

Comparative Performance Evaluation of Selected Commercial Banks in India using CAMELS Rating Model

Dr. Elizabeth M. Samuel

Assistant Professor, Dept. of Banking and Finance

Royal University for Women

PO Box: 37400, Riffa, Kingdom Of Bahrain

Tel: 00973-17764460. E-mail: esamuel@ruw.edu.bh

Received: December 14, 2017 Accepted: January 30, 2018 Published: February 1, 2018

doi:10.5296/ijgs.v2i1.12576

URL: <http://doi.org/10.5296/ijgs.v2i1.12576>

Abstract

Sound financial health of a bank is the guarantee not only to its depositors but is equally significant for the shareholders, employees and whole economy as well. As sequel to this maxim, efforts have been made from time to time to measure the financial position of each bank and manage it efficiently and effectively.

Indian banking sector widely includes commercial, nationalized, co-operative, private and international banks in its fold. In the present study an attempt is made to evaluate the financial performance of three major commercial banks (IOB, Canara Bank and Syndicate Bank) using CAMELS Rating Model. CAMELS rating model is basically an approach widely used to measure the performance of banking unit inside and outside India. This model measures the performance of banks from all important parameters like Capital adequacy, Asset quality, Management efficiency, Earning quality, Liquidity and sensitivity to market. The study is based on secondary data drawn from the annual reports. For the purpose of evaluation the data's of five years (2011-2016) before demonetization are analyzed by calculating the 17 ratios related to CAMELS rating model. It is found out that according to Basel Norm the overall state of capital adequacy of all the three banks are satisfactory. As far as loan portfolio is concern, the overall state of asset quality and management efficiency are satisfactory, whereas the earning capacity of the banks is not and the liquidity is also not satisfactory. The high level of NPAs and sluggishness in the domestic growth, slow recovery in the global economy and the continuing uncertainty in the global market leading to lower

exports and imports are one of the main reasons for the low earning capacity of banks along with these reasons RBI's new rules to make higher provisioning for substandard assets also affected the earning capacity of all the three banks. Based on the evaluations all the three commercial banks should improve its earning capacity and the liquidity position to perform efficiently and effectively.

Keywords: CAMELS rating Model, Capital adequacy, Asset quality, Management efficiency, Earning quality, Liquidity, Sensitivity, Basel Norms, NPA

1. Introduction

One of the most important prerequisite for ensuring the proper functioning of the economy of each country is undoubtedly the performance of its banking system, which must be capable to fulfill its major role of financial intermediary and sustain the economic growth by making the unused capital available for the active business and by facilitating the movements of capital within the economy. At the same time, the implications of the banks in such activities is very much depending on the profitability that may be obtained by them, which is depending, in turn, by several determinants, including by the economic and social climate, specific to that country, or valid globally, such as the manifestation of the financial crisis.

Indian banking sector has been the backbone of the Indian economy over the past few decades. The banking sector being the life line of the economy was treated with uttermost importance in the financial sector reforms. The reforms were aimed at to make the Indian banking industry more competitive, productive and efficient and to follow international accounting standards.

Recent Economic Survey (2015-16), states that there are many reforms initiatives undertaken in the Indian Banking sector. Firstly, BFIs (banks and Financial Institutions) to raise their minimum level of paid up capital so as to mobilize their resources and promote financial stability by strengthening their capital base for their long term development. Secondly, arrangements have been made for parallel run of Capital Adequacy Framework 2015 based Basel III provision in commercial banks from January 2016 followed by their full execution from July 2016.

Irrespective of various methods adopted by RBI, the performance of the Indian banking sector remained subdued during 2015 -16 amidst rising proportion of banks delinquent loans, consequent increase in provision and continued slowdown in credit growth. The report of 2015- 16 states that the India Scheduled Commercial bank's interest earning and non interest incomes were adversely affected, which led to a more than 60% drop in net profit for the banking sector. Banks Return on Assets (ROA) and Return on Equity (ROE) showed a substantial decline as compared to the previous years.

