

A Study of Profitability Performance evaluation of Commercial Banks in India

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Abstract - The objective of this study is to study the consolidated financial data of banking sector and measuring the profitability by categorizing the banks on their financial characteristics and comparing them. The total of 16 banks i.e8 private sectors and 8 public sectors were considered for analysis and coefficient of co relation, regression and ANOVA method will be used to measure the interdependency of the various variables. Profitability analysis is the ability of the given investment to earn monetary output from the use of it. Here for the study purpose the research used return on asset,return on equity,return on deposit ratio for profitability evaluation . These potential factors are analysis through coefficient of correlation, regression analysis and Anova Method for this study purpose.

Keywords:- Banking Sector, Profitability and Financial Data

I. INTRODUCTION

The Banking sector is consider to be the key source of financing to boost the growth of the economy and since the independence the great efforts were done by the government to stabilize the banking and utilizing them for the social- economy development of the country. For this purpose the nationalization of banks was undertaken to give the autonomy in banking and also to capture the long standing practices of the private sector Banks. The large numbers of banks came under the state control as public sector banks under the guidance of the banking regulation act to run and operate in a most compact manner with the noble mission for meeting the financial requirement of the economy by supplying funds when demanded.(Ref:- Dr.Jayanta Kumar Nandi,Asst. Professor,Dept. of Commerce, Ghatal,PaschimMEDinipur, West Bengal) After the nationalization in 1969different regulatory measures were also undertaken to protect and preserve from foreign aggression. Many restrictions were imposed on entry and expansion of private and foreign banks with the objective to provide the platform to public sector banks to grow and proper while serving to the society. In 1991 with a move towards waves of globalization and privatization the public sector banks has to give up their sole rights of financial control in the money market of this country.Numbers of prosperous private and foreign banks joined the Indian money market with more power and control. This leads to demoralizingof many public sector banks and reason of failure of public sector banks to cope up with the changing

scenario. In order to overcome from failure many steps were taken and measures were adopted by banks under the supervision of banking authority and government of India. Bases on the recommendation of the Narasimham committee and other committee the Reserve Bank ofIndia come up with the road map and implemented it to stabilize and empower with the technological revolution and changes in policy to keep a pace with the global market forces and competition.

II. REVIEW OF LITERATURE

Review of literature is essential in every research to carry out investigation successfully.Hence the present study is also based on the review of literature.

Dr. Dharmendra S. Mistry (2011), in his paper, "Determinants of Profitability of Indian Commercial Banks" in RVIM journal of Management Research Vol.3, Issue 1 has examine that determinants such as operating profit, total assets, deposits, advances and investment have significant impact on profitability of various category of banks. The study used correlation analysis methods to measures the relationship between the different variables of three categories of banks i.e public, private and foreign banks. The study found that change in the investment causes increase in profitability of public sector as well as foreign banks in India, while affecting that of private sector banks. The study recommended that public sector banks should reduce overstaffing through voluntary retirement schemes and keeping pace as well as embracing latest

technology for enhanced products and services. It also suggests that public sector banks should focus on efficient rising of funds at low cost on one hand and disposing them at high interest earning securities. More effective measures to reduce nonperforming assets will also contribute to improved profitability of public sector banks and private sector banks.

Dr. Debaprosanna Nandy (2011), in his study entitled, "A Multivariate analysis approach of selecting profitability indicators –An empirical study of Commercial Banks in India" conducted a study for the period of 2004-05 to 2006-07 using various statistical tools such as mean, multiple correlation and multiple regression. It was concluded that interest expenses is the only good predictor for net profit of all different bank groups.

Vivek Singla (May 2013), in his study entitled, "Analysis of Productivity of Indian Banks: A Comparative Study of Selected Private Banks" conducted a study for the period of 2007-08 to 2011-12 using various statistical tools such as Ratio analysis **Per employee**-Deposits, Advances,

Business Volume Per Branch -Deposits, Advances and Business volume It was concluded that though the per employee productivity of ICICI bank is better than other selected private sector bank, but per branch productivity of ICICI Bank is less than the other selected banks.

S. Sailesh & K. Ramakrishnaiah, in his study entitled, "Profitability and Productivity of Bank of India" conducted a study for the period of 2003-04 to 2012-13 using various statistical tools such as CV, LGR and CGR. It was concluded that the growth in number of branches is not in same direction with the growth in number of employees which led staff shortage and may increase the customer service issues in the future. The interest income & interest expenses is also increasing year on year. The share of non-interest income is decreasing year on year.

