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A COMPARATIVE STUDY ON FINANCIAL PERFORMANCE OF PUBLIC, PRIVATE AND FOREIGN BANKS IN INDIA THROUGH CAMEL RATING SYSTEM

Dr. Jagdish R. Raiyani
Department of Commerce, Tolani Commerce College,
Adipur, Kachchh, Gujarat, India

ABSTRACT

In today's scenario, the banking sector is one of the fastest growing sectors and many funds are invested in Banks. Also today's banking system is becoming more complex. So, we thought of evaluating the performance of the banks. There are so many models of evaluating the performance of the banks, 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 leading public sector, private sector and foreign banks. Data have been collected though annual reports of the consecutive nine years i.e. 2008-09 to 2016-17 of all the banks. The calculated ratios for all the banks interpreted by CAMEL Model parameters. The study concluded that Foreign Banks perform well as compare to Public sector and Private sector banks in terms of Capital Adequacy, Management Efficiency and in Liquidity Management. In term of Assets Quality Private sector banks preform well as compare to Public sector banks and Foreign Banks with lowest average of 1.0973. In terms of Earning Quality Public sector banks perform well as compare to Private sector banks and Foreign banks with higher average of 19.2344. The Overall all financial performance based on CAMEL parameters Foreign banks topped and obtained overall first rank by having average of 14.0047 followed by Public sector banks (11.756) and Private sector Banks (11.2778). On the whole, it is observed that Foreign Banks outperformed public sector and private sector banks with regard to CAMEL framework as a method of measuring and managing performance of the bank under financial measure.

Key words: Camels Rating System, Performance Analysis, Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality, Liquidity Management etc

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1. INTRODUCTION

The banking industry is going with increased professionalism due to the emergence of the new private banks and the increased participation of the foreign players. The public sector banks of India were performing poorly before the advent of private and foreign banks. Bank privatization, banking sector liberalization and bank mergers are frequently discussed as the solutions for better performance of the banks. Performance and efficiency of commercial banks are key elements of a country's economy. As the banking industry is an important financial sector of the Indian economy, it is very important for senior managers, regulators and investors to identify the major drivers of a bank's efficiency. Productivity and profitability are the major performance indicators besides many measures (financial ratios) on which we can depend on in order to analyze the efficiency of banks. Before the banking sector reform in India, Return on Assets (ROA) was used to evaluate banks performance.

However, ROA itself cannot provide us the clear picture of the performance. So, many researchers tried to incorporate the riskiness of the banks' operations. But, incorporating the riskiness of the banks' operations is not an easy task, for one has to make an elaborate study of banks' investments and portfolio. Chakrabarti and Chawla (2005) claimed that the risk adjusted return of a bank does not give a clear picture of the performance. They calculated the risk with time-series instead of the cross-sectional SD. Apart from ROA, risk adjusted returns; one can do the analysis of performance with respect to operating profits as a fraction of working funds, spread, turnover per rupee of employee expense, Gross NPA as a percentage of total assets. According to Ahluwalia (1985), the productive efficiency of labour, capital and how the management combines them is explained by the broader concept of total factor productivity. Capital adequacy, Asset quality, Management quality, Earnings, Liquidity, Sensitivity to Market Risk (CAMELS) rating mechanism has been in use in India as it is recommended by Padmanabhan Working Group (1991) with an additional dimension 'S'-Systems to supervise banks performance. Saha and Ravi Sankar (2000) proposed a different method called CAEL with elimination of M from CAMEL was developed to rate the banks with respect to their financial condition rather than its performance efficiency. Many times, the studies of commercial banks lead to contradictory findings, depending on the whole process of how the institution is treating each and every region and how phenomenon is modelled. Sherman and Gold (1985) observed that some treat the banks as producers of loans and deposit accounts. Yue (1992) has mentioned that some measure the outputs of a bank as value of loans and inputs as various costs of labour, capital, operations, deposits and other resources.