Against this backdrop, the present study attempts to evaluate the financial performance of three major banks (Indian Overseas bank, Canara bank, Syndicate Bank) operating in India. The evaluation has been done by using CAMELS parameters. CAMELS model is a significant tool to assess the relative financial strength of a bank and to provide policy suggestions to improve the weakness of a bank. In India, Reserve Bank of India adopted this method for evaluating the soundness of commercial banks so far as their Capital adequacy, assets quality, management soundness, earnings, liquidity and sensitivity to market risk.

In today's scenario, modern banking sector is becoming more complex than before and therefore there is a strong need to evaluate the performance of the banks. Various scholars have made several studies on the performance of banking sector in the emerging economies using CAMELS model.

1.1 Objectives of the Study

- 1) To investigate and analyse the financial soundness of the selected commercial banks in India using CAMELS model
- 2) To provide policy suggestions on tackling obstacles encountered while achieving soundness and convergence and how to maintain stability for longer period.

2. Literature Review

Mohamed and Chithra (2016) has studied the financial performance of selected Conventional and Islamic Banks in the Kingdom Of Bahrain using CAMEL model. Based on their study there are significant differences in the performance across the banks even though they work under the same socio, economic- political- legal and regulatory framework. Aswini (2013) has studied the soundness and efficiency of public sector and private sector banks using the CAMEL model. Based on his analysis, the private banks of India are growing at a faster pace than the public sector banks. Manoj (2014) did a paper on the application of Camel approach to OPBs (Old Private banks) with a special reference to Kerala state OPBs. His conclusion is that OPBs lag the most as regards to soundness in banking and remedial measures be quickly adopted by there, but the paper didn't suggest the method to achieve better soundness.

Whereas Srinivas, Saroj (2013) conducted a study to compare the financial performance of HDFC Bank and ICICI bank using CAMEL framework and found no significant different between ICIC and HDFC Bank's financial performance , but they concluded that the ICICI banks performance is slightly less compared with HDFC. Tripathi, Meghani (2014), compare the financial performance of Axis and Kodak Mahendra Bank using CAMEL analysis and t-test, concluded that there is no significant difference between the two banks financial performance.

Nurazia and Evans (2005) investigated whether the CAMELS ratio would be used to predict bank failure. The result suggested that adequacy ratio, asset quality, management, earnings, liquidity and banks size are statistically significant in explaining bank failure. Olweny and Shipo (2011) found that the poor quality and low level of liquidity are the two major caused of bank failure .Ongore and Kura (2013) concluded that the financial performance of commercial banks in kenya was driven mainly by board and management decision, while macroeconomic factors have insignificant contribution. Alabede (2012) concluded that in the presence of the effect of global financial condition only assets quality and market concentration are significant determinants of the Nigerian bank's performance. The study suggested that reducing nonperforming assets and introducing a policy to encourage a fair competition among the banks.

A study conducted by Siva and Natarajan (2011) tested the applicability of CAMEL norms and its consequential impact on the performance of SBI groups. The authors found that

CAMEL scanning helps banks to diagnose its financial health and alert the bank to take preventive steps for its sustainability. Whereas Chaudhry and Singh (2012) analysed the impact of the financial reforms on the soundness of Indian banking through its impact on the asset quality. The study identified the key players as risk management, NPA levels, effective cost management and financial inclusion.

A study conducted by Barr et al (2010) viewed that CAMEL rating criteria has become a concise and indispensable tool for examiner's and regulators. This rating criteria ensures a bank's healthy conditions by reviewing different aspects of a bank based on variety of information sources such as financial statement, funding sources, macroeconomics data, budget and cash flow.

3. Research Methodology

As the basic objective of the study is financial performance evaluation of Commercial banks in India, Only Commercial banks have been selected for this study. Out of the total 93 commercial banks in India, these (Indian overseas bank, Canara bank, Syndicate bank) 3 were chosen based on the following criteria:

- i. Comparable Asset Size (within 20 th Rank in Asset Size)
- ii. Data Availability (required data for CAMELS Model)

Thus, the study has followed a stratified convenient sampling technique. The study period covers five years beginning from 2011-2016.

