Analysing Financial Strength of Public and Private Sector Banks: A CAMEL Approach

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Abstract

Monitoring and supervision of banks has become very important due to significant Non-performing Assets and bank failures from the 1980s till now. Continuous Performance evaluation of the banking sector is therefore important to ensure financial stability of an economy. In the light of the world-wide banking crisis in recent years, CAMEL approach is a useful tool to examine the safety and soundness of banks. It also highlights the risks being faced by banks and help mitigate the potential risks which may lead to bank failures. In the present study, an attempt is made to evaluate the performance & financial soundness of selected various public & private sector banks using CAMEL approach.

Keywords:

Performance Evaluation, CAMEL Model, Public Banks, Private Banks and Ranking Method

Introduction

The economic development and financial growth of a country is critically dependent on the financial strength of its banks. The Indian banking sector has been the backbone of the Indian economy over the past few decades, helping it survive various national and worldwide economic shocks and meltdowns. It has transformed itself into one of the healthiest performers in the world banking industry seeing tremendous competitiveness, growth, efficiency, profitability and stability, especially in the recent years. The main goal of banks today is to maintain stability and make sure they are impervious to external shocks while at the same time being internally sound and sensible. In the light of the banking crisis in recent years worldwide, CAMEL (capital adequacy, asset quality, management quality, earnings and liquidity) is a useful tool to examine the safety and soundness of banks, and help mitigate the potential risks which may lead to bank failures.

This study is an attempt to evaluate the performance & financial soundness of various public & private sector banks using CAMEL approach.

Review of Literature

Banking sector has played a crucial role in the development of the Indian economy. Various scholars have made several studies on the performance of banking sector in India using CAMEL model. Some of the important studies reviewed for present paper are as under:

Prasuna (2003), analyzed the performance of Indian banks by adopting the CAMEL Model. The performance of 65 banks was studied for the period 2003-04. The author concluded that the competition was tough and consumers benefited from better services quality, innovative products and better bargains.

Wirnker and Tanko (2006)evaluated the adequacy of CAMEL approach in capturing the overall performance of a bank. The study concluded that no one factor in CAMEL suffices to depict the overall performance of a bank. The best ratio for capital adequacy was found to be the ratio of shareholder's fund to total risk weighted assets.

Uppal and Kaur (2007), analysed the efficiency of all the bank groups in the post banking sector reforms era i.e.. 1999-2000 to 2004-05. The paper concluded that the efficiency of all the bank groups increased in the second post banking sector reforms period but these banking sector reforms were more beneficial for new private sector banks and foreign banks.

Hugar S.S. and Vaz N.H. (2008), evaluated the customer orientation in 5 public sector banks 3 new private sector and 3 foreign banks are selected. The study concluded that new private sector banks had more ATMs as on March 2006 followed by SBI where 77.5% branches were fully computerized and 18.2% were partially computerized. Business per employee and profits per employee was higher in foreign banks where SBI had received more number of complaints followed by ICICI. The study also suggested adopting CRM by public sector banks to stand strong in competitive environment.

Rao N. and Tiwari S. (2009), studied the efficiency of 5 public sector banks selected on the basis of deposits size in 2005. The study concluded that all employee efficiency factors had insignificant influence on deposits, assets and advances, from branch efficiency, only operating profits per branch and from operating efficiency, cost of deposits had significant and positive impact. Liquidity influencing factors and ultimate profit factors do not influence deposits, assets and advances significantly although all profit factors had negative effect. The study also suggested some measures to improve efficiency.

Sangmi and Nazir (2010) analysed the performance of biggest nationalised bank (PNB) and biggest private sector bank (J&K Bank) using the CAMEL model for the period from 2001-2005. The study exhibited that the position of both the banks under study was sound and satisfactory in case of capital adequacy, asset quality, management capability and liquidity.

In light of the reviewed literature, it can be seen that several attempts have been made to analyse the performance of the banks in India. The present study is another attempt in this direction.

Research Methodology

The study was analytical in nature and based on secondary data covering a period from2010-13. Thedata was collected from the annual reports of following public & private sector banks.

