IMPACT OF PRIORITY SECTOR ADVANCES ON BANK PROFITABILITY: EVIDENCE FROM SCHEDULED COMMERCIAL BANKS OF INDIA

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Abstract

Pupose- The paper aims at analyzing the impact of priority sector advances of scheduled commercial banks operating in India on their profitability.

Design/methodology/approach- All the scheduled commercial banks operating in India were considered for the analysis. Data pertaining to bank profitability were taken from Reserve Bank of India website. Ratios of Priority sector advances to total advances (PSATA) of all commercial banks during the study period taken as an independent variables whereas, Return on Assets (ROA), Return on Investment (ROI), Return on Equity (ROE), Ratio of Operating Profit to Total Assets, (OPTA), and Ratio of Interest Income to Total Assets (INTTA) were taken as dependent variables. Linear regression models were used to examine the relationship between independent and dependent variables. The study covers the period ranging from 2005 to 2014.

Findings- The study reveals that there exists a statistically significant relationship between PSATA and ROI, ROA, OPTA, INTTA. On the other hand ROE was found not to be statistically significant.

Implications- The results thus imply that priority sector advances have bearing on bank profitability.

Keywords : Priority sector advances, profitability, PSATA, ROI, ROE, INTTA, OPTA

1. Introduction

According to RBI (2014), "Priority sector refers to those sectors of the economy which may not get timely and adequate credit in the absence of this special dispensation. Typically, these are small value loans to farmers for agriculture and allied activities, micro and small enterprises, poor people for housing, students for education and other low income groups and weaker sections"

Priority sector was first properly defined in 1972, after the National Credit Council emphasized a few years back that there should be a larger involvement of the commercial banks in the priority sector. First of all in 1974, the banks were given a target of 33.33 % as share of the priority sector in the total bank credit. This was later revised on the recommendation of the Dr. K S Krishnaswamy committee and the target was raised to 40%. The latest working group on this segment was C S Murthy Committee in 2007, on whose recommendations, RBI revised the guidelines.

Priority sectors play a vital role in the overall economic development of the country. Lending money to this sector is primarily aimed at creating productive assets which in turn culminate into the socio-economic development in the country. Scheduled bank operating in India are mandated to lend 40% percent of their total funds to priority sectors. Since priority sector lending accounts for a significant chunk of the total advances of the commercial banks, it is quite imperative to analyze the impact of priority sector advances on bank profitability. In the backdrop of this, an attempt has been made in this paper to examine the resultant impact of priority sector on bank profitability.

The paper is structured as follows. The second section discusses the literature review followed by research problem, objectives in the third section. A fourth section describes the research hypotheses. The fifth section outlines research methodology, including specification of research variables, regression models, tools of analysis. The Sixth section discusses the results of the study and the last section represents a summary of the findings and conclusion.

2. Literature review

Heggested investigated the profitability of commercial banks and found that time and saving deposits had a negative impact on profitability. Smirlock (1985) found a significant positive relationship between demand deposits and profits.

Burke (1989) examined the determinants of banks' performance for twelve countries selected from Europe, North America and Australia and found significant positive relation between capital adequacy and profitability. He proves that the higher the capital ratio is, the more profitable a bank will be.

Molynexu and Thornton (1992) analyzed the banking profitability of eighteen European countries for the period 1986-1989 and found that the capital ratio impacts banks' performance positively although such relationship was restricted to the state-owned banks only. In their banking performance study, Boyd and Runkle (1993), conclude that an inverse relation exists between size and profitability. Abreu and Mendes (2000) found that there exist a positive relationship between the loan ratio and profitability. Gischer and Juttner (2001), found that fee-income generating businesses actually exert a negative impact on banks' profitability. On the contrary, studies of Bashir and Hassan (2003) and Staikouras and Wood (2003) show that a higher loan ratio has negative impact on profits.

Ganesan (2003) analyzed the impact of priority sector advances of public sector banks covering the period ranging from 1974 to 1999. He found that priority sector advances, concessional lending and cross subsidization of advances adversely affected the profitability of Indian Public sector banks. Haron (2004) finds a significant positive relationship between capital and ROA. Haron (2004) finds that size has no significant impact on ROA.

Bolda and Verma (2006) utilizing stepwise multivariate regression model on temporal data from 1991-92 to 2003-04 identified the key determinants of profitability of public sector banks in India. They found that non-interest income, operating expenses, provision and contingencies and spread have a significant relationship with net profit.

Vong and Chan (2009) found that the capital strength of a bank is of paramount importance in affecting its profitability.

Ahmed (2010) concluded that with an increase in priority sector lending , there had been an increase in the volume of NPAs. Although he argued that non-priority sector advances were equally responsible for the rise in NPA levels.

Patidar (2012) examined the impact of priority sector lending on the Total NPA of Banks using tools like regression analysis and ratio analysis. The results showed significant impact of priority sector lending on total NAP of public sector banks whereas the impact of priority sector lending in case of private sector banks was not significant.

