

DETERMINANTS OF PROFITABILITY OF PRIVATE SECTOR BANKS IN INDIA

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Abstract As financial intermediaries banks play an important role in the operations of an economy. The paper examines the determinants of profitability in the private sector banks in India for the years 2006-07 to 2009-10. A sample of 23 banks in the private sector has been taken. Backward Stepwise Regression Analysis has been used to study the impact of these determinants on the performance of the banks. Return on Assets (ROA) has been taken as the dependent variable while other variables as Spread ratio, Provisions and contingencies, Non interest income, Credit/deposit ratio, Operating expense ratio, Profit per employee, Business per employee, Investment/deposit ratio, Capital adequacy ratio, Non performing assets and Type of bank have been controlled in the study. The results show that Spread ratio, Provisions and contingencies, Non interest income, Operating expense ratio, Profit per employee, Investment/ deposit ratio and Non performing assets are significant variables in affecting the profitability of banks in the private sector of Indian economy. It is also suggested that if banks concentrate on these variables, they would be able to generate better profitability in the present globalised era.

Keywords: Private Sector Banks, Return on Assets, Spread Ratio, Non Performing Assets

INTRODUCTION

The Indian banking sector provides an interesting context for studying bank profitability. The sector underwent significant changes since the last two decades. Since 1991, it was extensively liberalised through abolition of administrative interventions and regulations. Though the reforms have been adopted gradually by the Indian economy, but liberalisation of Indian economy accompanied with these banking sector reforms have highlighted the urgent need for Indian banking industry to improve in terms of technology, infrastructure and R&D. Not only this, the complicated structure of the Indian Banking industry comprising of scheduled banks and non scheduled banks; further divided into private sector banks, public sector banks, Regional Rural Banks, Cooperative banks along with Foreign sector banks have made the environment even more competitive and challenging. Unlike other nations of the world, where privatisation has been in vogue since many decades, for a country like India, privatisation is not only a new phenomenon but also such a challenging one that it has led to severe competition amongst different banks in India. Thus, each banks in India needs to uplift its performance in the growing phase of liberalisation, globalisation and privatisation.

There are many factors that affect the profitability of banks. These factors are not only bank specific but also industry specific. Also, many factors at the macro level too, affect a bank's profitability. Among the internal and bank specific

factors, the liquidity position of a bank is the pivotal factor that determines bank's credit/lending power, risk bearing capacity and provisioning norms. Thus, the liquidity position affects bank's profitability in a positive way (Singh and Chaudhary, 2009). However, extreme liquidity without sufficient credit creation would not be favourable for bank's performance. Credit creation accompanies with it the risk of non payment by the customers. Hence, huge amount of unpaid loans (Non performing assets) would have negative effect on the profitability of banking business (Badola and Verma, 2006). The liquid resources must be invested to improve the profitability position, so that the investment-deposit ratio generates profits for the bank (Singh and Chaudhary, 2009). Capital adequacy of banks also affects their profitability position. More the capital lesser would be the chances of bankruptcy and hence more profitability (Berger, 1995). Also, banks with high capital may incur large overheads without affecting their profitability (Naceur, 2003). However, the general theoretical framework suggests that reduced expenses and overheads lead to more profitability (Guru *et al*, 2002). Also size of a bank highlights economies and diseconomies of scale in a banking sector. On one hand increased size leads to economies and risk diversification and thus affects profitability in a favourable manner. On the other hand mismanaged size may lead to diseconomies (Naceur, 2003; Athanasoglou *et al*, 2005).

There are external factors also, as ownership of a bank. Many studies suggest foreign owned banks to outperform

domestically owned counterparts (Demerguc Kunt Huizine, 1999). Government ownership and private ownership too makes a difference (Molyneux and Thornton, 1992). Industry concentration too affects the performance (Molyneux and Thornton, 1992 Athanasoglou *et al*, 2005).