Public Banks:

1) Bank of Baroda
2) IDBI Bank
3) PNB Bank

Private Banks:

1) Axis Bank
2) ICICI Bank
3) HDFC Bank

The performance of the banks was measured through different ratios of CAMEL model (Table 1).

Table 1: CAMEL Ratios

Sr. No.	CAMEL Parameters	Ratios used in the present study
1	C	Capital Risk Adequacy Ratio Debt Equity Ratio Total Advances to Total Assets Ratio
2	A	Gross NPA Ratio Net NPA Ratio Total Investment to Total Assets Ratio
3	M	Total Assets to Total Deposits Ratio Asset Turnover Ratio Net Profit Margin Ratio

4	E	Dividend Payout Ratio Return on Assets Ratio Interest Income to Total Income Ratio
5	L	Credit Deposit Ratio

All the banks were first individually ranked based on the sub-parameters of each parameter. The sum of these ranks was then taken to arrive at the group average of individual banks for each parameter. Finally the composite rankings for the banks were arrived at after computing the average of these group averages. Banks were ranked in the ascending/descending order based on the individual sub-parameter.

The CAMEL parameters are discussed below:

Capital Adequacy Ratio: Capital adequacy ratios ("CAR") are a measure of the amount of a bank's core capital expressed as a percentage of its risk-weighted assets.

Capital adequacy ratio is defined as:

CAR = (Tier 1 Capital + Tier 2 Capital) / Risk weighted Assets

TIER 1 CAPITAL **-** (paid up capital + statutory reserves + disclosed free reserves) **-** (equity investments in subsidiary + intangible assets + current and brought forward losses)

TIER 2 CAPITAL – i. Undisclosed Reserves, ii. General Loss reserves, iii. hybrid debt capital instruments and subordinated debts where risk can either be weighted assets (a) or the respective national regulator's minimum total capital requirement. If using risk weighted assets,

$CAR = [(T1 + T2) / a]$ 10% percent threshold varies from bank to bank (10% in this case, a common requirement for regulators conforming to the Basel accords) is set by the national banking regulator of different countries.

Two types of capital are measured: tier one capital (T1 above), which can absorb losses without a bank being required to cease trading, and tier two capital (T2 above), which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

Asset Quality: It is a measure to account for the extent of Non-Performing Asset in the portfolios of the banks and the extent of damage this particular asset class can have on the financial performance.

Management Quality: The management dimension in CAMEL analysis has assumed unprecedented significance. This measure captures the possible effect of management efficiency on the financial performance of the banks.

Earnings Quality: Banks depend on their quality of earnings for performing activities like funding dividends, maintaining adequate capital levels, finding new opportunities for bank to grow, entering new geographic and product markets and maintaining the competitive outlook.

Apart from the sources of earning, the following dimensions also have significant impact on the financial performance of the banks. i. Level, trend, and stability of earnings, ii. Quality and sources of earnings. iii. Ability to augment capital through retained earnings. iv. Exposure to market risks. v. Provisions for loan losses

Liquidity: Liquidity management in banks has assumed critical importance due to competitive pressures and the easy flow of foreign capital in the domestic markets. The liquidity crisis in the banks can adversely impact the financial performance of the banks. Inability of the banks to manage its short term liquidity liabilities and loan commitments can adversely impact the performance of the banks by substantially increasing its cost of fund and over exposure to unrated asset categories. The cash flow from principal and interest payments could vary due to the types of loans on the balance sheet impacting the liquidity position.

The selected banks have been ranked on the basis of the values of the ratios.The banks with higher average value of the ratios are ranked higher. The bank with best ratio is given rank one and so on up to rank six with an interval of one. In case of tie the average rank is assigned to the banks. All the ratios having higher value get higher rank except the ratios relating to Asset Quality Position which gets the rank in reverse order i.e. the bank with highest average gets lowest rank.

Results & Discussion

The ranks of selected banks through different ratios using CAMEL rating methodology were calculated. The various ratios measuring capital adequacy of selected banks and the ranks assigned to them are presented in Table 2.

