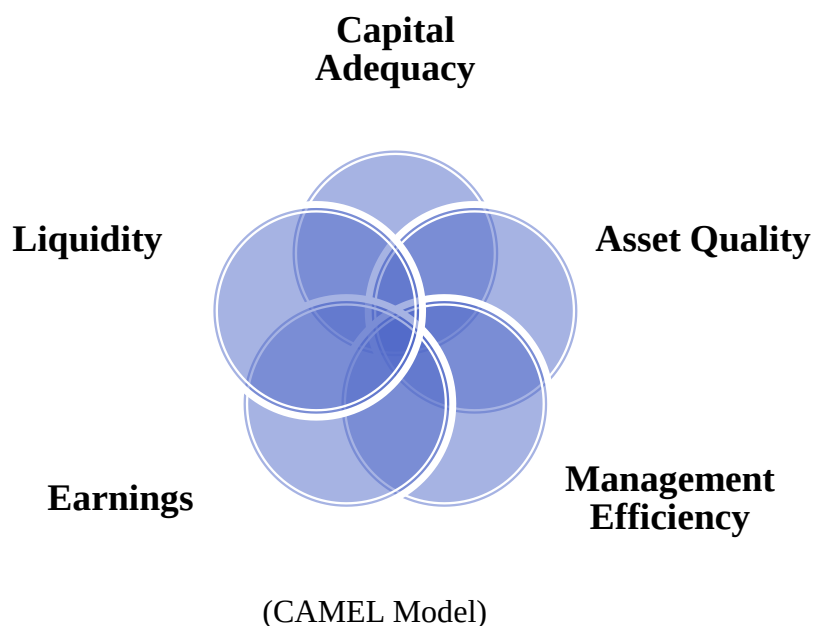
Abstract: *The Indian banking sector has undergone substantial transformations, with public and private sector banks playing a critical role in economic development. The CAMEL model comprising Capital Adequacy, Asset Quality, Management Efficiency, Earnings, and Liquidity serves as a comprehensive framework for evaluating the financial soundness of banks. This conceptual study examines the applicability of the CAMEL model in assessing the performance of Indian banks, incorporating recent financial data and trends. In the fiscal year 2023-24, the Indian banking sector recorded a net profit exceeding ₹3 lakh crore, driven by 15% credit growth and 13% deposit growth. Gross non-performing assets (NPAs) declined to 3.5%, reflecting improved asset quality. However, loan growth has slowed for six consecutive months, reaching 12.4% year-on-year in December 2024 due to stringent lending regulations. The application of the CAMEL model highlights differences between public and private sector banks. Private banks generally demonstrate higher management efficiency and earnings, whereas public banks maintain stronger capital adequacy ratios. This study underscores the relevance of the CAMEL model in evaluating the financial stability of Indian banks. The findings contribute to strategic decision-making and policy formulation in the banking sector.*

Keywords: *Economic Development, Indian Banking Sector, NPA, Financial Stability, Asset Quality, Credit Growth, Liquidity*

INTRODUCTION:

The banking sector plays a pivotal role in economic growth by facilitating financial transactions and supporting critical payment systems. Given the recurring instances of bank failures and financial crises over the past two decades, regulatory authorities worldwide have implemented measures to mitigate risks, including deposit insurance and liquidity support from governments and central banks. These challenges highlight the necessity of an effective supervisory framework and reliable evaluation tools to safeguard financial stability. Indian banks have long struggled with a significant accumulation of stressed assets, leading to a substantial rise in non-performing assets (NPAs). This ongoing financial strain has resulted in a noticeable decline in net interest margins, impacting overall profitability. Consequently, assessing the financial performance of banks has become a key area of concern for regulators, investors, managers, and customers alike.

Several financial models are available to assess banking performance, with the CAMEL model being one of the most widely recognized. This ratio-based tool evaluates financial health by examining key performance indicators. Initially developed by U.S. banking regulators in the 1970s, the Reserve Bank of India (RBI) formally adopted the CAMEL framework in 1996 following the recommendations of the Padmanabhan Working Group Committee. This model remains instrumental in assessing financial institutions by analyzing their financial statements across multiple dimensions.



REVIEW OF LITERATURE:

Bansal (2013) research assessed five commercial banks Kotak Mahindra, ICICI, Axis, HDFC, and the State Bank of India over the period from 2007 to 2012. By applying the CAMEL model, various financial ratios were analyzed to evaluate their performance. The findings indicated that HDFC Bank ranked highest, followed by SBI in second place, Kotak Mahindra in third, ICICI in fourth, and Axis Bank in fifth.

Sonaje (2017) carried out a study in which twelve banks were examined over five years from 2013 to 2017. Based on CAMEL parameters, the study found that HDFC Bank and Kotak Mahindra Bank demonstrated superior performance, whereas Punjab National Bank and the State Bank of India were positioned lower in comparison.

Birda (2019) examined "Camel Research of Selected Private and Public Sector Banks in India," selecting five private sector banks (HDFC, Axis, YES Bank, ICICI, and Kotak Mahindra) and five public sector banks (PNB, BOB, UBI, SBI, and Canara Bank). The study analyzed financial data spanning five years from 2012-2013 to 2016-2017 using the CAMEL model. The findings indicated that HDFC and Axis Bank performed above average, whereas PNB and Canara Bank exhibited below-average performance. The research concluded that private-sector banks outperformed public-sector banks based on CAMEL parameters.

