IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 7, Issue 6 Ver. III (Nov. - Dec. 2016), PP 40-46
www.iosrjournals.org

Measuring the Impact of Non-Performing Assets on the Profitability of Indian Scheduled Commercial Banks

Sunita Sharma[1]prof.D.S Rathore[2]
Research Scholar Amity University Rajasthan Amity University Rajasthan

Abstract: *The study aims to measure the impact of non-performing assets on the profitability of the Indian scheduled commercial banks. The study is based on the secondary data for the period 2004-05 to 2014-15. Regression analysis has been used in the study where; return on assets, return on equity and net interest margin have been used as a proxy variables for profitability of the banks while Gross NPA to Gross advances ratio and Net NPA to Net advances ratio has been used as independent variables to denote the non-performing assets of the banks. It was found from the study that the currently there is an increasing trend of non-performing assets in Indian scheduled commercial banks while all the three measures of profitability have shown a declining trend. It was also found from the study that NPA has an adverse impact on the profitability of the banks. Return on assets and return on equity is found to be negatively and significantly related to the gross NPA to gross advances ratio while net interest margin has shown negative but insignificant relationship with both the ratios of NPA.*
Keywords: *Asset Quality, Banks, India, Non-performing assets, Net Interest Margin, Profitability, Return on Assets, Return on Equity*

I. Introduction

Indian banking industry is fastest growing sector of Indian economy. The main function of banking is to accept deposits and lending money to people. Indian banking industry has undergone a drastic change after the first phase of liberalization and the concept of credit management arise. The primary function of banks which is to accept the deposit from the public involves no risk but function of lending money to the public in the form of loans involves credit risk. Banks have become cautious in extending loans and advances due to the huge burden of non-performing assets. Non-performing assets not only affects the profitability of the company but also erode the asset quality of the banks and make the survival of banks very difficult (Narula&Singla, 2014). Healthy banking system is the foundation of any economy. The growth of the economy depends on the banking system. RBI and other regulatory bodies have framed many rules and policies for the smooth functioning of the banks and to reduce the Non-performing assets of the banks. Non-performing assets of the banks is one of the important indicator which used to measure the performance of the banks. NPA has a direct impact on the profitability of the banks (Joseph & Prakash, 2014). Non-performing assets are those assets of the banks which are not generating any income for the banks neither in the form of interest nor the principal amount. The assets of the banks can be divided into four categories as per the guidelines of the RBI namely; Standard Assets, Sub-standard assets, doubtful assets and loss assets.

As per the recommendations of the Narasimham committee, due importance to primary sector while lending loans, was the main reason for huge non-performing assets of the banks. Narasimham committee highlighted the fact that priority sector lending was leading to huge amount of non-performing assets of the Indian commercial banks and thus it was recommended to be phased out. Subsequently, the committee highlighted the need for zero non-performing assets for all Indian commercial banks with international presence. In banks the major portion of the loans and advances comes from the public deposits of the banks. These public deposits with banks are mostly repayable on demand or order. Therefore banks should follow the appraisal policy of customers while sanctioning any credit to the borrowers, otherwise it will lead to non-performing assets in the future. Most of the commercial banks of India are facing the huge default risk and a large portion of profits are used to write off the bad debts every year, which leads to reduced profitability and value of the banks also. Due, to the importance of the NPA while measuring the performance of the banks, researcher has made an attempt to measure the impact of NPA on the profitability of the Indian Scheduled commercial banks.

II. Review of Literature

Kiran and Jones (2016), conducted a study to measure the effects of Non-performing asset on the profitability of the banks. The study was based on the secondary data of five public sector banks for the period 2004 to 2015. It was found from the study that there is a significant negative correlation between net profits and NPA of the banks. Only SBI bank has shown continuous improvement in net profits even after increasing trend of NPA.

Balasubramaniam (2012), conducted a study to assess the relationship between non-performing asset and profitability of the commercial banks. The study was based on the secondary data of scheduled commercial banks of India for the period 2001 to 2010. Researcher has stated in the study that the performance of the banks get affected by the non-performing assets. It was highlighted in the study that the after the global recession scheduled banks were allowed to restructure their loans and advances on the basis of their asset quality due to that the ratio of GNPA get increased. Laveena and Kumar (2016), made a comparative study of management of non-performing assets of the public and private sector banks of India. The study was based on the secondary data for the period 2001 to 2010. It was found from the study that the profitability of the banks get affected by the non-performing assets. Public banks are more affected by the poor management of NPA than private sector banks. It was also found from the study that the level of NPA is higher in public sector banks than private sector banks. It was suggested by the researcher that the credit evaluation policy of the banks should be improved to reduce the level of NPA in the banks.

