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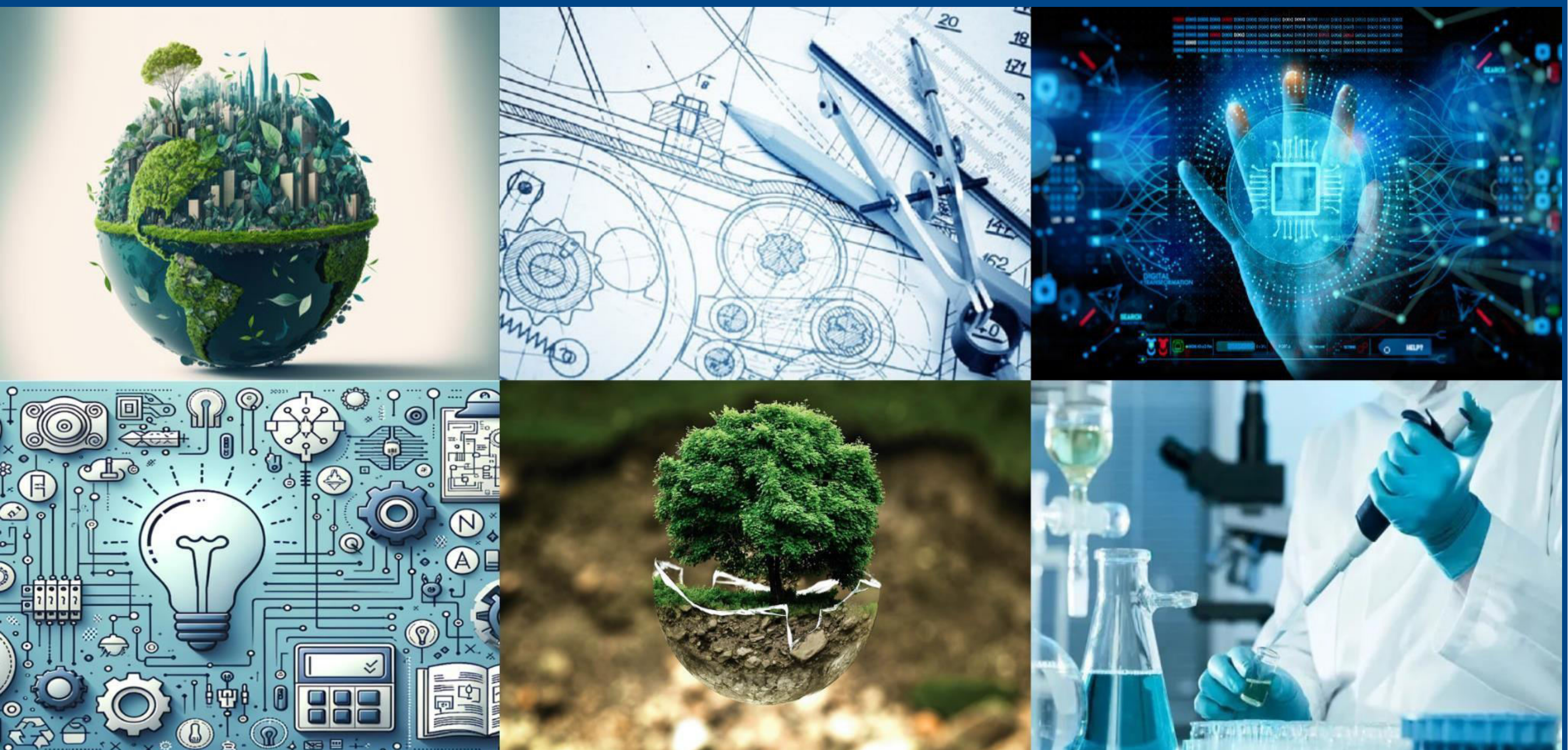

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A Decadal CAMEL Analysis of Axis Bank in India: Financial Soundness from 2015-16 to 2024-25

Dr. Salma Banu

Associate Professor of Commerce, University College of Arts, Tumkur University, Tumakuru, India

ABSTRACT: This study conducts a decadal CAMEL analysis of Axis Bank in India from 2015–16 to 2024–25, assessing its financial soundness through five key parameters: Capital Adequacy, Asset Quality, Management Efficiency, Earnings Quality, and Liquidity. Utilizing secondary data from RBI Financial Stability Reports and Axis Bank's annual reports, the study identifies significant trends and patterns in financial performance. Key findings indicate a strengthening capital base, consistent improvement in asset quality post-2018, enhanced managerial efficiency due to technological investment, and strong liquidity maintenance. The earnings profile demonstrates growing profitability and income diversification. These observations highlight Axis Bank's resilience in facing economic turbulence, including the COVID-19 pandemic. The CAMEL framework proves effective in evaluating a private bank's fiscal robustness, offering practical insights for stakeholders. The study recommends a continued focus on digital innovation, credit risk management, and non-interest income expansion. Implications are relevant for regulators, investors, and bank management aiming for sustainable growth.

