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A CAMEL MODEL ANALYSIS OF PRIVATE BANKS IN INDIA

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ABSTRACT

Performance evaluation of the banking sector is an effective measure and indicator to check the soundness of economic activities of an economy. In the present study an attempt has been made to evaluate the performance & financial soundness of selected Private Banks in India for the period 2007-2017. CAMEL approach has been used to examine the financial strength of the selected banks. Composite Rankings, Average, and Covariance has been applied here to reach conclusion through the comparative and significant analysis of different parameters of CAMEL. Axis bank is ranked first under the CAMEL analysis followed by ICICI bank. Kotak Mahindra occupied the third position. The fourth position is occupied by HDFC bank and the last position is occupied by IndusInd bank amongst all the selected banks.

KEYWORDS: *Private Banks, Financial Performance, CAMEL Model.*

INTRODUCTION

Banking sector is an important component of financial system plays a key role in the economic development of countries and it helps in stimulation of Capital formation, innovation and monetization in addition to facilitation of monetary policy (Said & Tumin, 2011). Indian banking industry has undergone several changes during the liberalization process. Indian banking sector has been dominated by public sector banks since 1969 when all major banks were nationalised by the Indian government. However, after liberalisation in government banking policy in the 1990s old and new private sector banks have grown faster and bigger over the last two decades by using the latest technology, providing contemporary innovations and monetary tools and techniques. The Indian banking system emerged unhurt from the global financial crisis of 2008, but the subsequent economic slowdown (barring 2009-10) has exerted pressure on banks' profitability and capital. Private sector banks have seen improvement in asset quality and efficiency parameters, whereas public sector banks have seen declines in both areas (Baru, 2010). Sound financial health and performance evaluation of a bank is significant for the depositors, shareholders, employees and the whole economy of a country because it determines banks' capabilities to compete in the sector and has a critical role for the development of the sector. As a result to this statement, efforts have been made from time to time, to measure the financial position of each bank and manage it efficiently and effectively (Mohiuddin, 2014). It is of great importance to evaluate the overall performance of banks by implementing a regulatory banking supervision framework. One of such measures of supervisory information is the CAMEL rating system which was put into effect firstly in the U.S. in 1979, and now it has been proved to be a useful and efficient tool in response to the financial crisis in 2008 by the U.S. government (Dang, 2011).

This study is organized as follows: the next section following the introduction discusses the relevant literature. The third section defines the Objective and Methodology of the study. In fourth section results and analysis are described, and the final section presents the main conclusions and suggestions.

LITERATURE REVIEW

Mathuva (2009) examined the relationship between Cost Income Ratio (CIR), Capital Adequacy Ratio (CAR) and profitability for the period 1998 to 2007. The study found that capital adequacy had differential impact on the profitability of the bank. **Mishra et al (2012)** analyzed the performance of 12 public and private sector banks for the period 2000-2011 by using CAMEL approach. It was concluded that private sector banks were growing at faster pace as compared to public sector banks. Union bank and SBI had displayed low economic soundness. **Misra(2013)** assessed the performance and financial soundness of State Bank Group using CAMEL approach. The study concluded that there is a requirement to improve its position in respect to asset quality and capital adequacy. **Erol (2013)** compared the performance of Islamic banks against conventional banks in Turkey during the period of 2001-2009. The results showed that Islamic banks performed better in profitability and asset management ratios compared to conventional banks but slow in sensitivity to market risk criterion. **Rostami (2015)** analyzed the impact of each parameter of CAMELS model on the performance of Iranian banks. Q-Tobin's ratio was used as performance indicator in this study. It was found that there was significant relation between each category of camel model and Q-Tobin's ratio as bank's performance ratio. **Majumdar (2016)** measured the financial performance of 15 banks in Bangladesh for the period 2009-2013. CAMEL model had been used to examine the financial soundness of selected banks. Composite Ranking, average and ANOVA test had been applied to the data. The study concluded that there had been significant difference in the performance of selected banks. The study suggested that banks should take required steps to recover their shortcomings. **Ramya (2017)** analyse the financial performance of State Bank of India for the study period 2012-2016 through the use of CAMEL approach. It was concluded that there is a need to take necessary steps to improve the position of SBI in the context of few parameters i.e., debt-equity, operating profit, and non-interest income to total income. **Singh (2017)** examined the capital adequacy performance of private and public sector banks in India for a period of 2006-2015. The study found that all the banks had sound capital adequacy position except Central Bank of India.