Prof. Dr. Mohi-ud-Din Sangmi & Dr. Tabassum Nazir, in his study entitled, "Profitability and Productivity of Bank of India Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model" conducted a study for the period of 2001-2005 using various statistical tools such as Mean and standard deviation CAMEL parameters. It was concluded that The PNB has an average Net Interest margin of 0.034 compare to 0.028 generated by JKB. However, ROA is more (1.498%) in case of JKB balance to PNB (0.936%). The PNB has succeed in diversifying its business from fund based to fee based actions and registered an average income of 14.95% while as JKB has generated 12.25% from this activity. The PNB has been able to uphold the ratio of Net NPAs to Net advances at 3.42%. The JKB bank has been extra competent by maintaining the average ratio of Net NPAs to Net advances at 1.760%

Objective of the Study

1. To study the overall profitability of selected banks through study of consolidated financial data of public and private sector banks for the period 2003-04 to 2013-14.
2. To compare the different variables in over a numbers of years with a intention of evaluating a critical variables effecting overall performance.

Scope of the Study

The study is about role of profitability analysis of public and private sector banks in India. It mainly deals with profitability ratio which reflects the overall efficiency and performance. A variability of profitability ratios can be used to assess the financial health of the banks. The study comprised 8 public sector banks and 8 private sector banks. The study will benefit the following persons.

- 1) **For Society**:- The research help the society members in selection of banks on the basis of various profitability ratios
- 2) **For Banking Manager**: - The study will help the bank manager to understand the activities that would enhance their bank profitability.
- 3) **For Government**:-As the profitability analysis will summaries the trend in banks over a period of study. It will help the regulatory authority to take the suitable action against the trends in financial performance of banks.
- 4) **For Researcher**:- This study enable the researcher to improve the in depth knowledge of banking sector specifically on account of profitability performance of Selected Indian Public Sector banks and Private Sector Banks

Period of the Study

The study cover a period of 10 years from 2003-04 to 2013-14.

III. RESEARCH METHODOLOGY

1. Data Collection

The study is based on secondary data. Information required for the study has been collected from the annual report of selected public and private sector banks, books, journals, magazines and data collected from the various websites.

2. Statistical tools

In this study various tools are used (i.e) mean, standard deviation, co-efficient of correlation and ANOVA test has been used for the study purpose.

3. Hypothesis

Profitability ratio i.e. return on assets, return on equity, Operating efficiency and return on Deposits do not differ significantly.

ANOVA is a statistical procedure for determining whether three or more sample means were drawn from populations

with equal means. In every day ANOVA test the null hypothesis that the population means (estimated by sample means) are all equal. If null hypothesis is rejected, than we can concluded that population means are not all equal. If it is rejected than we can conclude that the population means are not all equal. A more precise formulation of the null and alternative hypotheses for comparing k means is

$$H_0: \mu_1 = \mu_2 = \dots = \mu_k$$

$$H_1: \text{at least one pair of mean is different, } \mu_1, \dots, \mu_k$$

The F test statistics indicates that there is significant difference in the mean performance of the responses given for concerned samples. Here this computed value is compared with critical value of each group. If F exceeds this critical value for F at some significance level (usually 0.05) it means there is evidence to reject the null hypothesis in favour of alternative hypothesis.

Limitations of the study

- The period of the study is limited to 10 years
- Study is based on secondary data only.
- Due to limited span of time only selected factor i.e profitability is considered.

IV. OVERVIEW OF PROFITABILITY

The Profitability is the most important indicators of overall financial performance. The level of efficiency, productivity and cost effectiveness is reflected through the bank profit figure. In short the profit of the bank is considered as a composite index of the bank performance in its various areas of operations. Therefore banks in India, at present juncture have to ensure a balance between social banking and profitability and earn a fair return to justify their existence. Here for the study purpose the profitability analysis of the traditional and modern banks will be measured on the basis of ratios. 1. Return on Assets 2. Return on Equity 3. Return on deposit 4. Operating Efficiency Ratio