Of late, the banking industry is showing good profits despite competition. However, banks may have weak and inefficient areas giving raise to erosion of profitability that still need to be addressed. One way of identifying these areas is by way of analyzing their financial statements. In particular, analysis of selected accounting ratios (Ratio Analysis) enables the public to evaluate the banks performance over a period of time as well as its performance relative to that of competitors. This will help bankers to identify strengths and weaknesses and reasons thereof enables them to take remedial action wherever necessary. The public who are interested in dealing with a particular bank can also have a feel either to invest in their stocks or keep large funds with them. In the recent past say for a year or so the inflation in India has started increasing. To contain the inflation, RBI gradually increased the repo rates as

well as cash reserve ratio of scheduled banks. As a result of this, banks had to increase interest rates on deposits and advances. This resulted in change in profitability of some banks. Banks have changed the interest rates at very short intervals thereby making customers feel unhappy. However, the fluid situation is almost over and now the interest rates are firming up. Almost all the banks have resorted to Core Banking and ATM/Debit cards are extensively issued. There are some teething troubles, however, which are being addressed. In view of the introduction of the BASEL-II norms, most of the banks are going for additional capital either by way of equity or bonds, which may also affect the profitability. While the balance sheet discloses the assets and liabilities of a bank on a particular day, the profit and loss statement relates to a period (12 months) giving the alternate result, i.e. profit/loss for that period. The profitability can be defined as the capacity to make profits. This profitability depends upon the best use of funds as also on other miscellaneous non-fund business. The efficiency of bank depends on its profitability and not on its profit. Both capacity utilization and quality of output are relevant parameters in the measurement of profitability of any Decision-Making Unit (DMU). This concept of profitability or efficiency is also meaningful in the case of banking operations. Berger and Humprey (1992) made a comprehensive study on the measurement and efficiency of commercial banks and he reported that many efficacy measures in his paper like, scale efficiency, scope efficiency, allocative efficiency, productive efficiency and Technical Efficiency (TE). Our article mainly deals with TE, which gives the Relative Efficiency (RE). While there are a number of ratios in Ratio Analysis Method (RAM) to find out various strengths and weaknesses of a bank, we have taken ratios, which are very important in our view, for the present study. That does not mean that other ratios are irrelevant. They can be used for further analysis with an extended scope.

These aspects have motivated the researcher to undertake this research, of course, with a limited scope, to gather the first hand information on the above mentioned theme. As such, the researcher has decided to work on A Study on performance Evaluation of Selected Public, Private and Foreign Banks in Reference to CAMEL Model.

My research topic is on the basis of Indian banking industry. Now-a-days in India, banking sector plays a very important role in the growth of Indian economy. Indian banking industry have been running and working successfully and providing a world class services to the customer at their door. I have to study all these aspect very deeply and clearly which is related to financial performance of the banks. My topic is on the basis of…

"A Study on performance Evaluation of Selected Public, Private and Foreign Banks in India with Reference to CAMEL Model"

2. CAMEL MODEL

In 1994, the RBI established the Board of Financial Supervision (BFS), which operates as a unit of the RBI. The entire supervisory mechanism was realigned to suit the changing needs of a strong and stable financial system. The supervisory jurisdiction of the BFS was slowly extended to the entire financial system barring the capital market institutions and the insurance sector. Its mandate is to strengthen supervision of the financial system by integrating oversight of the activities of financial services firms. The BFS has also established a sub-committee to routinely examine auditing practices, quality, and coverage.

In addition to the normal on-site inspections, Reserve Bank of India also conducts off-site surveillance which particularly focuses on the risk profile of the supervised entity. The Off-site Monitoring and Surveillance System (OSMOS) was introduced in 1995 as an additional tool for supervision of commercial banks. It was introduced with the aim to supplement the on-site inspections. Under off-site system, 12 returns (called DSB returns) are called from the

financial institutions, which focus on supervisory concerns such as Capital Adequacy, Assets Quality, large credits and concentrations, connected lending, earnings and risk exposures (viz. currency, liquidity and interest rate risks).

In 1995, RBI had set up a working group under the chairmanship of Shri S. Padmanabhan to review the banking supervision system. The Committee certain recommendations and based on such suggestions a rating system for domestic and foreign banks based on the international CAMELS model combining financial management and systems and control elements was introduced for the inspection cycle commencing from July 1998. It recommended that the banks should be rated on a five point scale (A to E) based on the lines of international CAMELS rating model. CAMEL evaluates banks on the following six parameters:-

(a) Capital Adequacy: Capital adequacy is measured by the ratio of capital to risk-weighted assets (CRAR). A sound capital base strengthens confidence of depositors

(b) Asset Quality: One of the indicators for asset quality is the ratio of non-performing loans to total loans (GNPA). The gross non-performing loans to gross advances ratio is more indicative of the quality of credit decisions made by bankers. Higher GNPA is indicative of poor credit decision-making.