OBJECTIVE & RESEARCH METHODOLOGY

The main purpose of this paper is an attempt to compare the performance of selected Private Banks and to investigate the factors that mainly affects the financial performance of the selected banks in India. The present study is Descriptive cum exploratory in nature as it try to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables. Top five private sector banks i.e. HDFC Bank, ICICI Bank, Kotak Mahindra, Axis Bank, IndusInd Bank; as per their market capitalization are selected from the listed banks on BSE. This study is purely based on secondary data which is collected from annual reports of selected banks, Capitaline data base and Reserve Bank of India, for the time period of Ten years i.e. from year 2006-07 to year 2016-17. CAMEL approach has been used to examine the financial strength of the selected banks. Certain ratios have been calculated under each acronym of CAMEL and Composite Rankings, Average, and Covariance are applied here to reach conclusion through the comparative and significant analysis of different parameters of CAMEL.

RESULTS AND ANALYSIS

In this section we will analyse the financial soundness of the selected banks based on the CAMEL framework. Only those indicators are selected which are appropriate for the study. The selection of indicators is based on their analytical significance, availability of data for compilation, calculation and its relevance for the study. The following table shows the selected indicators for the study under each acronym of CAMEL:-

Table1: Calculated ratio under CAMEL model

Capital Adequacy	Assets Quality	Managerial Efficiency	Earning Capabilities	Liquidity
Capital Adequacy Ratio	Net NPA to Net Advance	Return on Equity(ROE)	Return on Assets	Cash Deposit Ratio
Capital Adequacy Ratio tier 1	Secured Advance to total Advance	Business Per Employee	Net Interest Margin	Credit Deposit Ratio
Capital Adequacy Ratio tier 2	Term loans to Total Advance	Profit per Employee	Operating Profit to Total Assets	Investment Deposit Ratio
		Return on Net Worth	Non-Interest Income to total assets	

1. CAPITAL ADEQUACY

Capital Adequacy indicates whether the bank has enough capital to absorb unexpected losses. It is required to maintain depositors' confidence and preventing the bank from going bankrupt (Reddy, 2012). "Meeting statutory minimum capital requirement is the key factor in deciding the capital adequacy, and maintaining an adequate level of capital is a critical element" (The United States Uniform Financial Institutions Rating System 1997) it shows the ability of the firm that liability could be privileged. If there is any loss of loans it will be a great risk for banks to meet the demand of their depositors. Therefore, to prevent the bank from failure, it is necessary to maintain a significant level of capital adequacy (Chen, 2003). As per regulatory norms, Indian scheduled commercial banks are required to maintain a CAR of 9% while Indian public sector banks are emphasized to maintain a CAR of 12%.

Table 2: Capital Adequacy of selected banks

Parameters		HDFC	ICICI	Kotak Mahindra	Axis Bank	IndusInd Bank
Capital Adequacy Ratio	Mean	15.77	16.88	17.63	14.46	13.89
	St. Dev.	1.33	2.40	1.89	1.59	1.47
	C. V.	1.78	5.77	3.57	2.53	2.16
	RANK	**3**	**2**	**1**	**4**	**5**
Tier 1 Capital	Mean	11.63	12.23	15.25	10.53	10.76
	St. Dev.	1.49	1.71	2.41	1.87	2.69
	C. V.	2.22	2.93	5.82	3.50	7.22
	RANK	**3**	**2**	**1**	**5**	**4**
Tier 2 Capital	Mean	4.15	4.65	2.38	3.92	3.12
	St. Dev.	0.96	1.23	1.34	0.77	1.92
	C. V.	0.93	1.52	1.80	0.60	3.69
	RANK	**2**	**1**	**5**	**3**	**4**
Composite	Average	2.66	1.67	1.4	4	4.33
	Rank	**3**	**2**	**1**	**4**	**5**

