Comparison of private banks - Performance Evaluation of private banks using CAMEL Model

[*1]Dr. Krunal K Bhuva & [2]Raina Vyas

[*1]*Associate Professor at Shri Jaysukhlal Vadhar Institute of Management Studies, Jamnagar, Gujarat (India)*
[2]*Student of Masters of Business Administration at Shri Jaysukhlal Vadhar Institute of Management Studies, Jamnagar, Gujarat (India)*

ARTICLE DETAILS

ABSTRACT

I have done research on the comparative analysis of the bank with CAMEL Model & have analyzed the financial data of various private banks which is named as ICICI Bank, HDFC Bank, Kotak Mahindra Bank and AXIS Bank. I have also calculated various ratios as per CAMEL Model which is one of the reliable measures to see the performance of the bank.

Analysis of the capital adequacy, assets quality, management efficiency, earnings of the bank and liquidity position of the bank is measured with the help of various ratio calculations. At the end of the research study I have ranked the banks as per their performances which help the banks to know that in which sector bank is performing well.

The research is also having findings and suggestions at the end which shows the result of the banks and also helps banks to make decisions and solve problems for their future. On the basis of the research banks can improve their performance in future.

1. Introduction of Camel Model

"CAMEL" model as a tool is very effective, efficient and accurate to be used as a performance evaluator in banking industries and to anticipate the future and relative risk. "CAMEL" ratios are calculated in order to focus on financial performance. The CAMEL stands for Capital adequacy, Asset quality, Management, Earning and Liquidity.

Traditional method of applying financial ratios to evaluate bank's state of performance has been long practiced, with practitioners using CAMEL rating to measure their banks' performance. CAMEL bank rating is used by bank's management to evaluate financial health and performance.

The Uniform Financial Institutions Rating System was created in 1979 by the bank regulatory agencies. In 1988, the Basel Committee on Banking Supervision of the Bank of International Settlements (BIS) proposed the CAMEL framework for assessing financial institutions. CAMEL rating systemic an international bank-rating system where bank supervisory authorities rate institutions according to five factors for financial institution's operations:

In 1997, it included the five components,

By concentrating on the top line and bottom line, banks across the board have improved their profit while reducing their operational costs and more number of banks has improved their financial performance by using the concept of mergers and acquisitions. CAMEL rating is used by most banks across the world as a performance evaluation technique. In order to evaluate banks' overall financial condition, CAMEL supervisory rating systemic built and introduced first in USA for onside monitoring. Now, it is used both on-site and off-site monitoring purposes.

2. Literature Review

This section covers review of literature from some of the important research papers, studies and articles as published by different authors.

1. Sushendra Kumar Misra and ParveshKumar(July 2013) "A Camel Model Analysis of State Bank Group" World Journal of Social Sciences Vol. 3. No. 4. Issue. Pp. 36 – 55

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 was made to evaluate the performance & financial soundness of State Bank Group using CAMEL approach. It is found that in terms of Capital Adequacy parameter SBBJ and SBP were at the top position, while SBI got lowest rank. In terms of Asset Quality parameter, SBBJ held the top rank while SBI held the lowest rank. Under Management efficiency parameter it was observed that top rank taken by SBT and lowest rank taken by SBBJ. In terms of Earning Quality parameter the capability of SBM got the top rank while SBP was at the lowest position. Under the Liquidity parameter SBI stood on the top position and SBM was on the lowest position. SBI needs to improve its position with regard to asset quality and capital adequacy, SBBJ should improve its management efficiency and SBP should improve its earning quality.

2. Md. Anwarul Kabir and Suman Dey (September 2012) "Performance Analysis through CAMEL Rating: A Comparative Study of Selected Private Commercial Banks in Bangladesh" Journal of Politics & Governance Vol. 1, No. 2/3,pp. 16-25.

CAMEL Rating has been considered as one of the widely used tools for judging capital adequacy, asset quality, management capacity, earnings ability, and liquidity of the

financial institutions including commercial banks by the principal regulators all around the world. This paper examines the comparative performance of two leading private sector commercial banks, namely, IFIC and EXIM bank, through CAMEL Rating.