(c) Management: The ratio of non-interest expenditures to total assets (MGNT) can be one of the measures to assess the working of the management. . This variable, which includes a variety of expenses, such as payroll, workers compensation and training investment, reflects the management policy stance.

(d) Earnings: It can be measured as the return on asset ratio.

(e) Liquidity: Cash maintained by the banks and balances with central bank, to total asset ratio (LQD) is an indicator of bank's liquidity. In general, banks with a larger volume of liquid assets are perceived safe, since these assets would allow banks to meet unexpected withdrawals.

3. METHODOLOGY OF THE STUDY

Scope of the Study

The scope of this research study is as under.

Functional Scope

Functional scope of this study is to analyze non-fund based income of Indian banking industry.

Geographical Scope

In this study researcher selected 27 banks, which are providing services in India. So, whole India is geographical criteria for this research study.

Research Design

According to Claire Selltiz, “Research Design is the arrangement of the conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure “ Architects ‘Design‘ a plan before constructing a building baring well in mind the purpose for which the building is to be used. The architect takes decisions such as, how long the building will be, how many rooms it will have, how these rooms does all this before the actual construction begins. The proceeds in this manner because he wants to get a picture which helps him to visualize clearly the difficulties and inconveniences that would face in future. The research design is also same process. Well-

structured research design protect researcher against difficulties and inconveniences. In other words, decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design.

Sample Design and Period of the Study

The data collection is very important task for the researcher for the researcher study. This research study was mainly based on secondary data. The secondary data were collected from the records, documents, related subject matter and related websites. Besides, the researcher was collected and analyzed published data as per the requirement. As such the universe of this research study is restricted with the reference to selected banks, which are providing services in India. So, researcher has selected 9 public sector banks and 9 private sector banks and 9 Foreign Banks. The data regarding selected banks have been obtained and collected from the annual report of the banks and related websites. The sample was a convenience sample, containing most of the major banks operating throughout India. The data was obtained from the financial statements of the sample banks for a period of nine years from 2008-09 to 2016-17. It is based on secondary data. The data are retrieved from various sources such as Annual Reports of the Selected Banks, Indian Banking Association Journal, Reserve Bank of India (RBI) Bulletin and Annual Reports on banking in India, Journal of Banking Studies, Journal of Accounting and Finance and Indian Journal of Commerce. The researcher has selected 9 public sector banks and 9 private sector banks and 9 Foreign Banks.

Public Sector Banks

State Bank of India, Allahabad Bank, Andhra Bank, Bank of Baroda, Bank of India, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank

Private Sector Banks

Axis Bank Ltd., Development Credit Bank Ltd., HDFC Bank Ltd., ICICI Bank Ltd., IndusInd Bank Ltd., Kotak Mahindra Bank Ltd., Yes Bank Ltd., Catholic Syrian Bank Ltd., City Union Bank Ltd.

Foreign Banks

AB Bank Ltd., Deutsche Bank AG, Citibank N.A., BNP Paribas, DBS Bank Ltd., Standard Chartered Bank, Abu Dhabi Commercial Bank Ltd., American Express Banking Corp., Bank of Mauritius Ltd.

4. DATA ANALYSIS AND INTERPRETATION

Table 1 Overall Camel Rank Test (On the Bases of Average of Ratio as Rank of Parameters)

Selected Banks	CAPITAL ADEQUACY		ASSET QUALITY		MANAGEMENT EFFICIENCY		EARNING QUALITY		LIQUIDITY MANAGEMENT		OVERALL	
	Average	Rank	Average	Rank	Average	Rank	Average	Rank	Average	Rank	Average	Rank
State Bank of India	23.449	22	2.187	20	7.012	21	21.00	2	5.079	21	11.745	15
Allahabad Bank	23.459	21	2.692	25	6.627	23	18.98	9	5.991	11	11.549	20
Andhra Bank	26.348	5	2.196	21	8.168	18	19.77	3	6.074	8	12.511	8
Bank of Baroda	24.557	11	1.750	14	8.609	15	18.76	13	4.840	24	11.703	17
Bank of India	25.129	8	2.575	23	6.702	22	18.64	16	5.434	17	11.695	18
Canara Bank	25.336	7	2.094	17	7.486	19	18.74	14	6.364	5	12.005	12
Central Bank of India	24.202	15	3.138	26	3.234	26	19.19	6	6.313	6	11.215	23
Corporation Bank	23.099	23	2.108	18	8.986	14	18.81	12	5.790	12	11.758	14
Dena Bank	23.846	17	2.598	24	6.402	24	19.22	5	6.021	9	11.617	19
Axis Bank Ltd.	20.654	26	0.759	7	11.091	11	18.02	18	0.410	27	10.186	27
Development Credit Bank Ltd.	23.996	16	1.671	13	3.454	25	18.86	11	5.777	13	10.751	24
HDFC Bank Ltd.	24.295	14	0.462	4	9.318	13	19.03	8	5.609	14	11.743	16