To realize the objectives of the study, two distinct data sources are used.

- i. Annual Financial Reports published by the Banks
- ii. Fact sheets published by Reserve bank Of India

Different ratios of CAMELS were extracted from the financial statements of banks. The sample limits to three commercial banks and the data's used are before demonetization of currency. This study use CAMELS Model to measure the financial performance. An interesting direction for further research would be to employ parametric Stochastic Frontier Analysis (SFA) and or the non-parametric Data Envelopment Analysis (DEA) and rating method of CAMELS to estimate the technical, allocative and scale efficiency of the selected banks.

Oztorul (2011) states that CAMELS rating are calculated in order to show financial performance of the banks in different aspects. It is not only a widespread supervisory tool, but also one of the few generally accepted quantifiers of the soft notion of bank safety. So that CAMELS model is very suitable and accurate to use as a performance evaluator for the banking industry and to predict the future rate.

3.1 CAMELS

CAMELS is an acronym for six measures (capital adequacy, assets quality, management soundness, earnings, liquidity and sensitivity to market risk). In this research study the six indicators which reflect the soundness of the institution framework are considered. Three banks were selected for the study. The banks selected for the purpose for the study are Indian Overseas Bank, Canara Bank and Syndicate Bank and these are traded in National Stock Exchange.

The ratios depicting the CAMELS parameters were calculated based on the publicly available information published at Reserve Bank of India and Money control.com.

3.1.1 Capital Adequacy Ratio

Capital adequacy ratio (CAR) are a measure of the amount of a bank's core capital expressed as a percentage of its risk weighted asset.

$CAR = (\text{Tier 1 Capital} + \text{Tier 2 Capital}) / \text{Risk weighted Assets}$

Tier 1 Capital – (paid up capital + statutory reserves + disclosed free reserves) – equity investments in subsidiary + intangible assets + current assets and b/f losses).

Tier 2 capital – Undisclosed reserves, General loss reserves, Hybrid debt capital instruments and subordinated debts where risk can either be weighted assets or the respective national regulator's minimum total capital requirement. If using risk weighted assets,

$CAR = [(T1 + T2) / a] \geq 10 \%$

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.

Tier one capital which can absorb losses without a bank being required to cease trading, and tier two capital, which can absorb losses in the event of a winding – up and so provide a lesser degree of protection to depositors.

3.1.2 Asset Quality

To account for the extent of Nonperforming Asset in the portfolios of the banks and extent of damage this particular asset class can have on the financial performance, the following ratio is considered.

Net NPA to Net Advances: the ratio portrays the quality of the asset class in the portfolio and also the extent of deterioration of the quality of the asset portfolio. This dimension of CAMELS analysis conveys the portfolio risk the bank is subjected to the effects it could have in the overall performance of the bank. Asset quality ratios are one of the main risks that banks face. As loans have the highest default risk, an increasing number of non-performing loans shows a deterioration of asset quality.

3.1.3 Management Efficiency

This is another significant component of the CAMEL model that indicates the growth and survival of the bank. Management efficiency means adherence to standard of norms, ability to plan and respond to changing environment leadership and administrative capability of the bank. To capture the possible dynamics of management efficiency affecting the financial performance of the banks the following ratios are considered. i. Total advances to Total debts, ii. Business per employees, iii. Profit per employees.

3.1.4 Earnings Quality

Banks depend on their strong capability of earnings for performing the activities like funding dividends, maintaining adequate capital levels, providing opportunities of investment for bank for bank to grow, strategies for engaging in new activities and maintaining the competitive outlook. The sub parameters chosen to measure earnings quality in this study are i. Operating profit (by average) to Total Asset, ii. Net profit to Total asset, iii. Interest income

to total income, iv. Non interest income to total income.