List of Banks	Return on Assets of Indian Public Sector Banks Vs Private Sector Banks												Mean	SD
	Year													
	2003-05	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15		
Public Sector Banks														
BOB	1.2	0.75	0.79	0.8	0.9	1.09	1.21	1.18	1.12	0.82	0.69	0.48	0.92	0.23
BOI	1.25	0.38	0.68	0.88	1.3	1.49	0.7	0.79	0.73	0.66	0.53	0.29	0.80	0.35
CB	1.29	1.01	1.01	0.98	0.9	1.06	1.3	1.42	0.95	0.77	0.52	0.52	0.98	0.27
PNB	1.08	1.12	1.09	1.03	1.2	1.39	1.44	1.31	1.17	1.01	0.65	0.55	1.08	0.25
SBI	0.94	0.99	0.89	0.84	1	1.04	0.88	0.65	0.91	0.97	0.65	0.69	0.87	0.13
AB	0.78	1.76	0.59	0.97	1.6	1.72	1.59	1.38	1.31	1.16	0.28	0.36	1.13	0.50
DB	1.11	0.26	0.27	0.71	1.1	1.02	0.96	0.95	1.02	0.81	0.46	0.21	0.74	0.33
CBI	0.98	0.53	0.37	0.62	0.5	0.45	0.66	0.7	0.26	0.44	-0.5	0.21	0.44	0.33
Private Sector Banks														
HDFC	1.45	1.47	1.38	1.33	1.3	1.28	1.53	1.57	1.68	1.82	1.9	1.89	1.55	0.21
ICICI	1.31	1.59	1.3	1.09	1.1	0.98	1.13	1.35	1.5	1.7	1.73	1.8	1.38	0.27
Axis	1.21	1.21	1.11	1.06	1.2	1.41	1.51	1.58	1.6	1.67	1.74	1.75	1.42	0.25
KMB	1.74	1.56	3.6	2.25	2.8	1.61	2.78	2.44	2.21	2.1	2.07	2.25	2.28	0.55
IB	1.74	1.32	0.22	0.34	0.3	0.58	1.14	1.46	1.57	1.63	1.76	1.83	1.16	0.59
FB	0.9	0.54	1.28	1.38	1.3	1.48	1.15	1.23	1.39	1.27	1.15	1.28	1.09	0.25
IDBI	0.7	0.78	0.63	0.67	0.7	0.62	0.53	0.73	0.81	0.69	0.36	0.28	0.62	0.15
KVB	2.27	1.34	1.5	1.53	1.6	1.49	1.72	1.66	1.52	1.3	0.87	0.87	1.48	0.36

V. DATA ANALYSIS AND INTERPRETATION

Source: - Secondary Data(Compiled From Annual report of Bank & Financial Results available on Investment Sites)

Return on asset measures how efficiently management use it assets to generate the earning. Higher return reflects the good utilization of available assets and lower returns reflects non effectiveness of management in use of assets. The above table no. 1 shows the comparison of return on assets on the basis of mean and standard deviation of 8 private banks and 8 public sector banks for the period 2003-04 to 2013-14. Kotak Mahindra bankis mostefficient in utilization of available asset compare to other banks then HDFC bank stand on the second rank follow by KarurVysya Bank. In Public sector banks Andhra Bank stand on the First rank in effective utilization of it resources follow by Punjab National Bank and Canara Bank. If we see look

to the risk factor associated with this return then HDFC bank is most efficient with higher mean and lower standard deviation compare to Kotak Mahindra Bank. In Public Sector SBI is bank which have lowest risk but return on assets are not satisfactory compare to some of the other banks. Between Andhra and Punjab National Bank, Punjab National Banks is the banks which gives fair return and lower risk.