Table 2: Camel Ratings (2010-13): Capital Adequacy

Bank	CAR (%)		D/E (times)		TAdv/TAst (%)		Group	
	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Axis Bank	14.44	3	1.40	4	58.65	4	3.67	4
HDFC Bank	16.50	2	0.76	1	58.46	5	2.67	1.5
IDBI Bank	13.78	5	3.13	6	61.70	3	4.67	6
ICICI Bank	18.91	1	2.16	5	53.63	6	4.00	5
PNB Bank	12.59	6	1.34	3	64.19	1	3.33	3
BOB Bank	14.16	4	0.92	2	62.68	2	2.67	1.5

It is clear that all banks have maintained higher CAR than the prescribed level. It is found that ICICI Bank secured the top position with highest average CAR of 18.91 followed by HDFC Bank (16.50), Axis Bank (14.44). PNB bank was at the bottom most position with a least average CAR of 12.59. In terms of Debt equity ratio HDFC bank is at the top position with least average of 0.76 followed by BOB (0.92) and PNB Bank (1.34). In case of Total Advances to Total Assets, PNB Bank was at the first position with highest average of 64.19 followed by BOB (62.68) and IDBI Bank (61.70). ICICI Bank was at the bottom most position with least average of 53.63.

On the basis of group averages of three sub-parameters of capital adequacy HDFC Bank & BOB was at the top position with group average of 2.67, followed by PNB Bank (3.33) and Axis Bank (3.67). IDBI Bank stood at the last position due to its poor performance in CAR and D/E.

Table 3 presents the various ratios representing asset quality position of selected banks and the ranks assigned to them.

Table 3: Camel Ratings (2010-13): Asset Quality Position

Bank	Gross NPA Ratio (%)		Net NPA Ratio (%)		TI/TA (%)		Group	
	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Axis Bank	1.52	2	0.31	2	31.90	5	3.00	3
HDFC Bank	1.04	1	0.19	1	27.43	3	1.67	1
IDBI Bank	2.51	4	1.42	5	28.70	4	4.33	4.5
ICICI Bank	3.82	6	0.87	4	32.57	6	5.33	6
PNB Bank	3.00	5	1.57	6	26.35	2	4.33	4.5
BOB Bank	1.78	3	0.72	3	20.22	1	2.33	2

HDFC Bank was at the top position with an average Gross NPA ratio of 1.04, followed by Axis Bank (1.52),BOB (1.78). ICICI was at the last position with an average of 3.82. In case of Net NPA ratio, it's again HDFC Bank was at the top position with a least average of 0.19 followed by Axis Bank (0.31), BOB (0.72). In terms of TI/TA, BOB was at the first position with an average of 20.22 followed by PNB (26.35), HDFC bank (27.43). ICICI Bank was at the last position with highest average of 32.57.

On the basis of group averages of sub-parameters of assets quality, the HDFC Bank was at the top position with group average 1.67, followed by the BOB (2.33), Axis Bank (3.00). ICICI Bank occupies the last position.

The various ratios representing management quality of selected banks and their ranks are depicted in Table 4.

Table 4: Camel Ratings (2010-13): Management Quality

Bank	TA/TD (%)		Asset Turnover Ratio (%)		Net Profit Margin Ratio (%)		Group	
	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Axis Bank	76.78	5	9.22	2	15.98	3	3.33	3
HDFC Bank	78.94	3	9.62	1	16.04	2	2.00	1.5
IDBI Bank	86.41	2	8.56	5	7.53	6	4.33	5
ICICI Bank	98.14	1	8.57	4	16.24	1	2.00	1.5
PNB Bank	77.87	4	8.86	3	12.27	5	4.00	4
BOB Bank	72.93	6	7.13	6	14.62	4	5.33	6

ICICI was at the top most position with an average TA/TD of 98.14 followed by IDBI (86.41), HDFC Bank (78.94). In terms of asset turnover ratio HDFC secured the top position with 9.62 followed by Axis Bank (9.22), PNB Bank (8.86). At the front of net profit margin ratio, ICICI was at the first place with an average 16.24, followed by HDFC Bank (16.04), Axis Bank (15.98). IDBI Bank was at the bottom.

