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Assessing the Impact of Bank Specific Variables on Non Performing Assets of Public and Private Sector Bank

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Abstract

An effort has been made to evaluate the impact of determinants on gross non-performing assets of Public and Private Sector Banks. Secondary data were used in the study. The secondary data of non-performing assets from 2001-02 to 2013-14 were collected from various issues of RBI. The results mainly indicated that Public and Private Sector Banks were influenced by bank specific determinants. Bank specific determinants are negatively and significantly associated with the level of NPAs

INTRODUCTION

The banking sector is the driving engine of the economic growth for the emerging market economies. Financial stability and security are the important and crucial components of the banking sector. Banking in modern economies is all about risk management because the economic repercussions of a bank failure could be catastrophic on the entire financial system. Unsound risk management practices governing bank lending played a critical role in recent episodes of financial turmoil. Providing credit for economic activities is the prime duty of banking. Apart from raising resources through fresh deposits, borrowings and recycling of funds received back from borrowers constitute a major part of funding credit dispensation activity. Lending is generally encouraged because it has the effect of funds being transferred from the surplus spending unit to deficit spending units for productive purposes, which results into economic growth. However lending also carries a risk called credit risk, which arises from the failure of the borrower. In particular, due to the social banking motto of the Government, the problem of non-performing asset was not considered seriously in India in the post nationalization period. However, with the recent financial sector liberalization drive, this issue has been taken up seriously by introducing various prudential norms relating to income recognition, asset classification, provisioning for bad assets and assigning risks to

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various kinds of assets of a bank. While the Reserve Bank of India as well as the banks has begun to pay considerable attention to the NPA problem, there are only a limited number of rigorous studies in the Indian context that look at this issue in some detail.

A sustainable economic growth of any country depends upon sound financial system. The economic crisis has exposed the weakness of financial systems across the globe (Dutta et al.2013).NPAs have gained attention in the last few years, as NPAs are increasing which causing banking crisis and failures . NPAs are main reasons that cause bankruptcy of various financial institutions and ultimately it hurts the whole economy (Hou, 2007). It is needed to control NPAs for the economic development of the country, otherwise the financial resources can be blocked in different unprofitable sectors which not only harm the financial strength but also harm the economic growth of the country. In order to manage NPAs it is required to understand the sources of these NPAs in the specific financial sector (Farhan, 2012).

Examining the determinants which are responsible for post lending risk of banks are significant for governing authorities which are looking for monetary strength and effective administration of Banks. In fact, post lending risk of banks is expected to become NPAs. NPAs can be alarming signal of financial crisis for Banks. There are bank specific variables which have a greater impact on NPAs. Investigating NPAs drivers will help policy makers and regulators to understand whether the impact of bank specific determinant are influencing NPAs or not and which determinants are the most dominant determinant affecting NPAs in banks. This would help the bank'spolicy makers and regulators to plan preventive micro or macro prudential measures to have future NPAs in banks. Policy makers and Regulators can also find out, whether there is any requirement to strengthen banking supervision and if so required, how to make this supervisionmore effective by concentrating on the most essential determinant. A better understanding of NPAs drivers can also help bank supervisor to manage existing stress of doubtful assets.

Review of Literature

Ranjan et al. (2003), explored the NPAs in commercial banks' of India. Three major sets of economic and financial determinants are bank size, terms of credit which encouraged risk preferences and macroeconomic factors were studied by the author. The results of panel regression models suggested that credit variables had crucial impact on NPAs of the Banks. On the other hand, macro-economic factors favorably led to lowering the NPAs.**Wu et al. (2003),** examined association between performing loans, real estate prices and the banking system. It also analysed determinants which disturb the ratio of non-performing loans to total loans. It was detected that a higher ratio of corporate loans to individual loans results in a lower proportion of NPAs, although, a lower percentage of real estate lending rate as compared to the primary lending rate leads to a higher percentage of NPAs. The study found that level of NPAs affects profitability of Bank as well as price performance of the real estate markets. **Khemraj et al. (2004)**, ascertained elements of NPAs in the Guyanese banking sector. The study indicated that whenever there was an appreciation in the local currency non-performing asset portfolios of commercial banks were likely to be higher. Results of the study showed that GDP growth was inversely related to non-performing loans and suggested that if there is any improvement in the real economy then it translates into lowering NPAs. The study found that real effective exchange rate (REER) had a significant impact on NPAs. It was also found that all those banks which charge relatively higher rate of interest and lent excessively were likely to

