

## **Profitability Performance : An Empirical Study of Selected Commercial Banks in India**

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### **Abstract**

Banking Sector Reforms brings paradigm shift in the Indian Banking Industry. The importance of profitability has assumed a critical significance in the changing scenario of banking sector as it is an important criteria to measure the performance of banks. Since the implementation of reforms process the focus of public sector dominated banking industry has been shifted from social banking to a more profit-oriented and efficient industry. The present paper intends to analyze profitability of four major banks, i.e., State Bank of India, Punjab National Bank, Federal Bank and ICICI Bank, during the second reform phase from 2007-08 to 2011-12. The sample banks were selected, each from different groups, namely, SBI and its associates, nationalized banks, old private sector banks and new private sector banks. The present paper focused on the factors affecting the profitability of banks with reference to net profit as a percentage of total assets, spread as a percentage of total assets, provision and contingencies as a percentage of total liabilities, saving deposits as a percentage of total deposits, net NPA as a percentage of net advances and other income as a percentage of total income with the help of correlation co-efficient matrix and regression analysis. The study has revealed that the Federal Bank has highest profitability in terms of average and it was lowest in the case of SBI. On the basis of empirical results, the study suggests the measures to increase the level of spreads and to increase non-interest income. The paper concludes with certain suggestions to improve the profitability of banks.

### **Key Words**

Commercial Banks, Profitability, Bivariate Correlation, Simple Regression Analysis, Second Reform Phase

## INTRODUCTION

Since the introduction of banking sector reforms following the recommendations of Narasimham Committee in 1991 and 1998 have changed the face of Indian Banking Industry. The wide ranging recommendations included in first reforms phase are reduction in SLR and CRR, transparent guidelines or norms for entry and exit of private sector banks, public sector banks have been allowed for direct access to capital markets, the regulated interest rate have been rationalized and simplified etc. Strictly speaking, there were no new recommendations made in the second report except two, on merger of strong units of banks and adaptation of narrow banking concept to rehabilitate the weak banks. The main motive behind the banking sector reforms has been the development of banking industry and to induce the financial discipline into their operations.

Profit in general means excess of excess of total revenue over total cost. Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. Profitability is a rate expressing profit as a percentage to total assets or sales or any other variable to represent the relationship. Profit and profitability can be increased by two methods : (i) Increasing the income; and (ii) Decreasing the expenses. Banks should have ability to control cost of operations to maintain profitability. Now a days banks are facing a number of challenges such as increasing competition, rising customer expectations, credit risk management, increasing pressure on profitability and frequent changes in technology and so on. Profitability of banks also comes under pressure with the introduction of banking sector reforms. The challenges to converge with the international financial reporting system and to comply with Basel III stipulation have further forced the banks to shift the focus to profitability for survival. Since profit is an important criteria to measure the performance of banks other than productivity and efficiency. Hence, Profitability has become a measure area of concern for the management and development of banking industry.

## REVIEW OF LITERATUTRE

An efficient management of banking operations aims to ensure growth in profit which can be achieved by having knowledge regarding the factors which have impact on banks' profitability. This is possible through studying various studies related to profitability. Some of the important studies are reviewed here :

Sathye (2005) examines the effect of bank privatization on bank performance and efficiency. For this data published by IBA for five years i.e 1998-2002 are

analysed using the difference of means test. He used Synchronic Approach and compared India's gradual privatization strategy with that of other countries like Poland, Mexico and Mozambique. The result reveals that partially privatized banks performed better than fully public sector banks.

Badola and Verma (2006) made an attempt to identify the key determinants of profitability of Public Sector Banks in India. The analysis is based on step-wise multivariate regression model used on temporal data from 1991-92 to 2003-04. The study has brought out that the variables non-interest income, operating expenses, provision and contingencies and spread have significant relationship with net profits.

Rao (2007) examines the impact of reform measures on the efficiency, profitability and overall performance of banks vis-à-vis bank groups in public and private sector during the period 1992-93 to 2002-03. The study reveals that private sector banks are much ahead of public sector banks in efficiency and in all profitability indices except Net Interest Margin. It appears that all public sector banks have not responded to the process of reforms in the same degree and spirit. The analysis also reveals that new private sector banks are better than old private banks and even various groups of public sector banks in performance.