3.1.5 Liquidity

Liquidity management in banks has assumed prime importance due to competitive pressure and the easy flow of foreign capita in the domestic markets. The impact of liquidity crisis in the banks can adversely affect the financial performance of banks. Inability of the banks to manage its short term liquidity liabilities and loan commitment can adversely impact the performance of the banks by substantially increasing its cost of fund and over exposure to unrated asset category.

To capture the impact of liquidity on the financial performance of the banks two ratios are considered:

- i. Liquid assets to total assets
- ii. Liquid assets to total deposits

Based on the values of the ratios the selected banks will be ranked. Higher average value of ratios gets ranked higher. All the ratios having higher value get higher rank whereas the ratio of Net NPA to Total Asset get the rank in reverse order. Higher Net NPA to Total assets attracts lower rank as well.

3.1.6 Sensitivity to Market Risk

In 1996, the Federal Deposit Insurance Corporation (FDIC) based in the US incorporated a 6th component in the CAMEL framework of bank performance analysis. The 6th component mainly looks into how a bank respond to risk to earnings and capital due to changes in interest rates, equity prices, commodity prices and foreign exchange rates.

4. Data Analysis Results and Discussion

4.1 Capital Adequacy

Capital adequacy has come forth as one of the prominent indicators of the financial health of a banking system. It is very useful for a bank to conserve and protect stakeholder's confidence and prevent the bank from being bankrupt. This reflects whether the bank has enough capital to bear unexpected losses arising in the future.

4.1.1 Capital Adequacy Ratio

According to Reserve Bank of India, all the banks under Basel III require to maintain a minimum capital adequacy of 9% and a Tier -1 ratio of 7%.

Table 1. Capital adequacy ratio (%) – group ranking

Banks	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	13.32	11.85	10.78	10.11	9.66	11.14	III
Canara Bank	14.02	12.61	10.75	10.65	11.17	11.84	I
Syndicate Bank	12.24	12.59	11.41	10.54	11.16	11.59	II

Table 2. Advances to assets (%)

Banks	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	64.06	65.54	63.98	60.13	58.61	62.46	II
Canara Bank	62.13	58.73	61.20	60.22	58.72	60.11	III
Syndicate Bank	67.74	68.59	69.05	66.87	65.38	67.52	I

Table 3. Composite capital adequacy

Banks	CAR		Advances /Assets		Group Rank	
	%	Rank	%	Rank	Mean	Rank
Indian Overseas Bank	11.14	III	62.46	II	2.5	III
Canara Bank	11.84	I	60.11	III	2	II
Syndicate Bank	11.59	II	67.52	I	1.5	I

On the basis of group averages of two ratios of capital adequacy as expressed in Table 3, Syndicate bank was at the top position with group average of 1.5, followed by Canara bank. Indian Overseas bank scored the lowest position due to the poor performance of capital adequacy for the year 2015- 16.

4.1.2 Asset Quality – to measure assets quality, measuring the net non-performing assets as a percentage of net advances

Table 4. Asset quality (%)- Group ranking Net NPAs to Net advances

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	1.35	2.50	3.20	5.68	11.89	4.9	III
Canara Bank	1.46	2.18	1.98	2.65	6.42	2.9	II
Syndicate Bank	0.96	0.76	1.56	1.90	4.48	1.93	I

Asset quality ratios are one of the main risks that banks face. As loans have the highest default risk an increasing number of non- performing loans shows a deterioration of asset quality.

4.1.3 Management Efficiency

This is another essential component of the CAMELS model that guarantee the growth and survival of a bank.

Table 5. Management efficiency total advances to total deposits (%)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	78.87	79.35	77.15	69.81	71.65	75.37	II
Canara Bank	71.09	68.05	71.56	69.65	67.68	69.61	III
Syndicate Bank	78.27	78.26	79.61	79.38	76.69	78.44	I

Business per employees: this reveal the productivity and efficiency of human resources of bank. Higher the ratio it is better for the bank and vice versa.