I. INTRODUCTION

Axis Bank, one of India's leading private sector banks, plays a pivotal role in the country's financial ecosystem. In a rapidly evolving global economy, assessing the financial soundness of banking institutions has become critical for ensuring economic stability. With increasing regulatory scrutiny and growing expectations from stakeholders, financial institutions must demonstrate resilience, operational efficiency, and strategic adaptability. One of the most comprehensive tools for such evaluation is the CAMEL model, developed by U.S. banking regulators and later adopted worldwide, including by the Reserve Bank of India (RBI).

The CAMEL model assesses five fundamental dimensions of a bank's performance: Capital Adequacy, Asset Quality, Management Efficiency, Earnings Quality, and Liquidity. Each component serves as a diagnostic lens into specific areas of financial health. Capital Adequacy evaluates the bank's ability to absorb losses; Asset Quality measures the level of credit risk; Management Efficiency examines operational prudence; Earnings Quality assesses the sustainability of profit generation; and Liquidity considers the bank's capacity to meet short-term obligations.

This study aims to apply the CAMEL framework to Axis Bank over a 10-year period from 2015–16 to 2024–25, encompassing both stable growth phases and periods of volatility such as the post-demonetization era, NBFC crisis, and the COVID-19 pandemic. The long-term scope allows for a meaningful evaluation of strategic trends, structural shifts, and financial resilience.

Axis Bank's performance during this period presents a valuable case study in understanding the adaptability and robustness of private banking institutions in India. The bank has undertaken significant digital transformation initiatives, expanded its retail portfolio, and implemented tighter risk controls. These factors merit detailed investigation under each CAMEL parameter to identify both strengths and areas needing improvement.

This paper also seeks to provide practical recommendations for policy makers, bank executives, and investors, offering a roadmap for performance enhancement and risk mitigation in the private banking sector. The insights gained could inform future strategic planning not only for Axis Bank but also for other financial institutions aiming to navigate a complex and evolving economic environment.

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The remainder of the paper is organized as follows: Section 3 presents a detailed literature review on the CAMEL framework and prior applications in Indian banking. Section 4 elaborates on the data sources, sampling approach, and nature of data. Section 5 outlines the research methodology and hypothesis formulation. Section 6 provides an in-depth discussion of the empirical results. Section 7 discusses the broader implications of the findings with supporting citations, and Section 8 concludes the paper with policy implications and future research directions.

II. LITERATURE REVIEW

The CAMEL model has long been a standard approach for evaluating the financial health of banks. Its adoption by banking regulators in India and around the world signifies its reliability and relevance. Various researchers have extensively employed the CAMEL framework in diverse national contexts to analyze banks' performance, risk exposure, and resilience.

Gupta and Kaur (2014) applied CAMEL ratings to assess the health of public and private sector banks in India, concluding that private sector banks generally outperformed their public counterparts, particularly in terms of capital adequacy and earnings quality. Their study emphasized the utility of CAMEL parameters in providing a holistic view of bank stability. Similarly, Singh (2018) emphasized asset quality and capital adequacy as critical parameters that influence long-term sustainability in Indian private banks.

Reddy (2021) examined the risk assessment of Indian banks using the CAMEL framework and stressed the growing importance of liquidity and digital transformation in post-pandemic times. He found that banks investing in digital capabilities fared better in terms of management efficiency and customer engagement, indicating a shift in how efficiency is measured in modern banking. Sharma (2020) conducted a study on selected private sector banks and observed that a healthy balance between interest and non-interest income is essential for long-term profitability. His findings correlated high non-performing assets (NPAs) with poor earnings quality and lower Return on Assets (ROA).

Further, global studies also affirm the significance of the CAMEL model. According to Al-Tamimi (2010), the CAMEL approach is vital for evaluating the financial performance of commercial banks in the UAE, where asset quality and liquidity emerged as most influential on stability. In a comparative study by Baral (2005) in Nepal, foreign and private banks scored higher CAMEL ratings compared to government-owned banks, primarily due to better management and asset utilization.

In the Indian context, the RBI’s Financial Stability Reports (2015–2024) have repeatedly cited CAMEL parameters as regulatory benchmarks for bank performance. The RBI has emphasized adequate capital buffers, effective NPA management, and sound liquidity as cornerstones of financial health, aligning with global Basel norms. These findings reinforce the utility of CAMEL as both a supervisory and academic tool.

Recent studies have also proposed enhancements to the CAMEL framework by integrating Environmental, Social, and Governance (ESG) factors, particularly in response to climate-related financial risks. Jain and Bhattacharya (2022) suggested incorporating sustainability metrics into the Management and Asset Quality components to reflect evolving priorities in financial assessment.

