



A Study On The Performance Evaluation Of Selected Commercial Banks In India

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Abstract:

The banking sector is the backbone and key component of the financial system that drives economic development. As a key driver of economic growth, the bank supports economic activity and meets the financial needs of all sections of society. This study employs ratios and trends to evaluate the banks financial performance in terms of capital adequacy, asset quality, earning capacity, management efficiency, and liquidity. We found that the majority of the selected banks are complying with Basel minimum capital requirement norms and earning adequately. However, it is further found that as banks earning increased non-performing asset component in bank books also increased.

Key words: Basel Norms, Earning capacity, Financial position, Capital adequacy, NPA.

I. Introduction

The banking sector, a pillar of strength to the financial system, leads to economic growth and prosperity. For the smooth flow of funds or credit availability in an economy, the banking system in the country must be financially sound. The development of an economy relies on the optimum utilization of resources as well as fund deployment and operational efficiency of the various sectors. The banking sector helps in capital formation, innovation and disbursement of money in the economy, and facilitation of monetary policy. Only financially sound banks and industry can lead to a healthy financial system and efficient economy.

Banks encounter various types of risk while carrying out their business of borrowing, lending, treasury and investment operations. Traditionally, banks were more concerned about credit risk. But in today's context, banks are exposed to severe competition. Hence, they are compelled to encounter various financial and non-financial risks such as credit, operational, interest rate, foreign exchange, liquidity, commodity price, legal, reputational risks, etc.

The banking regulations ensure that a bank not only keeps sufficient capital for the risk it takes but also prevents the banks from entering into those businesses that can potentially wipe out the entire capital base. It is not possible to eliminate bank failure but it is possible to bring down the probability of failure and default to manageable levels. Bank for International Settlements introduced Basel Norms focusing on the minimum capital requirements, the supervisory review process, and market discipline requirements to manage banking risks. However, in India, these norms are generally validated by RBI to suit the Indian situation. The present paper attempts to analyse the financial performance of banks based on the CAMEL framework of Capital adequacy, Asset quality, Management efficiency, Earnings quality and liquidity to understand the effectiveness of managing risk in banks (Altman, 1968) pioneering research on identifying failing enterprises essentially transformed a longstanding practice of traditional ratio analysis by including discriminant analysis. Contemporary early warning models for financial institutions became prominent when (Sinkey Joseph, 1975) employed discriminant analysis to differentiate between troubled and stable banks. A system has been established to find banks in trouble, predict their financial deterioration, and rate their financial soundness, popularly known as the CAMEL rating system.

II. Review of Literature

(Satyanarayana, 1994) examined capital adequacy gaps in banks concerning the time schedule prescribed by the Reserve Bank of India 1994 and 1996. A critical analysis of the ratios revealed that apparent capital adequacy ratios do not necessarily reflect the true financial strength of banks. He found that Private sector banks despite their high profitability, were undercapitalised compared to their counterparts. Furthermore, the author highlighted need for banks to mobilise additional capital funds to meet requisite prudential norms which were identified as four times for private sector banks and three times for public sector bank their estimated capital levels by March 1996. (Kaur, 2010) evaluated the performance of various commercial banks operating in India through CAMEL rating. The study found that Andhra Bank and State Bank of Patiala Jammu and Kashmir Bank, HDFC bank, Antwerp Bank, and JP Morgan Chase Bank ranked best in their respective categories.

(Dash & Das, 2012) compared the performance of public sector banks with private/foreign banks under the CAMELS frameworks. The study found that private/foreign banks are far better than public sector banks in respect to management, earnings and profitability. (Kumar et al., 2012) found that private sector banks outperformed their counterparts in terms of financial soundness. However, they concluded that performance should not be assessed solely based on CAMEL ratios. Further, suggested that, based on observed trends, private sector banks are likely to achieve convergence with public sector banks more rapidly. The study by (Roman & Şargu, 2013) looked into the stability of Romanian commercial banks. Although most Romanian banks have sufficient capital, the research did find large differences in asset quality, managerial effectiveness, and profitability. The results highlighted the importance of banks enhancing their financial stability, especially considering possible market concern. (Trivedi, 2013) examined the performance of 14 Bankex listed banks in India. The study found that private sector banks Kotak Mahindra Bank, ICICI Bank and Yes Bank outperformed public sector banks like State Bank