List of Banks	Return on Equity of Indian Public Sector Banks Vs Private Sector Banks												Mean	SD
	Year													
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15		
Public Sector Banks														
BOB	19.7	12.81	11.15	12.71	13.6	17.95	20.23	20.31	18.4	14.43	13.21	9.3	15.32	3.65
BOI	25.3	7.09	14.57	18.85	22	25.84	13.73	15.58	13.5	12.1	9.7	6.18	15.37	6.23
CB	29.2	19.95	20.65	18.78	18.9	20.64	24.09	22.43	15.91	12.57	10.1	10.2	18.62	5.43
PNB	22	17.96	17.01	16.03	19	23.52	24.06	22.12	18.52	15.19	9.69	8.12	17.76	4.83
SBI	20.2	16.78	14.86	14.96	14.6	15.13	14.11	12.8	14.44	14.32	9.61	10.5	14.36	2.59
AB	36.41	35.66	23.34	17.78	17.71	17.9	23.71	19.23	17.79	15.19	5.02	6.34	19.67	9.09
DB	26.6	7.43	9.03	17.48	23	21.68	21.36	17.68	18.71	14.05	7.72	3.56	15.68	6.96
CBI	28.7	13.09	8.52	20.37	16.7	15.76	24.2	19.25	5.29	7.6	-9.66	4.18	12.83	9.95
Private Sector Banks														
HDFC	24.4	23.67	22.73	23.57	13.8	15.31	13.89	15.6	17.36	18.74	19.79	16.9	18.82	3.77
ICICI	20.4	15.09	10.88	11.51	7.59	7.64	9.1	11.01	12.47	13.96	14.44	14.5	12.38	3.46
Axis	26.4	18.19	18.28	19.37	12.2	17.77	15.67	17.83	18.59	15.64	16.26	16.5	17.72	3.19
KMB	16.4	12.45	14.58	11.19	8.17	7.06	12.35	12.03	13.65	14.4	12.24	13.2	12.31	2.50
IB	34.2	25.79	4.34	7.1	6.76	10.39	16.19	15.12	17.79	14.32	16.3	17.5	15.48	7.98
FB	23.29	12.57	18.1	19.56	9.2	11	9.5	11.09	13.47	13.6	12.38	13.7	13.96	4.08
IDBI	8.91	5.1	8.16	9.1	10.6	10.1	12.21	12.33	11.41	9.71	5.25	4.14	8.92	2.66
KVB	25.35	14.3	16.58	16.54	17.5	17.46	20.74	19.65	19.17	17.83	12.91	10.9	17.41	3.60

Source: - Secondary Data(Compiled From Annual report of Bank & Financial Results available on Investment Sites)

Return on equity measures the rate of return on Shareholder equity. It measures the Firm efficiency in generating profit from every unit of shareholders' equity. Companies can increase their return on equity percentage by buying back their stock, increasing earnings using more debts to fund operations. Table No. 2 Indicates the trend analysis of return on equity of 8 Private sector banks and 8 public sector banks 2003-04 to 2013-14. It also shows the mean of return on equity and standard deviation of these banks. Among the Private sector bank stood at the first position follow by the Axis Bank ,KarurVysya Bank and Axis Bank. Among the Public Sector Banks Andhra Bank stand on the first position follow by Canara Bank and Punjab National Bank. Here if we look from the Standard Deviation point of view than Kotak Mahindra Bank is the bank which having lowest risk follow by IDBI and Axis. In Public Sector bank SBI having lowest standard deviation follow by Bank of Baroda and Punjab National Bank.

List of Banks	Return on Deposits of Indian Public Sector Banks Vs Private Sector Banks												Mean	SD
	Year													
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15		
Public Sector Banks														
BOB	1.372	0.739	0.701	0.832	0.978	1.186	1.281	1.418	1.329	0.984	0.850	0.608	1.023	0.284
BOI	1.420	0.414	0.749	0.939	1.303	1.582	0.755	0.831	0.837	0.715	0.571	0.327	0.870	0.387
CB	2.038	1.892	1.432	1.297	1.173	0.435	0.658	0.707	0.278	0.455	-0.521	0.242	0.840	0.745
PNB	1.261	1.299	1.230	1.112	1.276	1.487	1.547	1.428	1.294	1.235	0.766	0.649	1.215	0.267
SBI	1.437	1.206	1.044	1.042	1.187	1.105	1.077	0.890	1.119	1.126	0.788	0.853	1.073	0.174
AB	2.038	1.892	1.432	1.297	1.173	1.101	1.347	1.357	1.256	1.032	0.302	0.412	1.220	0.500

DB	1.300	0.356	0.393	0.728	1.060	0.982	0.996	0.953	1.041	0.834	0.501	0.229	0.781	0.337
CBI	1.105	0.496	0.393	0.609	0.492	0.435	0.658	0.707	0.278	0.455	-0.521	0.242	0.446	0.380
Private Sector Banks														
HDFC	1.982	2.348	1.571	1.675	1.582	1.579	1.813	1.929	2.139	2.330	2.388	2.376	1.976	0.333
ICICI	2.320	1.790	1.391	1.059	1.125	1.291	2.005	2.438	2.815	3.218	3.248	3.353	2.171	0.855
Axis	1.295	1.629	1.701	1.113	1.209	1.545	1.754	1.768	1.918	2.076	2.249	2.311	1.714	0.387
KMB	4.748	4.510	8.069	4.768	5.837	4.172	5.557	5.363	4.802	4.320	4.252	4.094	5.041	1.107
IB	2.141	1.602	0.245	0.387	0.394	0.671	1.312	1.680	1.895	1.961	2.327	2.420	1.420	0.800
FB	1.012	0.593	1.260	1.356	1.417	1.555	1.295	1.369	1.577	1.476	1.388	1.429	1.311	0.270
IDBI	1.199	2.109	2.104	1.359	1.023	0.682	0.609	0.866	0.958	0.840	0.495	0.369	1.051	0.567
KVB	2.724	1.579	1.786	1.713	1.660	1.562	1.744	1.681	1.562	1.424	0.982	1.039	1.621	0.434