Shariqua (2021) conducted an analysis, focusing on the financial performance of two banks—State Bank of India (public sector) and Axis Bank (private sector)—over the five years from 2016 to 2020. Various CAMEL ratios were utilized for assessment. Although SBI performed poorly in Capital Adequacy, Asset Quality, and Liquidity, it surpassed Axis Bank due to its stronger Management Efficiency and Earnings Quality. The study ultimately concluded that the public sector bank had an overall better performance than its private sector counterpart.

Dadhania (2024) evaluating ten banks from both sectors over five financial years from 2018-2019 to 2022-2023. The study employed 17 financial ratios to assess the five CAMEL model parameters, concluding that

among private sector banks, Kotak Mahindra Bank exhibited the highest performance, while Bank of Baroda led in the public sector.

Srinivasan and Saminathan (2024) analyzed the financial performance of the Bank of Baroda and Punjab National Bank using the CAMELS model. Their research, covering the five years from 2011-2012 to 2015-2016, identified significant differences in the mean values of CAMEL ratios between the two banks, highlighting variations in their financial health and overall performance.

CONCEPTUAL ANALYSIS:

Category	Ratios	Formula	Significance	Evaluation Criteria
Capital Adequacy	Capital Adequacy Ratio (CAR)	$CAR = \frac{\text{Tier 1 Capital} + \text{Tier 2 Capital}}{\text{Risk-Weighted Assets}}$	Indicates the bank's ability to absorb potential losses and remain solvent.	Higher CAR reflects a bank's financial stability and its capacity to withstand economic stress. A CAR of at least 9-10% is generally considered adequate by regulators.
Asset Quality	Non-Performing Assets (NPA) Ratio	$NPA \text{ Ratio} = \frac{\text{Non-Performing Assets}}{\text{Total Assets}}$	Measures the proportion of loans that are unlikely to be repaid, reflecting the quality of the bank's assets.	Lower NPA ratios indicate better asset quality. An NPA ratio below 5% is generally considered good.
	Loan Loss Provision (LLP) Ratio	$LLP \text{ Ratio} = \frac{\text{Loan Loss Provisions}}{\text{Total Loans}}$	Reflects the bank's preparedness for potential defaults in loan repayments.	A higher LLP ratio indicates a bank is well-prepared for loan defaults and has stronger financial health.
Management Quality	Return on Assets (ROA)	$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$	Measures how efficiently the bank is utilizing its assets to generate profit.	Higher ROA signifies efficient management and operational effectiveness. ROA greater than 1% is typically favorable.
	Return on Equity (ROE)	$ROE = \frac{\text{Net Income}}{\text{Shareholder Equity}}$	Indicates the bank's ability to generate profits from shareholders' investments.	Higher ROE indicates a more effective use of equity to generate profits. A ROE above 10% is usually considered satisfactory.
Earnings	Net Interest Margin (NIM)	$NIM = \frac{\text{Interest Income} - \text{Interest Expenses}}{\text{Average Assets}}$	Measures the difference between interest earned and interest paid, representing the bank's profitability from core lending activities.	Higher NIM shows a bank's ability to generate earnings from its loan portfolio. A NIM over 3% is often seen as strong.
	Cost to Income Ratio (CIR)	$CIR = \frac{\text{Operating Costs}}{\text{Operating Income}}$	Evaluates how efficiently the bank manages its expenses relative to income.	Lower CIR reflects efficient cost management. A CIR of 40-50% is typically considered good.

Liquidity	Liquidity Coverage Ratio (LCR)	$\text{LCR} = \frac{\text{High-Quality Liquid Assets}}{\text{Total Net Cash Outflows}}$	Assesses the bank's ability to meet short-term obligations with liquid assets.	Higher LCR (above 100%) indicates the bank's strong liquidity position to meet its short-term liabilities.
	Loan to Deposit Ratio (LDR)	$\text{LDR} = \frac{\text{Total Loans}}{\text{Total Deposits}}$	Indicates how much of the bank's deposits are being used to fund loans, reflecting liquidity risk.	A ratio between 70-80% is considered healthy, indicating the bank is not overly reliant on borrowed funds. Lower ratios are preferable for liquidity management.

INTERPRETATION AND CONCLUSION:

This study critically analyzes the performance of Indian banks through the CAMEL model, highlighting the financial soundness and stability of both public and private sector banks. The fiscal year 2023-24 witnessed a significant net profit of ₹3 lakh crore for the banking sector, driven by substantial credit and deposit growth. Despite this, the ongoing issue of non-performing assets (NPAs) was partially alleviated, as the gross NPA ratio decreased to 3.5%. However, the persistent slowdown in loan growth, compounded by tighter lending regulations, raised concerns about the sustainability of credit expansion.

The application of the CAMEL model revealed that private sector banks, such as HDFC and Kotak Mahindra, consistently outperformed their public sector counterparts in terms of management efficiency and earnings. Public banks, however, demonstrated stronger capital adequacy ratios, highlighting their financial robustness. This dichotomy between public and private sector banks underscores the diverse operational and financial strengths of each category, with private banks excelling in profitability and management, while public banks maintain superior capital buffers.

In conclusion, the CAMEL model remains an effective tool for assessing the financial stability of Indian banks, providing valuable insights for regulatory authorities, investors, and policymakers. The study emphasizes the need for a balanced approach in enhancing both the profitability and capital strength of Indian banks, ensuring long-term financial stability and growth.

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