Ketkar and Ketkar (2008) investigate the impact of reforms and liberalization on individual banks' profitability and efficiency from 1997-2004 using DEA. The study concludes that the liberalization and deregulation of banks have raised efficiency scores over time of all banks in India regardless of their ownership. These gains in efficiency have also improved bank profitability.

Bhatnagar and Sharma (2010), attempt to find out the performance of Indian banking sector amidst the Global Financial Turmoil. The period covered under the study stretches over 2007-2008. Banks selected for study are State Bank of India, ICICI Bank, Punjab National Bank, HDFC Bank and Bank of Baroda. The study reveals that all the five leading banks have shown growth, but the most important challenge faced by the government during this period is to ensure a balance between inflation and growth.

Dangwal and Kapoor (2010) evaluate the financial performance of the nationalised banks in India, with the basic objective of examining the growth index values of various parameters through overall profitability indices. The data for 19 nationalised banks for the post-reforms period of 2002-2003 to 2006-2007 was taken into account for calculating the indices of spread ratios, burden ratios, and profitability ratios. The result reveals that while four banks have shown the 'excellent performance' level, five banks have achieved 'good performance' level, four banks have shown 'fair performance' level, and six banks have obtained the 'poor

performance' level.

Javaid et al. (2011) analyse the determinants of top 10 banks' profitability in Pakistan over the period 2004-2008. The focus is on the internal factors only. The study uses the pooled Ordinary Least Square (OLS) method to investigate the impact of assets, loans, equity, and deposits on one of the major profitability indicators return on asset (ROA). The empirical results have found strong evidence that these variables have a strong influence on the profitability.

Kaushal and Pathak (2011) investigate the impact of monetary policy changes on inflation and banking sector interest profitability in India. The results suggest that there has been a significant impact of policy changes on the commercial banks' interest profitability and the inflation. But when the policy tightens its stance, commercial banks have enough flexibility to re-adjust their lending rates and deposit rates to narrow down the impact on its profitability due to the hike in policy rates.

Nandy (2011) examines the factors that have significant influence on profitability of commercial banks in India from 2004-05 to 2006-07 using multiple correlation and multiple regression method. The study concludes that "Interest Expenses" is the only good predictor for "Net Profit" of all different bank groups taking together.

Nguyen (2011) aims to test whether the Structure-Conduct-Performance Paradigm (SCP) holds in a period when banks are increasingly relying on profits from non-traditional activities. The analysis is based on panel data collected from 28 financially liberalized countries between 1997 and 2004. The study concludes that bank size is predicted to have a negative influence on ROE (Return on Equity) and PTOIAA (Pre-tax Profit) and non-interest income appears to be a positive function of both ROE and PTOIAA. There is no evidence supporting the SCP hypothesis.

Dangwal and Kapoor (2012) assessed the profitability of four major banks in India, namely, PNB, SBI, ICICI and Federal Bank during the post-reforms period from 2004 to 2009. The paper seeks to examine the factors affecting the profitability of these banks with the help of correlation co-efficient matrix and univariate regression analysis. The study has revealed that while the average profitability was highest in the case of ICICI Bank, it was lowest in Federal Bank. On the basis of empirical result paper suggests the measures to be taken to curtail the burden and to augment the fund-based activities to increase the level of spread.

Guruswamy (2012) made an attempt to analyze the profitability performance of SBI and its associates from 1996-97 to 2007-08. The objectives of the paper are

to study the profitability of SBI and its associates, and to analyze their profitability performance. For the purpose of evaluating the performance, five profitability ratios have been considered. On the basis of analysis of profitability ratios, it is found that all the five ratios show fluctuating trend during the study period in all the banks.

Kavitha (2012) examines the profitability of banks during the period 2000-2010. To assess the profitability of banking sector in India, discriminate analysis and discriminate function analysis which measures the profitability of banks from each important parameter like the differences between the mean profitability of two periods is used.

Mistry (2012) analysed eighteen Indian public sector banks and impact of asset management, operational efficiency, and bank size on the financial performance of these banks with the help of simple regression. The study found that assets size, assets utilization and operational efficiency have impact on return on assets and interest income. It also depicted that return on assets and interest income size have negative relationship with operational efficiency and positive relationship with asset management and bank size.