3. B S Bodla & Richa Verma, "Evaluating Performance of Banks through Camel Model: A Case Study of SbianIcici": The present supervisory system in banking sector is a substantial improvement over the earlier system in terms of frequency, coverage and focus as also the tools employed. Nearly one-half of the Basle Core Principles for Effective Banking Supervision has already been adhered to and the remaining is at a stage of implementation. Two Supervisory Rating Models, based on CAMELS and CACS factors for rating of the Indian Commercial Banks and Foreign Banks operating in India respectively, have been worked out on the lines recommended by the Padmanabhan Working Group (1995). These ratings would enable the Reserve Bank to identify the banks whose condition warrants special supervisory attention. This paper studies the performance of SBI and ICICI through CAMEL Model for the period 2000-01 to 2004-05.

4. Jagjeet Kaur and Harsh Vineet Kaur (Volume 15, Number 9, 2017):

Banks are the pillars for the development of the economy. They are the storehouse of money. The main aim of this study is to analyzed compares the financial results of Indian public and private sector banks using the camel model. The CAMEL stands for various criteria through which bank performance will be measured .C represents the capital adequacy; A denotes the assets quality of banks. E denotes the earning and profitability & L represents the liquidity indicators. For the purpose of the study ten years data (2005-06 to 2014-15) of ten public and private sector banks will be taken. The banks will be selected on the basis of market capitalization BSE.5.Hari Karri (Jawaharlal Nehru Technological University (JNTU)), Kishore Meghani (Galgotia's College of Engineering and Technology), & Bharti Mishra (MohanlalSukhadia (MLS) University) (March 12, 2015), "A Comparative Study on Financial Performance of Public Sector Banks in India: An Analysis on Camel Model"

Banking sector is one of the fastest growing sectors in India. Today's banking sector becoming more complex. The objective of this study is to analyze the Financial Position and Performance of the Bank of Baroda and Punjab National Bank in India based on their financial characteristics. This study attempts to measure the relative performance of Indian banks. For this study, we have used public sector banks. We know that in the service sector, it is difficult to quantify the output because it is intangible. We have chosen the CAMEL model and t-test which measures the performance of bank from each of the important parameter like capital adequacy, asset quality, management efficiency, earning quality, liquidity and Sensitivity.

6. Prasuna, (2003) "A Camel Model Analysis of Nationalized Banks In India" International Journal of Trade and Commerce -IIARTC,Vol. 1, No. 1, pp.23–33. Prasunaanalyzed 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.

7. Keeley and Gilbert (988 and 1991) "CAMEL rating system"

This study uses the capital adequacy component of the CAMEL rating system to assess whether regulators in the 1980s influenced inadequately capitalized banks to improve their capital. Using a measure of regulatory pressure that is based on publicly available information, he found that inadequately capitalized banks responded to regulators' demands for greater capital. This conclusion is consistent with that reached by Keeley (1988). Yet, a measure of regulatory pressure based on confidential capital adequacy ratings reveals that capital regulation at national banks was less effective than at state chartered banks. This result strengthens a conclusion reached by Gilbert (1991).

3. Research Methodology

- *Research Objectives*
    - To give rank the banks as per their performance relating to the ratios derived from the annual data of banks.
    - To study capacity of assets and performance of liability of the Bank in comparison with other private banks.
    - To analyze the value of capital, assets, liability with the performance of management and earning and to recognize the sensitivity areas.

- *Data & Methods*

    Type of Research Design is Exploratory. Sample size is 4. There is 4 bank taken for the competition. The samples are taken on the basis of non – probability convenience sampling. Sample Units are Kotak Mahindra bank, ICICI bank, HDFC bank & AXIS bank Here for the research of CAMELS MODEL tools are taken: Ratios, Average, Hypothesis, ANOVA, Tables and Charts.

