Camel model analysis of select public and private sector banks in India

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ABSTRACT

The financial performance of banks has gained significant importance in recent years. It is a blue print of the financial affairs of a business concern. Financial performance analysis is mainly done to compare the growth, profitability and financial soundness of banks by diagnosing the information contained in the financial statements. It is also useful for the measurement of the overall financial health of the organization over a given period of time. The paper evaluates the financial performance of select public and private sector banks for a five years period from 2016 to 2020.CAMEL (Capital Adequacy, Asset, Management Efficiency, Earnings, Liquidity) model measures the performance of banks on the basis of five parameters viz. Capital adequacy, Asset quality, Management quality, Earning quality and Liquidity quality.

Keywords: *Axis Bank, Banks, CAMEL Model, Performance, SBI.*

1. INTRODUCTION

CAMEL model is a ratio based tool to evaluate financial performance of banks. It was developed in 1970s by US banking regulatory supervisors (the Federal Reserve, the Office of the Comptroller of the currency, National Credit Union Administration, the Federal Deposit Insurance Corporation). In India, RBI adopted this approach in 1996 following the recommendations of Padmanabham Working Group (1995) committee. The financial strength of banks is judged based on five different parameters under the acronym C (Capital Adequacy), A (Asset), M (Management Efficiency), E (Earnings), and L (Liquidity).

2. LITERATURE REVIEW

1)   B. Lavanya and T Srinivas (2018) in their paper "Performance Analysis Using CAMEL Model – A Study of Select Private Banks" studied five select private banks, ICICI Bank, HDFC banks, Kotak Mahindra Bank, Axis Bank and YES Banks. The paper concluded that although ICICI bank has performed well during the study period but, none of the banks showed continuous growth with respect to the CAMEL parameters.

2)   Vinod Kumar and Bhawna Malhotra (2017) in their paper "A CAMEL Analysis of Private Banks in India" evaluated the financial soundness and performance of select private banks in India for the period from 2007 to 2017.In order to reach the conclusion CAMEL model parameters, averages and composite ranking has been applied. Amongst all the five selected banks Axis bank is ranked first followed by ICICI bank, Kotak Mahindra, HDFC bank and IndusInd bank. Hence they concluded that Axis bank is the safest bank compared to others under the study.

3)   G.L. Meena (2016) in her paper "Financial Analysis of Select Banks Using CAMEL Approach - A study With Reference to Indian Banking Industry" analysed banks by applying CAMEL model parameters. Four ratios namely, debt–equity ratio, total assets to deposit ratio, earnings per employee, net NPA to total advances ratio were used as dependent variable to assess the impact their on ROA studied as independent variable.

3. STATEMENT OF THE PROBLEM

Private sector banks always have upper hand compare to public sector banks. Thus, the study is undertaken to analyse the financial strength of the public and private sector banks.

4. OBJECTIVES OF THE STUDY

(a)   To analyse the financial performance of select public and private sector banks.
(b)   To rank the banks according to the CAMEL model parameters.

5. HYPOTHESES

H $_{(O)}$: There is no difference in financial performance of select Public and Private sector banks.

6. SCOPE OF THE STUDY

The present study is undertaken to analyse the financial performance of State Bank of India (SBI) and Axis Bank through CAMEL model.

7. RESEARCH METHODOLOGY:

7.1 Data source: The data collected is from secondary sources. The financial data is collected from RBI website and annual reports of banks.

7.2 Period of the study: The study period is of five years period from 2016-2020.

7.3 Sampling: The sample banks are top banks selected based on profitability. One from each sector is taken as sample namely, State Bank of India (SBI) from public sector banks and Axis Bank from private sector banks.

7.4 Statistical tools: Different ratios under five parameters of CAMEL model were applied to analyse the financial performance of banks. The calculated ratios were then ranked and further they are used for composite ranking.

7.5 Limitations of the study: The data collected from RBI website and banks website may not be uniform since annual reports of banks may be window dressed to hide the actual position of banks. Therefore, data might lack accuracy and reliability.

7.6 Methodology: CAMEL framework is applied to analyse the financial soundness of the select banks under study. Parameters are selected based on data availability and its relevance for the study. Table 1 presents the selected parameters for the study under each acronym of CAMEL model.