Yadagiri and Srinivas (2012) analysed the financial performance of Indian public sector banks with reference to Deposits, Advances, Business Per Employee, Profit Per Employee, Return on Assets and Capital adequacy Ratio etc. The study includes 28 public sector banks operating in India. On the basis of result, paper suggests that performance of public sector banks can be enhanced by introducing good governance through articulating corporate values, code of conducts etc.

The above review of literature indicates that no study has been conducted with reference to four major banks i.e. SBI, PNB, ICICI Bank and Federal Bank on profitability aspect after second phase of economic reforms in India. However, there are a number of valuable studies related to profitability aspect before 2007-08 but there is a need to conduct a systematic and comprehensive research for the period 2007-08 to 2011-2012 to fill the gap. The previous studies have been reviewed critically to identify the gaps that existed in the literature in this area. The research gap is noticeable because after the second reforms phase the profitability is one of the important factors for the growth of the banking sector. Furthermore, the banking industry has not been fully explored to this aspect and therefore, the proposed study has been selected for the research purpose.

## OBJECTIVES OF THE STUDY

The main objectives of the study are given below :

- To evaluate the profitability of State Bank of India, Punjab National Bank, Federal bank and ICICI Bank during the period selected for the study, i.e., 2007-08 to 2011-12.
- To investigate the factors affecting the profitability of four selected major banks.

## RESEARCH METHODOLOGY

### Sample Size

The four major banks, i.e., State Bank of India, Punjab National bank, Federal Bank and ICICI Bank, each representing the different groups, i.e., SBI and its associates, nationalized banks, old private sector banks and new private sector banks have been taken up for the study purpose during the period from 2007-08 to 2011-12.

### Data Collection

The study is based on the secondary data. The data is collected through the annual reports of the respective banks.

### Tools of Analysis

To evaluate the Profitability, Mean, Standard Deviation and Co-efficient of Variation were computed for each variable and the bank groups.

Five variables have been selected which are affecting the profitability of the banks in either direction. They are as follows :

Dependent Variable	Independent Variable
Net Profit as a Percentage of Total Assets (X1)	(1) Spread as a Percentage of Total Assets (X2)
	(2) Provision and Contingencies as a Percentage of Total Liabilities (X3)
	(3) Saving Deposits as a Percentage of Total Deposits (X4)
	(4) Net NPA as a Percentage of Net Advances (X5)
	(5) Other Income as a Percentage of Total Income (X6)

The degree of association between the variables (X2 to X6) and the net profit as a percentage of total assets (X1) was studied for the four selected banks through Bivariate Correlation Coefficient matrix. Then Regression analysis was analysed for different combination of variables. It is done with the help of R square, which shows the variation (in percentage) in the profitability due to independent variables. Software packages, Ms Excel and SPSS 15.0 were performed for the analysis purpose.

## DATA ANALYSIS AND FINDINGS

### Profitability of Banks

Net profit as a percentage of total assets, for the period 2007-08 to 2011-12, are shown in Table 1. As shown in the Table, this ratio in terms of average was highest in Federal Bank (1.18%) and least in the case of SBI (0.86%). While the highest variation was observed in ICICI (13.91%), the lowest variation was in the Federal Bank (8.47%).

**Table 1**  
Net Profit as a Percentage of Total Assets

Years	SBI	PNB	Federal Bank	ICICI
2007-08	0.93	1.02	1.13	1.04
2008-09	0.94	1.25	1.29	0.99
2009-10	0.87	1.31	1.06	1.10
2010-11	0.67	1.17	1.14	1.27
2011-12	0.87	1.06	1.28	1.36
Mean	0.86	1.16	1.18	1.15
S.D	0.11	0.12	0.10	0.16
C.V	12.79	10.34	8.47	13.91

Source : Compiled from the Various Annual Reports of the Banks.

### Spread Over the Years

Spread is the vital factor affecting the profitability of the banks. Higher the spread, greater is the profit margin for the banks. Spread is the difference between the interest earned and interest paid by the banks. We notice from the Table, in terms of average, Federal Bank shows the highest spread ratio, while ICICI Bank is at last among the four selected banks. The maximum consistency for this ratio was in PNB (4.47%) and the minimum was in the SBI (17.39%).

**Table 2**  
**Spread as a Percentage of Total Assets**

Years	SBI	PNB	Federal Bank	ICICI
2007-08	2.36	2.78	2.67	1.83
2008-09	2.16	2.85	3.38	2.20
2009-10	2.24	2.86	3.23	2.32
2010-11	2.66	3.12	3.39	2.22
2011-12	3.24	2.93	3.22	2.27
Mean	2.53	2.91	3.18	2.17
S.D	0.44	0.13	0.29	0.19
C.V	17.39	4.47	9.12	8.75

Source : Compiled from the Various Annual Reports of the Banks.