1. Debt equity ratio
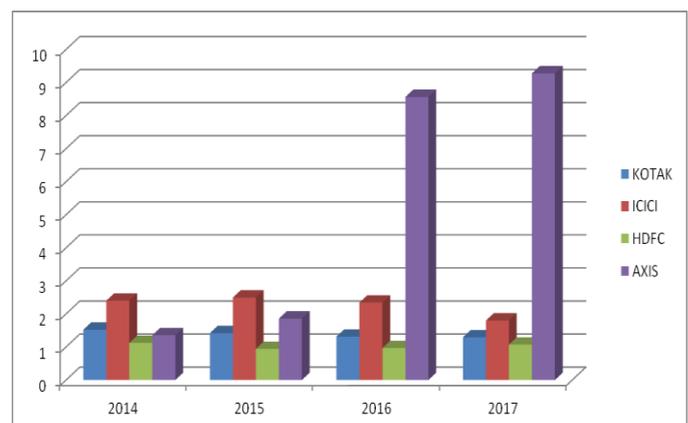
In the above chart debt equity ratio of selected banks for the year 2014-2017 has been shown. On X axis selected years and on Y axis ratio of debt equity of selected banks is plotted.
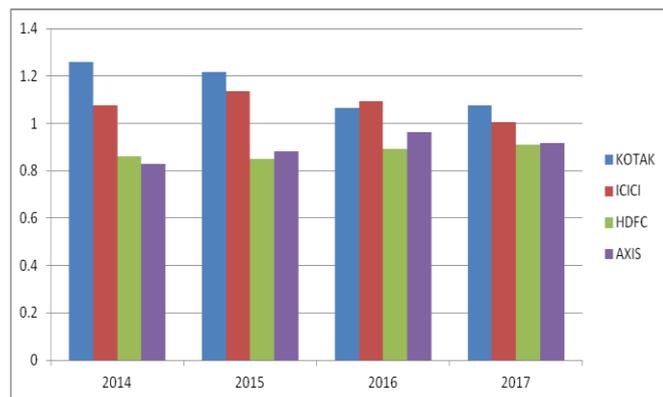
It can be seen from the above graph that lowest debt equity ratio was noted for HDFC bank for the year 2015 and highest debt equity ratio was observed is for Axis bank for the year 2017. The ideal debt equity ratio is 2:1. Axis bank has more debt as compare to equity as far as other banks are concern for the selected study period.

2. Return on net worth

In the above chart return on net worth ratio of selected banks for the year 2014-2017 has been shown. On X axis selected years and on Y axis ratio of return on net worth of selected banks is plotted. It can be seen from the above graph that lowest return on net worth ratio was noted for AXIS bank for the year 2017 and highest return on net worth ratio was observed is for HDFC bank for the year 2014.

3. Total advances to total deposits

In the above chart Total advance to total deposits ratio of selected banks for the year 2014-2017 has been shown. On X axis selected years and on Y axis ratio of Total advance to total deposits of selected banks is plotted. It can be seen from the above graph that lowest Total advance to total deposits ratio was noted for AXIS bank for the year 2014 and highest Total advance to total deposits ratio was observed is for Kotak Mahindra bank for the year 2014.

1. Capital adequacy ratio(CAR):

Bank	2014	2015	2016	2017
Kotak	1.05	0.96	0.86	0.99
ICICI	0.79	0.82	0.83	0.71
HDFC	0.55	0.58	0.63	0.65
AXIS	0	0.79	0.92	0.82

Hypothesis:

H_0: There is no significance relationship between the capital adequacy ratios of selected banks during the study period

H_1: There is a significance relationship between the capital adequacy ratios of selected banks during the study period

ANOVA:

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	0.120119	3	0.04004	0.608793	0.621988	3.490295
Within Groups	0.789225	12	0.065769			
Total	0.909344	15				

By testing one way ANOVA at 5% significance level it can be interpreted that there is no significance relationship between the capital adequacy ratios of selected banks during the study period, as F calculated value (0.608793) is less than F tabulated value so we can say that it is within the acceptance region. So we accept the null hypothesis.

2. Investment to total assets

Bank	2014	2015	2016	2017
Kotak	1.520608	1.418066	1.31082	1.290954
ICICI	2.401652	2.494206	2.341852	1.799622
HDFC	1.122946	0.941786	0.965807	1.072136
AXIS	1.356954	1.857918	8.564691	9.276176

Hypothesis:

H_0: There is no significance relationship between the Investments to Total assets Ratio of selected banks during the study period

H_1: There is a significance relationship between the Investments to Total assets Ratio of selected banks during the study perio

ANOVA:

Source of Variation	SS	Df	MS	P-value	F crit
Between Groups	15.65561	3	5.218537	1	3.238872
Within Groups	12967241	16	810452.6		
Total	12967257	19			

By testing one way ANOVA at 5% significance level it can be interpreted that there is significance relationship between the Investment to total assets ratios of selected banks during the study period, as F calculated value (6.44) is more than F tabulated value so we can say that it is within the acceptance region. So we reject the null hypothesis.