of India, Punjab National Bank, Union Bank of India in capital adequacy and asset quality, while public sector banks lag in management efficiency and earning quality. **(Fatima, 2014)** found that top Indian banks particularly private sector banks, maintained an adequate level of Capital to risk weighted asset ratio (CRAR). Further, study stated that strong capital structure regulated environment helped the Indian banking sector not to get affected by the financial crisis. **(Gupta, 2014)** analysed the performance of public sector banks in India using the CAMEL framework. The authors found a notable disparity in banks' overall performance and suggested that banks with the lowest rankings must enhance their performance to achieve their targeted criteria. **(Dhanabhakyaam & Kavitha, 2012)** examined the financial performance of six public sector banks using ratio analysis, correlation, and regression tool to assess financial efficiency. Their findings indicated that the selected banks demonstrated strong growth rates and financial efficiency during the study period. However, they also found that public sector banks have to enhance their competitiveness with private sector banks to increase earnings and create surplus from their banking activities.

(Sangmi & Nazir, 2010) examined the financial performance of the two predominant Northern region banks, Panjab National Banks and Jammu Kashmir Banks, using CAMEL parameters. The study results stated that the banks under study demonstrate sound and satisfactory capital adequacy, asset quality, management capability and liquidity. They attributed this performance to the adoption of prudent financial management policies. **(Kouser & Saba, 2012)** used the CAMEL model to compare the performance of Pure Islamic banks, mixed banks, and conventional banks in Pakistan. The authors found that Islamic banks have adequate capital and good asset quality compared to other banks. Islamic branches of conventional banks have higher earnings than full-fledged Islamic banks and conventional banks. **(Irene et al., 2014)** examined the Spanish commercial banks' performance before and after the 2008 financial crisis and even evaluated the impact of Spanish reforms. The study used multivariable regression to identify the effect of the CAMELS rating system. The authors discovered that before or after the banking reforms, capital adequacy, management capacity, liquidity and sensitivity to market risk and bank performance. Furthermore, before and after the banking reforms liquidity was not a significant predictor of bank performance, and no significant relationship between liquidity – and bank performance which supports the prior studies. **(Hyz & Gikas, 2015)** focused on evaluating the performance of the Greek banking sector during the financial crisis using the CAMELS model. The study result showed that the overall performance of banks deteriorated during the crisis with the National Bank of Greece. Conversely, Alpha Bank and Piraeus Bank improved their standing despite facing challenges. Furthermore, they concluded that the CAMELS model is a valuable tool for identifying weak banks and suggesting necessary measures to improve the weaknesses of a bank. **(Azizud-din et al., 2016)** have examined the performance and financial health of Malaysia's Islamic and conventional banking systems. The author's findings indicated that commercial banks outperformed Islamic banks in terms of profitability, capital adequacy, asset quality, and liquidity (liquid assets to deposits and short-term funding). Islamic banks, on the other hand, demonstrated superior management capability, earning power, liquidity (liquid assets to total assets), and market risk sensitivity. The study deemed all other variables significant, except for return on asset and liquidity.

Furthermore, the study analysis revealed that asset quality did not have a significant impact on profitability. (Saeed et al., 2020) assessed the efficiency of the banking sector of Pakistan and Sri Lanka through the CAMELS ratio and panel data regression. The study discloses that capital adequacy, asset quality, liquidity, management soundness, ROE, and ROA variables significantly predict the efficiency ratio in Pakistan and Sri Lanka's banking sectors. However, sensitivity to market risk is not significantly yet positively associated with efficiency in the Pakistan and Sri Lankan banking sectors, stating that it is not affected substantially by market shock.

The reviewed literature highlights the diverse financial performance of banks across different regions and economic conditions, as evaluated through the CAMEL framework. It is observed from Indian studies that private sector banks consistently demonstrated stronger capital adequacy, asset quality, profitability, and operational efficiency.

III.Objectives of Study

- 1 To assess the selected banks compliance with Basel norms minimum capital requirement norms.
2. To evaluates the performance of selected banks using the CAMEL model.

IV. Research methodology

The study collected required data for analysis from the financial reports of 10 banks and Reserve Bank of India (RBI) database for a period of 10 years from 2014-2023. The selection of banks was based on market capitalisation ensuring the representative mix of public and private sector banks. Key financial ratios from the CAMEL model were applied to assess the financial performance of these banks across five essential dimensions: Capital adequacy, Asset quality, Management efficiency, Earning quality and Liquidity. Further, to facilitate comparisons and determine the highest-ranking banks, the data was sorted based on the average values of these ratios.