ICICI Bank Ltd.	19.881	27	2.022	15	8.223	17	17.70	22	4.896	22	10.544	26
IndusInd Bank Ltd.	23.661	19	0.492	5	8.403	16	18.69	15	5.273	20	11.303	22
Kotak Mahindra Bank Ltd.	24.417	13	1.143	12	7.172	20	22.45	1	6.019	10	12.240	9
Yes Bank Ltd.	20.691	25	0.286	3	14.559	7	18.91	10	5.367	19	11.963	13
Catholic Syrian Bank Ltd.	23.708	18	2.141	19	1.860	27	18.45	17	6.917	4	10.615	25
City Union Bank Ltd.	25.365	6	0.900	8	9.343	12	19.67	4	5.483	15	12.152	10
AB Bank Ltd.	34.360	1	4.005	27	14.240	8	11.39	26	3.572	26	13.513	6
Deutsche Bank AG	23.509	20	0.541	6	13.155	9	17.73	21	5.368	18	12.060	11
Citibank N.A.	29.096	4	1.110	11	19.318	5	17.75	20	8.692	2	15.193	4
BNP Paribas	25.118	9	0.245	2	27.272	1	17.17	24	6.177	7	15.196	3
DBS Bank Ltd.	20.715	24	2.298	22	21.499	3	17.83	19	7.389	3	13.946	5
Standard Chartered Bank	24.469	12	2.041	16	18.112	6	17.69	23	4.892	23	13.441	7
Abu Dhabi Commercial Bank Ltd.	33.434	2	1.052	10	20.654	4	19.03	7	5.474	16	15.930	1
American Express Banking Corp.	30.404	3	0.961	9	11.845	10	9.24	27	4.396	25	11.369	21
Bank Of America N A	25.047	10	0.159	1	26.574	2	16.33	25	8.840	1	15.390	2

Table 1 presents the overall averages and ranking of all the components of ratios in CAMEL. AB Bank Ltd. has got first position in Capital Adequacy followed by Abu Dhabi Commercial Bank Ltd., American Express Banking Corp. and Citi Bank NA. Bank of America has got first rank in Asset Quality followed by BNP Paribas, Yes Bank Ltd. and HDFC Bank Ltd. BNP Paribas has got first rank in Management Soundness followed by Bank of America, DBS Bank Ltd. and Abu Dhabi Commercial Bank Ltd. Kotak Mahindra bank Ltd. has got first rank in Earnings and Profitability followed by State Bank of India, Andhra Bank and Citi Union Bank Ltd. Bank of America N.A. has got first rank in Liquidity followed by Citi bank N.A., DBS bank Ltd. and Catholic Syrian bank Ltd.

Overall averages and rankings of all the components are the outcomes of the study on nine public, nine private and nine foreign sector banks using CAMELS approach. On the aggregate basis, from the above table it is evident that Abu Dhabi Commercial Bank Ltd. was got first rank with the highest composite index of 15.930 which is followed by Bank of America with a composite index of 15.390 BNP Paribas with a composite index of 15.196 and Citi Bank N.A. with a composite index of 15.193. While Axis Bank Ltd. is got last rank with a composite index of 10.186. Here, higher score (AVG.) shows the highest or better OVERALL CAMEL RANK. Because bases of parameter is average of ratios that has been achieved in all calculated ratios of that particular category.

4.1. Hypothesis Testing

The study proposed a hypothesis that there is a significant difference between the financial performance of public sector, private sector and foreign banks with reference to the CAMEL model (select variables). The study considered 21 different financial ratios as variables viz., Capital Adequacy Ratio (CAR), Debt Equity Ratio (DER), Total Advance to Total Asset Ratio (TATA), Govt. Securities to Total Investment Ratio (GSTI), Gross NPA Ratio (GNPA), Net NPA Ratio (NNPA), Total Investments to Total Assets (TITA), Net NPAs to Total Assets (NNPATA), Total Advance to Total Deposit Ratio (TATD), Business Per Employee Ratio (BPE), Profit Per Employee Ratio (PPE), Return on Equity (ROE), Operating Profits to Average Working Funds (OPAWF), Spread Ratio (SR), Net Profit to Total Assets (NPTA), Interest Income to Total Income (ITTI), Non-interest income as a percentage to working funds (NIIWF), Liquid Assets to Total Assets Ratio (LATA), , Govt. Securities to Total Assets (GSTA), Liquid Assets to Demand Deposits (LADD) and Liquid Assets to Total Deposits (LATD).