Table 6. Management efficiency business per employees (in crore)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	11.96	12.88	13.67	13.24	12.41	12.83	III
Canara Bank	13.74	14.20	14.42	14.35	14.45	14.23	I
Syndicate Bank	10.74	12.57	14.30	15.39	14.61	13.52	II

Profit per employees – this indicates the average profit generated per person employed by a bank.

Table 7. Management efficiency profit per employees (lakh)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	4.00	2.00	2.00	-1.41	-9.05	-2.46	III
Canara Bank	8.21	6.96	5	5.01	-1.01	4.83	II
Syndicate Bank	5.29	8.11	6.83	5.55	5.51	6.25	I

Table 8. Composite management efficiency

Banks	Total advances to total deposits		Business per employees		Profit per employees		Group Rank	
	%	Rank	Crore	Rank	Lakh	Rank	Mean	Rank
Indian Overseas Bank	75.37	II	12.83	III	-2.46	III	2.67	III
Canara Bank	69.61	III	14.23	I	4.83	II	2	II
Syndicate Bank	78.44	I	13.52	II	6.25	I	1.33	I

4.1.4 Earnings Quality

This parameter lays importance on how a bank earn its profits. The quality of earnings is very important decisive factor that determines the ability of the bank to earn consistently. it basically determines the profitability of the bank. It also explains the sustainability and growth in earnings in the future. Following four ratios were calculated for evaluating the earning quality of banks.

Operating profit to total asset – this reflects how much a bank can earn profit from its operations for every rupee invested in its total asset.

Table 9. Earning qualityoperating profit to Total assets (%)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	1.61	1.56	1.45	1.17	1.05	1.37	III
Canara Bank	1.59	1.43	1.38	1.27	1.29	1.39	II
Syndicate Bank	1.83	1.60	1.47	1.32	0.98	1.44	I

Net profit to total asset – this reflects the return on assets employed or the efficiency in utilization of assets.

Table 10. Earning qualityNet Profit to total asset (%)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	0.47	0.23	0.22	-1.19	-1.23	-0.3	III
Canara Bank	0.88	0.70	0.50	0.49	-0.51	0.41	II
Syndicate Bank	0.72	0.93	0.68	0.50	-0.53	0.46	I

Interest income to total income –Interest income is considered as prime source of revenue for banks. The interest income to total income reflects the capability of the banks in generating income from its lending business.

Table 11. Earning qualityInterest income to total income (%)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	91	91	91	92	90	91	II
Canara Bank	91	92	91	91	90	90.8	III
Syndicate Bank	93	94	93	91	90	92.2	I

Non-Interest income to Total Income

Table 12. Earning Quality Non-Interest income to total income (%)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	8.60	8.71	8.72	8.20	9.70	8.79	II
Canara Bank	8.66	8.50	9.04	9.42	9.97	9.12	I
Syndicate Bank	6.58	6.41	6.63	8.89	9.76	7.65	III

Table 13. Composite earning quality

Banks	Operating profit to TA		Net Profit to Total Asset		Interest Income to Total Income		Non-interest Income to Total Income		Group Rank	
	%	Rank	%	Rank	%	Rank	%	Rank	Mean	Rank
Indian Overseas Bank	1.37	III	-0.3	III	91	II	8.79	II	2.5	III
Canara Bank	1.39	II	0.41	II	90.8	III	9.12	I	2	II
Syndicate Bank	1.44	I	0.46	I	92.2	I	7.65	III	1.5	I

4.1.5 Liquidity

Risk of liquidity can have an effect on the image of bank. Liquidity is a crucial aspect which reflects bank's ability to meet its financial obligations. An adequate liquidity position means a situation, where organization can obtain sufficient liquid funds, either by increasing liabilities or by converting its assets quickly into cash.

Liquid Assets to total Asset –this ratio measures the overall liquidity position of the bank.