Banking performance is also affected by the macro economic variables. First and foremost, the financial environment and development level of a country affects bank's performance. The well developed financial system accelerates economic growth by balancing between income, savings and consumption in an economy (Singh and Chaudhary, 2009). Inflation also affects bank's margins. It has an association with bank's rate of interest and hence profitability (Abreu and Mendes, 2002; Guru *et al*, 2002; Athanasoglou, 2005). Even the level of development of stock markets of a country affects the profitability of banking industry (Bashir, 2002; Naceur, 2003). In fact the list of factors that determine and affect the profitability of banks is not exhaustive.

REVIEW OF LITERATURE

Molyneux and Thornton (1992) were the first to explore thoroughly the determinants of bank profitability on a set of countries. They used a sample of 18 European countries during the 1986-1989 period. They found a significant positive association between the return on equity and the level of interest rates in each country, bank concentration and government ownership.

Berger (1995) examined the relationship between the Return on Equity and Capital Asset Ratio for a sample of US banks for the 1983-92 time periods. Using the Granger Causality model he showed that ROE and Capital to Asset Ratio were positively related. Neelay and Wheelock (1997) too explored the profitability of a sample of commercial banks in USA for the period 1980-1995. They found that bank's profitability was positively related to the annual percentage changes in the state's per capital income. Even Angbazo (1997) studied the determinants of bank's net interest margin for a sample of US banks for the period 1989-2003. The results of the pooled sample documents suggested that default risks, opportunity cost of non interest bearing reserves, leverage and management efficiency were positively related with bank interest spread.

In a comprehensive study Demerguç-Kunt and Huizingha (1999) examined the determinants of bank interest margins and profitability on a sample of bank level data for 80 countries for the time periods of 1988-1995. They studied several factors representing individual bank's characteristics as well as macro economic conditions, taxation, regulations, financial structure and legal indicators. The results showed that larger ratio of bank assets to GDP and a lower market concentration ratio led to lower margins and profits. Foreign banks had higher margins and profits than their domestic

counterparts in developing countries, while the opposite prevailed in developed countries.

Barajas *et al* (1999) evaluated a sample of banks in Columbia to study the effects of financial liberalisation on bank interest margin. The study revealed that though the overall spread had not declined after financial reforms, the relevance of the different factors behind the bank's spread were affected by such measures. Another changed linked with liberalisation process was the increase of the coefficient of loan quality after liberalisation.

Bashir (2000) examined the determinants of Islamic bank's performance in eight Middle Eastern countries for the period, 1993-1998. A number of internal and external factor were used to predict profitability and efficiencies of the banks. Controlling for macroeconomic environment, financial market situation and taxation, the results show that higher leverage and large loans to asset ratios, led to higher profitability. The foreign-owned banks were found to be more profitable than the domestic banks. There was also evidence that taxation had a negative impact on banks profitability. Finally, macroeconomic setting and stock market development have a positive impact on profitability.

Abreu and Mendes (2002) investigated the determinants of bank's interest margins and profitability for some European countries in the last decade. They reported that well-capitalised banks had better profitability. The results of regression analysis also studied some macro-economic indicators and unemployment rate had a negative relationship with profitability while the inflation was also a relevant variable.

Afanaseiff *et al* (2002) used panel data techniques to study the main determinants of the Tunisian bank's performances for the period 1980-1995. They suggested that the best performing bank's were those who tried to improve labour and capital productivity and those who maintained a high level of deposit accounts relative to their assets and those that were able to reinforce their equity.

Guru *et al* (2002) attempted to identify the determinants of successful deposit banks. They took a sample of 17 Malaysian banks for the period 1986-1995. The profitability determinants were divided into two categories as internal determinants (Liquidity, capital adequacy and expense management) and external determinants (ownership, firm size and external economic conditions). The findings of the study revealed that efficient expense management was one of the most significant variables in explaining high bank profitability. Among the macro indicators, high interest ratio was associated with low bank profitability and inflation was found to have a positive effect on bank performance.

Naceur (2003) investigated the impact of bank's characteristics, financial structure and macro-economic indicators on bank's interest margins and profitability in the Tunisian

banking industry for the periods 1980-2000. Individual bank characteristics explain a substantial part of within country variations in the bank's interest margins and net profitability. High interest margins and profitability tended to be associated with bank's that held high amount of capital and with large overheads. Other important internal determinants of bank's interest margins were bank loans that have had a positive and significant coefficient on the net interest margin. The size had a negative and significant coefficient on the net interest margin. Also the macro-economic indicators as inflation and growth rates had no impact on bank's interest margins and profitability. Also stock market development had a positive impact on banking profitability.

