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COMPARISON OF OPERATIONAL EFFICIENCY OF LISTED BANKS FROM KERALA - A STUDY BASED ON CAMEL MODEL

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Abstract

The importance of banks is growing everyday because banking system is the back born of our financial system and economic development. Indian banking sector is undergoing a major transformation over the last few years. This transformation brings more effectiveness in banking operations, earns several outstanding achievements and creates healthy competition among various players. Superior performance of the banks is an effective indicator to measure the performance of the economy to a great extent. So in this study, efforts have been made to compare the operational efficiency of private sector banks, one of the major constituents of Indian banking system, listed from the state of Kerala using CAMEL model.

Keywords: **Operational Efficiency; Financial Performance; Camel Model; Private Banks, Kerala**
JEL code: **C22, C51, H63**

INTRODUCTION

An efficient banking system is an integral part for the economic development of any country as repositories of nation's savings and as distributor of money to various agents of economy. Several studies reveal that a country which has a well-developed banking system grows faster than those with a weaker banking system. India, emerging super power in the globe, to sustain its high growth rate, the banking sector has a crucial role to play in mobilizing savings and channelizing them to productive uses. Indian banking sector is undergoing a major transformation over the last few years. This transformation brings more effectiveness in banking operations, earns several outstanding achievements and creates healthy competition among various players. This sector is rich in terms of number of players with the presents of private and public sector banks, foreign banks, small finance banks etc. Initially, only few private and few public sectors were operating, but now the number has changed and also Indian banks are facing stiff competition from the foreign banks to retain the market share. The service mix offered by these foreign banks attracted many customers in the past. This has changed the phase of competition in this sector and to outperform, the domestic banks should offer a unique mix of values. New generation banks have done this job more successfully through delivery of services competent to that of foreign banks.

Strong financial health of a bank is equally significant for the stakeholders of the bank as well as for the economy. Superior performance of the banks is an effective indicator to measure the performance of the economy to a great extent. Both the sectors i.e. private and public sector banks have equal role in this process of

development. As a 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. So in this study, efforts have been made to compare the operational efficiency of private sector banks, one of the major constituents of Indian banking system, listed from the state of Kerala using CAMEL model.

LITERATURE REVIEW

Financial statement analysis is mostly used by various stakeholders like investors, creditors etc not only to measure the past and present financial position but also to predict the future financial performance of organizations. Financial statements are commonly analyzed by using the ratio analysis method. The ratio analysis is the use of ratio to interpret the financial statements thereby the strength and weakness of the company as well as its historical, current and future financial state can be determined [1]. In spite of the size, the ratio analysis can also relate and examine the risk and return of the company in the industry. In addition, the ratio analysis can make the analyzed financial results comparable as to identify the deficiency and take the corrective actions to solve the problem. The comparison can be made in two ways which are the comparison with historical result (trend analysis) and with other competitors in the same business line or industry average. Generally, the financial ratio analysis provides information about a bank's performance on comparative basis and allows the conclusion about the bank performance to derive [2].

Many studies have conducted CAMEL-based analyses of Indian banks in various contexts to measure its financial performance. Some of them are listed below.

Anil Tiwari, studied the performance of commercial banks in India using Camel Approach. The group rankings of all the banks considered for the purpose of study was taken and averaged out to reach at the overall grand ranking. HDFC is ranked first under the CAMEL analysis followed by ICICI. Axis Bank occupied the third position. The fourth position is occupied by IDBI and KMB jointly while Bank of Baroda and PNB follow.

Cma Jeelanbasha and JeelanBasha, evaluated the performance of six nationalized bank covering a period of 5 years from 2013 to 2017. The study summarized on an average consistency basis of CAMEL model, Canara bank stands the best among sample banks during the study period. Despite Indian bank secures the second rank, consistent-wise it needs to strive to increase its earnings and maintain adequate liquidity to overcome the problem of short-term insolvency. ICICI has to improve its quality of assets. There is no stability in management efficiency and asset quality of Axis bank. UCO bank needs to overhaul its system and structure [3].