Table 14. Liquidity quality liquid assets to total asset (%)

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	7.40	6.24	6.91	8.71	6.17	7.09	III
Canara Bank	7.53	8.42	9.11	9.11	9.40	8.71	I
Syndicate Bank	7.65	7.74	5.98	7.83	9.44	7.73	II

Liquid assets to total deposits – this ratio measure the liquidity available to the depositors of a bank.

Table 15. Liquidity quality Liquid assets to total deposits

	2011-12	2012-13	2013-14	2014-15	2015-16	Mean	Rank
Indian Overseas Bank	9.11	7.55	8.34	10.11	7.71	8.56	III
Canara Bank	8.62	9.76	10.66	10.65	10.78	10.10	I
Syndicate Bank	8.79	8.90	7.06	9.33	11.16	9.05	II

Table 16. Composite liquidity quality

Banks	Liquid assets to total assets		Liquid assets to total deposits		Group Mean	Rank
	%	Rank	%	Rank		
Indian Overseas Bank	7.09	III	8.56	III	3	III
Canara Bank	8.71	I	10.10	I	1	I
Syndicate Bank	7.73	II	9.05	II	2	II

4.1.6 Sensitivity to Market Risks

The 'S' component – interest rate risk is managed through the use of gap analysis of rate sensitive assets and liabilities and monitored through prudential limits prescribed. The bank estimates the earnings risk and modified duration gap periodically for assessing the impact on Net Interest Income. Besides, all banks, in accordance with the RBI regulations measure and manage the risk by setting limits on the interest rate gaps on a periodic basis. The Bank has put in place Board approved Market Risk Management Policy and Asset Liability Management (ALM) policy for effective management of Market risk, Liquidity Risk and Interest Rate Risk. The Liquidity risk is managed through gap analysis based on residual maturity/behavioral pattern of assets and liabilities on daily basis. The Market Risk management policy lays down well defined organizational structure for market risk management functions and processes whereby the market risks (carried by the bank) are identified, measured, monitored and controlled within the ALM framework, consistent with the Banks risk tolerance level.

4.1.7 Composite Ranking Overall Performance of these three Banks

In order to assess the overall performance of Indian Overseas Bank, Canara Bank and Syndicate Bank, we calculated the composite rating, and results are presented in Table 17.

Table 17. Composite overall ranking

Banks	C	A	M	E	L	Mean	Rank
Indian Overseas bank	2.5	4.9	2.75	2.5	3	3.13	III
Canara Bank	2	2.9	2	2	1	1.98	II
Syndicate Bank	1.5	1.93	1.25	1.5	2	1.64	I

4.2 Findings of the Study

1) All the three banks have succeeded in maintaining CAR at a higher level than the prescribed level, i.e. 9%. Canara Bank has maintained highest ratio all across the duration of last five years but even though the banks maintained the level higher than the required, but the performance of Indian Overseas bank went down comparing with the last years. Even though the Cananra Bank rank highest in CAR but the CARR is highest for Syndicate bank, which shows that this bank can survive and have opportunities for expanding.

2) Throughout the study period the net NPA to Net advances ratio is increasing which is quite obvious that the management is ineffective in providing loans to customer. Which is not satisfactory based on asset quality. Comparing with the other two banks Syndicate Banks rank 1 showing the performance of Syndicate banks is better than the other two banks. Whereas the Indian Overseas banks ranked third and the ratio is too high which clearly shows that the bank is in a riskier position.

3) Total advances to total deposit ratio is a measure of bank's competences to convert the deposits available with the bank into high earning advances. During the period of the study the Syndicate bank rank 1 st followed by Indian Overseas bank and Canara bank. During the period of the study all the three banks Business per employees shows somewhat stable ratio, whereas the profit per employees for the year 2015- 16 shows a loss in the case of Indian Overseas Bank and Canara bank. Both these banks had a net loss for the year 2015-16 due to the high default and credit rate.

The Composite management efficiency position is satisfactory only for the Syndicate bank. The other two banks has to introduce new norms to reorganize the management and to increase the leadership and administrative capability to increase the management efficiency of the bank.