Singh (2016), conducted a study to measure the non-performing asset of the commercial banks of India and also studied the recovery system of NPA by the banks. It was stated in the study that high level of non-performing assets leads to high level of credit defaults and affect the profitability of the banks and also the value of the firm get decreases. The financial health of the banks can be improved by reducing the amount of NPA in the banks. NPAs not only affect the profitability but also the liquidity of the banks and the asset quality of the banks and creates problem to the survival of the banks. Rajput et al. (2012), conducted a study to measure the relationship between NPA and return on asset of public sector banks of India. Researchers stated that the non-performing asset is a burden on the banks and it affects the profitability of the banks. NPAs should be within the tolerance level and should be managed effectively to improve the profitability of the banks. NPAs in the banks can be managed by following legal reforms and effective monitoring and credit control policy of the banks. It was found from the study that there is a negative relationship between NPA and ROA of the public sector banks.

Srinivas (2012), conducted a study to examine the non-performing assets of the commercial banks of India. The study was based on the secondary data for the period of 1996 to 2012. It was found from the study that the level of NPAs is increasing in the nationalized banks year by year. The study showed an increasing trend in the level of NPAs and decreasing level of profits of the banks. It was suggested by the researcher that by following a strict credit policy and by doing a complete inquiry about the creditworthiness of the customers before approval of loans can help in reducing the NPAs in the banks.

Objective Of The Study

The study aims to measure the impact of Nonperforming assets on the profitability of the scheduled commercial banks of India. The study also aims to measure the trend of NPA in during last ten years.

III. Research Methodology

The study is purely based on the secondary data taken from the annual publications of RBI accessed from the website of the reserve bank of India. The period of the study is from 2004-05 to 2014-15. Regression analysis has been used by the researcher to measure the impact of NPAs on the profitability of the scheduled commercial banks of India. Profitability of the scheduled commercial banks has been measured using three different variables namely; Return on assets, Return on equity and Net interest margin. The measure for non-performing assets used in the study are namely; Gross NPA to Gross Advances ratio and Net NPA to Net Advances ratio. Profitability measures have been used as dependent variable in the study while measures of NPA have been used as independent variables in the regression model. The hypothesis which were formulated and tested during the current study are as follows:

Null Hypothesis (H_{01}): There is no relationship between Return on assets and Gross NPA to Gross Advances ratio.

Regression Model 1

$$ROA = \alpha + \beta.X1 + \varepsilon$$

Where ROA is dependent variable and X1 is Gross NPA to Gross Advances ratio

Null hypothesis (H_{02}): There is no relationship between Return on assets and Net NPA to Net Advances ratio.

Regression Model 2:

$$ROA = \alpha + \beta.X1 + \varepsilon$$

Where ROA is dependent variable and X1 Net NPA to Net Advances ratio

Null Hypothesis (H_{03}): There is no relationship between Return on equity and Gross NPA to Gross Advances ratio.

Regression Model 3:

$$ROE = \alpha + \beta.X1 + \varepsilon$$

Where ROE is dependent variable and X1 Gross NPA to Gross Advances ratio

Null hypothesis (H_{04}): There is no relationship between Return on equity and Net NPA to Net Advances ratio.

Regression Model 4:

$$ROE = \alpha + \beta.X1 + \varepsilon$$

Where ROE is dependent variable and X1 Net NPA to Net Advances ratio

Null Hypothesis (H_{05}): There is no relationship between Net Interest margin and Gross NPA to Gross Advances ratio.

Regression Model 5:

$$NIM = \alpha + \beta.X1 + \varepsilon$$

Where NIM is dependent variable and X1 Gross NPA to Gross Advances ratio

Null hypothesis (H_{06}): There is no relationship between Net Interest margin and Net NPA to Net Advances ratio.

Regression Model 6:

$$NIM = \alpha + \beta.X1 + \varepsilon$$

Where NIM is dependent variable and X1 Net NPA to Net Advances ratio

Data has been analyzed using SPSS 20.0 software.