Athanasoglou et al (2005) studied the factors affecting profitability of Greek banks for the period 1985-2001. The study had taken bank specific factors (operating efficiency, financial risk and size), industry specific factors (industry concentration and ownership status) as well as macro-economic factors (cyclical output and inflation). GMM technique was applied to panel data. The results suggested that but for size other bank specific determinants significantly affected bank's performance. The profitability was pro cyclical and the effect of business cycle was asymmetric. However, industry variables were not important in explaining bank's profitability.

Badola and Verma (2006) studied all the 27 banks in public sector in India for the period of 13 years from 1991-92-2003-04. Backward estimation method of regression analysis was used. The variables considered for the present study include Spread (S), Non-Interest Income (NII), Credit/ Deposit Ratio (C/D), NPA as percentage to Net Advances (NPA), Provision and Contingencies (P&C), Operating Expenses (OE), Business per Employee (BPE), Profit per Employee (PPE) and Net Profit (NP). Net Profit was taken as the dependent variable. The results showed that NPAs, P&C and OE had a negative impact on the Net profits while S, NII, C/D, BPE and PPE had a positive impact on the profitability of banks.

Singh and Chaudhary (2009) studied the determinants of profitability in public sector, private sector and foreign sector banks in India from 2000-01 to 2006-07. Both bank specific determinants (investment, advances, deposits and assets) as well as macro- economic determinants (per capital income, exports, foreign exchange ratio etc.) were taken. The results of simple regression analysis showed that investments had significant impact on the operating profitability for all the banks in all the three sectors. However, advances, deposits and assets affected profitability of private sector and foreign sector banks only. Even the macro-economic determinants affected the profitability significantly.

Manoj (2010) studied only the old private sector banks based in Kerela state (KOPBs). Operating profit ratio (OPR) was taken as the dependent variable while operational efficiency

in terms of Net Interest Margin was the independent variable. Other variables controlled were assets, investment in government securities, non interest income, and ratio of rural braches to semi urban and metropolitan braches. The results of regression analysis showed a significant and positive relation between OPR and non interest income. However there was a strong negative relationship between net interest margin and investment in government securities.

NEED OF THE STUDY

Liberalisation of Indian economy commenced since 1991. It led to introduction of many banking sector reforms by several committees set up in the country as Chakraborty Committee, Narasimham Committee etc. As a result, there has been reduction in CRR and SLR; variations in interest rates and deregulations and adaption of prudential norms. All this has changed the face of the Indian banking industry and has encouraged deregulated and privatised environment. Though many studies have been carried out in different countries of the world to find the determinants of profitability of the banking sector, like USA, Saudi Arabia, Greece, Malaysia, India and many European countries as well. These studies have taken diverse variables both at the micro as well as the macro level. But, a country like India which has been recently liberalised and is facing competition not only at the international level but also within its home boundaries, needs a revaluation so that its profitability could be sustained in the present competitive environment. Hence, the present study.

OBJECTIVES OF THE PAPER

The major objective of the paper is to find the determinants affecting profitability of the banks operating in private sector in India.

DATA BASE AND METHODOLOGY

Sample

A sample of 23 private sector banks in India has been taken. These 23 banks are represented by 15 banks in the old private sector and 8 banks in the new private sector. The private sector has been chosen because banks in private sector have emerged as dominating entities in the era of liberalisation, privatisation and globalisation.

Time Period

The determinants affecting the profitability in banks have studied for 4 years, that is, 2006-07 to 2009-10. This period is relevant because it represents the post recession period during which the banks in developed nations like USA have

been affected badly. An assessment of profitability in the Indian banks too needs to be made during this relevant time period.

Data source

The information pertaining to the dependent and independent variables has been taken from the statistics available at the websites of Reserve Bank of Indian and Indian Banking Association.

VARIABLES

Dependent Variables

Return on Assets (ROA) is taken as the dependent variable as it reflects as to how well a bank's management is using the banks real investment resources to generate profits.