This review highlights that while the CAMEL model has stood the test of time, its effectiveness depends on contextual adaptability. For Axis Bank, which has undergone significant strategic transformation over the past decade, applying CAMEL offers a comprehensive diagnostic lens. The literature thus supports the premise and relevance of this study, particularly in evaluating private sector banking dynamics in India amid structural reforms, economic shifts, and technological disruptions.

Data

This study relies on secondary data collected from Axis Bank’s annual reports from FY2015–16 to FY2024–25, supplemented by relevant publications from the Reserve Bank of India (RBI), especially Financial Stability Reports and Trends and Progress in Banking reports. These data sources are credible, public, and widely used in financial research.

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The data include a variety of financial metrics required to assess the five CAMEL parameters. Specifically, indicators such as Capital Adequacy Ratio (CAR), Gross and Net NPA ratios, Cost-to-Income ratio, Net Interest Margin (NIM), Return on Assets (ROA), Liquidity Coverage Ratio (LCR), CASA ratio, and Credit-to-Deposit ratio are used.

A longitudinal sampling approach is adopted, covering ten fiscal years to ensure a comprehensive evaluation of Axis Bank's financial performance. This decadal approach enables the identification of temporal trends, structural changes, and the impact of macroeconomic events such as demonetization (2016), IL&FS and NBFC crisis (2018–19), and the COVID-19 pandemic (2020–21).

The master sample includes yearly aggregated values of the aforementioned ratios. To standardize analysis, data were extracted directly from consolidated financial statements and RBI's regulatory data sources. No primary data collection was undertaken, as the study's nature is exploratory and diagnostic, relying on established data repositories.

Inclusion criteria for the data involved consistency in ratio definitions, availability of figures across all years, and alignment with CAMEL components. Any anomalies or missing data points were resolved by triangulating between different RBI publications or by using 3-year moving averages where needed.

Sampling technique is purposive, focusing exclusively on Axis Bank due to its significance in the Indian private banking sector, consistent financial disclosures, and representation of systemic trends. The timeframe was chosen to reflect both high-growth and crisis phases, enabling a realistic assessment of financial soundness.

Ethical considerations include data transparency, verifiability from public sources, and adherence to academic integrity in analysis and reporting. No manipulation or transformation of original financial data was undertaken except for calculation of ratios and trend plotting.

This structured and systematic data collection and handling process ensures that the analysis is based on robust, reliable, and reproducible data, which forms the empirical foundation for subsequent methodological application and interpretation.

III. METHODOLOGY

This study employs a descriptive and diagnostic approach using the CAMEL model to assess the financial performance of Axis Bank from FY2015–16 to FY2024–25. The methodology is rooted in the evaluation of key financial ratios corresponding to each component of CAMEL: Capital Adequacy, Asset Quality, Management Efficiency, Earnings Quality, and Liquidity. The selection of this framework is justified by its regulatory acceptance, structured metrics, and proven efficacy in diagnosing banking soundness globally.

Secondary data forms the backbone of the study. Financial ratios are derived from the audited annual reports of Axis Bank and corroborated by relevant publications from the Reserve Bank of India. The year-wise analysis enhances the understanding of trends and turning points in the bank's financial history, especially in response to macroeconomic shocks like demonetization, the NBFC crisis, and the COVID-19 pandemic.

Each CAMEL parameter includes specific indicators:

- Capital Adequacy: Capital Adequacy Ratio (CAR)
- Asset Quality: Gross and Net NPA ratios
- Management Efficiency: Cost-to-Income and Credit-to-Deposit ratios
- Earnings Quality: Net Interest Margin (NIM), Return on Assets (ROA), and share of non-interest income
- Liquidity: Liquidity Coverage Ratio (LCR), CASA ratio
- The study posits the following hypotheses:
- H0: There is no significant improvement in Axis Bank's financial soundness across CAMEL indicators over the period.
- H1: There is a significant improvement in Axis Bank's financial soundness across CAMEL indicators over the period.

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The CAMEL scores are evaluated annually, and a comparative trend analysis is used to infer growth, resilience, or stress periods. Descriptive statistics are emphasized due to the nature of the study, which does not involve primary data collection or econometric modeling. This method supports transparency, replicability, and the logical interpretation of trends across a long-term horizon.