To investigate the proposed hypothesis statistical tools like Descriptive Statistics, One Way ANOVA (to examine the significant difference between the banks as well as among the banks), Test of Homogeneity (Levene's Statistic) has been used. The following sections discuss the results of various statistical tests employed.

Table 2 Descriptive Statistics

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
CAPITAL ADEQUACY	PUBLIC SECTOR	9	24.3806	1.06373	0.35458	23.5629	25.1982	23.1	26.35
	PRIVATE SECTOR	9	22.9631	1.99247	0.66416	21.4316	24.4947	19.88	25.37
	FOREIGN BANKS	9	27.3502	4.68899	1.563	23.7459	30.9545	20.72	34.36
	Total	27	24.898	3.43583	0.66123	23.5388	26.2571	19.88	34.36
ASSET QUALITY	PUBLIC SECTOR	9	2.3709	0.41541	0.13847	2.0516	2.6902	1.75	3.14
	PRIVATE SECTOR	9	1.0973	0.69437	0.23146	0.5636	1.6311	0.29	2.14
	FOREIGN BANKS	9	1.3791	1.22522	0.40841	0.4373	2.3209	0.16	4.01
	Total	27	1.6158	0.98648	0.18985	1.2255	2.006	0.16	4.01
MANAGEMENT EFFICIENCY	PUBLIC SECTOR	9	7.0251	1.69175	0.56392	5.7247	8.3255	3.23	8.99
	PRIVATE SECTOR	9	8.1581	3.79398	1.26466	5.2418	11.0744	1.86	14.56
	FOREIGN BANKS	9	19.1854	5.51552	1.83851	14.9458	23.4251	11.85	27.27
	Total	27	11.4562	6.7758	1.304	8.7758	14.1366	1.86	27.27
EARNING QUALITY	PUBLIC SECTOR	9	19.2344	0.74783	0.24928	18.6596	19.8093	18.64	21
	PRIVATE SECTOR	9	19.0867	1.3857	0.4619	18.0215	20.1518	17.7	22.45
	FOREIGN BANKS	9	16.0178	3.3516	1.1172	13.4415	18.594	9.24	19.03
	Total	27	18.113	2.54998	0.49074	17.1042	19.1217	9.24	22.45
LIQUIDITY MANAGEMENT	PUBLIC SECTOR	9	5.7673	0.53707	0.17902	5.3545	6.1802	4.84	6.36
	PRIVATE SECTOR	9	5.0834	1.8421	0.61403	3.6675	6.4994	0.41	6.92
	FOREIGN BANKS	9	6.0889	1.85653	0.61884	4.6618	7.5159	3.57	8.84
	Total	27	5.6466	1.5414	0.29664	5.0368	6.2563	0.41	8.84
AVERGE OF CAMEL COMPONENTS	PUBLIC SECTOR	9	11.756	0.35262	0.11754	11.485	12.027	11.21	12.51
	PRIVATE SECTOR	9	11.2778	0.77651	0.25884	10.6809	11.8747	10.19	12.24
	FOREIGN BANKS	9	14.0047	1.57033	0.52344	12.7976	15.2117	11.37	15.93
	Total	27	12.3461	1.56536	0.30125	11.7269	12.9654	10.19	15.93

Table 2 clearly reveals information about the CAMEL performance of selected banks based on some parameters. The Foreign Banks perform well as compare to Public sector and Private sector banks in terms of Capital Adequacy (27.35), Management Efficiency (19.1854) and in Liquidity Management (6.0889). In term of Assets Quality Private sector banks preform well as compare to Public sector banks and Foreign Banks with lowest average of 1.0973. In terms of Earning Quality Public sector banks perform good as compare to Private sector banks and Foreign banks with higher average of 19.2344. The Overall all financial performance based on CAMEL parameters Foreign banks topped and obtained overall first rank by having average of 14.0047 followed by Public sector banks (11.756) and Private sector Banks (11.2778).