It is calculated as:

$$\text{ROA} = \text{Net Income} / \text{Total Assets}$$

Independent Variables

1. Spread Ratio: Spread represents the difference of Interest received and interest paid. The ratio is calculated as a percentage spread to total assets. The higher the ratio, the more will be the profitability. It can be written as, $\text{Spread Ratio} = \text{Spread} / \text{Total Assets}$.
2. Provision and Contingencies: These represent a portion of profits kept for contingent situations and expenditure and thus have a direct bearing on the profitability.
3. Non Interest Income: This represents income of a bank from its allied and non-banking activities. Banks should operate at lower cost to increase profitability. This is calculated as, $\text{Non-interest income} / \text{Total Assets}$.
4. Credit Deposit Ratio: it is calculated as, $\text{Total advances} / \text{total deposits}$. The ratio bears a positive relationship with profitability as it highlights effective utilisation of deposits which are the major and cheapest source of revenue to the bank. However, a lower ratio may indicate that the deposits are merely serving as a burden to the banking business.
5. Operating Expense Ratio: It is calculated as, $\text{Operating Expenses} / \text{Total expenses}$. The ratio has a negative relationship with profitability as it high ratio highlights operational inefficiency of a bank.
6. Profit per employee: It is calculated as, $\text{Net profits} / \text{total number of employees}$. The ratio has a positive relation with profitability and depicts employee efficiency.
7. Business per employee: The ratio is calculated as, $\text{Deposits} + \text{Advances} / \text{Total number of employees}$. The

ratio bears a positive relation with profitability as it highlights the efficiency of human resources in relation to the core business of banking.

8. Investment Deposit Ratio: This is calculated as, $\text{Investments} / \text{Deposits}$. The ratio highlights the efficiency of a bank to invest its deposits and surplus cash so as to generate profits.
9. Capital Adequacy Ratio: This is calculated as, $\text{Capital} / \text{Risk Weighted Assets}$ of a business. In the adoption of risk management strategies by a bank the ratio determines the cushion available to a bank against the credit risk, operational risk and market risk.
10. Non Performing asset ratio: this is calculated as, $\text{NPA} / \text{Total assets}$. The ratio bears a negative relationship with profitability as it indicates the credit risk of the bank
11. Type of Bank: The total sample of 23 banks is represented by 15 'old private sector banks' and 8 'new private sector banks'. Hence in order to see whether the new banks outperform their old counterparts or vice versa, the type of bank has been taken as the dummy variable. The value of 1 has been given if the bank represents the old private sector; otherwise the value 0 has been assigned.

The data for the entire period 2006-07 to 2009-10 has been averaged for the dependent and independent variables.

Hypotheses of the Study

The hypotheses of the study are:

- H_1 : The higher the spread ratio, the more will be the profitability.
- H_2 : Provisions and Contingencies have a negative relationship with profitability.
- H_3 : Non Interest Income bears a positive relationship with profitability.
- H_4 : Credit Deposit ratio bears a positive relationship with profitability.
- H_5 : Operating Expense ratio has a negative relationship with profitability.
- H_6 : Business per employee bears a positive relation with profitability.
- H_7 : Profit per Employee has a positive relation with profitability and depicts employee efficiency.
- H_8 : Investment Deposit ratio bears a positive relation with profitability as more the profitable investments, more would be the profitability.
- H_9 : Capital Adequacy ratio bears a positive relationship with profitability.
- H_{10} : Non Performing Assets bears a negative

relation with profitability as it highlights poor credit management of the banks.

- H_{11} : New private sector banks outperform old private sector banks.