Profitabilitymeasures used in the study

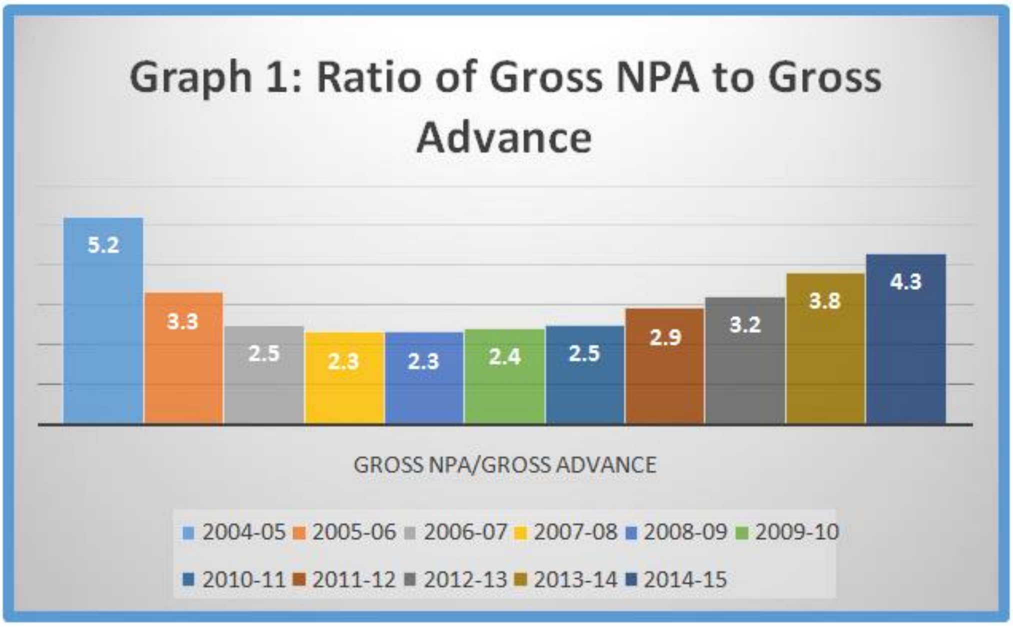
Return on Assets: ROA measure of the ability of the firm to generate returns on its portfolio of assets.The higher ratio depicts the better utilization of the assets thus higher the profitability.

Return on Equity: ROE reflects how effectively a bank management is utilizing its shareholders funds.Higher ratio positively affects the profitability of the banks.

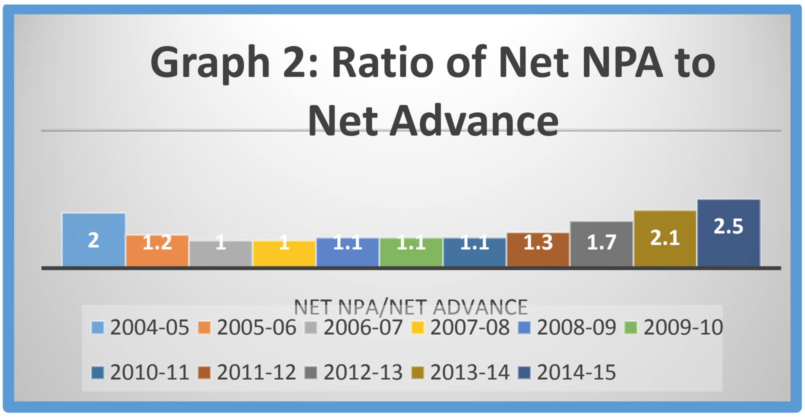
Net Interest Margin: This ratio shows how much a bank has earned by the way of net interest income after deducting all the costs incurred on earning the interest income.Higher the spread higher will be the efficiency of the banks and affects positively the profitability of the banks.

