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CREDIT RISK MANAGEMENT IN COMMERCIAL BANKS

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ABSTRACT:

The banking sector plays a vital role in the stability and growth of the economy by providing a secure environment for investors and customers, this security could be ensured by using one of the tools – CAMEL approach (this approach is well documented in various financial literature, regulatory guideline and academic paper), a robust frame work used by regulatory authorities to assess the performance and the stability of the institutions. By vigorously evaluating these CAMEL approach helps banks maintain sound practices, mitigate risk and foster trust among the stakeholders.

This mainly focuses on five components – (1) Capital adequacy (2) Asset quality (3) management quality (4) earnings and (5) Liquidity.

Provides a comprehensive and effective framework to ensure sound credit risk management. Implementing these insights can help commercial banks to achieve better financial health and resilience against economic shocks.

KEYWORDS – Risk management, Financial health, Earnings and liquidity, Capital, CAMEL approach, Assets.

INTRODUCTION

The CAMEL approach is a widely used framework for evaluating the performance and financial health of banks but this paper mainly focusses on banks in South India. CAMEL stands for Capital Adequacy, Asset Quality, Management Quality, Earnings, and Liquidity. This method helps in assessing the overall stability and efficiency of banks by examining these five key components.

In the context of public sector banks in South India, the CAMEL approach is particularly relevant as it provides insights into how these banks are managing their capital, handling their assets and liabilities, maintaining effective management practices, generating earnings, and ensuring sufficient liquidity to meet their obligations.

This evaluation is crucial for identifying areas of strength and weakness, enabling regulatory bodies and stakeholders to take informed decisions to enhance the banks' performance. Earnings assess the bank's profitability and its ability to generate consistent and stable income over time. Lastly, Liquidity measures the bank's ability to meet its short-term obligations and maintain sufficient liquid assets to handle sudden financial demands. Overall, the CAMEL approach provides a thorough evaluation of a bank's financial stability and risk profile, aiding regulators and investors in making informed decisions.

Public sector banks (PSBs) in India are financial institutions where the government holds a majority stake, ensuring that they operate with the primary aim of serving the public interest and promoting financial inclusion. These banks have played a crucial role in the country's economic development, particularly after the nationalization of major banks in 1969 and 1980, which was intended to extend banking services to rural and underserved areas and support sectors like agriculture and small industries.

The number of PSBs has been reduced to 12 due to mergers and consolidations, with major players including the State Bank of India (SBI), Punjab National Bank (PNB), and Bank of Baroda (BoB). PSBs are instrumental in implementing government policies, especially those focused on financial inclusion and providing credit to priority sectors. The government has introduced various initiatives to strengthen these banks, such as recapitalization plans, governance reforms, and a push towards digitization to enhance efficiency.

However, PSBs face challenges like high levels of non-performing assets (NPAs), the need for improved governance, and competition from private sector banks and fintech companies. Despite these challenges, ongoing reforms and consolidation efforts aim to improve their performance and ensure that PSBs continue to play a vital role in supporting India’s economic growth and financial stability.

The present study focuses on performance appraisal of three public sector banks held their headquarter in south India i,e Canara Bank, Indian Bank and Indian Overseas Bank. Regression Analysis, WACC, and CAMEL model are some of the tools used to measure banks performance.

RESEARCH METHODOLOGY

PROBLEM STATEMENT

- Synonym of Bank is Trust. The word trust comes with ambit of influence in all sort of human life. Now-a-days due to increase in global presence in financial sector, the margin of earning is narrowing down and parallel to this the banks are exposed to huge amount of financial risk. An attempt is being made to analyse the risk management in banking sector.
- Asset quality remains a persistent problem, with high levels of non-performing assets (NPAs) reflecting poor loan recovery and risk management practices. Management quality is often questioned due to bureaucratic inefficiencies, limited autonomy, and slower decision-making processes, which impede the ability of these banks to adapt to changing market dynamics. Earnings have been inconsistent, with profitability under pressure from rising NPAs, higher provisioning requirements, and increased competition from private sector banks and fintech companies. Evaluation of 3 selected public sector banks in south india by using CAMEL approach shows Public sector banks accurate financial status and position.

