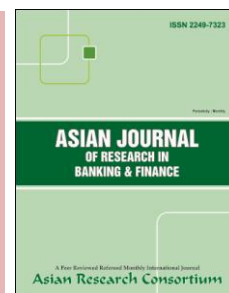




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AN ANALYSIS OF FINANCIAL PERFORMANCE OF SELECTED INDIAN COMMERCIAL BANKS

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ABSTRACT

Indian banking sector, which withstood the turmoil of the global financial crisis during 2008-09, started showing some signs of stress during the subsequent period. The present study was done to examine the importance of financial performance of the commercial banks during the period of 2000 to 2011. The study applied key profitability ratios for assessing the financial performance of the commercial banks. Financial stability of the banks plays a crucial role in the growth of the banks. To accomplish this objective a regression analysis between Earnings before interest and tax and different factors affecting banks profitability was done. The study reveals that the during the period Return on Assets which indicates how efficiently the company is using its total assets shows an increasing trends in the last five year from 2007 to 2011. Return on Net Worth shows an increasing trend from 2007 onwards with very poor performance in 2006. The Capital adequacy ratio has strong negative relation with Net Assets to RONW ratio and NPA to net assets ratio.

KEYWORDS: Banking, Earnings before interest and tax, NPA, Profitability, Ratios.

INTRODUCTION

After independence the first regulation to come for the banking sector is the banking regulation Act of 1949 which gave extensive power to the RBI over commercial banks. Banking regulation



act was amended in 1968 to provide a degree of social control through creation of National Credit Council to formulate credit policy to smoothen the flow of credit for the priority sector.

More radical change regarding increasing role of government in the banking sector was taken in July 1969 with nationalization of 14 major banks. This was done in the fourth five year plan between 1969-74. The rationale given for nationalization was that the banks were controlled by a few industrialist and business tycoon which failed to play significant role in the planned development of the nation.

The nationalization was followed by tremendous growth in the number of branches particularly those in rural areas. The total number of branches increased 8,262 in 1969 to 60,650 in 1991. By June 2009 the number increased to 80,514. Rural branches as a proportion of total branches increased from 22% in 1969 to 55% in 1992.

The total amount of bank credit also increased consistently since 1969. The total bank credit was Rs.4,690 crore in 1970-71 which increased to a level of Rs.1,16,300 crore in 1990-91 and stood at a level of Rs.27,75,549 crore in 2009.

Another post nationalization initiative in the banking sector was in the form of Priority Sector Lending. In order to achieve the priority sector lending the public sector banks went on indiscriminating lending which resulted in Non Performing Assets.

A committee was set up with Mr. Narasimhan as the chairman by the Government of India to look into the financial health of the public sector banks. The committee gave various important recommendations on Statutory Liquidity Ratio, Cash reserve Ratio, Interest Rate Structure and on Banking Structure Reorganization. The committee also proposed capital adequacy ratio norms for banks to achieve a capital risk weighted asset ratio of 8%

LITERATURE REVIEW

Sehrish Gul Faiza Irshad and Khalid Zaman (2011) investigate the impact of bank-specific characteristics and macroeconomic indicators on bank's profitability in the Pakistan's banks for the 2005-2009 periods. The empirical results have found strong evidence that both internal and external factors have a strong influence on the profitability. The results of the study are of value to both academics and policy makers.

Harish Kumar Singla (2008) analyzed the financial performance of selected banks; he concluded that the financial positions of banks are reasonable. Debt equity ratio is maintained at an adequate level throughout and NPAs also witnessed a decline during the study period. The ROI remains at a very position, which is a worrying factor.

Mishra Aswini Kumar, G. Sri Harsha, Shivi Anand and Neil Rajesh Dhruva (2012) analyze the performance of 12 public and private sector banks over a period of eleven years (2000-2011) in the Indian banking sector. For this purpose, CAMEL approach has been used and it is established that private sector banks are at the top of the list, with their performances in terms of soundness



being the best. Public sector banks like Union Bank and SBI have taken a backseat and display low economic soundness in comparison.