Source: Compiled from annual reports of respective bank

The above table shows that in term of overall Capital Adequacy Kotak Mahindra has top position followed by ICICI, HDFC and Axis bank. The lowest composite rank represents the good position for the bank. On the other hand, IndusInd bank has the lowest position in comparison to other banks under the study. Capital adequacy highest in case of Kotak Mahindra bank which is 17.63 and IndusInd bank has 13.89. ICICI has suffered from highest slandered deviation which shows more volatility as compare to other bank.

2. ASSET QUALITY

The quality of assets is an important parameter to examine the degree of financial strength. The primary objective to measure the assets quality is to ascertain the composition of non-performing assets (NPAs) as a percentage of the total assets.

Table 3: Asset Quality of selected banks

Parameters		HDFC	ICICI	Kotak Mahindra	Axis Bank	IndusInd Bank
Net NPA to Net Advance	Mean	0.32	1.50	1.29	0.45	0.82
	St. Dev.	0.14	0.69	0.60	0.15	0.81
	C. V.	0.02	0.47	0.36	0.02	0.66
	RANK	**1**	**5**	**4**	**2**	**3**
Secured Advance to total Advance	Mean	74.95	80.86	78.85	83.16	89.56
	St. Dev.	2.47	4.65	4.66	3.17	2.46
	C. V.	6.12	21.65	21.68	10.03	6.05
	RANK	**5**	**3**	**4**	**2**	**1**
Term loans to Total Advance	Mean	66.47	80.96	78.32	70.21	67.72
	St. Dev.	8.05	2.62	7.38	1.25	5.61
	C. V.	64.77	6.85	54.50	1.55	31.52
	RANK	**5**	**1**	**2**	**3**	**4**
Composite	Average	3.67	3	3.33	2.33	2.67
	Rank	**5**	**3**	**4**	**1**	**2**

Source: Compiled from annual reports of respective banks

From the Table No. 3, it is witnessed that assets quality of Axis bank is much better as compare to other bank. IndusInd bank got second place in assets quality followed by ICICI, Kotak Mahindra and HDFC respectively. Net NPA to Net Advance ratio (Lowest value provide lowest rank) shows that HDFC (0.32) has the better condition with standard deviation 0.14. Where Secured Advance to total Advance depicts that highest value 89.56 obtain by the IndusInd bank and standard deviation value is 2.46. Term loans to Total Advance showed that ICICI have highest value (66.47) with standard deviation 8.05) which is more volatile in comparison to other.

3. MANAGMENT EFFICIENCY

Management efficiency is another vital component of the CAMEL model that ensures the survival and growth of a bank. While the other factors of CAMEL model can be quantified easily from current financial statements, management quality is a somewhat indefinable and subjective measure, yet one that is crucial for institutional success. The banking sector reforms reinforce the need to improve productivity of the banks through appropriate measures which aim at reducing the operating cost and improving the profitability of the banks.