On the basis of group averages of sub-parameters, HDFC Bank & ICICI Bank were at the top position with group average 2, followed by Axis (3.33), PNB (4). BOB was positioned at last due to its poor performance in TA/TD and Asset Turnover Ratio.

Table 5 presents the earning quality positions of sample banks in terms of dividend pay-out ratio, return on assets ratio and interest income to total income ratio.

Table 5: Camel Ratings (2010-13): Earnings Quality

Bank	Dividend Pay-out Ratio (%)		Return on Assets Ratio (%)		II/TI Ratio (%)		Group	
	Avg	Rank	Avg	Rank	Avg	Rank	Avg	Rank
Axis Bank	19.00	6	1.69	1	79.13	6	4.33	6
HDFC Bank	22.73	3	1.54	2	82.31	4	3.00	2
IDBI Bank	24.98	2	0.64	6	89.97	1	3.00	2
ICICI Bank	33.11	1	1.38	3	81.37	5	3.00	2
PNB Bank	19.85	4	1.18	4	89.57	3	3.67	4
BOB Bank	19.21	5	1.04	5	89.64	2	4.00	5

The ICICI Bank was ranked highest in case of Dividend Pay-out Ratio with an average of 33.11 followed by IDBI Bank (24.98), HDFC Bank (22.73). Axis Bank was at the bottom most position with least average of 19. I n case of Return on Assets Ratio,Axis Bank was at the first position with an average of 1.69, followed by HDFC Bank (1.54). IDBI Bank was at the last place. In case of II/TI ratio, IDBI Bank stood at the top place.

On the basis of group averages, HDFC Bank, IDBI Bank & ICICI Bank were at the top position with group average (3) followed by Punjab National Bank (3.67). Axis Bank performed poorly in Dividend Pay-out Ratio & II/TI Ratio and stood at last place.

Table 6 presents liquidity position based on credit deposit ratio of sample banks.

Table 6: Camel Ratings (2010-13): Liquidity

Bank	Credit Deposit Ratio (%)	
	Avg	Rank
Axis Bank	76.78%	6
HDFC Bank	78.94%	4
IDBI Bank	86.51%	2
ICICI Bank	98.14%	1
PNB Bank	77.87%	5
BOB Bank	85.22%	3

ICICI Bank stood at the top position with average 98.14 followed by IDBI Bank (86.51), BOB (85.22). Axis Bank was placed at last.

CAMELS: Overall Ranking

Table 7 shows the overall ranking for each parameter of CAMEL Model.

Table-7: Composite ranking: Overall Performance

Bank	C	A	M	E	L	Avg	Rank
Axis Bank	3.67	3.00	3.33	4.33	6	4.07	5.5
HDFC Bank	2.67	1.67	2.00	3.00	4	2.67	1
IDBI Bank	4.67	4.33	4.33	3.00	2	3.67	4
ICICI Bank	4.00	5.33	2.00	3.00	1	3.07	2
PNB Bank	3.33	4.33	4.00	3.67	5	4.07	5.5
BOB Bank	2.67	2.33	5.33	4.00	3	3.47	3

It is clear from table 7 that HDFC bank is ranked at top position with composite average of 2.67, followed by ICICI (3.07), BOB (3.47), Axis Bank and PNB were at the bottom most position.

Conclusion

In the process of evaluation of performance of various banks, our study concluded that, different banks have obtained different performances with respect to CAMEL ratios. Our study also concluded the following:

- The HDFC Bank & BOB stood at top position in terms of capital adequacy.
- In terms of asset quality, the HDFC Bank was at top most position.
- In context of management quality, HDFC Bank & ICICI Bank positioned at first.
- In terms of earnings quality, HDFC Bank, ICICI Bank & IDBI Bank obtained the top position.
- The ICICI Bank was ranked top in liquidity criterion.
- The overall performance table shows that, HDFC Bank is ranked first followed by ICICI Bank & Bank of Baroda.

Most of these banks, including HDFC, ICICI, IDBI, lie in a similar rank region. However, these banks' assets etc. vary a great deal and they cannot be judged solely based on the absolute values of the CAMEL ratios. Looking at the trend, we can say that private banks are growing at a faster pace than public sector banks.

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