Purohit and Bothra, compare the performance of SBI and ICICI Bank using CAMEL parameters. They conclude that ICICI bank needs to improve its position with regard to capital adequacy and asset quality while SBI need to improve its position with regard to management efficiency, earning quality and liquidity [4].

Nancy Bawa compared performance analysis of Nationalized Banks using Camel Model covering 19 nationalized banks and period of 2006-16. He reveals from his study that Indian bank is top in terms of capital adequacy; Bharatiya Mahila Bank in terms of asset quality; IDBI in terms of Management efficiency and earnings quality and Andhra Bank is in overall performance.

Acharya and Subramanian, conducted a thorough analysis of the health of public sector banks and private sector banks by examining capitalization, exposure to systemic risk, and profitability. They find that while public sector banks, as of March 2014, had adequate Tier I capital, this was the result of overstated capital ratios due to regulatory forbearance provided by the Reserve Bank of India. These ratios might be subject to changes as the Basel 3 standards get adopted. The authors simulate three possible scenarios moving forward and find that, absent regulatory forbearance, all public sector banks would have Tier I capital ratios significantly lower than the mandated levels. On the other hand, all private sector banks would have Tier I capital ratios significantly higher than the mandated levels [5].

CA Ruchi Gupta in his study an analysis has been made on the progression of the economy that significantly depends upon the deployment as well as optimum utilization of resources and most importantly operational efficiency of various sectors. This study attempts to evaluate the performance of public sector banks in India for the period 2009-2013.The resource shows that there is statistically significant difference between the camel ratios of all the public sector banks [6].

STATEMENT OF THE PROBLEM

Operational efficiency is considered as the best indicator that helps the stakeholders to understand and judge performance of players in the banking sector. Through the literature review, we identified that CAMEL analysis is very significant model that describes financial health of the bank and helps to provide ratings to the bank according to their relative performance and efficiency. Several studies have been done on the performance analysis of the banks through CAMEL rating model during the different time period in the form of journals, article, research papers and dissertations in India or outside India. In this study, the operational efficiency of listed private banks from Kerala has been analyzed through CAMEL model for the period of five years from FY 2013-14 to FY 2017-18.

OBJECTIVES OF THE STUDY

Following are the major objectives of this study:

- To compare operational efficiency of listed private sector banks from Kerala in all the five areas of CAMEL.
- To find out is there any significant difference between the performances of these banks on the basis of CAMEL rating system.
- To give suitable recommendations for the improvement in efficiency and financial performance of selected banks.

RESEARCH METHODOLOGY

CAMEL Framework is basically a ratio based model for determining the financial soundness of the banks. It is an internal management rating tool that measures capital adequacy, asset quality, management capability, earnings capacity and liquidity management of financial institutions. The present study is an exploratory in nature is based on purposive sampling. The period for evaluating performance in this study is five years, i.e. from financial year 2013-14 to 2017-18. The study is based on secondary data and the required data is collected from annual reports of the banks, RBI Bulletin and websites like money control etc. Both accounting tools and statistical tools were used to analyze the collected data [7].

RESULTS AND DISCUSSION

Capital Adequacy

Capital adequacy is very useful for a bank to protect stakeholder's confidence, ensures stability and effectiveness of bank and prevents the bank from bankruptcy. As Per the instruction of RBI, every bank should maintain a minimum Capital to risk weighted asset ratio of 9% with regard to credit risk, market risk and operational risk on an ongoing basis, as against 8% prescribed in Basel documents. In this study following ratios are used to measure capital adequacy (Table 1).

- **Capital adequacy ratio:** a measure of the amount of a bank's core capital expressed as a percentage of its risk weighted Assets. Higher the ratio better it is
- **Debt equity ratio:** Higher ratio indicates less protection for the creditors and depositors in the banking system
- **Advance to total asset ratio:** Aggressiveness of a bank in lending, thus resulting in better profitability. Higher the ratio better it is.

Table 1: Camel Rating - C: Capital Adequacy.