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incur higher levels of NPAs. **Bhakare(2010),** made an attempt to study inter sectoral comparison of NPAs of private sector banks and urban cooperative banks in Maharashtra State. The study concluded that private sector banks have higher standard assets as compared to Co-operative sector banks. It means the quality of standard assets possessed by private sector was better than Co- operative sector banks. **Kabra (2010)**, analysed the sensitivity of non-performing loans to macroeconomic factors and bank specific factors. The study used regression analysis and a panel data and taken data for 10 years that ranges from 1998-99 to 2008-09 to scrutinize association between non-performing loans and macroeconomic variables and bank specific variables. The study found that both bank specific factors and macroeconomic factors showed their impact on the loan portfolios of Indian banks. The study further revealed that commercial banks should also pay more attention to various factors while sanctioning loans.

The above reviews indicate that although large studies have been done on various aspects of Banks. But no worthwhile research has been done on assessing the impact of bank specific variables on Gross NPAs. This study is an attempt to fill this gap.

Objectives of the study

a) To assess the impact of bank specific variables on Gross NPAs of Public Sector Banks and Private Sector Banks.

Research Methodology

To achieve the objectives of present research, secondary data has been used. Secondary data has been compiled from various reports of the RBI, Trend and Progress Report of Banking in India, Statistical tables relating to banks in India, annual reports of selected banks, RBI bulletins, RBI annual reports, RBI Reports on bank statistical returns of scheduled commercial banks in India to identify the determinants influencing NPAs in Indian Banking Sector such as bank specific determinants. The impact of banks specific determinants on Gross NPAs (GNPA) have been assessed with the help of Regression and Panel Data Regression. Time frame for study is from 2001-02 to 2013-14. The sample consists of 10 banks each from public and private sector banks on the basis of size. The sample has been selected by applying quartile deviation and three banks chosen from upper quartile, four banks from middle quartile and three banks from lower quartile. The collected data have been analysed with the help of Panel Data Regression.

The present study examined impact of bank specific variables on Gross NPAs of Public and Private Sector Banks. Bank specific variables include return on assets, leverage ratio, solvency ratio, return on equity, credit deposit ratio, cost of funds, capital adequacy ratio and net interest margin.

BANK SPECIFIC DETERMINANTS

Bank specific determinants influencing gross NPAs as percentage of gross advances of Public sector banks and Private Sector Banks:

Bank specific variables are taken as independent variable and have shown impact on NPAs of sampled banks of public sector banks in table 1.1 and private sector banks in table 1.2.

TABLE 1.1

Impact of Bank Specific Variables on Gross NPAs as Percentage of Gross Advances of Public Sector Banks

Dependent Variables : Gross NPAs as Percentage of Gross Advances of Public sector banks			
Independent Variables	Coefficient	T	P>t
Leverage ratio	-1.749896	1.07	0.287
Solvency ratio	-.7734422	0.50	0.616
Interest margin to total asset	1.609822	5.18	0.000*
Return on asset	-1.059826	1.13	0.260
Return on equity	-.1217403	2.58	0.011*
Cost of fund	.8254582	6.07	0.000*
Credit deposit ratio	-.179404	9.85	0.000*
Capital adequacy ratio	-.1786327	1.91	0.058
Constant	13.56689	5.43	0.000
R^2	0.7410		
Adjusted R^2	0.7238		
F	43.26		
Prob >t	0.0000		

Notes: * denotes values significant at 5 % level.

Table 1.1 depicts the impact of independent variables have been measured on dependent variable. Analysis shows the variations in dependent variable (Gross NPAs as percentage of gross advances) due to bank specific factors is of 74 per cent as value of R^2 stands at 0.7410.