Return on Deposits is considered as one of the best measures for evaluating the profitability performance of the bank. It reflects efficiency of the management in generating profit from the deposits provided by the customers. The above table No. 3 shows that Kotak Mahindra Banks is the bank which having highest return on deposits follow by ICICI and HDFC. Amongst the Public Sector Banks Andhra Banks stood at first position follow by Punjab National Bank and SBI. If we look to the standard deviation factor than Federal Bank Stood at the first position follow by HDFC and ICICI. In Case of Public Sector Banks in terms of mean return on deposits Andhra Bank stood at the first position follow by Punjab National Bank and Bank of Baroda. When we compare on the basis of standard deviation first position is occupied by SBI, second by bank of baroda and third by Punjab National Bank.

List of Banks	Operational Efficiency Ratio of Indian Public Sector Banks Vs Private Sector Banks													Mean	SD
	Year														
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15			
Public Sector Banks															
BOB	0.022	0.026	0.025	0.020	0.020	0.017	0.017	0.013	0.012	0.011	0.011	0.012	0.017	0.005	
BOI	0.028	0.024	0.024	0.022	0.019	0.017	0.020	0.014	0.013	0.012	0.012	0.013	0.018	0.006	
CB	0.023	0.020	0.018	0.016	0.016	0.015	0.014	0.014	0.013	0.012	0.012	0.013	0.016	0.003	
PNB	0.023	0.025	0.021	0.024	0.019	0.020	0.019	0.017	0.015	0.017	0.017	0.017	0.020	0.003	
SBI	0.032	0.024	0.026	0.027	0.026	0.023	0.034	0.028	0.026	0.025	0.026	0.027	0.027	0.003	
AB	0.033	0.025	0.021	0.020	0.017	0.016	0.015	0.018	0.018	0.018	0.018	0.020	0.020	0.005	
DB	0.044	0.041	0.034	0.032	0.027	0.022	0.018	0.017	0.015	0.013	0.015	0.016	0.025	0.011	
CBI	0.026	0.025	0.023	0.022	0.017	0.013	0.012	0.019	0.016	0.016	0.018	0.018	0.019	0.004	
Private Sector Banks															
HDFC	0.345	0.242	0.027	0.027	0.029	0.032	0.027	0.026	0.028	0.028	0.025	0.024	0.072	0.106	
ICICI	0.032	0.043	0.045	0.051	0.062	0.066	0.066	0.059	0.049	0.045	0.041	0.042	0.050	0.011	
Axis	0.027	0.015	0.019	0.019	0.024	0.024	0.028	0.020	0.021	0.021	0.021	0.021	0.022	0.004	
KMB	0.058	0.098	0.097	0.089	0.103	0.103	0.112	0.081	0.062	0.057	0.057	0.066	0.082	0.021	
IB	0.025	0.015	0.018	0.019	0.020	0.025	0.025	0.018	0.023	0.024	0.020	0.025	0.021	0.003	
FB	0.019	0.027	0.022	0.020	0.020	0.024	0.025	0.016	0.017	0.017	0.020	0.020	0.021	0.003	
IDBI	0.006	0.006	0.010	0.008	0.008	0.009	0.008	0.010	0.009	0.010	0.010	0.012	0.009	0.002	
KVB	0.024	0.024	0.024	0.020	0.015	0.015	0.017	0.015	0.014	0.016	0.020	0.021	0.019	0.004	

Source: - Secondary Data (Compiled From Annual report of Bank & Financial Results available on Investment Sites)

To analyses the non-interest expenses is an important indicator of bank efficiency. Non-Interest expenses are also called Operating expenses or Intermediation Cost. Employees expenses is the largest component of non-interest expenses. Lower the ratio is preferable. In the above table among the private Banks IDBI is one of the leading banks having the lowest Operating

efficiency ratio. After that second position is taken by KarurVyasya Bank. Among the Public Sector banks canara Banks stand at the First position 0.016 and on the second position Bank of Baroda is their.