Name of the Bank	Capital Adequacy Ratio			Debt Equity Ratio			Advance to Total Asset Ratio			Equity to Total Asset Ratio			Group Rank	
	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	Rank
South Indian Bank	12.89	0.36	2	15.37	0.37	2	64.52	1.60	1	0.156	0.01	2	1.75	2
Federal Bank	14.32	1.22	1	10.12	0.88	1	62.78	3.03	2	0.282	0.06	1	1.25	1
Dhanalakshmi Bank	9.98	2.41	3	18.42	2.81	3	53.05	2.25	3	0.186	0.15	3	3	3

Inference: Review of the above table revels that selected banks has maintained 9% of CAR during the study period though Federal bank has highest ranking. CAR of Dhanalakshmi bank is just over to minimum requirement and holds the least position. Federal bank is more secure as they are using debt (10.12) comparatively lesser than that of other banks. In case of Advance to total asset ratio, SIB stands in the first position with an average of 64.52 followed by Federal Bank (62.78). Federal bank has also been in the top among the three in equity to total asset ratio with an average of .282 followed by SIB. Analysis of group averages of four sub parameters of capital adequacy is expressed in the above table, which indicates that Federal bank outstands from other banks and ranked first with an average of 1.25 followed by South Indian Bank (1.75). Dhanalakshmi Bank stood at the last position due to its poor performance in all these sub parameters with an average of 3 [8].

ASSET QUALITY

The second component, Asset Quality is an important parameter to test the financial credibility of the banks and their risk exposure. This determines the healthiness of

bank against loss of value in the assets as, it impairment risks the solvency of the institution. The weakening value of assets has a spillover effect, as losses are eventually written-off against capital, which eventually expose the earning capacity of the institution. The level and severity of non-performing assets, adequacy of provisions, distribution of assets etc. impacts the asset quality. The ratios used to assess asset quality are (Table 2).

- **Net NPA to total asset:** Lower the ratio, better is the performance of bank
- **Net NPA to total advance:** Lower ratio is a sign of credit efficiency of bank
- **Total investment to total asset:** Higher ratio adversely affects the profitability of banks
- **Percentage change in NPA:** Shows the growth in Non-Performing Assets

Table 2: Camel Rating - A: Asset Quality.

Name of the Bank	Net NPA to Total Asset Ratio			Net NPA to Total Advance Ratio			Total Investment to Total Asset			Percentage change in NPA			Group Rank	
	Mean	SD	Rank	ean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	Rank
South Indian Bank	1.12	0.635	2	1.73	0.955	2	17.12	2.73	1	+15.80	56.31	3	2	2
Federal Bank	0.77	0.322	1	1.21	0.467	1	26.57	4.17	2	+15.72	36.63	2	1.5	1
Dhanalakshmi Bank	1.66	0.267	3	3.12	0.425	3	32.85	2.27	3	-7.66	20.51	1	2.5	3

Inference: Based on the Net NPA to Total Asset, federal bank ranked on the first position with lowest average of 0.722, followed by SIB (1.12). Analysis of Net NPA to total advance indicates Federal bank has lowest average and maintained first rank (1.216) followed by SIB with an average of 1.730. In case of total investment to total asset, SIB has the lease average and Dhanalakshmi bank is on the bottom most position. Ranking of the banks based on the four parameters shows that,

performance of federal bank is better than all other banks [9].

MANAGEMENT EFFICIENCY

Another essential parameter of this model is management efficiency that guarantees growth and survival of banks. This element shows the path to set norms, knack to plan and be proactive in the dynamic environment, leadership, innovativeness and administrative competence of the bank. The following ratios have been used to measure management efficiency (Table 3).

- **Business per employee:** Efficiency of the employees to generate business (total advances and total deposits). The higher the ratio, better it is.
- **Profit per employee:** Efficiency of the employees to generate profit for the bank. Higher ratio is better.
- **Return on equity:** Profits available for shareholders. Higher ratio signifies efficiency of the bank.
- **Total advance to total asset:** Indicates the ability of the bank to convert deposits into high earning advances. Higher ratio is better.

Table 3: Camel Rating - M: Management Efficiency.