3. Advance to Assets

Bank	2014	2015	2016	2017
Kotak	0.586506	0.596546	0.60129	0.605114
ICICI	0.518165	0.530809	0.537389	0.522612
HDFC	0.626303	0.631544	0.667282	0.656116
AXIS	0.60148	0.608781	0.647823	0.623228

Hypothesis:

H_0: There is no significance relationship between the advances to assets Ratio of selected banks during the study period

H_1: There is a significance relationship between the advances to assets Ratio of selected banks during the study period

ANOVA:

Source of Variation	SS	Df	MS	P-value	F crit
Between Groups	1.063624	3	0.354541	1	3.238872
Within Groups	12991466	16	811966.6		
Total	12991467	19			

By testing one way ANOVA at 5% significance level it can be interpreted that there is significance relationship between the advances to assets ratios of selected banks during the study period, as F calculated value (4.36645) is more than F tabulated value so we can say that it is within the acceptance region. So we reject the null hypothesis.

4. Management Efficiency

Bank	2014	2015	2016	2017
Kotak	5.653815	6.047948	5.099036	5.344361
ICICI	6.714456	7.260151	6.48678	6.163361
HDFC	7.711122	7.215754	7.522266	8.078921
AXIS	7.375104	7.999056	7.688649	5.521264

Hypothesis:

H_0: There is no significance relationship between the Management efficiency Ratio of selected banks during the study period

H_1: There is a significance relationship between the Management efficiency Ratio of selected banks during the study period

ANOVA:

Source of Variation	SS	Df	MS	P-value	F crit
Between Groups	0.475545	3	0.158515	1	3.238872
Within Groups	12912359	16	807022.5		
Total	12912360	19			

By testing one way ANOVA at 5% significance level it can be interpreted that there is no significance relationship between the management efficiency ratios of selected banks

during the study period, as F calculated value (1.9642) is less than F tabulated value so we can say that it is within the acceptance region. So we accept the null hypothesis.

5. Assets Quality

Bank	2014	2015	2016	2017
Kotak	8.134279	28.31058	13.73776	4.987915
ICICI	17.53085	26.39134	29.54224	28.20865
HDFC	6.882569	15.13138	12.63074	13.2395
AXIS	11.88236	24.45399	53.58175	24.08901

Hypothesis:

H_0: There is no significance relationship between the assets quality Ratio of selected banks during the study period

H_1: There is a significance relationship between the assets quality Ratio of selected banks during the study period

ANOVA:

Source of Variation	SS	Df	MS	P-value	F crit
Between Groups	505.4039	3	168.468	0.999996	3.238872
Within Groups	12745180	16	796573.7		
Total	12745685	19			

By testing one way ANOVA at 5% significance level it can be interpreted that there is no significance relationship between the assets quality ratios of selected banks during the study period, as F calculated value (0.000211) is less than F tabulated value so we can say that it is within the acceptance region. So we accept the null hypothesis.

6. Earning Quality

Bank	2014	2015	2016	2017
Kotak	6.075285	5.665742	5.078331	5.133305
ICICI	4.738819	4.806991	4.714976	4.684878
HDFC	5.472146	5.420242	5.583818	5.06903
AXIS	5.675281	5.414032	5.51787	5.290574

Hypothesis:

H_0: There is no significance relationship between the Earning quality Ratio of selected banks during the study period

H_1: There is a significance relationship between the Earning quality Ratio of selected banks during the study period

ANOVA:

Source of Variation	SS	Df	MS	P-value	F crit
Between Groups	0.182698	3	0.060899	1	3.238872
Within Groups	12931269	16	808204.3		
Total	12931269	19			

By testing one way ANOVA at 5% significance level it can be interpreted that there is significance relationship between the Earning quality ratios of selected banks during the study

period, as F calculated value (7.53512) is more than F tabulated value so we can say that it is within the acceptance region. So we reject the null hypothesis.

7. Liquidity

Bank	2014	2015	2016	2017
Kotak	0.035429	0.035404	0.035163	0.041104
ICICI	0.041609	0.043276	0.043153	0.046712
HDFC	0.053421	0.045485	0.040935	0.043047
AXIS	0.055615	0.048536	0.045897	0.056275

Hypothesis:

H_0: There is no significance relationship between the Liquidity Ratio of selected banks during the study period

H_1: There is a significance relationship between the Liquidity Ratio of selected banks during the study period

ANOVA:

Source of Variation	SS	Df	MS	P-value	F crit
Between Groups	8.54E-05	3	2.84774E-05	0.627891	3.490295
Within Groups	0.000571	12	4.75511E-05		
Total	0.000656	15			

By testing one way ANOVA at 5% significance level it can be interpreted that there is no significance relationship between the liquidity ratios of selected banks during the study period, as F calculated value (0.598879) is less than F tabulated value so we can say that it is within the acceptance region. So we accept the null hypothesis.