Table 1: CAMEL Model components

Category	Variable	Significance	Criteria
CAPITAL ADEQUACY	Capital adequacy ratio	It is an amount to measure a bank's core capital expressed as a percentage of its risk weighted Assets.	Higher the ratio, better it is.
	Tier I Capital	It is the amount a bank uses to function on a regular basis.	According to Basel III norms 10.5% is the minimum tier I ratio.
	Tier II Capital	It is the supplementary amount considered less reliable than tier I.	According to Basel III norms 2% is the minimum tier I ratio.
ASSET QUALITY	Ratio of term loans to total advances	It measures the outstanding term loans as percentage to total advances.	Lower the ratio, better it is.
	Ratio of secured advances to total advances	It measures the secured advances as a percentage to total advances	Lower the ratio, better it is.
	Ratio of net NPA to net advances	It measure the level of net NPA in net advances	Lower the ratio, better it is.
MANAGEMENT QUALITY	Credit - Deposit Ratio	It measures the efficiency of management in converting the bank's deposit into advances.	Higher the ratio, better it is.
	Return on Equity	It discloses how much bank's investment is converted into income.	Higher the ratio, better it is.
EARNING QUALITY	Net Interest Margin	It measures the difference between interest earned and interest expended.	Higher the ratio, better it is.
	Ratio of operating profits to total assets	It indicates operating income of bank invested in total assets.	Higher the ratio, better it is.
	Return On Assets	It discloses how much returns are earned by assets deployed by bank.	Higher the ratio, better it is.
LIQUIDITY QUALITY	Cash - Deposit Ratio	It measures the cash balance in relation to the customers' deposits.	Higher the ratio better it is.

	Investment - Deposit Ratio	It measures the efficiency of management in converting the bank's deposit into investments.	Higher the ratio better it is.
	Government Securities to total assets	It measures the government securities in relation to total assets of bank.	Higher the ratio better it is.

8. RESULTS AND ANALYSIS
8.1 CAPITAL ADEQUACY RATIO
From table 2(a) it is found that Axis bank is ranked first with highest average CAR. Whereas, SBI is ranked as second.

Table 2(a): CAMEL Rating – CAPITAL ADEQUACY RATIO

Ratios	Bank/Year	2016	2017	2018	2019	2020	Average	Rank
Capital adequacy ratio	SBI	13.12	13.11	12.60	12.72	13.06	12.92	2
	Axis Bank	15.29	14.95	16.57	15.84	17.53	16.04	1
Tier I Capital	SBI	9.92	10.35	10.36	10.65	11.00	10.46	2
	Axis Bank	12.51	11.87	13.04	12.54	14.49	12.89	1
Tier II Capital	SBI	3.20	2.76	2.24	2.07	2.06	2.47	2
	Axis Bank	2.78	3.08	3.53	3.30	3.04	3.15	1

Source: www.rbi.org.in

On the basis of group average of three ratios of capital adequacy as presented in table 2(b) Axis bank is ranked first with composite average of 1.33.

Table 2(b): COMPOSITE CAPITAL ADEQUACY RATIO

Bank/Ratios	Capital adequacy ratio		Tier I Capital		Tier II Capital		Composite	
	%	Rank	%	Rank	%	Rank	Average	Rank
SBI	12.92	2	10.46	2	2.47	2	1.66	2
Axis Bank	16.04	1	12.89	1	3.15	1	1.33	1

8.2 ASSET QUALITY RATIO
From table 3 it is found that SBI banks is at top position with highest average ratios with respect to term loans to total assets ratio and secured advances to assets ratio. On the other hand Axis bank is at top position in net NPA to net advances ratio.

Table 3(a): CAMEL Rating – ASSET QUALITY RATIO

Ratios	Bank/Year	2016	2017	2018	2019	2020	Average	Rank
Term loans to total advances	SBI	53.28	56.78	57.94	60.80	65.91	58.94	1
	Axis Bank	70.11	7.25	65.67	66.47	69.83	55.87	2
Secured advances to total advances	SBI	78.43	81.99	81.38	76.08	75.95	78.77	1
	Axis Bank	76.37	77.86	71.23	72.13	72.54	74.03	2
Net NPA to net advances	SBI	3.81	3.71	5.73	3.01	2.23	3.70	2
	Axis Bank	0.74	2.27	3.64	2.20	1.62	2.09	1

Source: www.rbi.org.in

On the basis of group average of three ratios of asset quality as presented in table 3(b) Axis bank is ranked first with composite average of 1.66.Due to SBI's low performance in net NPA to advances.

Table 3(b): Composite asset quality ratio

Bank/Ratios	Term loans to total advances		Secured advances to total advances		Net NPA to net advances		Composite	
	%	Rank	%	Rank	%	Rank	Average	Rank
SBI	58.94	1	78.77	1	3.70	2	1.33	2
Axis Bank	55.87	2	74.03	2	2.09	1	1.66	1

8.3 MANAGEMENT EFFICIENCY RATIO
Table 4 shows the Management efficiency ratios and it is found that Axis bank is ranked first under this parameter with highest average ratios of Credit Deposit as 92.21 and ROE as 6.70.