4.2. Test of Homogeneity

Table 3 presents the results of Levene's Test Statistic for test of homogeneity. Equal variances across the groups/samples is called homogeneity of variances. The Levene's test uses an F-test to test the null hypothesis that the variance is equal across groups. Levene's test statistic shows that all variables have unequal variances across the samples.

Decision Rule for Levene's Test Statistic (for α =0.05)

If P≤0.05, the variances are significantly different (Unequal).

If P≥0.05, the variances are not significantly different (Equal).

Table 3 Test of Homogeneity of Variances

	Levene Statistic	**df1**	**df2**	**Sig.**
CAPITAL ADEQUACY	13.483	2	24	.000
ASSET QUALITY	3.629	2	24	.042
MANAGEMENT EFFICIENCY	3.902	2	24	.034
EARNING QUALITY	5.893	2	24	.008
LIQUIDITY MANAGEMENT	2.526	2	24	.101
AVERGE OF CAMEL COMPONENTS	8.817	2	24	.001

Above table 3 clearly reveals information about the homogeneity test of CAMEL parameters of selected banks under study period. In terms of Liquidity there is no significant difference in variances (Sig. = 0.101) at 5% level of significant. In other variable there is unequal variances. So, we conclude that the data is not fulfill the condition of Homogeneity for the ANOVA test. When data are not fulfill homogeneity Welch ANOVA is useful for further analysis.

H_{01}: The Overall CAMEL test do not differ significantly.

Table 4 Robust Tests of Equality of Means

		Statistica	**df1**	**df2**	**Sig.**	**Null (H0)**	**Remarks**
CAPITAL ADEQUACY	Welch	3.708	2	13.277	.053	Accepted	Not Sig. Difference
ASSET QUALITY	Welch	11.776	2	13.979	.001	Rejected	Sig, Difference
MANAGEMENT EFFICIENCY	Welch	19.028	2	13.111	.000	Rejected	Sig, Difference
EARNING QUALITY	Welch	3.760	2	13.295	.051	Accepted	Not Sig. Difference
LIQUIDITY MANAGEMENT	Welch	.704	2	12.242	.514	Accepted	Not Sig. Difference
AVERGE OF CAMEL COMPONENTS	Welch	10.388	2	12.837	.002	Rejected	Sig, Difference

For determining whether there is any significant difference between the means of CAMEL ratios, one-way Welch ANOVA test has been applied and the results highlighted at Table 4. From the table it can be observed that there is a significant difference between selected Public sector, Private sector and Foreign banks in terms of Assets Quality (Sig. = 0.001 at 5% level of Sig.), Management Efficiency (Sig. = 0.000 at 5% level of Sig.) and Overall CAMEL performance (Sig. = 0.002 at 5% level of Sig.), while remaining variables are exhibiting not significant results. Here Sig. value is less than P- value (0.05). It means there is statistically significant difference between the mean values of CAMEL ratios. It signifies that there is

significant difference in performance of Public, Private and Foreign sector Banks assessed by CAMEL model during the study period. It reveals the fact that the overall performance of selected banks are differ; this may be because of the adoption of modern technology, banking reforms and recovery mechanism.

4.3. Post Hoc Tests

Post Hoc test was carried out to explore the significant difference in a specific pair of the sample among the various samples. Post Hoc tests are designed for situations in which the researcher has already obtained a significant omnibus F-test with a factor that consists of three or more means and additional exploration of the differences among means is needed to provide specific information on which means are significantly different from each other.

Table 5 Comparison of Public, Private and Foreign Sector Banks

Dependent Variable: AVERGE OF CAMEL COMPONENTS							
						95% Confidence Interval	
	(I) SELECTED BANKS	(J) SELECTED BANKS	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Games-Howell	PUBLIC SECTOR	PRIVATE SECTOR	.47822	.28428	.254	-.2879	1.2443
		FOREIGN BANKS	-2.24867*	.53648	.006	-3.7527	-.7447
	PRIVATE SECTOR	PUBLIC SECTOR	-.47822	.28428	.254	-1.2443	.2879
		FOREIGN BANKS	-2.72689*	.58394	.002	-4.2903	-1.1635
	FOREIGN BANKS	PUBLIC SECTOR	2.24867*	.53648	.006	.7447	3.7527
		PRIVATE SECTOR	2.72689*	.58394	.002	1.1635	4.2903
*. The mean difference is significant at the 0.05 level.							