Molyneux and Thornton (1992) found a significant positive association with the return on equity and the level of interest rates, bank concentration and government ownership during their study.

Havrylchyk et al. (2006) found a positive and direct relationship between capital and profits of banks which indicate that efficient bank should have higher profits since it is able to maximize on its net interest income.

B. Nimalathasan (2008) initiated a Comparative Study of Financial Performance of Banking Sector in Bangladesh using CAMELS rating system with 6562 Branches of 48 Banks in Bangladesh from Financial year 1999-2006. Accordingly CAMELS rating system shows that 3 banks was 01 or Strong, 31 banks were rated 02 or satisfactory, rating of 7 banks was 03 or fair, 5 banks were rated 04 or Marginal and 2 banks got 05 or unsatisfactorily rating. 1 NCB had unsatisfactorily rating and other 3 NCBs had marginal rating.

K.V.N. Prasad and G. Ravinder (2012) examine the economic sustainability of a sample of thirty nine banks in India using CAMEL model during the period 2006-10. Results shown that on an average Andhra bank was at the top most position followed by bank of Baroda and Punjab & Syndicate Bank. It is also observed that Central Bank of India was at the bottom most position.

Gupta and kumar (2008) conducted the study to assess the performance of Indian Private Sector Banks on the basis of Camel Model and gave rating to top five and bottom five banks. They ranked 20 old and 10 new private sector banks on the basis of CAMEL model.

Bhayani (2006) investigated the performance of new private sector banks by CAMEL model. Samples are Industrial Credit & Investment Corporation of India, Housing Development Finance Corporation, Unit Trust of India and Industrial Development Bank of India.

Prasuna (2003) concluded that the competition was tough and consumers benefited from better services quality, innovative products and better bargains.

Maishanu (2004) studied financial health of commercial banks, and concluded eight financial ratios to diagnose the financial state of a bank by using univariate approach to Predicting failure.

Berger (1995) found a positive causal relationship attributed to bankruptcy costs reflected in borrowing rates.

OBJECTIVES

- To study the progress of Indian banking sector
- To study the performance of profitability measures of selected banks and
- To examine the factors determining profitability of selected banks



DATA SOURCE AND METHODOLOGICAL FRAMEWORK

The study is done for the period from 2000 to 2011. The data relating to the financial parameters which is required to study the financial performance of the banks is obtained from capital line database. A total of 15 commercial banks consisting of both public sector and private sector banks selected on the basis of their market capitalization were taken for the study.

The analysis for the study is done using the ratio analysis. Various important ratios are studied extensively and statistical measures like correlation analysis, multiple regression analysis and hypothesis testing are used for comparing the parameters.

HIGHLIGHTS OF THE RATIO ANALYSIS

TABLE 1A: RETURN ON ASSETS

ROA	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Mean	1.24	1.18	1.10	1.05	.97	.92	1.02	1.13	1.21	.94	.76	.81
Median	1.33	1.23	1.09	1.13	1.00	1.11	1.19	1.38	1.16	.91	.66	.75
Std Dev	.305	.29	.29	.31	.36	.49	.50	.35	.29	.33	.38	.44
Variance	.09	.09	.08	.10	.13	.24	.25	.12	.08	.11	.15	.19
Kurtosis	-.91	-.75	-.66	.77	2.00	.51	.12	-.65	1.23	-.07	.78	.55
Skewness	-.30	-.33	-.46	-.78	-	-	-.59	-.16	.51	.38	1.28	.97
Minimum	.72	.70	.58	.34	.05	-.25	.09	.74	.64	.37	.40	.29
Maximum	1.68	1.67	1.50	1.60	1.57	1.46	2.01	1.96	1.88	1.60	1.62	1.84

Table 1A shows Return on Assets which indicates how efficiently the company is using its total assets to generate profit. It gives an idea as how effectively the management is utilizing its assets to generate income out of it. The ROA of the banks is showing increasing trends in the last five year from 2007 to 2011. The fall in ROA was mainly due to increased interest expenditure.