Day (2013) made a comparative analysis of the impact of nonperforming assets of public and private sector banks on their profitability. The study considered the period from 2005 to 2012. By taking a sample of sixteen public and private sector banks jointly, he concluded that NPA did not affect the profitability of banks.

Swamy (2013) using panel data techniques analyzed the determinants of bank asset quality and profitability for the period 1997 to 2009. The study revealed that priority sector credit was found to be not significant in affecting NPAs. He concluded that capital adequacy and investment activity significantly affected the profitability of commercial banks apart from other accepted determinants of profitability, asserting that asset size had no significant impact on profitability.

In the backdrop of aforesaid literature, as per the best of our knowledge we have not found any study specifically analyzing the impact of priority sector advances on bank profitability. In this sense, an attempt has been made to enhance the existing literature by examining the relationship between priority sector advances and bank profitability. This paper will thus try to highlight the causal relationship between the said two variables.

3.1 Statement of Research Problem

Priority sector advances form a significant chunk for the total advances of banks in India. As per the RBI guidelines bank are supposed to lend a definite percentage of their total funds to these priority sectors for the overall socioeconomic development of the country. This paper aims at analyzing the impact of priority sector advances of scheduled commercial banks and impact thereof on their profitability.

3.2 Research Objectives

The research study aims at achieving the following objectives

- To analyze the impact of priority sector advances on commercial banks' profitability
- To identify the profitability measure that is significantly affected by priority sector advances of commercial banks
- To measure the extent to which priority sector advances and profitability measures are correlated

4. Research Hypothesis

In order to accomplish the aforesaid research objectives, following research hypotheses were formulated.

H1: There is a significant relationship between Ratio of priority sector advances (PSATA) to total advances and Return on Assets (ROA)

H2: There is a significant relationship between Ratio of priority sector (PSATA) advances to total advances and Return on Equity (ROE)

H3: There is a significant relationship between Ratio of priority sector advances (PSATA) to total advances and Return on Investments (ROI)

H4: There is a significant relationship between Ratio of priority sector advances to total advances (PSATA) and ratio of operating profit to total assets (OPTA)

H5: There is a significant relationship between Ratio of priority sector advances (PSATA) to total advances and ratio of interest income to total assets. (INTTA)

5. Methodology

The study primarily uses secondary data pertaining to all scheduled commercial banks operating in India. The study covers the period ranging from 2005 to 2014. It covers all nationalized banks, private sector banks and foreign banks operating in India. The data for the study were taken from Reserve Bank of India website.

5.1 Research Variables

5.1.1 Independent Variable

Ratio of priority sector advances to total advances was taken as an independent variable. Ratios will help to overcome the size bias as large banks usually tend to have higher amounts of priority sector advances in absolute terms than that of small and medium banks.

5.1.2 Dependent Variables

Return on Assets (ROI), Return on Equity (ROE), Return on Investment (ROI), ratio of operating profit to total assets and ratio of interest income to total assets were taken as dependent variables. Again, here the ratios were taken to reduce size bias in the sample. Demirguc-Kun and Huizinga (1998) suggested two measures of bank performance bank profitability (measured as profits divided by assets), and bank interest margins (measured as net interest income divided by assets). Rasiah (2010) suggests that for one to realize how well a bank is performing it is much more useful to consider return on assets (ROA) and return on equity (ROE). Rivard and Thomas (1997) argued that bank profitability is best measured by ROA in the sense that, ROA cannot be distorted by a high equity multiplier.

5.2 Regression Models

Model 1: $ROA_{it} = \beta 0 + \beta 1\ PSATA_{it}$

Model 2: $ROE_{it} = \beta 0 + \beta 1\ PSATA_{it}$

Model 3: $ROI_{it} = \beta 0 + \beta 1\ PSATA_{it}$

Model 4: $OPTA_{it} = \beta 0 + \beta 1\ PSATA_{it}$

Model 5: $INTTA_{it} = \beta 0 + \beta 1\ PSATA_{it}$

Where,

$PSATA_{it}$ = ratios of priority sector advances to total advances of ith bank and t periods.

ROA_{it} = returns on assets of ith bank and t periods

ROI_{it} = returns on investments of ith bank and t periods

$OPTA_{it}$ = ratios of operating profit to total assets of ith bank and t periods

$INTTA_{it}$ = ratios of interest income to total assets of ith bank and t periods

5.3 Tools of Analysis

Simple linear regression was run for all the five models described in the study. In order to test the significance of regression coefficient t statistics was tested at $\alpha = 0.05$. In order to test the overall significance of the model F ratio was used. To

analyze the problem of autocorrelation among the time series data of the variables, Durbin-Watson test was used. All the statistical calculations were done by running SPSS software.

6. Results and Discussion

6.1 Descriptive Statistics

The results of descriptive statistics are presented in table 1. It is evident from the table that the mean value of ROE (10.34%) was highest among all five dependent variables with a higher standard deviation. It implies that Indian scheduled commercial banks have witnessed on an average 1.. 34% return for their shareholders during the period 2005 to 2014.Whereas, mean value of operating profit to total asset ratio (OPTA) was lowest with the mean of 2.5%.This implies that Indian Scheduled commercial banks' performance was not impressive in terms of operating profit to total assets ratio. The interest income to total assets ratio recorded lowest standard deviation of 1.5% indicating lesser volatility in the interest income to total assets.