V. Analysis and Interpretation

Capital Adequacy

CAR reflects the banks' overall financial condition and the management's ability to meet the need for additional capital. It also indicates whether the bank has enough capital to absorb unexpected losses. The capital adequacy ratio acts as an indicator of the bank's leverage.

Table V.1- Capital Adequacy, Asset Quality, Management Efficiency

Public Sector Banks	Capital Adequacy				Asset Quality				Management Efficiency			
	CAR	Rank	TA /TA	Rank	NPA /TA	Rank	NPA/NA	Rank	BPE	Rank	PPE	Rank
Bank of Baroda	13.607	6	59.784	6	1.817	4	3.084	4	1954	2	4.3	7
Bank of India	13.28	7	58.100	10	2.604	2	4.517	2	1969	1	-1.66	10
Canara Bank	12.866	9	59.632	7	2.544	3	4.265	3	1676	4	1.9	8
PNB	12.407	10	58.482	9	3.497	1	6.016	1	1634	5	-1.6	9
State Bank of India	13.13	8	59.217	8	1.568	5	2.637	5	1891	3	6.681	6
Private Sector Banks												
Axis bank	16.664	4	62.013	4	0.862	7	1.351	7	1585	6	10.23	5
HDFC Bank	17.034	3	63.901	1	0.210	10	0.327	10	1515	7	20.2	1
ICICI Bank	17.679	2	60.020	5	1.361	6	2.281	6	1195	8	14.37	2
IndusInd Bank	15.462	5	63.123	2	0.379	9	0.594	9	1170	9	12.41	3
Kotak Mahindra Bank	18.942	1	62.583	3	0.560	8	0.982	8	851.9	10	11.9	4

(Source: RBI and Author's computation)

Capital Adequacy Ratio

The ratio shows owned funds in proportion to the bank's risk-weighted assets. As per the latest RBI norms, the banks in India should have a CAR of 9%. The higher the CAR value stronger the bank is considered as it ensures high safety against bankruptcy. It arrived by dividing Tier-I and Tier II capital by risk-weighted assets. Kotak Mahindra Bank has the highest CRAR of 18.94%, followed by ICICI, HDFC Bank, Axis, and IndusInd Bank. Private sector banks occupied the top 5 positions, followed by India's second-largest lender bank, Bank of Baroda. All the selected banks have maintained CRAR above the minimum requirement level of 9%.

Total Advances to Total Assets

This ratio indicates banks' aggressiveness in lending, which ultimately results in better profitability. A higher ratio of advances to bank assets is preferred over a lower one. HDFC bank has the highest Total Advances to Total Assets ratio (63.90%), followed by IndusInd Bank(63.12%) Kotak Mahindra Bank (62.58%), Axis Bank (62.01%), and Bank of Baroda (59.78%), whereas Bank of India has the lowest Total Advances to Total Assets ratio(58.1%).

As Table 1 shows, Private sector banks HDFC, IndusInd Bank, Kotak Mahindra Bank, Axis Bank and ICICI bank were aggressive in lending, followed by the Bank of Baroda, the leading public sector bank.

Asset Quality

The quality of a bank's assets reflects its overall financial strength and stability. Measuring asset quality enables the identification of nonperforming assets as a proportion of total assets, providing insights into the extent of damage this particular asset class can cause to financial performance. The declining value of assets directly affects other areas, as losses are eventually written off against capital, ultimately exposing the institution's earning capacity.

Net Non-Performing Assets to Total Assets

The usefulness of this ratio is to analyse the efficiency of the banks in relation to credit risk and debt recovery. A high level of NPAs suggests a higher chance of credit defaults that affect banks' profitability and net worth and wear down the asset's value. A higher ratio indicates greater credit risk exposure. It was found that Punjab National Bank (PNB) has the highest Net NPA/ Total Assets of (3.5%), followed by Bank of India (2.60%) and Canara bank (2.54%), whereas HDFC Bank as the leading Private sector bank has the lowest Net NPA to Total Assets of (0.21%). As we can observe from Table 1, selected private sector banks have lower ratios, showing their efficiency in handling credit risk. A lower ratio is preferable as non-payments lead to losses to the bank and poor quality of assets, but sometimes increased assets also cause a lower ratio.