TABLE 1B: RETURN ON NET WORTH

RONW	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Mean	19.3	19.4	18.4	16.9	15.7	14.3	19.3	27.5	23.8	19.4	16.6	15.6
Median	19.3	19.3	18.7	17.8	18.2	16.0	19.7	27.5	24.4	21.1	14.7	15.5
Std Dev	4.57	5.41	5.79	5.99	5.55	6.13	8.35	7.38	6.62	6.45	7.00	6.45
Variance	20.9	29.3	33.6	35.9	30.8	37.5	69.7	54.5	43.8	41.6	49.1	41.6
Kurtosis	-.20	-.20	-.26	-.02	2.11	.55	-.30	-.26	1.29	-.07	-.39	-
Skewness	-.49	-.36	.23	-.11	-	-	-.39	.41	.72	-.83	.60	-.19
Minimum	9.65	7.96	7.83	6.47	.89	.00	2.05	15.1	12.7	7.23	7.52	6.25
Maximum	26.4	26.7	29.1	27.5	22.0	21.4	31.6	41.1	40.3	29.2	31.8	23.4

Table 1B shows the trends in Return on Net Worth which is another indicator of profitability. Return on Net Worth reveals how much profit a company generates with the amount of capital



that the equity shareholders have invested. This also shows an increasing trend from 2007 onwards with very poor performance in 2006

TABLE 1C: CAPITAL ADEQUACY RATIO

CAR	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Mean	13.4	13.6	13.0	12.5	12.0	11.9	11.2	11.9	10.6	10.1	11.8	11.1
Median	12.9	13.1	12.9	12.4	12.0	11.6	12.1	12.8	12.2	11.6	11.6	11.7
Std Dev	1.70	2.11	1.33	.98	.79	1.37	1.64	2.32	1.87	1.84	1.54	2.33
Variance	2.91	4.47	1.78	.97	.64	1.90	2.71	5.40	3.50	3.40	2.37	5.46
Kurtosis	.96	1.71	1.12	-.55	-.87	-.38	1.90	5.66	6.34	5.75	-.01	7.10
Skewnes	.96	1.24	.14	-.27	-.09	-.06	.66	1.83	2.20	2.19	.14	2.31
Minimu	11.0	10.8	10.2	10.5	10.6	9.09	9.21	9.81	10.7	10.6	9.00	9.64
Maximu	17.6	19.1	15.9	13.9	13.5	14.0	16.2	20.1	18.5	17.9	15.0	19.6

Table 1C shows the Capital Adequacy Ratio of the selected banks. Capital Adequacy Ratio is a measure of banks capital and risk weighted credit exposure. The ratio is used to measure the riskiness of the capital and protect the depositors from any instability of financial system around the world. The table shows an increasing trend in CAR as banks started infusing fresh capital in their capital structure to meet the BASEL norms. Especially after the economic recession the voice to have a better CAR increased.

TABLE 1D: CREDIT DEPOSIT RATIO

Credit/	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Mean	73.5	72.4	71.8	70.5	68.6	65.8	61.2	57.87	57.85	55.23	49.08	47.9
Median	72.3	72.1	70.1	69.4	67.1	65.2	60.0	55.67	53.69	52.39	49.01	47.2
Std Dev	5.95	6.67	6.98	5.86	6.21	8.08	9.91	12.28	18.86	16.26	6.24	7.25
Varianc	35.5	44.5	48.8	34.4	38.6	65.3	98.2	151.0	355.7	264.6	39.02	52.6
Kurtosis	7.73	9.64	10.3	5.96	3.74	4.67	5.76	9.89	12.38	10.76	-1.15	.42
Skewne	2.39	2.78	2.97	2.17	1.50	1.50	1.89	2.85	3.35	3.04	-.09	.63
Minimu	66.7	66.1	65.5	65.1	59.8	52.7	47.4	43.63	42.84	39.06	39.73	36.1
Maximu	92.9	95.0	95.9	88.7	86.4	89.6	91.7	99.70	125.0	111.5	58.13	64.7

The ratio of how much a bank lends out of the deposits it has mobilized from the public. It indicates how much of a bank's core funds are being used for lending. A higher ratio indicates more reliance on deposits for lending and vice-versa. The credit deposit ratio (C/D) for the Indian banking system was the highest in the last ten years. Low deposit mobilization was one of the major reasons for this trend. Most public sector banks have started off-loading high cost bulk deposits as the Ministry Of Finance has mandated them to reduce it to 15% of their total deposits by March 2013. Also, higher Inflation and better returns from other asset classes like gold and real estate led investors to park their savings in these instruments causing lower deposit.