OBJECTIVE

- To study the concept of CAMEL approach and apply its feasibility in determining the financial performance
- To evaluate the capital adequacy, Asset Quality, Management, Earnings and Liquidity of selected public sector banks of south India.

SCOPE

- The study considered a period of 1 year i.e. 2024.
- To focus on performance of PSBs from south region include Canara Bank, Indian Bank, and Indian Overseas Bank of India.

RESEARCH DESIGN

- For this analysis, Secondary data that has been used.
- Canara Bank, Indian bank and Indian Overseas Bank annual report have been used to deepen understanding of the financial performance. For data analysis and interpretations, method of ratios has been used.

AN ANALYSIS OF INDIAN PUBLIC SECTOR BANKS USING CAMEL APPROACH

- C – CAPITAL ADEQUACY
    - Capital Adequacy Ratio
    - Debt Equity Ratio
    - Coverage Ratio
    - Advances to Assets
    - Government Securities to Total Investment

- A - ASSETS QUALITY
    - Net NPA to Net Advances
    - Net NPA to Total Assets
    - Total Investment to Total Assets
    - Standard Advances to Total Advances

- M- MANAGEMENT EFFICIENCY
    - Business per Employee
    - Profit per Employee
    - Credit Deposit Ratio
    - Return on Net Worth

- E- EARNING QUALITY
    - Return on Assets
    - NIM to Total Assets
    - Operating profit to Total Assets
    - Interest Income to Total Income

- L- LIQUIDITY
    - Liquid Assets to Total Assets
    - Government Securities to Total Assets
    - Liquid Assets to Total Deposits
    - Liquid Assets to Demand Deposits

LITERATURE REVIEW

- Siva and Natarajan (2011) observed that annual CAMEL scanning helps the public sector banks to analyze that its financial health and alert the bank to take prevention steps for its sustainability.
- Chaudhry and Singh (2012) analyzed that key players as risk management, NPA levels and effective cost management and financial inclusion.
- Dhawan & Nazneen (2021) studied on earnings quality also affects profitability negatively. ROA is negatively correlate with asset quality.

LIMITATIONS

- Due to time constrain we can't go with all the public sector banks which are functioning in India
- Private banks rapidly adopt new technologies, public sector banks may lag due to slower decision-making processes, impacting their competitiveness.
- The autonomy of management in public sector banks is often restricted due to government influence, which can affect strategic decision making and operational efficiency

FURTHER RESEARCH

- Examine the impact of regulatory changes and government policies on public sector banks. Consider recent reforms, such as mergers and recapitalization efforts.
- Assess how broader economic conditions (e.g., GDP growth, inflation rates) and market dynamics affect the performance of public sector banks.

- Compare the performance of public sector banks with private sector banks and foreign banks operating in India to identify relative strengths and weaknesses.
- Review case studies or reports on specific public sector banks to gain insights into their unique challenges and strategies.
- Use historical data to identify trends and patterns in the performance of public sector banks over time.

DATA ANALYSIS

CAPITAL ADEQUACY

$$\mathbf{1. Capital\ Adequacy\ Ratio} = \frac{\text{Tier1 Capital} + \text{Tier2 Capital}}{\text{Risk Adjusted Capital}} \text{x}100$$

$$\mathbf{2. Debt\ Equity\ Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

$$\mathbf{3. Coverage\ Ratio} = \frac{\text{Loans}}{\text{Deposits}} \text{x}100$$

$$\mathbf{4. Advances\ to\ Assets} = \frac{\text{Advances}}{\text{Assets}} \text{x}100$$

$$\mathbf{5. Government\ Securities\ to\ Total\ Investment} = \frac{\text{GovernmentSecurities}}{\text{TotalInvestments}} \text{x}100$$