4) The average operating profit ratio is low which indicates that the profitability of bank is not satisfactory. In earnings quality the major part of income of Syndicate bank is from the interest income because their large part of investment is in Government securities. According to the Composite earning quality, the Syndicate bank ranked I followed by Canara Bank and Indian Overseas bank.

5) The liquidity ratio indicates the better liquidity of the banks. However, the Canara bank has performed well throughout the period of study.

6) The 'S' component of the sample banks are analysed mainly from the data given in the balance sheets of the respective banks. Based on the their disclosures as per pillar III of the Basel requirements, the research shows that all the banks in the sample have the risk measurement and reporting systems in place to deal with the sensitivities arising from market risk.

7) From the above analysis I would like to conclude Syndicate Bank has right efficiency in terms of asset quality, management efficiency and earning efficiency, while Canara bank has high efficiency related to liquidity. Whereas all the three banks are maintaining the CAR.

5. Conclusions

From the above findings and analysis the researcher like to conclude Syndicate bank has high efficiency in terms of asset quality, management efficiency and earning efficiency. While Canara Bank has high efficiency related to liquidity whereas all three banks are maintaining

the CAR.

The researcher makes an attempt to compare the performance of three different banks (Indian overseas Banks, Canara Bank, Syndicate Bank) of India. The analysis is based on CAMEL'S Model. The Study has brought many interesting results;

Ranking of banks under study:

I st rank – Syndicate bank

II nd Rank - Canara Bank

III rd Rank – Indian Overseas bank

Ranking the commercial banks is difficult to the extent that any type of ranking is subject to criticism as the ratios used for the purpose of ranking can be interpreted in the way one likes. This method of analysis provides a simplistic, reader friendly version of presenting complex data regarding performance of a set of players in the banking industry. The ranking system makes judging and analysing the financial data of banks much simpler for the common man. Thus, through this particular data set, it can be established that Syndicate Banks is at the top of the list with their performance in terms of soundness being the best. As for convergence, using parameters of the CAMELS, we can see that all the three banks are heading towards convergence in the long run. Nonetheless, further investigations are needed in order to identify approaches for each bank to increase efficiency by moving towards the efficient frontier.

5.1 Recommendations

The following suggestions could be laid down in the light of the findings:

- 1) In order to maintain the depositors confidence and to promote the stability and efficiency of its financial system all the three banks has to increase their Capital Adequacy ratio. Whereas Reserve Bank of India has to take immediate action to increase the Capital adequacy ratio of IOB.
- 2) The IOB should give due importance to the management of its assets, since the quality of assets is an important parameter to measure the degree of financial strength.
- 3) All the three banks have to take important decisions to improve the management and earnings in order to take crucial decision depending on the risk perception.
- 4) In order to increase the earning capacity of the banks, they need to adopt innovative reward design for the most profitable clients, automating customer care or big data. This helps the banks to understand their clients at a more granular level.
- 5) All the three banks have to give utmost importance to its liquidity position and should try to improve it.
- 6) The Reserve bank of India has to adopt various ratios like Net Stable Funding Ratio to limit the bank's reliance on short term wholesale funding and promote funding stability.
- 7) All the three banks have to benchmark with the International Best Practices with regards to risk and liquidity management.

References

Alabede, J. O. (2012). The Intervening Effect of Global Financial Condition on the Determinants of Bank Performance: Evidence from Nigeria. *Accounting and Finance*

Research, 1(2). <https://doi.org/10.5430/afr.v1n2p161>

Aswini, K. (2013). Are private sector banks more sound and efficient than public sector banks? Assessments based on CAMEL and Data Envelopment Analysis approaches. *Research Journal of Recent Sciences*, 28-35.

Barr, R. et al. (2010). Evaluating the Productive Efficiency and performance of U.S Commercial Banks', *Engineering Management*, 28(8), 19.