Table1: Descriptive Statistics

Variables	Mean	Std. Deviation	N
ROA	1.110	1.644	796
PSAT	35.022	14.858	796
ROE	10.34	15.49	797
ROI	7.32	1.54	797
OPTA	2.50	1.81	797
INTTA	7.57	1.50	797

Source: Author

6.2 Testing of Hypotheses

In order to test all five hypotheses, five regression models were run. The results of these models are summarized below.

Hypothesis#1

Table 2 represents the results of model 1. Results suggested that the correlation coefficient between PSATA and ROA was statistically significant ®= 0.093, $p<0.05$). Results of ANOVA reveal that 0.9% variation in ROA is explained by PSATA ($R2= 0.009$, $F= 6.992$, $p<0.05$). Contrary to this, results of t test indicate that there is a statistically significantly positive relationship between PSATA and ROA ($t= 2.644$, $p<0.05$).

Table 2: Regression results of Model 1

Pearson Correlation	0.093
R square	0.009
Adjusted R square	0.007
Durbin-Watson	1.89
F- Ratio	6.992
P F-Ratio	0.010
t-value	2.644
Sig. (P)	0.008

Source: Author

Hypothesis#2

Table 3 depicts the results of model 2. Results suggested that the correlation coefficient between PSATA and ROE was not statistically significant ($r = -0.013$, $p>0.05$). The relationship between PSATA and ROE was not statistically significant ($t= -0.364$, $p>0.05$).

Table 3: Regression results of Model 2

Pearson Correlation	-0.013
R square	0.000
Adjusted R square	-0.001
Durbin-Watson	1.877
F- Ratio	0.133
P F-Ratio	-0.013
t-value	-0.364
Sig. (P)	0.716

Source: Author

Hypothesis#3

Table 4 shows the results of model 3.Results suggested that the correlation coefficient between PSATA and ROI was statistically significant (r= 0.134, p<0.05). Results of ANOVA for the model 3 reveal that PSATA explains 1.8% variation in ROI. (R2= 0.018, F= 14.456, p<0.05). On the other hand, results of t test indicate that coefficient is statistically significant. (t= 3.802, p<0.05).

Table 4 : Regression results of Model 3

Pearson Correlation	0.134
R square	0.018
Adjusted R square	0.017
Durbin-Watson	1.675
F- Ratio	14.456
P F-Ratio	0.014
t-value	3.802
Sig. (P)	0.000

Source: Author

Hypothesis#4

Table 5 reports the results of model 4. Results suggested that the correlation coefficient between PSATA and OPTA was statistically significant ®= 0.162, p<0.05). Results of ANOVA for the model 4 indicate that 2.6% variation in OPTA is explained by PSATA (R2= 0.026, F= 21.464, p<0.05). Results of t test prove that there exists a statistically significant positive relationship between PSATA and OPTA (t= 4.633, p<0.05).

Table 5: Regression results of Model 4

Pearson Correlation	0.162
R square	0.026
Adjusted R square	0.025
Durbin-Watson	1.798
F- Ratio	21.464
P F-Ratio	0.020
t-value	4.633
Sig. (P)	0.000

Source: Author

Hypothesis#5

Table 6 shows the results of model 5. Results suggested that the correlation coefficient between PSATA and INTTA was statistically significant ®= -0.190, p<0.05). Results of ANOVA for model 5 highlights that 3.6% variation in INTTA is explained by PSATA (R2= 0.036, F= 29.767, p<0.05). The results of t test indicate that there exist a statistically significant negative relationship between PSATA and INTTA (t= -5.456., p<0.05).

Table 6: Regression results of Model 5

Pearson Correlation	0.190
R square	0.036
Adjusted R square	0.035
Durbin-Watson	1.076
F- Ratio	29.767
P F-Ratio	0.019
t-value	-5.456
Sig. (P)	0.000

Source: Author

7. Findings and Conclusions

The study examined the causal relationship between priority sector advances and five measures of bank profitability encompassing the sample of all scheduled commercial banks operating in India. The basic objective of the study was to further an existing literature by providing empirical evidence regarding the priority sector advances and impact thereof on bank profitability. The study reveals that Return on Assets (ROA), Return on Investments (ROI), Ratio of Operating Profit to Total Assets (OPTA) and Ratio of Interest Income to Total Assets (INTTA) have a statistically significant relationship with priority sector advances whereas Return on Equity (ROE) has been found to be statistically insignificant. The results of the study thus imply that priority sector advances have a bearing on bank profitability.

8. Implications of the study

The results of the study offer several implications for the banks.

The study reveals that priority sector advances affect ROA and ROI of the banks. This implies that banks should exercise caution while advancing loans to priority sector else it would be adversely affecting the profitability of the banks. Contrary to this, the study revealed that ROE was not significantly related to priority sector advances which implies the priority advances of the banks have not affected the returns on the equity of the banks.

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