### Provision and Contingencies

As per the accounting norms, banks are required to make provisions for non-performing assets, income tax and interest tax. Provisions & contingencies as percentage of total assets are shown in Table 3. The average ratio is highest in Federal Bank (1.58%) followed by PNB and ICICI Bank (1.13%) with equal ratio. On the other hand, the average ratio is quite low in case of SBI (1.11%) which means that SBI have not apportioned much of their funds in maintaining provisions which is the reason for their increased profitability. The maximum variation in

**Table 3**  
**Provision and Contingencies as a Percentage of Total Liabilities**

Years	SBI	PNB	Federal Bank	ICICI
2007-08	0.88	0.98	1.31	0.95
2008-09	0.91	1.07	1.95	1.36
2009-10	0.86	1.15	1.83	1.57
2010-11	1.39	1.22	1.63	0.96
2011-12	1.48	1.25	1.20	0.83
Mean	1.11	1.13	1.58	1.13
S.D	0.31	0.11	0.32	0.31
C.V	27.92	84.6	20.25	27.43

Source : Compiled from the Various Annual Reports of the Banks.



provisions & contingencies as percentage of total assets in terms of coefficient of variation is observed in PNB (84.6%) while this ratio is more consistent with Federal Bank (20.25%).

### Saving Deposits

Table 4 deals with analysis of saving deposits as percentage of total deposits during the study period of 2007-08 to 2011-12. Saving deposits are more flexible than fixed deposits but less flexible as compared to current deposits. So these deposits also affect the bank profitability in either way. This ratio on an average is maximum in SBI (31.63%) followed by PNB (30.24%) and ICICI (24.10%). On the other side, this ratio is lowest in case of Federal bank (21.65%). In terms of CV, the maximum variation is found in ICICI (26.39%) while the least variation is observed in PNB (5.58%).

**Table 4**  
Saving Deposits as a Percentage of Total Deposits

Years	SBI	PNB	Federal Bank	ICICI
2007-08	28.70	32.30	19.43	15.99
2008-09	26.71	29.86	20.02	18.79
2009-10	32.02	31.34	21.11	26.34
2010-11	35.37	29.88	25.37	29.64
2011-12	35.37	27.83	22.33	29.76
Mean	31.63	30.24	21.65	24.10
S.D	3.90	1.69	2.35	6.36
C.V	12.33	5.58	10.85	26.39

Source : Compiled from the Various Annual Reports of the Banks.

### Net Non-Performing Assets

Table 5 shows the ratio of net non-performing assets as percentage of net advances during the period of study. This ratio, on an average, is lowest in Federal bank (0.43%) which is the vital factor affecting the profitability of this bank, while it is highest in SBI (1.75%) followed by ICICI (1.5%) and PNB (0.74%). While the highest variation was observed in PNB, i.e. 66.22%, the lowest variation was in the SBI (4%).

**Table 5**  
**Net NPA as a Percentage of Net Advances**

Years	SBI	PNB	Federal Bank	ICICI
2007-08	1.78	0.64	0.23	1.55
2008-09	1.79	0.17	0.30	2.09
2009-10	1.72	0.53	0.48	2.12
2010-11	1.63	0.85	0.60	1.11
2011-12	1.82	1.52	0.53	0.73
Mean	1.75	0.74	0.43	1.5
S.D	0.07	0.49	0.16	0.61
C.V	4.00	66.22	37.21	40.67

Source : Compiled from the Various Annual Reports of the Banks.

### Other Income

Table 6 depicts analysis of other income as a percentage of total income over the study period of 2007-08 to 2011-12. Other income which is also known as non-interest income is the deduction of interest income from total income. Higher share of other income will be in favour of the bank profitability. The analysis indicates that this ratio on an average is quite high for ICICI (20.62%) followed by SBI (15.45%) and PNB (12.39%) while it is least in Federal Bank (11.94%). On the other hand, the coefficient of variation is highest in Federal Bank (16.75%) while it is least in ICICI (8.68%).