A bank with strong profitability is less likely to contribute in risky activities, such as sanctioning unsafe loans. Moreover ROE is a close indicator of profitability. As analysis depicts that return on equity issignificantly and negatively associated with NPAs. According to Johannes 2015, there were negative association between NPAs and return on assets as well as return on equity and recommend that banks with more profitability are less enticed to generate income. Thus, they are less forced to engage in unsafe/risky activities for sanctioning loans (Dimitrios et al. 2016; Curak et al. 2013). It was also discovered that CDR is negatively linked with NPAs which demonstrating that higher the CDR the lower will be the level of NPAs (Ghosh, 2013). COF has found to be significantly and positively related with NPAs as cost of funds increases then banks tend to be very vigilant and picky in their lending therefore leading to decrease in NPAs (Swamy, 2012; Munialo, 2014; Singh and Sharma,2016). Net interest margin to total asset has shown positive and significant impact on NPAs. The net interest margin (NIM) is considered to be a significant efficiency measure of financial sector. This indicates that how efficiently the banks used their funds to earn income from investments and credit operations. Lower the net interest margin ratio, the more efficient is the banking system so lower interest margins are associated with a rising scope of nonperforming loans. So other variables have not shown significant impact on gross NPAs as percentage of gross advances of public sector banks (Lis, et al.2000).

The difference in the average found statistically significant as p value is less than 0.05, in return on equity (p>0.015), net interest margin (p>0.000), credit deposit ratio (p>0.000), cost of fund (p>0.022) Model has been found fit as shown by F value which is 43.26.

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Table 1.2
Impact of Bank Specific Variables on Gross NPAs as Percentage of Gross Advances of Private Sector Banks

Dependent Variable : Gross NPAs as Percentage of Gross Advances of Private Sector Banks			
Independent Variables	Coefficient	T	P>t
Leverage ratio	1.095799	1.38	0.172
Solvency ratio	-.6641401	1.41	0.160
Interest margin to total asset	-.6516396	1.66	0.099
Return on asset	-1.379518	3.91	0.000*
Return on equity	.0286974	1.12	0.264
Cost of fund	.526026	3.10	0.002*
Credit deposit ratio	-.0437706	3.38	0.001*
Capital adequacy ratio	-.316008	0.73	0.468
Constant	6.5418	3.71	0.000
R^2	0.3850		
Adjusted R^2	0.3444		
F	9.47		
Prob > F	0.0000		

Notes: * denotes values significant at 5 % level.

Table 1.2 presents the impact of independent variables has been measured on dependent variable. Analysis shows the variations in dependent variable (Gross NPAs as percentage of gross advances)due to bank specific factors is of 38 per cent as value of R^2 stands at 0.3850.

A bank with strong profitability is less likely to contribute in risky activities, such as sanctioning unsafe loans. According to Johannes, 2015 there is negative association between NPAs and return on assets as well as return on equity and recommend that banks with more profitability are less enticed to generate income. Thus, they are less forced to engage in unsafe/risky activities for sanctioning loans.It is causing in reduced amount of problematic loans. Accordingly, above analysis has found that ROA is negatively and significantly associated with the NPAs (R^2= 0.9261; Dimitrios et al. 2016; Curak et al. 2013).COF has found to be significantly and positively related with the NPAs that as the cost of funds increase the banks tend to be very vigilant and picky in their lending therefore leading to decrease in NPAs (Munialo, 2014; Singh and Sharma, 2016). It was also detected that CDR is connected with NPAs negatively and significantly which demonstrating that higher the CDR the lower tends to be the level of NPAs (R^2 =0.82; Ghosh, 2013). So other variables have not shown significant impact on gross NPAs as percentage of gross advances of private sector banks (R^2 = .858;Dutta, et al.2013).

The difference in the average found statistically significant as p value is less than 0.05, in return on equity (p>0.000), cost of funds (p>0.002), credit deposit ratio (p>0.001), Model has been found fit as shown by F value which is 9.47.

Conclusion: Overall observation shows that bank specific determinants influence the NPAs of public sector banks and private sector banks. In public sector banks, independent variables like return on equity, credit deposit ratio has been shown negative and significant influence on dependent variable i.e. gross NPAs. Although

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COF and NIM have shown positiveand significant impact on dependent variable. It means both variables increase the level of NPAs.Although, in private sector banks there are bank specific determinants that are negatively and significantly associated with the level of NPAs i.e. Return on asset and credit deposit ratio but cost of fund has shown positive and significant impact on NPAs.

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