Table 4: Managerial Efficiency of selected banks

Parameters		HDFC	ICICI	Kotak Mahindra	Axis Bank	IndusInd Bank
Return on Equity	Mean	18.53	11.45	12.66	18.70	14.50
	St. Dev.	1.52	2.25	2.34	1.26	4.55
	C. V.	2.31	5.07	5.47	1.58	20.74
	RANK	**2**	**5**	**4**	**1**	**3**
Business Per Employee	Mean	72.45	69.09	55.70	122.54	84.50
	St. Dev.	21.18	36.80	14.26	14.26	11.28
	C. V.	448.64	1354.48	203.33	203.29	127.32
	RANK	**3**	**4**	**5**	**1**	**2**
Profit per Employee	Mean	0.84	18.63	0.72	1.31	0.70
	St. Dev.	0.32	35.15	0.28	0.33	0.28
	C. V.	0.10	1235.39	0.08	0.11	0.08
	RANK	**3**	**1**	**4**	**2**	**5**
Return on Net Worth	Mean	18.49	11.51	12.68	18.71	15.80
	St. Dev.	1.57	2.26	2.33	1.27	4.33
	C. V.	2.48	5.13	5.41	1.61	18.74
	RANK	**2**	**5**	**4**	**1**	**3**
Composite	Average	2.5	3.75	4.25	1.25	3.25
	Rank	**2**	**4**	**5**	**1**	**3**

Source: Compiled from annual reports of respective bank

Table no 4 depicts that managerial efficiency of Axis bank is better in comparison to other banks followed by HDFC, IndusInd bank and ICICI banks respectively and Kotak Mahindra got lowest rank. Return on Equity and business per employee analysis shows that the Axis banks have highest value with mean 18.70 and 122.54 respectively. ICICI bank has highest Profit per Employee mean value i.e. 18.63 and standard deviation 35.15. Axis bank shows better position in terms of Return on Net Worth with mean and standard deviation 18.71 and 1.27 respectively.

4. EARNING QUALITY

The quality of earnings is crucial criterion that determines the ability of a bank to earn consistently. Basically, it determines the profitability of bank and explains its sustainability and growth in earnings in future context. Banks depend on their strong earning capability to perform the activities such as funding dividends, maintaining adequate capital levels, providing for investment opportunities to for bank for growth, strategies for engaging in new activities and maintaining the competitive outlook

Table 5: Earning Quality of selected banks

Parameters		HDFC	ICICI	Kotak Mahindra	Axis Bank	IndusInd Bank
Return on Assets	Mean	1.67	1.40	1.52	1.58	1.27
	St. Dev.	0.28	0.30	0.38	0.23	0.60
	C. V.	0.08	0.09	0.14	0.05	0.36
	RANK	**1**	**4**	**3**	**2**	**5**
Net Interest Margin	Mean	4.29	2.47	4.68	3.04	2.81
	St. Dev.	0.20	0.43	0.48	0.29	0.88
	C. V.	0.04	0.18	0.23	0.08	0.77
	RANK	**2**	**5**	**1**	**3**	**4**
Operating Profit to Total Assets	Mean	3.19	2.59	2.85	2.90	2.32
	St. Dev.	0.09	0.46	0.48	0.36	0.88
	C. V.	0.01	0.21	0.23	0.13	0.78
	RANK	**1**	**4**	**3**	**2**	**5**
Non-Interest Income to total assets	Mean	1.85	1.97	1.74	2.05	1.95
	St. Dev.	0.14	0.25	0.31	0.20	0.44
	C. V.	0.02	0.06	0.10	0.04	0.19
	RANK	**4**	**2**	**5**	**1**	**3**
Composite	Average	2	3.75	3	2	4.25
	Rank	**1.5**	**4**	**3**	**1.5**	**5**

Source: Compiled from annual reports of respective banks

Table 5 depicts that HDFC and Axis bank has top position in term of earning quality followed by Kotak Mahindra and ICICI bank and lowest position secured by IndusInd bank. Return on Assets is highest in case of HDFC bank with mean value 1.67 and lowest in IndusInd bank with mean value 1.27. Kotak Mahindra has highest net interest margin and ICICI has lowest with mean 4.68 and 2.47 respectively. Operating Profit to Total Assets shows that HDFC has the highest position and Axis bank got the highest position in term of Non-Interest Income to total assets with mean value 3.19 and 2.05 respectively.