Data analysis and its interpretation

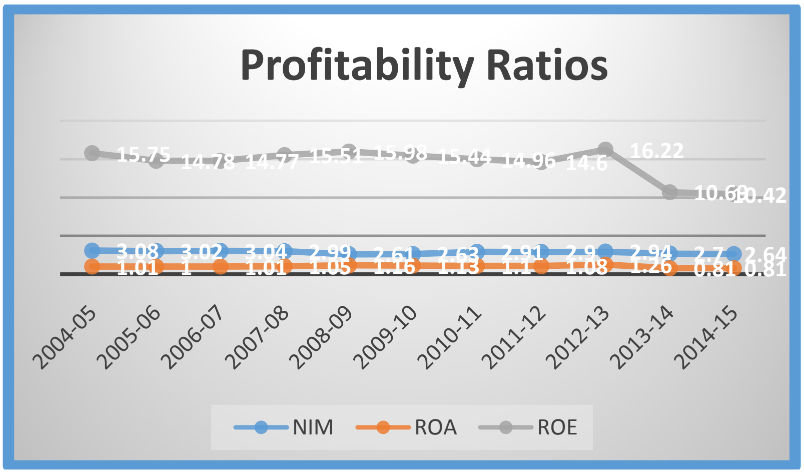
This section deals with the analysis of secondary data. The trend of the NPA for all the scheduled commercial banks in India has been shown in the below section using graphs.



Graph 1 shows the Gross NPA to Gross Advance ratio for the Indian scheduled commercial banks for the period 2004-05 to 2014-15. It can be interpreted from the graph 1 that the ratio of gross NPA to gross advances has decreased from 5.2 per cent to 2.3 per cent during the year 2004 to 2008-09, after that period the ratio starts increasing and till that period it is continuously increasing. Thus, it can be said that after global recession period 2008-09, the ratio of Gross NPA to gross advances has increased year by year. The ratio shows the percentage of gross advances turned in to gross non-performing assets of the banks. Any increase in the percentage of this ratio has a negative impact on the profitability of the banks which leads to the poor performance of the banks.



Graph 2 shows the Net NPA to Net Advance ratio for the Indian scheduled commercial banks for the period 2004-05 to 2014-15. It can be interpreted from the graph 2 that the ratio of net NPA to net advances has decreased from 2 per cent to 1 per cent during the year 2004 to 2007-08, after that period the ratio remains constant for consecutive three years, 2008-09, 2009-10 and 2010-11. From the year 2011-12, the ratio of net NPA to net advances started increasing and till that period it is continuously increasing. Thus, it can be said that after global recession period 2008-09, the ratio of net NPA to net advances has increased year by year. The ratio shows the percentage of net advances turned in to net non-performing assets of the banks. Net NPA of the banks is calculated by making all the deductions from the gross NPA such as; provisions, loss assets etc. Any increase in the percentage of this ratio has a negative impact on the profitability of the banks which leads to the poor performance of the banks.



Graph 3 shows the measures of profitability of Indian scheduled commercial banks for the period 2004-05 to 2014-15. It can be interpreted from the graph 3 that the net interest margin of the banks is decreasing from last ten years. It has decreased from 3.08 to 2.64. The trend shows both increase and decrease in the net interest margin during last ten years. Similarly, the return on assets has decreased from 1.01 to 0.81 during last ten years. Trend shows both the upwards and downwards in the value of return on assets. Thus, it can be said that the profitability of the Indian scheduled commercial banks has not remained constant during last ten years. It can also interpreted from the graph 3 that there is a huge decline in the return on equity during last ten years. ROE has decreased from 15.75 to 10.42. It has also shown a mixed trend during last ten years.

Results of Regression Analysis

Table 1: Regression Results

Model Dependent Variable: Return on Assets		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.269	.106		11.936	.000
	Net NPA to Net Advances	-.158	.069	-.608	-2.297	.047
R =0.608, R Square = 0.370, F Value = 5.278 at p value = 0.047						

Interpretation: Table 1 shows the results of regression analysis, where the dependent variable is return on assets and independent variable is Net NPA to Net Advances ratio. The value of f is found to be 5.278 which is significant at 5 per cent level of significance. Thus, it can be said that there is a significant relationship between return on asset and Net NPA to Net advances ratio. Thus it can said that a significant model has emerged from the regression analysis. The value of R square is 0.370 indicates that the ratio of Net NPA to Net advances, explains the 37 per cent of total variance in the value of return on assets. Remaining, 63 percent of the total variance in the value of return on assets is due to other factors. Thus, it can be said that non-performing asset has an impact on the profitability of the Indian scheduled commercial banks. The negative sign of regression coefficient indicates that there is a negative relationship between return on asset and Net NPA to Net advances ratio. Thus, it can be said that the profitability and NPA have an inverse relationship. If the amount of net non-performing asset increases then it will have an adverse impact on the profitability of the banks.