Analysis of Hypothesis Testing

Profitability ratio i.e. return on assets, return on equity, Operating efficiency and return on Deposits do not differ significantly.

List of Banks	ROA	ROE	ROD	Operating Efficiency Ratio
Bank of Baroda	0.9183	15.3225	1.0231	1.7216903
Bank of India	0.8025	15.3658	0.8703	1.8046623
Canara Bank	0.9792	18.6183	0.8405	1.5570637
Punjab National Bank	1.0825	17.7642	1.2154	1.9512804
State Bank of India	0.8717	14.3600	1.0728	2.6967386
Andhra Bank	1.1275	19.6733	1.2200	1.9915697
Dena Bank	0.7367	15.6842	0.7810	2.4576761
Central Bank of India	0.4425	12.8325	0.4456	1.8722994
HDFC Bank	1.5517	18.8150	1.9760	7.1593658
ICICI Bank	1.3833	12.3758	2.1712	5.0138656
Axis Bank	1.4175	17.7217	1.7140	2.1755563
Kotak Mahindra	2.2817	12.3092	5.0410	8.1973325
IndusInd Bank	1.1608	15.4842	1.4196	2.1439681
Federal Bank	1.0925	13.9575	1.3105	2.0580333
IDBI Bank	0.6225	8.9183	1.0511	0.8870603
Karur Vyas Bank	1.4750	17.4133	1.6213	1.8758436

To simplify the calculation 0.4425 is deducted from the entire table

List of Banks	ROA	ROE	ROD	Operating Efficiency Ratio
Bank of Baroda	0.48	14.88	0.58	1.28
Bank of India	0.36	14.92	0.43	1.36
Canara Bank	0.54	18.18	0.40	1.11
Punjab National Bank	0.64	17.32	0.77	1.51
State Bank of India	0.43	13.92	0.63	2.25
Andhra Bank	0.69	19.23	0.78	1.55
Dena Bank	0.29	15.24	0.34	2.02
Central Bank of India	0.00	12.39	0.00	1.43
HDFC Bank	1.11	18.37	1.53	6.72
ICICI Bank	0.94	11.93	1.73	4.57
Axis Bank	0.98	17.28	1.27	1.73
Kotak Mahindra	1.84	11.87	4.60	7.75
IndusInd Bank	0.72	15.04	0.98	1.70
Federal Bank	0.65	13.52	0.87	1.62
IDBI Bank	0.18	8.48	0.61	0.44
Karur Vyas Bank	1.03	16.97	1.18	1.43

ANOVA TABLE				
Sources of Variation	Sum of Square	D.F.	Mean Squares	F
Between Columns(Ratios)	3698.67	3	1232.89	1.4209801
Between Rows(Banks)	20422.00	15	1361.466667	1.5691724
Residual	39043.51	45	867.6335556	
Total	63164.18	63		

- The table Value of F at 5% for V1=3 & V2 = 45 is 2.81. Since the calculated value is less than the table value, hence the hypothesis hold true. Hence the profitability ratios of the banks do no differ significantly.
- The table Value for F for V1=15 & V2 =45 at 5% level is 1.89 as the calculated value is less than the table value. Hence performance made by different banks do not differ significantly

VI. CONCLUSION

Kotak Mahindra bank is most efficient in utilization of available asset & In Public sector banks Andhra Bank stand on the First rank in effective utilization of it resources It was found that among Private sector bank Axis Bank,

KarurVysya Bank and Axis Bank stands at first position & Among the Public Sector Banks Andhra Bank stand on the first position follow by Canara Bank and Punjab National Bank. It was found that Kotak Mahindra Banks is the bank which having highest return on deposits and among public

sector banks Andhra Bank stood at the first position. IDBI is one of the leading banks having the lowest Operating efficiency ratio & among the Public Sector banks Canara Banks stand at the First position on the basis of the hypothesis testing it is concluded that profitability ratio of selected banks do not differ significantly over the study period. The ratios of the banks over a period of time are close to each other. Private sectors banks are slightly on a higher side in terms of profitability indicators as their focus main on profit generation compare to public sector banks.

Journal of Advanced Research in Management and Social Sciences ISSN: 2278-6236” Vol III. Issue VII.

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