**Table 6**  
**Other Income as a Percentage of Total Income**

Years	SBI	PNB	Federal Bank	ICICI
2007-08	15.08	12.28	13.56	22.25
2008-09	16.59	13.12	13.46	19.65
2009-10	17.41	14.42	12.63	22.53
2010-11	16.28	11.80	11.31	20.38
2011-12	11.87	10.34	8.74	18.28
Mean	15.45	12.39	11.94	20.62
S.D	2.17	1.52	2.00	1.79
C.V	14.04	12.27	16.75	8.68

Source : Compiled from the Various Annual Reports of the Banks.

### Correlation Analysis

Karl Pearson's Coefficient of Correlation, the most commonly used bivariate correlation technique is used to ascertain the association between the two variables. Correlation analysis measures the magnitude and direction of the relationship between the two variables. The significance of correlation was also calculated by using 2-tailed significant value at 1 percent and 5 percent level of significance. Higher the correlation, greater the accuracy of the prediction and smaller the errors involved. If correlation was zero, the prediction would be futile. Significant association between different variables (X1 to X6) is being identified.

#### Profitability in State Bank of India

Correlation co-efficient matrix in the case of the SBI is presented in Table 7.

The Table shows that among the variables only net NPA, as a percentage of net advances (X5), had a positive relationship (.867) with profitability. Moreover, Spread as a percentage of total assets (X2) had a significant relationship with Provision and Contingencies as a Percentage of Total Liabilities (X3) and Other Income as a Percentage of Total Income (X6), while X3 is positively associated with degree of association being .907 but X6 is negatively associated with X2 with degree of association being -.883, which is significant at 5 per cent level. No significant relationship was found between selected factors and profitability.

Table 7

Correlation Co-efficient Matrix : SBI

	X1	X2	X3	X4	X5	X6
X1	1					
X2	-.324	1				
X3	-.635	.907*	1			
X4	-.747	.780	.840	1		
X5	.867	.173	-.165	-.411	1	
X6	-.115	-.883*	-.654	-.415	-.574	1

Source : Calculated \*\* Correlation is significant at 0.01 level (2-tailed).

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

### Profitability in PNB

Correlation co-efficient matrix in respect of the PNB is shown in Table 8.

The Table reveals that in the case of PNB, not even a single factor had a significant relationship with profitability. But all the factors had positive association with profitability except net NPA as a percentage of net advances (X5), the degree of association being -.594.

Table 8

Correlation Co-efficient Matrix : PNB

	X1	X2	X3	X4	X5	X6
X1	1					
X2	.085	1				
X3	.137	.756	1			
X4	.096	-.480	-.780	1		
X5	-.594	.371	.671	-.630	1	
X6	.784	-.375	-.426	.667	-.822	1

Source : Calculated \*\* Correlation is significant at 0.01 level (2-tailed).

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

### Federal Bank Profitability

Correlation co-efficient matrix in respect of the Federal Bank is shown in Table 9.

As shown in the Table, only one variable, Spread as a Percentage of

Table 9

Correlation Co-efficient Matrix : Federal Bank

	X1	X2	X3	X4	X5	X6
X1	1					
X2	.312	1				
X3	-.121	.575	1			
X4	-.089	.571	-.069	1		
X5	-.112	.639	-.054	.900*	1	
X6	-.361	-.316	.571	-.581	-.728	1

Source : Calculated \*\* Correlation is significant at 0.01 level (2-tailed).

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

Total Assets (X2) had a positive association with profitability, the degree of association being .312. Saving deposits as a percentage of total assets (X4) had a high degree of positive and significant relation with net NPA as a percentage of net advances (X5), the degree of association being .900, which is significant at 5 per cent level.

#### Profitability in ICICI Bank

Correlation co-efficient matrix of the selected variables of ICICI is shown in Table 10.

As shown in the Table, in ICICI, certain independent variables had significant positive and negative relationship with each other and profitability. Only one variable, net NPA as a percentage of net advances (X5) had significant but negative association with profitability, the degree of association being -.889 at 5 per cent level of significance. Provisions and contingencies as a percentage of total liabilities (X3) had high degree of significant and positive association with X5, the degree of association being .908, which is significant at 5 per cent level.

Table 10

Correlation Co-efficient Matrix : ICICI Bank

	X1	X2	X3	X4	X5	X6
X1	1					
X2	.426	1				
X3	-.618	.390	1			
X4	.872	.763	-.177	1		
X5	-.889*	-.005	.908*	-.561	1	
X6	-.570	-.390	.473	-.404	.596	1

Source : Calculated \*\* Correlation is significant at 0.01 level (2-tailed).