Net NPA to Net Advances

The net NPA to Advances ratio measures the overall quality of a bank loan portfolio. NPA are those assets for which interest is overdue for over 90 days. Net NPA is calculated by reducing the cumulative balance of provisions outstanding at the period end from gross NPA. This ratio shows how much loans have been turned into bad debts against the total amount given as a loan. A higher ratio indicates that the bad quality of loans is increasing; thus, a lower ratio is preferable. HDFC Bank (0.33%) has the lowest Net Non-performing assets against Advances; the maximum Net Non-performing assets against Net Advances is Punjab National Bank (6.02%). It shows that the quality of Punjab National Bank loan portfolio is not as strong as that of HDFC Bank.

Management Quality

It reflects management efficiency in handling resources, maximising income, and utilising facilities productively by reducing costs in the bank.

Business Per Employees (in Rupees Lakhs)

It indicates the productivity of the bank's human force. It helps to measure the efficiency of all bank employees in generating business. A higher ratio indicates that the banks get sufficient business from their employees, which increases management efficiency, resulting in earnings for the bank. An increasing trend in revenue per employee is considered a positive signal, as it suggests that the bank is optimizing its human resources to drive greater revenue. As per Business Per Employees, Bank of India has ranked highest with Rs.1969 lakh, followed by Bank of Baroda at Rs.1954 lakh, whereas Kotak Mahindra Bank has the least Rs.851.9 lakh Business per employee.

Profit Per Employee (in Rupees Lakhs)

The Profit Per Employee metric is a key indicator of a bank's ability to generate surplus earnings per employee, reflecting workforce productivity and managerial efficiency in fund utilization. It shows the Bank's earning surplus per employee. A higher ratio indicates higher efficiency of management in handling funds. HDFC Bank has the highest Profit per employee of Rs.20.2 lakh, followed by ICICI Bank, Rs.14.37 lakh, and IndusInd Bank, Rs.12.41 lakh. In contrast, PNB and Bank of India have the negative and lowest values of Rs. -1.66 and -1.6 lakhs, respectively.

Table 2 Earning Quality and Liquidity

Public Sector Bank	Earnings				Liquidity			
	ROA	Rank	II/TI	Rank	LA/TA	Rank	LA/TD	Rank
Bank of Baroda	0.214	7	88.03	1	24.96	8	29.83	10
Bank of India	0.05	9	87.67	2	27.998	3	33.06	8
Canara Bank	0.128	8	86.05	5	28.282	2	32.67	9
PNB	-0.147	10	86.96	3	29.244	1	34.25	5
State Bank of India	0.452	6	86.2	4	26.862	4	34.18	6
Private Sector Banks								
Axis bank	0.956	5	81.27	8	23.658	9	34.03	7
HDFC Bank	1.97	1	83.79	6	25.929	7	34.55	4
ICICI Bank	1.397	4	79.9	10	23.391	10	35.54	3
IndusInd Bank	1.629	3	79.91	9	26.423	6	38.06	1
Kotak Mahindra Bank	1.844	2	83.58	7	26.587	5	36.86	2

(Source: Author's computation)

Earning Quality

A bank's capacity to maintain financial health and grow its capital base is directly related to its profitability and earnings. A strong earnings and profitability profile enhances a bank's finance expansion, capacity to absorb losses, distribution of dividends to shareholders, and maintenance of an adequate capital buffer. The most widely used earning indicator for assessing bank profitability is Return on assets (ROA), which measures how efficiently a bank utilizes its assets to generate earnings. Additionally, the Interest Income to Total Income ratio provides insights into a bank's revenue composition and reliance on core banking activities.

Return on Assets (ROA)

ROA is the net income the bank produces using its total assets. The higher the proportion of average earnings assets maintained by banks, the better would be the resulting returns on total assets. Low ROA indicates that the bank's sustainability is under threat, and the bank works with losses. The ROA of the bank shows how effectively it has turned its investments into profits. It is observable from the results that private sector banks have higher earnings compared to public sector banks, which have had negative value in recent years. The table shows that HDFC Bank has the highest ROA of 1.97%, followed by Kotak Mahindra Bank (1.84%) and IndusInd Bank (1.63%), whereas Bank of India (0.05%) and Punjab National Bank (-0.17%) has the lowest as well as negative ratio value.

Interest Income to Total Income

Interest income is a traditional and primary source of income for banks. The interest income to total income indicates the bank's ability to generate income from its primary activity, i.e., lending. In other words, this ratio measures the income from lending activity as a percentage of the total income generated by the bank in a year. Interest income includes income on advances, interest on deposits with the RBI, and dividend income. Public and private sector banks have their primary source of revenue from interest income. Bank of Baroda has the highest II/TI at 88.03%, followed by Bank of India (87.67%) and Canara Bank at 86.05%, while ICICI Bank has the lowest ratio at 79.9%. A high ratio indicates bank depends heavily on interest income for its earnings, which pressures bank lending.