Name of the Bank	Business Per Employee		Profit Per Employee		Total Advance to Total Asset			Return on Equity			Group Rank	
	Mean	Rank	Mean	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	Rank
South Indian Bank	13.24	1	4.93	2	73.59	2.53	2	9.75	3.43	1	1.5	1.5
Federal Bank	12.84	2	7.11	1	75.14	4.03	1	9.48	3.05	2	1.5	1.5
Dhanalakshmi Bank	8.65	3	-6.25	3	60.33	3.84	3	-22.04	19.79	3	3	3

Inference: The productivity ratio shows that SIB has the best business per employee and they are able to generate more business through proper use of their employees. In case of profit per employee, Federal bank bagged the top position with an average of 7.11 followed by South Indian bank. Total advance to total asset ratio shows the efficiency of the bank. Federal bank stood on the top with highest average of 75.14 followed by south Indian bank. In case of return on net worth, south Indian bank is on the top with an average of 9.75 followed by federal bank. Based on the four sub parameters of efficiency, SIB and Federal bank jointly holds the top position and Dhanalakshmi bank stood at the bottom of the table [10].

EARNING QUALITY

The forth parameter, earning quality is another important element which indicate profitability of banks and its ability to earn consistent return and also shows the path for future of the bank. Bank can increase their growth and productivity by increasing earning quality. The following ratios are used to check the earning quality (Table 4).

- **Operating profit to total asset:** Indicates operating income of the bank per rupee invested in total assets. Higher ratio is better.
- **Interest income to total income:** Represent the share of interest income in total income. Higher ratio is better.
- **Net Profit Margin:** this is the ratio of net profits or net income to revenues for a bank. Higher ratio is better.
- **Return on asset:** Efficiency with which bank uses its assets to generate net income.

Table 4: Camel Rating - E: Earning quality.

Name of the Bank	Operating Profit to Total Asset			Interest Income to Total Income			Net Profit Margin			Return on Asset			Group Rank	
	Mean	SD	Rank	ean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	Rank
South Indian Bank	-0.27	0.32	2	90.64	2.03	2	2.37	0.11	2	0.57	0.20	2	2	2
Federal Bank	-0.08	0.23	1	89.88	0.90	3	10.06	2.86	1	0.84	0.31	1	1.5	1
Dhanalakshmi Bank	-1.48	0.73	3	92.79	1.86	1	-11.4	9.92	3	-1.03	0.90	3	2.5	3

Inference: The above table shows the earning efficiency of the banks. In case of operating profit to total asset, Federal bank stood in the top position with an average -.080 followed by south Indian bank. The main source of income of a bank is interest. Dhanalaksmi bank is on the top with an average of 92.79 followed by south Indian bank. In terms of net profit margin, federal bank leads other banks with high net profit margin followed by south Indian bank. Ranking of the banks based on ROA indicates that, Federal bank ranked on the top with highest ROA of 0.84 followed by south Indian bank. Results of the group averages of three ratios of Earning Quality, which indicates that Federal bank is ranked at Top in this category with group average of 1.5 followed by south Indian bank [11].

LIQUIDITY

Liquidity is the last but crucial element in Camel, which reflects banks ability to meet its financial obligations. The risk of liquidity can have a direct impact on bank's reputation. A proper equilibrium is necessary in liquidity, which helps banks to obtain enough funds. The following ratios are used to measure liquidity of banks (Table 5).

- **Current ratio:** This ratio shows ability of bank to pay its short term obligations. For the purpose of analysis, a higher ratio is better.
- **Credit deposit ratio:** It shows how much bank has lends out of the deposit it has mobilized. This ratio should neither be too high nor too low. But for the purpose of analysis a higher ratio is preferable.
- **Liquid asset to total asset:** This ratio shows percentage of liquid asset to total asset. Higher ratio is better.
- **Liquid asset to total deposit:** This ratio shows percentage of liquid asset to total deposit. A higher ratio is preferable.

Table 5: Camel Rating - L: Liquidity.