ANOVA give the results for whether there is a significance difference among the means of CAMEL. It does not tell exactly between which two groups there is a difference. This limitation of the ANOVA can be filled by using the Post Hoc test. Hence, to perform a multiple comparison among the banks for their CAMEL Ratios, Post Hoc test has worked out. Results are presented in following lines:

Comparison of Public sector banks with Private and Foreign banks for their CAMEL ratio to find the significance of difference Post Hoc test has worked out. Results are presented in Table 5. Shows that Foreign banks are perform statistically significant differ with Public Sector banks (Sig. = 0.006) at 5 percent level of significant with t= -2.24867. Similarly Foreign banks are perform statistically significant differ with Private Sector banks (Sig. = 0.002) at 5 percent level of significant with t= -2.72689. We also find from above table that there is no significant difference in financial performances (CAMEL) of Public and Private sector banks (Sig. =0.254) at 5 percent level of significant with t= .47822 during study period.

It was found that Foreign banks are perform statistically significant differ with Public Sector banks (Sig. = 0.006) at 5 percent level of significant with t= -2.24867. Similarly Foreign banks are perform statistically significant differ with Private Sector banks (Sig. = 0.002) at 5 percent level of significant with t= -2.72689. We also find from above table that there is no significant difference in financial performances (CAMEL) of Public and Private sector banks (Sig. =0.254) at 5 percent level of significant with t= .47822 during study period.

It was found that the financial performance of selected Public sector and Private sector banks are same but the selected Foreign banks performed well in compare to selected Public and Private sector banks during the study period.

5. FINDINGS OF THE STUDY

The following are the major findings of the study.

- It was found that In case of capital adequacy American Express Banking Corp. was at the top position with least rank group average of 4.205, followed by City Union Bank Ltd. (6.750) and AB Bank Ltd. (7.500). DBS Bank Ltd. stood at the last position with higher rank group average due to its poor performance in CAR, Debt-Equity Ratio, and Advances to Assets Ratio and G-secs to Total Investments Ratio.
- It was found that In case of Assets Quality IndusInd Bank Ltd. and .BNP Paribas was performing well in all selected parameters and stood at the top position with group average of 6.250, followed by HDFC Bank Ltd. (6.500), Abu Dhabi Commercial Bank Ltd. (6.750) and Bank of America N A (7.250). Central Bank of India stood at the last position with group average of 23.500 due to its poor performance in Gross NPA to Advances, Net NPA to Net Advances and Net NPAs to Total Assets.
- It was found that In case of Management Efficiency Bank Of America N A was performing well in all selected parameters and stood at the top position with least rank group average of 5.500, followed by BNP Paribas (7.00), Standard Chartered Bank (7.250) and Yes Bank Ltd. (7.500). Catholic Syrian Bank Ltd. a stood at the last position with highest rank group average of 25.250 due to its poor performance in all parameters of management efficiency Gross NPA to Advances, Net NPA to Net Advances and Net NPAs to Total Assets and Return on Equity.
- It was found that In case of Earning Efficiency Kotak Mahindra Bank Ltd. was performing well in all selected parameters and stood at the top position with least rank group average of 7.40, followed by AB Bank Ltd. (7.80), Standard Chartered Bank (8.00) and Deutsche Bank AG (8.40). Bank of India stood at the last position with highest rank group average of 21.00 due to its poor performance in Operating Profits to Average Working Funds, Spread, Net Profit to Total Assets and Non-Interest Income as percentage of Working Funds.
- It is found that In case Liquidity Citibank NA was performing well in all selected parameters and stood at the top liquidity position with least rank group average of 6.750, followed by Abu Dhabi Commercial Bank Ltd. (7.250), DBS bank Ltd. (7.750) and Bank of Baroda (9.500). Standard Chartered Bank stood at the last position with highest rank of group average 22.000 due to its poor performance in Liquid assets to Total Assets, Govt. Securities to Total Assets and Liquid Assets to Demand Deposits.
- On the Overall (aggregate) basis, Citibank N.A. and Bank of America N.A. are ranked the best with the lowest composite index of 7.8 followed by HDFC Bank Ltd. with a composite index of 8.4 and BNP Paribas with a composite index of 8.8 (Table 6.1). Here, Lowest score (AVG.) shows the highest or better OVERALL CAMEL RANK. Because bases of parameter is rank of ratios that has been achieved in all calculated ratios of that particular category.
- On the Overall (aggregate) basis, from the above table it is evident that Abu Dhabi Commercial Bank Ltd. was got first rank with the highest composite index of 15.930 which is followed by Bank of America with a composite index of 15.390 BNP Paribas with a composite index of 15.196 and Citi Bank N.A. with a composite index of 15.193. While Axis Bank Ltd. is got last rank with a composite index of 10.186. Here, higher score (AVG.) shows the highest or better OVERALL CAMEL RANK. Because bases of parameter is average of ratios that has been achieved in all calculated ratios of that particular category.
- It was found that the Foreign Banks perform well as compare to Public sector and Private sector banks in terms of Capital Adequacy (27.35), Management Efficiency (19.1854) and in Liquidity Management (6.0889). In term of Assets Quality Private