Liquidity

Liquidity refers to banks' ability to meet their short-term obligations. An adequate liquidity position is a situation where an institution can obtain sufficient funds by increasing liabilities or converting its assets quickly to liquidity at a reasonable cost. Therefore, liquidity is generally assessed in terms of overall asset and liability management, as mismatching leads to liquidity risk.

Liquid Asset to Total Asset

The proportion of liquid assets to total assets indicates the overall liquidity position of the bank. Liquid assets include balance with banks (India and abroad), balance with the RBI, cash in hand, and money at call and short notice. Total assets include the revaluations of all the assets. The data indicates that Punjab National Bank has the highest available liquid assets (29.24%), followed by Canara Bank (28.28%) and Bank of India (27.99%). The least liquidity is maintained by ICICI Bank (23.39%) and Axis Bank (23.69%). It may be the reason for high Business per Employee and Profit per Employee.

Liquid Asset to Total Deposit

This ratio shows how easily the bank can pay its short-term obligations, such as depositor withdrawals. The higher the ratio, the greater the liquidity buffer, which means that the bank has a considerable share of its assets in cash or readily convertible assets. In contrast, if the ratio is low, it could mean that there is less short-term cash on hand and more reliance on long-term investments

This ratio measures the liquidity available to a bank's deposit holders. Total deposits include demand deposits, savings deposits, term deposits, and deposits of other financial institutions. This ratio indicates that IndusInd Bank (38.06%) has the maximum Liquid asset to Total deposits, followed by the Kotak Mahindra Bank (36.86%). The Bank of Baroda maintains the least liquidity (29.83%).

Table 3 Composite CAMEL Ranking Score

Public Sector Bank	Ranking											
	CAR	TA/T	NPA/T	NPA/B	BPE	PPE	ROA	II/TI	LA/TA	LA/TD	Average	Rank
Bank of Baroda	6	6	7	7	2	7	7	1	8	10	61	7
Bank of India	7	10	9	9	1	10	9	2	3	8	68	8
Canara Bank	9	7	8	8	4	8	8	5	2	9	68	9
PNB	10	9	10	10	5	9	10	3	1	5	72	10
State Bank of India	8	8	6	6	3	6	6	4	4	6	57	6
Private Sector Banks												
Axis bank	4	4	4	4	6	5	5	8	9	7	56	5
HDFC Bank	3	1	1	1	7	1	1	6	7	4	32	1
ICICI Bank	2	5	5	5	8	2	4	10	10	3	54	4
IndusInd Bank	5	2	2	2	9	3	3	9	6	1	42	3
Kotak Mahindra Bank	1	3	3	3	10	4	2	7	5	2	40	2

(Source: Author's Computation)

Table 3 shows the composite CAMEL ranking score of selected public and private sector banks. A lower composite CAMEL ranking score indicates a bank's strong financial stability, superior profitability and efficient risk management. HDFC Bank ranks first among all selected banks, indicating strong capital adequacy, asset quality and profitability, followed by Kotak Mahindra Bank and IndusInd Bank. Selected all private banks performed better over public sector banks. Punjab National Bank (ranked 10th) ranks lowest among public sector banks, primarily due to weaker asset quality and profitability metrics. SBI (Rank 6) leads the public sector category, demonstrating relatively better financial stability than other public sector banks. The rankings highlight a clear gap between private and public sector banks, where private banks are strong and efficient in financial fundamentals, asset quality, and profitability.

Conclusion

The study examines the financial performance of 10 selected commercial banks on CAMEL key indicators of capital adequacy, asset quality, earning capacity, management quality, and liquidity position. The findings indicate significant differences in the performance of banks within the sector and a comparison with banks from other sectors. The results suggest that no single public or private sector bank consistently achieved high rankings across all performance indicators. The study reflects the fluctuations in bank performance, which result in high exposure to risk. Also, the banks with the lowest ranking require strategic improvements in their performance to meet the desired standards.

While this study has attempted to assess the banks' financial performance using selected ratios comprehensively, it does not offer a definitive conclusion on overall bank performance. The study presents a broad overview, leaving scope for future research incorporating other critical aspects such as productivity analysis, branch-level performance analysis, service quality, and human resources efficiency. Additionally, one could utilize advanced analytical models, such as the CAMEL impact on performance in econometric models or Data Envelope Analysis (DEA), to examine the bank's performance from an efficiency perspective.

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