TABLE 1E: BUSINESS PER EMPLOYEE RATIO

BPE	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Mean	10.5	8.96	8.00	7.11	6.16	5.37	4.90	4.52	4.47	3.98	3.85	3.88
Median	10.3	8.45	7.68	6.23	5.42	4.31	3.48	2.92	2.50	2.18	1.85	1.39
Std Dev	2.91	2.14	2.15	2.11	2.25	2.24	2.58	3.00	3.70	3.84	4.10	4.71
Variance	8.50	4.61	4.63	4.46	5.06	5.03	6.66	9.02	13.7	14.7	16.8	22.2
Kurtosis	-1.12	-.07	-.83	-.65	.08	.01	-.20	.08	.51	5.83	4.06	2.35
Skewness	.11	.56	.27	.84	1.13	1.19	1.22	1.32	1.43	2.38	2.07	1.77
Minimum	6.24	5.90	4.46	4.86	3.50	3.31	2.77	2.28	1.94	1.68	1.23	1.05
Maximu	15.7	13.3	11.5	11.1	10.4	10.2	10.2	10.8	12.8	15.8	15.8	16.5

An important ratio that looks at a company's sales in relation to the number of employees they have. A bank would like to increase its business per employee that would generate higher revenue for the banks. With the increase in competition the banks are becoming more competitive that reflects in their Business per employee ratio which is of increasing trend.

HIGHLIGHTS OF THE CORRELATION ANALYSIS

TABLE 2: CORRELATION ANALYSIS

	Return on Assets	Return on Net Worth	Capital Adequacy Ratio	Credit to Deposit Ratio	Business per Employee	Net Assets to RONW	NPA to Net Assets Ratio	Investment to Deposit Ratio
Return on Assets	1							
Return on Net Worth	.702**	1						
Capital Adequacy Ratio	.412**	.062	1					
Credit to Deposit Ratio	.112	-.163*	.139	1				
Business per Employee	.153*	-.051	.137	.477**	1			
Net Assets to RONW Ratio	-.346**	.246**	-.441**	-.594**	-.441**	1		
NPA to Net Assets Ratio	-.421**	-.158*	-.262**	-.390**	-.447**	.488 *	1	
Investment to Deposit Ratio	.151*	.076	.046	-.086	-.165*	.308**	.169*	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).



- Return on assets has strong positive relation with RONW, capital adequacy ratio, credit to deposit ratio, business per employee and investment to deposit ratio but negative relation with net assets to RONW Ratio and NPA to net assets ratio.
- Return on net worth has strong negative relation with credit to deposit ratio, business per employee and NPA to net assets ratio while strong positive relation with capital adequacy ratio, net assets to RONW ratio and investment to deposit ratio.
- Capital adequacy ratio has strong negative relation with Net Assets to RONW ratio and NPA to net assets ratio.
- Credit to deposit ratio has strong negative relation with Net Assets to RONW ratio and NPA to net assets ratio while positive relation with business per employee.
- Business per Employee has strong negative relation with Net Assets to RONW ratio, NPA to net assets ratio and investment to deposit ratio.
- Net Assets to RONW has positive relation with Net Assets to RONW ratio and investment to deposit ratio.
- NPA to Net Assets Ratio is linked positively with investment to deposit ratio.