Statistical Tools Used

Backward Stepwise Regression Analysis has been used to find the impact of determinants of profitability on the performance of banks in India. SPSS 15 version of the software has been used. The data for all the dependent and explanatory variables have been averaged for the years 2007-2010. The coefficient of regression suggests the direction of relationship between the variables while the t values suggest the level of significance. The adjusted R^2 suggests the proportion of variation in the dependent variable as explained by the independent variables. The problem of multi-collinearity has been diagnosed through Pearson Correlation. The problem of auto correlation has been checked through Durbin Watson. The following regression model has been framed:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \varepsilon$$

Where

- Y = Profitability (ROA)
- X_1 = Spread
- X_2 = Credit Deposit Ratio
- X_3 = Non Performing Assets
- X_4 = Operating Expenses
- X_5 = Business per Employee
- X_6 = Profit per Employee;
- X_7 = Investment Deposit Ratio

X_8 = Capital Adequacy Ratio

X_9 = Provisions and Contingencies

X_{10} = Non Interest Income

X_{11} = Dummy (Old private sector banks=1, new private sector banks=0);

β = Slopes of the independent variables while β_0 is a constant or the value of Y when all values of X are zero;

$\varepsilon = \varepsilon_t$

Results and Discussion

The results can be summarised as follows:

Table I shows the matrix of correlation that studies the problem of multi-collinearity. If the value is 0.80 or more then there exists a problem of multi-collinearity. Table I state that multicollinearity is an issue of concern in the case of Business per Employee (BPE) and Profit per Employee (PPE). The variables BPE and PPE have coefficient of correlation of 0.794 which is also significant at 1% level of significance. Thus, the problem of multicollinearity exists between these measures for the period. Rest of the variables do not have problem of multicollinearity among them for the said period. However, in application of backward stepwise regression, BPE has been removed automatically.

Table II shows that five cross-sectional regression equations have been framed for the financial years 2006-07 to 2009-2010 for the final analysis. The results for multivariate regression analysis (regression equation 1) show that the spread as percentage of Assets is positive at 1% level of significance. Non performing Assets as percentage of net advances are negative at 10 % level of significance. Also, Operating expenses as a percentage of total expenses are

Table I. Matrix of Pearson Coefficient of Correlation

	ROA	Spread	CD	NPA	opexp	BPE	PPE	ID	CAR	PC	NII
ROA	1										
Spread	.319**	1									
CD Ratio	.113*	.219	1								
NPAs	-.753***	-.057	.376**	1							
Opt Exp	-.309***	.548*	.292***	.345**	1						
BPE	.307***	-.516*	.262	-.292***	-.433**	1					
PPE	.737	-.115	.277***	-.569*	-.347**	.794*	1				
ID Ratio	.044	.183	.599*	.182	.376**	.333***	.376**	1			
CA	.241	.227	-.062	-.135	.081	-.082	.186	.122	1		
PC	.087	.565*	.428**	.129	.221	.004	.022	.234	-.096	1	
NII	-.146	-.256	.579*	.190	.293***	.552	.317***	.517*	-.271	-.293***	1

Note: *, **, *** significant at 1%, 5% and 10% level respectively.

Table II: Backward Stepwise Regression Analysis

Model/Independent variables	1	2	3	4	5
Constant	.402 (.660)	.154 (.469)	.025 (.116)	.084 (.436)	.149 (.817)
Spread	.942 (4.243)*	.992 (5.205)*	.967 (5.390)*	1.048 (7.743)*	1.020 (7.710)*
CD Ratio	.004 (.657)	.004 (.644)	.004 (.706)	X	X
NPAs	-.180 (-1.871)***	-.167 (-1.866)***	-.160 (-1.856)***	-.116 (-1.986)***	-.111 (-1.908)***
Opt Exp	-.063 (-4.050)*	-.062 (-4.154)*	-.058 (-4.488)*	-.063 (-5.735)*	-.059 (-5.731)*
BPE	0.000 (-.490)	X	X	X	X
PPE	.058 (1.944)***	.049 (2.140)***	.055 (2.714)***	.058 (2.993)***	.066 (3.693)***
ID Ratio	-.015 (-2.289)**	-.015 (-2.588)**	-.015 (-2.644)**	-.015 (-2.714)**	-.015 (-2.658)**
CAR	.005 (.991)	.005 (1.040)	.005 (.968)	.005 (.991)	X
PC	-.794 (-3.636)*	-.829 (-4.159)*	-.796 (-4.328)*	-.858 (-5.40)*	-.832 (-5.319)*
NII	.073 (2.823)**	.074 (2.986)**	.073 (3.036)**	.084 (4.499)*	.076 (4.477)*
Dummy	-.095 (-.703)	-.056 (-.529)	X	X	X
R ²	0.968	0.968	0.967	0.966	0.963
Adjusted R ²	0.936	0.940	0.944	0.946	0.946
F-statistics	30.474*	35.760*	42.030*	48.976*	55.90*
Durbin Watson	2.188	2.188	2.188	2.188	2.188