TABLE 1

Sl.No	**Capital Adequacy**	**Canara bank**	**Indian Bank**	**Indian overseas bank**
1	Capital Adequacy ratio	16.28	16.44	17.28
2	Debt Equity Ratio	0.66	0.32	0.49
3	Coverage Ratio	4.38	3.362	10.62
4	Advances to Assets	60.70	64.96	60.59
5	Government Securities to total investment	88.55	100.00	95.99
	Average	**34.11**	**37.01**	**36.99**
	Ranks	**2**	**1**	**3**

Capital Adequacy Ratio of three banks Canara Bank, Indian Bank and Indian Overseas Bank. Capital Adequacy is very useful to conserve stakeholder confidence & prevent bank from its bankcurrept. The Capital Adequacy Ratio for all three banks is strong, with Indian Overseas Bank leading slightly. This indicates that all three banks are well-capitalized and can absorb potential losses, which is crucial for maintaining stability in the face of financial stress.

- Indian Bank Displays the most conservative and stable financial health, with strong capital adequacy, low leverage, and a complete focus on safe investments. This positions it as a highly secure and reliable institution.
- Indian Overseas Bank Also shows strong financial health, particularly in its ability to cover liabilities and maintain capital adequacy, making it a robust bank with a slightly less conservative approach than Indian Bank.
- Canara Bank While still performing well, it is slightly more leveraged and less conservative in its investment strategy. This might suggest a higher risk-reward approach, but it is still within the bounds of strong financial health.

ASSET QUALITY

$$1.\ \textit{Net NPA to Net Advances} = \frac{Net\ NPA}{Net\ Advances} x100$$

$$2.\ \textit{Net NPA to Total Assets} = \frac{Net\ NPA}{Total\ Assets} x100$$

$$3.\ \textit{Total Investments to Total Assets} = \frac{Total\ Investments}{Total\ Assets} x100$$

$$4.\ \textit{Standard Advances to Total Advances} = \frac{Standard\ Advances}{Total\ Advances} x100$$

TABLE 2

Sl.No	Asset Quality	Canara bank	Indian Bank	Indian overseas bank
1	Net NPA to Net Advances	1.27	0.43	0.57
2	Net NPA to Total Assets	0.79	0.28	0.34
3	Total Investments to Total Assets	23.96	26.81	28.30
4	Standard Advances to Total Advances	96.5	95.7	93.8
	Average	**30.63**	**30.80**	**30.75**
	Ranks	**3**	**1**	**2**

- Indian Bank has the lowest Net NPA to Net Advances ratio, which suggests it has the highest quality loan portfolio among the three. Canara Bank has the highest ratio, indicating higher risk in its loan advances.
- Indian Bank performs the best, indicating a healthier overall asset base with fewer problematic loans. Canara Bank shows the highest percentage, suggesting potential issues with asset quality.

- Indian Overseas Bank has the highest proportion of its assets invested, which might indicate a more aggressive investment strategy compared to the other banks. Canara Bank has the lowest, possibly reflecting a more conservative approach.
- Canara Bank has the highest percentage of standard advances, suggesting better credit quality in its lending portfolio. Indian Overseas Bank has the lowest, which could imply higher exposure to risky loans.

MANAGEMENT EFFICIENCY

$$1.\ \textbf{\textit{Business per Employee}} = \frac{Total\ Business\ [Total\ Deposits + Total\ Advances]}{No.\ of Employees}$$

$$2.\ \textbf{\textit{Prof it per Employee}} = \frac{Net\ Profit}{No.\ of Employees}$$

$$3.\ \textbf{\textit{Credit Deposit Ratio}} = \frac{Total\ Advances}{Total\ Deposits} x100$$

$$4.\ \textbf{\textit{Return on Net worth}} = \frac{Profit\ after\ tax}{Equity} x100$$

TABLE 3

Sl.No	Management Efficiency	Canara bank	Indian Bank	Indian overseas bank
1	Business per Employee	1143.22	29.88	23.24
2	Profit per Employee	0.176	0.200	0.123
3	Credit Deposit ratio	70.98	73.84	74.61
4	Return on Net worth	9.20	8.56	7.95
	Average	**305.89**	**28.12**	**26.48**
	Rank	**1**	**2**	**3**

- Canara Bank has the highest overall average (305.89) and ranks first in terms of management efficiency. Its strong performance in business per employee and return on net worth highlights its effectiveness in utilizing its resources.
- Indian Bank comes in second with an average of 28.12. Despite lower business per employee, it excels in profit per employee and maintains a competitive CD ratio.
- Indian Overseas Bank ranks third with an average of 26.48. While it has a higher CD ratio, its lower business and profit per employee indicate that it might be less efficient in managing its workforce and resources.