MULTIPLE REGRESSION ANALYSIS

The following multiple regression equation is used in the model to describe the relationship between dependent and independent variables:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8$$

Y= Earnings before Interest and Tax (EBIT) (dependent variables)

α = Intercept

β_1 = coefficient of Return on Assets

β_2 = coefficient of Return on Net Worth

β_3 = coefficient of Capital Adequacy Ratio

β_4 = coefficient of Credit/Deposit Ratio

β_5 = coefficient of Business per Employee

β_6 = coefficient of Net Assets to Return on Net Worth Ratio



β_7 = coefficient of Nonperforming Assets to Net Assets Ratio

β_8 = coefficient of Investment/ Deposit Ratio

x1= Return on Assets

x2= Return on Net Worth

x3= Capital Adequacy Ratio

x4= Credit/Deposit Ratio

x5= Business per Employee

x6= Net Assets to Return on Net Worth Ratio

x7= Nonperforming Assets to Net Assets Ratio

x8= Investment/ Deposit Ratio

TABLE 3A: MODEL SUMMARY (2000-2011)

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
8	.643	.414	.388		4393.203

TABLE 3B: ANALYSIS OF VARIANCE (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.493E9	8	3.117E8	.648	.000 ^a
Residual	3.532E9	7	1.930E7	-	-
Total	6.025E9	15	-	-	-

It is inferred from the multiple regression equation for the period of (2000-2011) that the correlation coefficient is 0.643(Table 3a). The eight selected independent variables in the study collectively contributed 41.4% to Earning before Interest & Taxes. The analysis of variance (multiple regressions) in Table 3b shows “F” value of 0.648.

TESTING OF HYPOTHESIS

Hypothesis is a statement about the population parameter.

H₀: When ROA increase, EBIT remain same.



H_1 : When ROA increase, EBIT also increase.

t-Test	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
EBIT - ROA	- 5114.96703	5616.46196	405.33323	- 5914.47142	- 4315.46265	- 12.619	15	.000

The calculated t value of -12.619 is more than the table value of 2.58 at 1% level of significance, so the null hypothesis that is When ROA increase EBIT remains same is rejected. This implies that as the ROA increases, EBIT also increases.

H_0 : When Capital Adequacy Ratio remain same, ROA increase.

H_1 : When Capital Adequacy Ratio increase, ROA decreases.

t-Test	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
CAR - ROA	- 11.49807	1.64354	.11861	-11.73203	-11.26411	- 9.938	15	.000

The calculated t value of -9.938 is more than the table value of 2.58 at 1% level of significance, so the null hypothesis that is When Capital Adequacy Ratio remains same is rejected. This implies that with the increase in Capital Adequacy Ratio, the ROA decreases.

H_0 : When ROA increase, Non-performing Assets to Net Assets Ratio remain same.

H_1 : When ROA increase, Non-performing Assets to Net Assets Ratio also increase.



TABLE 4C: HYPOTHESIS – 3

t-Test	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
NPA to NA-ROA	-1.33328	2.67031	.19271	-1.71340	-.95316	-6.918	15	.000

Calculated t value -6.918 is more than the table value 2.58 at 1% level of significance, so the null hypothesis that, as ROA increase, Non-performing Assets to Net Assets Ratio remain same is rejected. So we can say that when ROA increases, Non-performing Assets to Net Assets Ratio also increase.

CONCLUSION

Financial performance of banks came under pressure during 2011-12, mainly due to the increased cost of deposits in the backdrop of an elevated interest rate environment. The important indicator of financial performance i.e. the Return on Asset and Return on Equity is showing a stable increase during the last decade. This may be because of increase in business per employee and a stable interest regime. The study of the last decade from 2001 to 2011 reveals that the financial position of the commercial banks were rational with a steady growth over the last decade. However, on a positive note, the efficiency of banks improved. The table shows an increasing trend in CAR as banks started infusing fresh capital in their capital structure to meet the BASEL norms.

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APPENDICES

The fifteen commercial banks that were selected for the study are as follows

- 1) Andhra Bank
- 2) Bank of Baroda
- 3) Bank of India
- 4) Canara Bank
- 5) Corporation Bank
- 6) Oriental Bank of Commerce
- 7) Punjab National Bank
- 8) Union Bank of India
- 9) Vijaya Bank
- 10) HDFC Bank



- 11) ICICI Bank
- 12) INDUSIND Bank
- 13) City Union Bank Ltd.
- 14) AXIS Bank
- 15) ING Vysya Bank Ltd.