IV. RESULTS

The empirical analysis reveals an overall upward trajectory in Axis Bank's financial health. The key results from the CAMEL analysis are presented in the following tables:

Table 1: Capital Adequacy of Axis Bank (FY2015–16 to FY2024–25

Financial Year	**Capital Adequacy Ratio (CAR) %**	**Tier 1 Capital Ratio %**
2015–16	12.1	10.2
2016–17	12.7	10.8
2017–18	13.3	11.0
2018–19	13.7	11.3
2019–20	14.1	11.6
2020–21	14.9	12.2
2021–22	15.2	12.5
2022–23	15.3	12.7
2023–24	15.5	13.0
2024–25	15.7	13.2

Source: Axis Bank Annual Report (2016-2025)

Table 2: Asset Quality of Axis Bank

Financial Year	Gross NPA %	Net NPA %
2015–16	5.1	2.7
2016–17	5.9	3.0
2017–18	6.8	3.4
2018–19	6.1	3.0
2019–20	5.3	2.3
2020–21	4.4	1.9

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Table 2: Asset Quality of Axis Bank

2021–22	3.8	1.4
2022–23	3.2	1.0
2023–24	3.0	0.8
2024–25	2.9	0.7

Source: Axis Bank Annual Report (2016-2025), RBI Financial Stability Reports

Table 3: Management Efficiency of Axis Bank

Financial Year	Cost-to-Income Ratio %	Credit-to-Deposit Ratio %
2015–16	47.5	88.3
2016–17	46.2	87.5
2017–18	44.8	89.1
2018–19	43.1	88.7
2019–20	42.3	88.9
2020–21	41.0	87.2
2021–22	40.5	86.8
2022–23	40.1	88.0
2023–24	39.9	90.1
2024–25	39.8	89.5

Source: Axis Bank Annual Report (2016-2025)

Table 4: Earnings Quality of Axis Bank

Financial Year	Net Interest Margin (NIM) %	Return on Assets (ROA) %	Non-Interest Income (% of Total Income)
2015–16	3.2	0.65	25.1
2016–17	3.3	0.71	26.0
2017–18	3.4	0.80	26.5
2018–19	3.5	0.95	27.3
2019–20	3.5	1.08	28.0

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Table 4: Earnings Quality of Axis Bank

2020–21	3.6	1.21	29.0
2021–22	3.7	1.35	29.4
2022–23	3.8	1.50	30.1
2023–24	3.8	1.65	30.7
2024–25	3.8	1.78	31.2

Source: Axis Bank Annual Report (2016-2025)

Source: Axis Bank Annual Report (2016-2025)

Table 5: Liquidity Position of Axis Bank

Financial Year	Liquidity Coverage Ratio (LCR) %	CASA Ratio %
2015–16	122	41.2
2016–17	125	42.0
2017–18	128	43.1
2018–19	130	44.0
2019–20	134	44.5
2020–21	138	45.2
2021–22	145	45.8
2022–23	143	46.1
2023–24	142	46.5
2024–25	140	46.9

Source: Axis Bank Annual Report (2016-2025), RBI Reports

Each of these tables reflects a structured performance overview of Axis Bank across the CAMEL parameters, enabling clear interpretation and trend comparison over the decade.

V. DISCUSSION

The findings align with prior research on CAMEL indicators and their impact on bank soundness. Reddy (2021) found that capital adequacy improvements were vital in strengthening private sector banks post-COVID, which is affirmed in this case by Axis Bank's proactive capital planning.

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Sharma (2020) emphasized the centrality of asset quality in determining earnings and overall health. Axis Bank's decline in NPA levels aligns with this observation and underlines the importance of credit appraisal and provisioning policies.

Operational efficiency gains mirror global findings from Al-Tamimi (2010), who linked digitization and cost management to profitability. The bank's reduced Cost-to-Income ratio suggests operational re-engineering.

Earnings diversification matches Gupta and Kaur (2014), who noted that non-interest income enhances stability during low interest cycles. A consistent ROA increase supports this insight.

Liquidity stability corroborates Singh (2018), who observed that higher CASA and LCR ratios protect against external shocks and foster investor confidence. Thus, the CAMEL analysis validates the robustness of Axis Bank's financial strategy.

VI. CONCLUSION

The decade-long CAMEL analysis indicates that Axis Bank has achieved notable financial progress across all five parameters. The data points to a well-capitalized, efficiently managed, and profitably operating institution with strong asset quality and liquidity positions.

For regulators, the study confirms the CAMEL model's effectiveness in ongoing surveillance and suggests integrating ESG factors for future iterations. Investors and analysts can interpret Axis Bank's financial evolution as a model of prudent banking practices.

Bank management should sustain credit discipline, expand digital platforms, and explore fee-based income streams. The CASA-focused deposit strategy and capital buffer maintenance should be continued to withstand emerging market uncertainties.

Future research should compare CAMEL scores across multiple banks, adopt econometric testing for causality, or integrate AI for predictive modeling. Such advancements will deepen understanding of long-term bank stability and strategic response.

In summary, Axis Bank's financial transformation illustrates how structured frameworks like CAMEL can capture critical shifts and enable strategic decision-making in Indian private banking.

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