EARNING QUALITY

$$1.\ \textit{Return on Assets} = \frac{\textit{Net Income}}{\textit{Average Assets}} x100$$

$$2.\ \textit{Net Income Margin to Total Assets} = \frac{\textit{Net Income Margin}}{\textit{Total Assets}} x100$$

$$3.\ \textit{Operating profit to Total Assets} = \frac{\textit{Operating profit}}{\textit{Total Assetds}} x100$$

$$4.\ \textit{Interest Income to Total Income} = \frac{\textit{Interest Income}}{\textit{Total Income}} x100$$

TABLE 4

Sl.No	Earning Quality	Canara bank	Indian Bank	Indian overseas bank
1	Return on Assets	5.4	6.3	8.7
2	Net Income margin to Total Assets	13.33	10	12
3	Operating profit to Total Assets	1.47	2.52	2.32
4	Interest Income to Total Income	50	50	40
	Average	**17.55**	**17.20**	**15.75**
	Ranks	**1**	**2**	**3**

- Canara Bank scores the highest average (17.55) and is ranked first. This suggests that, on balance, Canara Bank has the best earning quality among the three, driven by its high net income margin and strong reliance on interest income.
- Indian Bank follows closely with an average of 17.20, ranking second. While it performs exceptionally well in terms of operational efficiency, it lags behind slightly in net income margin and return on assets.
- Indian Overseas Bank comes in third with an average score of 15.75. Despite leading in ROA, its lower net income margin and reliance on interest income affect its overall ranking.

LIQUIDITY

$$1.\ \textit{Liquid Assets to Total Assets} = \frac{\textit{Liquid Assets}}{\textit{Total Assets}} x100$$

$$2.\ \textit{Government Securities to Total Assets} = \frac{\textit{Government Securities}}{\textit{Total Assets}} x100$$

$$3.\ \textit{Liquid Assets to Total Deposits} = \frac{\textit{Liquid Assets}}{\textit{Total Deposits}} x100$$

$$4. \textit{Liquid Assets to Demand Deposits} = \frac{\textit{Liquid Assets}}{\textit{Demand Deposits}} x100$$

TABLE 5

Sl.No	Liquidity	Canara bank	Indian Bank	Indian overseas bank
1	Liquid Assets to Total Assets	10.12	5.30	5.98
2	Government securities to Total Assets	23.81	26.81	21.60
3	Liquid Assets to Total Deposits	11.50	6.12	7.51
4	Liquid Assets to Demand Deposits	2.36	7.89	90.23
	Average	**11.95**	**11.53**	**31.33**
	Ranks	**2**	**3**	**1**