Name of the Bank	Current Ratio			Credit Deposit Ratio			Liquid Asset to Total Asset			Liquid Asset to Total Deposit			Group Rank	
	Mean	SD	Rank	ean	SD	Rank	Mean	SD	Rank	Mean	SD	Rank	Mean	Rank
South Indian Bank	0.048	0.025	2	73.20	0.96	2	5.43	0.50	3	6.20	0.61	3	2.5	3
Federal Bank	0.044	0.013	3	74.64	2.50	1	7.41	0.61	2	7.41	0.60	2	2	2
Dhanalakshmi Bank	0.050	0.018	1	61.66	4.14	3	8.14	2.07	1	9.34	2.81	1	1.5	1

Inference: The above tables indicate that, Dhanalakshmi bank is having better liquidity when compared to other banks. This bank leads other banks in terms of Liquidity to total deposit with an average of 9.34, i.e. they have enough liquidity to pay deposits. Dhanalakshmi bank is also on the top position with highest current ratio and federal bank has least current ratio. In case of credit deposit ratio, Federal bank stood on the top with an average of 74.64 followed by South Indian bank. Overall Dhanalakshi bank is performing well in terms of its high liquidity compared to other listed banks from Kerala (Table 6).

Table 6: Camel - Composite Ranking.

Bank	C	A	M	E	L	Mean	Rank
South Indian Bank	2	2	1.5	2	3	2.10	2
Federal Bank	1	1	1.5	1	2	1.30	1
Dhanalakshmi Bank	3	3	3	3	1	2.60	3

Inference: From Table 7, it is clear that, Federal bank rated at the top position with a composite average of 1.30 and followed by south Indian bank. The performance of Dhanalakshmi bank is very poor when compared to other listed banks from Kerala.

Table 7: T-Test.

Bank	Mean	SD	T Value	Degree of Freedom	P value
South Indian Bank	2.10	.547	-3.647	4	4.604
Federal Bank	1.30	.447	-8.500	4	4.604
Dhanalakshmi Bank	2.60	.894	-1.00	4	4.604

Inference: From Table 7, it is clear that T value is lesser than the P value at 5% significance level in all the banks, it is inferred that there is no significant difference in the operational efficiency of selected banks. or the entire vector of coefficients. They proposed biased –corrected modified ADF*, $Z\alpha^*$ and Zt^* for testing co-integration of the above variables [12].

FINDING AND SUGGESTION

Federal bank has performed better in Capital Adequacy followed by SIB. So it shows that the bank has strong risk management system and capacity to meet their additional capital needs. Federal bank also stood in the top position in asset quality followed by SIB. These banks are effective in managing their assets and NPA when

compared to Dhanalakshmi bank. In the context of management efficiency, Federal bank and SIB jointly holds the first position and it's an indication of their high productivity and goods working management. Federal bank has better earning capacity when compared to other two banks. It is a clear indication of their cash flow management. However, Dhanalashmi bank has secured the first position in term of liquidity. It shows they have good working capital management. Overall, the operational efficiency of Federal bank is ahead of the other banks. The present study depicted that though ranking of ratios is different, but there is no statistically significant difference between the CAMEL ratios. The performance of Dhanalakshmi bank was not satisfactory. So bank management should take corrective measures to improve their capital adequacy, asset quality, management efficiency and earning capacity. They should adopt a new strategy and required complete reforms to stay in the high competitive industry.

LIMITATIONS

The study covers only listed private banks from Kerala. No other private, public and foreign banks are included in this study. The study is also based on secondary data, so the operational efficiency through financial performance was measured on the basis of data provided by sources.

CONCLUSION

The importance of banks is growing everyday because banking system is the back born of our financial system and economic development. The study is conducted with a view to understand the operational efficiency of listed banks from the state of Kerala using Camel Model. The study covers three listed private banks namely South Indian bank, Federal and Dhanalakshmi Bank. The ratings of the selected banks during the period from 2013-14 to 2017-18 provide the correct scenario of each of the selected banks. Based on the study, Federal bank has a strong base and they are in the top among three listed banks in all parameters of Camel. Dhanalakshmi bank lacks must initiate corrective actions to survive in the high

competitive industry. We hope that the findings of the study will benefited all the people those are using the services of the banks and those who are willing to invest in shares of these banks.

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