Note: *, **, *** significant at 1%, 5% and 10% level respectively

negative at 1% level of significance. However, Profit per employee has a positive association with ROA at 10% level of significance. Investment deposit Ratio is negative at 5% level of significance, Provisions and contingencies as a percentage of total assets are also negative at 1% level of significance while Non Interest Income as percentage of Total Income has a positive relationship with ROA at 5% level of significance. Rest of the variables, as credit deposit ratio, Business per employee, Capital adequacy ratio and the dummy variable representing old private sector and new private sector banks could not significantly influence the ROA in the first regression equation.

Also, the value of R² is 0.968. It explains that 96.8% variation in model is explained by all independent variables jointly. The value of adjusted R² is 0.936 which states that 93.6% variation in ROA is explained by variations in independent

variables. The value of F statistics is 30.474 and is significant at 1% level which shows the fitness of the model. The value of Durbin Watson is 2.188 which state that there is no problem of autocorrelation. Afterwards, variables were removed one by one to see the impact of independent variables on ROA to get the best-fit model.

Following the statement by Gujarati (2006; p.260) the regression equation 5 has been chosen for the final analysis. The selected regression equation in Table II approximates the value for adjusted R² (0.963) explains hereby that 96.3 % variations in ROA score is explained by indicators namely Spread, NPAs, Investment deposit ratio, Profit Per Employee, Provisions and Contingencies, Non Interest Income of private sector banks.

The Spread as percentage of assets is positive at 1 % level

Table III: A snap shot of results (comparison of expected relationship and actual results)

Independent variables	Level of significance	Expected relationship with Profitability (ROA)	Results of the present study
Spread	Significant at 1 %	Positive	positive
Credit deposit ratio	Insignificant	Positive	positive
Non Performing Assets	Significant at 10 %	Negative	Negative
Operating Expenses	Significant at 1 %	Negative	Negative
Profit Per Employee	Significant at 10 %	Positive	Positive
Investment Deposit Ratio	Significant at 5 %	Positive	Negative
Capital Adequacy Ratio	Insignificant	Positive	Positive
Provisions and Contingencies	Significant at 1 %	Negative	Negative
Non Interest Income	Significant at 1 %	Positive	Positive

of significance. Both Non- performing Assets as percentage of net advances and operating expenses as a percentage of total expenses have negative association with ROA and are significant at 10% and 1% level of significance respectively. Profit per employee is positive at 10% level of significance. But, Investment deposit Ratio is somehow showing a negative relationship with ROA at 5% level of significance. Provisions and contingencies as percentage of total assets are negative at 1% level of significance and Non Interest Income as percentage of Total Income influences the profitability (ROA) positively and significantly at 10% level for all private sector banks. The value of F-statistics is 55.90 and is significant at 1% level which indicates that the model is best-fit model.

In nutshell, the results indicate that the backward stepwise regression model has significant explanatory power. The value of R² (0.963) states that 96.3% variations in ROA is explained by independent variables. The adjusted R² (0.946) suggests that approximately 94.6% of the overall variation in ROA is explained by variations in the independent variables. Additionally, to test the assumption of independent errors (autocorrelation), the Durbin-Watson statistic was used. The value of this statistic between 1.5 and 2.5 is considered as better and for this data the value is 2.188 in Table II. In sum, the diagnostics indicate the model to be valid and reliable.

Discussion

Our hypothesis (H₁), that is, higher the spread ratio, the more would be the profitability has been accepted. Obviously, the hypothesis satisfies the rationality behind it. As the spread represents the difference between interest received and interest paid by a bank on its loan and deposits respectively, so it ought to result in a positive association with profitability unless the banks have a problem of asset liability mismatch. Angbazo (1997) supports our results and found a positive association between spread and net interest margins on

a sample of US banks. Our results are also in conformity with Badola and Verma (2006) who highlighted a positive association between spread and net profits in case of Public sector banks in India. The hypothesis (H₂) that states that Provision and Contingencies have a negative relation with profitability to has been accepted and is supported by Badola and Verma (2006) in his study on Indian banks operating in the Public sector.