- Canara Bank has the highest percentage of liquid assets relative to its total assets at 10.12%. This suggests that Canara Bank is more conservative in holding liquid assets, which improves its ability to meet short-term obligations. Indian Bank has the lowest ratio at 5.30%, indicating it might be more invested in less liquid assets, potentially increasing risk if immediate cash needs arise.
- Indian Bank holds the highest proportion of government securities relative to its total assets at 26.81%, reflecting a strategy focused on low-risk investments. Government securities are generally considered safe, so a higher percentage indicates a more risk-averse strategy. Indian Overseas Bank, with 21.60%, has the lowest ratio, suggesting a more diversified or risk-tolerant investment strategy.
- Canara Bank again shows a stronger liquidity position, with 11.50% of its total deposits covered by liquid assets. This means it is better positioned to handle a sudden withdrawal of deposits compared to the other two banks. Indian Bank has the lowest ratio at 6.12%, potentially indicating higher exposure to liquidity risk if deposit withdrawals increase unexpectedly.
- Indian Overseas Bank has an exceptionally high ratio at 90.23%, indicating that it has a very large proportion of liquid assets relative to its demand deposits. This could mean that the bank is extremely conservative, maintaining a very high liquidity buffer to cover demand deposits. On the other hand, Canara Bank's ratio of 2.36% is quite low, suggesting it may have a much smaller liquidity buffer relative to its demand deposits, which could pose a risk in times of financial stress.
- Indian Overseas Bank leads in overall liquidity, with an average ratio of 31.33%, which gives it the top rank. This suggests that Indian Overseas Bank maintains a highly liquid position, which could be seen as a very conservative and risk-averse approach to liquidity management. Canara Bank, with an average ratio of 11.95%, comes in second, indicating a balanced approach to liquidity. Indian Bank, despite having a higher ratio of government securities to total assets, has the lowest overall liquidity position with an average of 11.53%, ranking third.

FINDINGS

- Indian Banks performs well in terms of operational efficiency But, it lags behind slightly in net income margin and return on assets.
- Indian Overseas Bank has 10.62 the highest Coverage Ratio, indicating stronger liquidity and ability to cover obligations.
- Both Canara Bank and Indian Bank 50% rely heavily on interest income, with Indian Overseas Bank being slightly more diversified.
- Canara Bank has 13.33% the highest Net Income Margin, which is a positive indicator of its earnings quality.
- Canara Bank has 9.20% the highest Return on Net Worth, indicating better earnings generation relative to shareholders' equity.
- Indian Overseas Bank has 74.61% the highest Credit Deposit Ratio, indicating a higher loan disbursement from deposits, which could suggest aggressive lending practices.
- Indian Overseas Bank has 8.7% the highest ROA, indicating it generates more profit from its assets compared to the other two banks.
- Indian Bank has 0.32 the lowest Debt Equity Ratio, indicating a lower reliance on debt compared to its equity. This is favorable from a capital adequacy perspective, suggesting lower financial risk.
- Indian Overseas Bank leads in overall liquidity, with an average ratio of 31.33%. This suggests that Indian Overseas Bank maintains a highly liquid position.

SUGGESTIONS

- Public sector banks should focus on raising additional capital through government support or market instruments to ensure they have enough buffers to absorb losses, especially in times of economic stress.
- Implement strategies to optimize the risk-weighted assets, thereby improving capital adequacy ratios without compromising on lending to productive sector
- Enhance the credit appraisal mechanisms to reduce the incidence of non-performing assets (NPAs). This includes adopting advanced analytics and credit scoring models.
- Implement more aggressive and innovative strategies for loan recovery, including engaging with professional asset management companies and using the Insolvency and Bankruptcy Code (IBC) more effective
- Focus on diversifying income by introducing new financial products and services, especially in areas like wealth management, insurance, and fee-based services.
- Accelerate the adoption of digital banking platforms to improve customer experience, operational efficiency, and financial inclusion. Invest in cybersecurity to safeguard customer data and bank operations.
- Leverage local knowledge and tailor financial products to meet the specific needs of South Indian markets, such as offering specialized agricultural loans or MSME financing.
- Enhance customer relationship management to build loyalty and trust, which can lead to a more stable deposit base and lower cost of funds.

CONCLUSION

The CAMEL approach analysis of public sector banks reveals a mixed picture of their overall health and performance. While these banks generally maintain adequate capital levels to cushion against potential losses, they often struggle with high non-performing assets (NPAs), which adversely impact asset quality and profitability. Management in public sector banks typically prioritizes stability and regulatory compliance, though they may face inefficiencies and slower adaptability compared to private banks. Earnings are often under pressure due to low margins and high provisioning for bad loans, while liquidity remains strong due to a broad deposit base. Overall, the CAMEL analysis underscores the importance of continued reforms, enhanced risk management, and capital strengthening for the long-term sustainability and competitiveness of public sector banks in the evolving financial landscape.

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