Table 4(a): CAMEL Rating – Management Efficiency Ratio

Ratios	Bank/Year	2016	2017	2018	2019	2020	Average	Rank
Credit – Deposit Ratio	SBI	84.57	76.83	71.49	75.08	71.73	75.94	2
	Axis Bank	94.64	90.03	96.92	90.21	89.27	92.21	1
Return On Equity (ROE)	SBI	7.30	6.31	-3.21	0.39	6.40	3.44	2
	Axis Bank	16.81	6.76	0.60	7.19	2.15	6.70	1

Source: www.rbi.org.in

On the basis of group average of two ratios of management quality as presented in table 4(b) SBI is ranked first with composite average of 2.

Table 4(b): Composite management efficiency ratio

Bank/Ratios	Credit – Deposit Ratio		Return On Equity		Composite	
	%	Rank	%	Rank	Average	Rank
SBI	75.94	2	3.44	2	2	1
Axis Bank	92.21	1	6.70	1	1	2

8.4 EARNING QUALITY RATIO

Table 5 depicts that Axis bank is ranked as first in terms of earning quality followed by SBI .Axis bank's average earnings ratio namely, NIM, operating profits to total assets and ROA stands at 3.05, 2.80 and 0.65 respectively.

Table 5(a): CAMEL Rating – Earning Quality Ratio

Ratios	Bank/Year	2016	2017	2018	2019	2020	Average	Rank
Net Interest Margin (NIM)	SBI	2.60	2.44	2.43	2.48	2.57	2.50	2
	Axis Bank	3.36	3.17	2.88	2.91	2.94	3.05	1
Operating profits to total assets	SBI	1.96	2.01	1.93	1.55	1.76	1.84	2
	Axis Bank	3.22	3.08	2.41	2.55	2.73	2.80	1
Return on Assets (ROA)	SBI	0.46	0.41	-0.19	0.02	0.38	0.22	2
	Axis Bank	1.72	0.65	0.04	0.63	0.20	0.65	1

Source: www.rbi.org.in

On the basis of group average of three ratios of earning quality as presented in table 5(b) SBI is ranked first with composite average of 2 because higher the earnings ratio, better it is for the bank.

Table 5(b): Composite earning quality ratio

Bank/Ratios	Net Interest Margin (NIM)		Operating profits to total assets		Return on Assets (ROA)		Composite	
	%	Rank	%	Rank	%	Rank	Average	Rank
SBI	2.50	2	1.84	2	0.22	2	2	1
Axis Bank	3.05	1	2.80	1	0.65	1	1	2

8.5 LIQUIDITY QUALITY RATIO

From table 6 it is found that Axis bank is at top position with highest average ratios of 10.46 with respect to cash deposit ratio. On the other hand SBI is at top position in terms of investment deposit ratio and government securities to total assets with 35.09 and 21.27.

Table 6(a): CAMEL Rating – Liquidity Quality Ratio

Ratios	Bank/Year	2016	2017	2018	2019	2020	Average	Rank
Cash – Deposit Ratio	SBI	0.46	6.26	5.56	6.08	32.30	10.13	2
	Axis Bank	6.25	7.45	7.82	6.40	24.40	10.46	1
Investment – Deposit Ratio	SBI	33.26	37.46	39.20	33.22	32.30	35.09	1
	Axis Bank	36.40	31.08	33.92	31.90	24.49	31.56	2
Government Securities to total assets	SBI	19.49	21.26	24.56	20.7	20.33	21.27	1
	Axis Bank	17.52	15.06	14.66	14.58	13.32	15.03	2

Source: www.rbi.org.in

On the basis of group average of three ratios of liquidity quality as presented in table 6(b) Axis bank is ranked first with composite average of 1.66 as higher the liquidity ratio, better it is for the bank.

Table 6(B): Composite Liquidity Quality Ratio

Bank/Ratios	Cash – Deposit Ratio		Investment – Deposit Ratio		Government Securities to total assets		Composite	
	%	Rank	%	Rank	%	Rank	Average	Rank
SBI	10.13	2	32.30	1	21.27	1	1.33	2
Axis Bank	10.46	1	24.49	2	15.03	2	1.66	1

9. OVERALL PERFORMANACE (COMPOSITE RANKING) OF SELECT BANKS

Table 7: Overall Ranking of Selected Public and Private Sector Banks

Bank/Ratios	C	A	M	E	L	AVERAGE	RANK
SBI	2	2	1	1	2	1.6	1
Axis Bank	1	1	2	2	1	1.4	2

Above table 7 depicts the overall ranking of banks. It is found that SBI is ranked first under Management quality and Efficiency quality ratio parameter. On other the hand Axis bank is ranked first under Capital adequacy, Asset quality and Liquidity quality ratios. It is found that SBI is ranked first under composite ranking through CAMEL model analysis over the five years period.

10. CONCLUSION

After considering overall performance of select banks assessed through CAMEL Model it can be concluded that, even though SBI has shown poor performance in terms of Capital adequacy, Asset quality and Liquidity quality ratios, it is still ahead of Axis bank because of good Management quality and Efficiency quality ratio. Therefore financial performance of Public sector banks is better than Private sector banks.

11. REFERENCES

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