4. Findings & Suggestions

- In terms of Capital Adequacy Ratio, Kotak Mahindra Bank is performing well as compare to other three banks.
- Debt to Equity Ratio is lowest in HDFC, which indicates that HDFC Bank has more of its own capital rather than debt.
- Axis & HDFC is more aggressive in terms of lending money to the customers. While other three banks are little bit conservative in terms of lending money.(total advance to total assets ratio)
- Total investment to Total assets Ratio is lower in HDFC bank, which suggests that total assets does not only consists investments, it also has other assets.
- Total advances to total deposit ratio shows that higher the ratio betters the bank's performance. Here, in the study kotak Mahindra Bank is performing well in terms of this ratio.

- AXIS bank having more business per employee. This shows better efficiency of the employees working in the bank.
- HDFC & AXIS bank has more interest income in total income. It indicates the better position of bank.
- Growth in net profit indicates that during the years what a bank has improved in its operations and it shows the development of the bank. ICICI bank has higher Ratio.
- Liquid Assets to Total Deposits is higher in AXIS bank which shows AXIS bank is having more liquidity as compared to other banks.

BANK	RANK
HDFC	1
AXIS	2
Kotak Mahindra bank	3
ICICI	4

- Liquid assets to total assets ratio and liquid assets to demand deposits ratio is higher in AXIS & HDFC bank. It indicates that AXIS & HDFC bank is having more capability to meet its demand as it has more liquidity.

5. Conclusion

		Banks			
	Ratios	Kotak	ICICI	HDFC	AXIS
C	CAPITAL ADEQUACY	6	10	6	8
A	ASSET QUALITY	11	16	8	15
M	MANAGEMENT EFFICIENCY	13	8	10	9
E	EARNINGS	10	17	13	10
L	LIQUIDITY	13	10	9	8
	Grand Total	53	61	46	50
	Rank	3	4	1	2

The above table shows the points to the Private Banks. Lower the points better the performance of the bank.

- From the above table we can conclude that HDFC bank performance is better as its score is 46 in compare to other three banks because of which it's got the FIRST rank among all other three banks.
- AXIS bank scored 50 points and got SECOND rank which shows that there is very minor difference in scores of AXIS bank and HDFC bank.
- Kotak Mahindra bank has scored 53 points and is ranked THIRD.
- ICICI bank scored 61 points and got FOURTH rank which is an indication that they have to do some changes to improve their services.

References

1. C.R. Kothari, "Research Methodology" Revised second Edition, New Age International (p) limited for Research Methodology.

2. Ken Black, "Business Statistics" Fifth edition, John Wiley & Sons INC., U.S.A., for analysis of Variance.

3. Ambrish Gupta "Financial Accounting for Management"3rd edition, Dorling Kindersley (INDIA) Pvt. Ltd, Licenses of Pearson Education in South Asia.

4. Shah P. Management Accounting, Oxford University Press, 9th Edition 2013

5. Black K. Business Statistics, Wiley India Pvt. Ltd. 5th Edition 2011.

6. Pandey I. M. Financial Management Vikas Publishing House Pvt. Ltd. 10th Edition 2010.

7. Baral, K.J. (2005), Health Check-up of Commercial Banks in the Framework of CAMEL: A Case Study of Joint Venture Banks in Nepal, The Journal of Nepalese Business Studies, 2(1), pp.41-55.

8. Bodla, B.S. and Verma, R. (2006), Evaluating Performance of Banks through CAMEL Model: A Case Study of SBI and ICICI, The ICFAI Journal of Bank Management, 5(3), pp.49-63.

9. Dash, M. and Das, A. (2009), A CAMELS Analysis of the Indian Banking Industry, Social Science Research Network paper no. 1666900. http://www.ssrn.com/Economic Survey (2014-2015), Ministry of Finance Publication Division, Government of India.

10. Gupta, R. (2008), A CAMEL Model Analysis of Private Sector Banks in India, Journal of Gyan Management, 2(1), pp.3-8.

11. Kaur, H.V. (2010), Analysis of Banks in India- A CAMEL Approach, Global Business Review, 11, pp.257-280.

12. Siva, S. and Natarajan, P. (2011), CAMEL Rating Scanning (CRS) of SBI Groups, Journal of Banking Financial Services and Insurance Research, 1(7), pp.1-17.

13. Annual Report of Kotak Mahindra bank.

14. Annual Report of ICICI bank.