5. LIQUIDITY

Liquidity has a significant impact on financial soundness and it evaluates the operational performance of a bank. It indicates the capacity of a bank to pay its short term debts and face unexpected withdrawals of depositors. Liquidity shows the ability of an organisation to convert its assets into cash without any loss. Liquidity of the banks assures the depositors that they can access to their funds whenever need arise and shows the stability and longevity of banks. While too much liquidity has a negative impact on profitability, too little liquidity increases the risk of insolvency.

Table 6: Liquidity Quality of selected banks

Parameters		HDFC	ICICI	Kotak Mahindra	Axis Bank	IndusInd Bank
Cash Deposit Ratio	Mean	8.02	8.57	6.42	6.75	6.47
	St. Dev.	2.54	2.32	1.79	1.06	1.05
	C. V.	6.43	5.37	3.21	1.13	1.11
	RANK	**2**	**1**	**5**	**3**	**4**
Credit Deposit Ratio	Mean	76.15	97.39	94.76	76.82	79.80
	St. Dev.	6.74	6.38	6.62	8.90	10.40
	C. V.	45.37	40.74	43.78	79.17	108.26
	RANK	**5**	**1**	**2**	**4**	**3**
Investment Deposit Ratio	Mean	37.77	50.81	51.81	39.97	35.39
	St. Dev.	5.59	8.61	8.55	3.44	2.46
	C. V.	31.28	74.14	73.14	11.82	6.04
	RANK	**4**	**2**	**1**	**3**	**5**
Composite	Average	3.67	1.33	2.67	3.33	4
	Rank	**4**	**1**	**2**	**3**	**5**

Source: Compiled from annual reports of respective banks

Above table present that liquidity position of ICICI bank is much better followed by Kotak Mahindra, Axis bank, and HDFC respectively. IndusInd bank secured the lowest position in term of liquidity. ICICI Bank has strong position in case of in case of cash deposit ratio and credit deposit ratio. Kotak Mahindra has highest average investment deposit ratio i.e. 51.81 with standard deviation 8.55.

OVERALL RANKING

The overall ranking of the banks considering all the sub criteria rankings under CAMEL analysis over the ten years period (2007-2017) is presented in following Table 1-6. The group rankings of all the banks considered for the purpose of study is taken and averaged out to reach at the overall grand ranking. Axis bank is ranked first under the CAMEL analysis followed by ICICI. Kotak Mahindra occupied the third position. The fourth position is occupied by HDFC. The last position under CAMEL analysis is occupied by IndusInd bank amongst all the selected banks during the year 2007-2017.

Table 8: Overall ranking of the selected banks based on the CAMELS parameters

Bank	Capital Adequacy	Assets quality	Managerial efficiency	Earning capacity	Liquidity	AVERAGE	Rank
HDFC	3	5	2	1.5	4	3.1	**4**
ICICI	2	3	4	4	1	2.8	**2**
Kotak Mahindra	1	4	5	3	2	3	**3**
Axis Bank	4	1	1	1.5	3	2.1	**1**
IndusInd Bank	5	2	3	5	5	4	**5**

CONCLUSION AND SUGGESTION

By considering all of the parameters of CAMEL, it is seen that Axis bank is at the top position as assessed by the CAMEL Model compared to other banks under the study. Axis bank has strong performance in case of Asset Quality, Management efficiency and Earnings Ability while it is lag behind in case of capital adequacy. On the other side, IndusInd bank at the lowest position compared to other banks under the study due to its poor performance in the context of Capital Adequacy, Earnings Ability and Liquidity whereas it perform better in case of capital adequacy. Therefore, IndusInd bank should improve its position in particular weak areas. Therefore, the policy makers of the related lowest ranking banks should take necessary steps and try to find out solution to improve their weaknesses by using the findings this study.

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