Banks these days tend to diversify into non core areas, popularly known as the fee based services of banking industry, thus generating non -interest income to banks. Our hypothesis (H₃) that non- interest income is positively related with ROA has been accepted. It is supported by Manoj (2010) who suggests a positive association between Operating Profit Ratio and Non –interest income in case of old private sector banks in Kerala. Our results with respect to non interest income are also similar to Angbazo (1997) in case of USA banks.

Also, all banks in order to increase profitability should focus on reducing operating expenses. Hence, hypothesis (H₅) that operating expenses have a negative impact on profitability too has been accepted. The results of present study corroborate with Guru *et al* (2002) who stressed on effective expense management to increase profitability. Hypothesis (H₆) that suggested a positive association between Business per employee and ROA too has been accepted. This is supported by Anaseiff *et al* (2002) in his study who suggested that those banks who tried to improve labour productivity generated more profits. Hypothesis (H₁₀) that Non -performing assets have negative relationship with profitability too has been accepted. First and foremost it is supported by the theoretical argument that NPAs definitely hamper the profitability by increasing credit risk and in turn the liquidity risk. NPAs lead to asset liability mismanagement. Our results coincide with those given by Badola and Verma (2006).

However, our hypothesis (H₈) that investment deposit ratio bears a positive relationship with profitability has been

rejected. Our results show a negative and a significant association between Investment deposit ratio and ROA. The results of present study are contradictory to Singh and Chaudhary (2009) who found a positive association between Investment deposit ratio and profitability in case of both public sector and private sector banks in India. This difference is perhaps because their study is for the period 2000-01 to 2006-07. The period of our study is from 2006-07 to 2009-10, which exactly represents the post recession phase of the economy. Perhaps during this period of time the investments were not repaying many profits due to the spill over effects of recession in various sectors of the economy including the stock markets. However, our results can be suggested to be supported by Manoj (2010), though indirectly who found a strong negative association between investment in government securities and net interest margin in case of old private sector banks in case of banks in India.

CONCLUSION

The study has identified the indicators of profitability of private sector banks in India. It is believed that first the bank specific factors which represent the internal efficiency of any bank ought to be analyzed and improved; only then the macro and external factors could be faced. A bird's eye view of results as shown in Table III, compares the expected relationship of independent variables with profitability in terms of ROA and the results of the present study.

As can be seen from Table III, the actual results coincide with the expected results in terms of all the variables as Spread ratio, Credit deposit ratio, Profit per employee, Business per employee, Capital adequacy ratio and Non interest income that show a positive association with profitability measured in terms of ROA. However, one variable, that is, Investment deposit ratio has a negative relationship with profitability against the expected relationship. It is perhaps because the Indian economy was passing through a phase of global recessionary pressures where the bank's investments could not prove very fruitful. However, private sector banks need to be cautious with respect to their investments as the Investment Deposit Ratio has a strong bearing on a banks' asset-liability management in the long run. Similarly, other independent variables as, Non- performing assets, operating expenses and Provisions and Contingencies have a negative association with ROA as expected. NPAs indicated failure of bank's assets to regenerate. Provisions and contingencies are a reduction in profits and obviously the lesser the operating expenses, more is the profitability and vice versa. Hence, banks should take measure to reduce NPAs and operating expenses in order to have enhanced profitability.

Thus, it can be concluded that the financial system has expanded from national to international boundaries. There is a paradigm shift in marketing philosophy from the rising

focus towards quality of service for customers. From traditional functions of accepting deposits and granting loans and advances banks have diversified into allied businesses. There is rising stress on improving operational efficiency rather than just focussing on Profitability. There is a shift from: Revenue Model based on, Cost + Profit concept to Cost Model based on, Revenue – Profit concept. Hence, an in depth study of the bank specific factors and their impact on the profitability of banks would lead to further growth and increase in efficiency and profitability of the banks, which is the need of the privatised and the globalised economy.

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