sector banks preform well as compare to Public sector banks and Foreign Banks with lowest average of 1.0973. In terms of Earning Quality Public sector banks perform well as compare to Private sector banks and Foreign banks with higher average of 19.2344. The Overall all financial performance based on CAMEL parameters Foreign banks topped and obtained overall first rank by having average of 14.0047 followed by Public sector banks (11.756) and Private sector Banks (11.2778).

- It was found that there is a significant difference between selected Public sector, Private sector and Foreign banks in terms of Assets Quality (Sig. = 0.001 at 5% level of Sig.), Management Efficiency (Sig. = 0.000 at 5% level of Sig.) and Overall CAMEL performance (Sig. = 0.002 at 5% level of Sig.), while remaining variables are exhibiting not significant results. Here Sig. value is less than P- value (0.05). It means there is statistically significant difference between the mean values of CAMEL ratios. It signifies that there is significant difference in performance of Public, Private and Foreign sector Banks assessed by CAMEL model during the study period. It reveals the fact that the overall performance of selected banks are differ; this may be because of the adoption of modern technology, banking reforms and recovery mechanism.
- It was found that Foreign banks are perform statistically significant differ with Public Sector banks (Sig. = 0.006) at 5 percent level of significant with t= -2.24867. Similarly Foreign banks are perform statistically significant differ with Private Sector banks (Sig. = 0.002) at 5 percent level of significant with t= -2.72689. We also find from above table that there is no significant difference in financial performances (CAMEL) of Public and Private sector banks (Sig. =0.254) at 5 percent level of significant with t= .47822 during study period. So we can say that financial performance of selected Public sector and Private sector banks are same but the selected Foreign banks performed well in compare to selected Public and Private sector banks during the study period.

6. CONCLUSION

Economic development of any country is mainly influenced by the growth of the banking industry in that country. The analysis of twenty seven prominent banks of India individually and in groups reveals the following result using CAMEL model. The above analysis provides that the public, private and foreign sector bankers accorded importance to various measures of CAMEL Model. An overview of all the measures, such as Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity brings out that bankers from all sectors considered these measures as well as various ratios under these measures more important for measuring the performance of the banks. The researcher has taken Public Sector Banks, Private Sector Banks, Foreign Banks for evaluation and the study reveals the following results. Foreign Banks perform well as compare to Public sector and Private sector banks in terms of Capital Adequacy, Management Efficiency and in Liquidity Management. In term of Assets Quality Private sector banks preform well as compare to Public sector banks and Foreign Banks with lowest average of 1.0973. In terms of Earning Quality Public sector banks perform well as compare to Private sector banks and Foreign banks with higher average of 19.2344. The Overall all financial performance based on CAMEL parameters Foreign banks topped and obtained overall first rank by having average of 14.0047 followed by Public sector banks (11.756) and Private sector Banks (11.2778). On the whole, it is observed that Foreign Banks outperformed public sector and private sector banks with regard to CAMEL framework as a method of measuring and managing performance of the bank under financial measure.

7. LIMITATIONS OF THE STUDY

- The scope of this study is limited to twenty seven selected banks only.
- Only nine years (2008-09 to 2016-17) was taken in to account.
- Only secondary data has been used for the study i.e. from the annual report of the company.
- The basis of our study is limited to our theoretical knowledge and understanding of Financial Evaluation. But actual determinants of the Company's financial evaluation may be different.
- The financial statements and accounting data have been rearranged as per the need of the study.
- All the limitations of mean, standard deviation, coefficient of variation, coefficient of correlation, coefficient of determination, adjusted coefficient of determination, multiple correlations, multiple regression, ANOVA and ratio also implies in this study wherever they have been used.

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