Bodla, B. S., & Verma, R. (2011). Evaluating the performance of Banks through CAMELS model: A case study of SBI and ICICI. *The ICAFI Journal of Bank Management*, 5(3), 49-63.

Chowdhury, S. (2012). An Inquiry into The Financial Soundness of Commercial Banks in India using the CAMELS Approach. *Journal of Banking Financial Services and Insurance Research*, 1(7), 52-61.

Derviz, A., & Podpiera, J. (2008). Predicting Bank CAMELS and S & P rating: the case of the Czech Republic. *Emerging Markets Finance and Trade*, 44(1), 117-130. <https://doi.org/10.2753/REE1540-496X440107>

Dixit, D. (2016). Performance Analysis of Private Sector and Public Sector banks with reference to ICICI bank and State Bank of India. *International Journal of Applied Research*, 2(9), 443-449.

Economic Survey. (2014-2015). *Ministry of Finance Publication Division*. Government of India.

Gupta, P. K. (2014). An Analysis of Indian Public Sector Banks Using CAMEL Approach. *Journal of Business and Management*, 16, 94-102.

Hasan, D., & Gulsah, N. (2011). A performance evaluation of the Turkish Banking sector after the Global crisis via CAMELS Ratio. *Procedia Social and Behavioral Sciences*, 1(24), 1530-1545.

Lopez, J. (2009). Using CAMELS rating to monitor Bank condition. *Journal of Economic Research*, 1(24).

Manoj, P. K. (2014). Financial Soundness of Old Private Sector Banks (OPBs) in India and Benchmarking the Kerala based OPBs: A CAMEL Approach. *American Journal of Scientific Research*, 11.

Mohamed & Chitra. (2016). Financial performance of Selected Conventional and Islamic Banks in Kingdom of Bahrain – A CAMEL ranking based approach. *European Journal of Contemporary Economics and Management*, 3(1).

Nurrazi & Evans. (2005). An Indonesian Study of the Use of CAMEL(S) Ratios as Predictors of Bank Failure. *Journal of Economics and Financial Issues*, 3, 1-20.

Olweny, T., & Shiphoo. (2011). Effects of Banking Sectoral Factors on the Profitability of Commercial Banks in Kenya. *Economics and Finance Review*, 1, 1-30.

Ongore & Kusa. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3, 237-52.

Oztorul, G. (2011). Performance Evaluation of Banks and Banking groups: A Turkey Case, *Doctoral Dissertation*. Middle East Technical University.

Prasad, K. V. N., & Chari, A. A. (2011). Financial Performance of Public and Private sector

Banks: An Application of Post Hoc Tukey HSD test. *Indian Journal of Management Sciences*, 2(5), 79-92.

RBI. (2016). Report on Trend and Progress of Banking in India.

Rostami, M. (2015). Determination of CAMELS Model on Banks Performance. *International Journal of Multidisciplinary Research & Development*, 2(1), 652-684.

Salhuteru, F., & Wattimena, F. (2015). Banks Performance with CAMELS Ratios towards earnings management practices In State Banks and Private Banks. *Advances in Social Sciences Research Journal*, 2(3). <https://doi.org/10.14738/assrj.24.940>

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

Srinivasal & Saroja. (2013). Comparative Financial Performance of HDFC Bank and ICICI Bank. *Scholars World- International Referred Multidisciplinary Journal of Contemporary Research*, 1.

Tripati, D., & Meghani, K. (2014). Financial Performance of Axis Bank and Kotak Mahindra Bank in the post Reform Era. Analysis on CAMEL Model. *Economics and Applied Management Research*, 1.

Website References

Indian Bank's Association (<http://www.iba.org.in/>) 2015-16.

Moneycontrol.com: India's No:1 Financial Portal
(<http://www.moneycontrol.com/stocksmarketsindia/>)2015-16

Reserve Bank of India (<http://dbie.rbi.org.in/DBIE/dbie.rbi?site=home>) 2015-16

Copyright Disclaimer

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).