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

#### Impact of Independent Variables on Profitability of Selected Banks

An attempt was made to ascertain the selected independent variables impact on the banks' profitability. The results so obtained are exhibited in Table 11. Correlation analysis does not explain the casual analysis between two variables, which can be found by regression analysis. It can be done with the help of R-square value, which is the measure of the overall predictive accuracy of a regression model and shows the variation (in percentage), in the profitability due to independent variables.

**Table 11**  
**Selected Variables Impact on the Banks' Profitability**

Banks	SBI	PNB	Federal Bank	ICICI
Variables	R <sup>2</sup>	R <sup>2</sup>	R <sup>2</sup>	R <sup>2</sup>
X2	.104	.007	.097	.182
X3	.403	.019	.015	.382
X4	.555	.009	.008	.760
X5	.752	.352	.013	.791
X6	.013	.615	.130	.325

Source : Calculated

As shown in the Table, in the case of SBI only one variable net NPA as a percentage of net advances (X5) has a positive but insignificant relationship with the profitability. Moreover, it shows 75.2 per cent variations in the profitability. Among the variables, other income as a percentage of total income (X6), showed 1.3 per cent variations in the profitability.

In the case of Punjab National Bank, only one variable net NPA as a percentage of net advances (X5) had a negative relationship with profitability. Moreover, other variables had a positive but insignificant relationship with the profitability. Other income as a percentage of total income (X6), showed 61.5 per cent variations in the profitability.

In the case of Federal Bank, among the variables, spread as a percentage of total assets (X2) had a positive but insignificant association with profitability. All other variables had negative and insignificant association with the profitability. Moreover, spread as a percentage of total assets (X2) and saving deposits as a percentage of total assets (X4) showed 9.7 per cent and 0.8 per cent variations in the profitability respectively.

In the case of ICICI, spread as a percentage of total assets (X2) and saving deposits as a percentage of total assets (X4) had positive and insignificant association with the profitability. Provision and contingencies as a percentage of total liabilities (X3) and other income as a percentage of total income (X6), explained 38.2 per cent and 32.5 per cent variations in the profitability.

## CONCLUSION

In the present study, attempt has been made to identify the key determinants of profitability of the four selected major banks. The analysis is based

on bivariate correlation and regression analysis performed with the help of software packages MS Excel and the SPSS 15.0. The study has brought out that the overall profitability of Federal Bank and PNB during the study period is higher than the profitability of ICICI Bank and SBI. In the case of net profit as a percentage of total assets, provision and contingencies as a percentage of total liabilities and spread as a percentage of total assets, the Federal Bank has ranked number one. Moreover, saving deposits as percentage of total deposits and net non-performing assets as percentage of net advances, ratio on an average is highest in the SBI. The ICICI Bank has acquired the top position in terms of variable other income as a percentage of total income.

The foregoing bivariate correlation analysis has revealed that in the case of SBI among the variables only net NPA as a percentage of net advances, had a positive relationship with profitability. Moreover, no significant relationship was found between selected factors and profitability. While in the case of PNB, not even a single factor had a significant relationship with profitability and among the variables only net NPA as a percentage of net advances has negative association with profitability. Furthermore, in the case of ICICI, certain independent variables had significant positive and negative relationship with each other and profitability. Only one variable, net NPA as a percentage of net advances had significant but negative association with profitability. In the case of Federal Bank, only one variable, spread as a percentage of total assets had a positive but insignificant association with profitability. The regression analysis result revealed out that in the case of SBI and the ICICI Bank, net NPA as a percentage of net advances shows maximum variation in profitability. Moreover, in the case of PNB and the Federal Bank, spread as a percentage of total assets and saving deposits as a percentage of total assets shows least variation with profitability respectively.

To strengthen the profitability of the banks, banks must strive to greatly enhance efficiency through a control over shrinking spread, increasing non-interest income, use of modern risk management practices etc. In order to improve the profitability banks must converge with the international financial reporting system and to comply with Basel III stipulation. Cost-reduction strategies, technology upgradation, inculcating customer-driven work culture, integrated banking services, are also the most sought after steps that area needed to ensure the sustainable level of profit.

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