Table 2: Regression Results

Model Dependent Variable: Return on Assets		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.279	.134		9.537	.000
	Gross NPA to Gross Advances	-.076	.041	-.528	-1.866	.051
R =0.528, R Square = 0.279, F Value = 3.482 at p value = 0.051						

Interpretation: Table 2 shows the results of regression analysis, where the dependent variable is return on assets and independent variable is Gross NPA to Gross Advances ratio. The value of f is found to be 3.482 which is significant at 5 per cent level of significance. Thus, it can be said that there is a significant relationship between return on asset and Gross NPA to Gross Advances ratio. Thus it can said that a significant model has emerged from the regression analysis. The value of R square is 0.279 indicates that the ratio of Gross NPA to Gross Advances, explains the 28 per cent of total variance in the value of return on assets. Remaining, 72 percent of the total variance in the value of return on assets is due to other factors. Thus, it can be said that non-performing asset has an impact on the profitability of the Indian scheduled commercial banks. The negative sign of regression coefficient indicates that there is a negative relationship between return on asset and Gross NPA to Gross advances ratio. Thus, it can be said that the profitability and Gross NPA have an inverse relationship. If the amount of Gross non-performing asset increases then it will have an adverse impact on the profitability of the banks.

Table 3: Regression Results

Model Dependent Variable: Return on Equity		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	17.233	2.116		8.143	.000
	Gross NPA to Gross Advances	-.877	.645	-.413	-1.360	.207
R =0.413, R Square = 0.170, F Value = 1.849 at p value = 0.207						

Interpretation: Table 3 shows the results of regression analysis, where the dependent variable is return on equity and independent variable is Gross NPA to Gross Advances ratio. The value of f is found to be 1.849 which is found to be insignificant with a p-value of 0.207. Thus, it can be said that there is no significant relationship between return on equity and Gross NPA to Gross Advances ratio. Thus it can said that return on equity has a negative but insignificant relationship with the Gross NPA to Gross Advances ratio.

Table 4: Regression Results

Model Dependent Variable: Return on Equity		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.361	1.415		12.974	.000
	Net NPA to Net Advances	-2.661	.915	-.696	-2.908	.017
R =0.696, R Square = 0.485, F Value = 8.459 at p value = 0.017						

Interpretation: Table 4 shows the results of regression analysis, where the dependent variable is return on equity and independent variable is Net NPA to Net Advances ratio. The value of f is found to be 8.459 which is significant at 1 per cent level of significance. Thus, it can be said that there is a significant relationship between return on equity and Net NPA to Net Advances ratio. Thus it can said that a significant model has emerged from the regression analysis. The value of R square is 0.485 indicates that the ratio of Net NPA to Net Advances, explains the 48 per cent of total variance in the value of return on equity. Remaining, 52 percent of the total variance in the value of return on equity is due to other factors. Thus, it can be said that non-performing asset has an impact on the profitability of the Indian scheduled commercial banks. The negative sign of regression coefficient indicates that there is a negative relationship between return on equity and Net NPA to Net Advances ratio. Thus, it can be said that the profitability and Net NPA have an inverse relationship. If the amount of Net non-performing asset increases then it will have an adverse impact on the profitability of the banks.

Table 5: Regression Results

Model Dependent Variable: Net Interest Margin		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.776	.206		13.445	.000
	Gross NPA to Gross Advances	-.027	.063	.140	.424	.682
R =0.140, R Square = 0.020, F Value = 0.180 at p value = 0.682						

Interpretation: Table 5 shows the results of regression analysis, where the dependent variable is net interest margin and independent variable is Gross NPA to Gross Advances ratio. The value of f is found to be 0.180 which is found to be insignificant with a p-value of 0.682. Thus, it can be said that there is no significant relationship between net interest margin and Gross NPA to Gross Advances ratio. Thus it can said that net interest margin has a negative but insignificant relationship with the Gross NPA to Gross Advances ratio.

Table 6: Regression Results

Model Dependent Variable: Net Interest Margin		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.982	.172		17.381	.000
	Net NPA to Net Advances	-.083	.111	-.243	-.752	.471
R =0.243, R Square = 0.059, F Value = 0.565 at p value = 0.471						

Interpretation: Table 6 shows the results of regression analysis, where the dependent variable is net interest margin and independent variable is net NPA to net Advances ratio. The value of f is found to be 0.565 which is found to be insignificant with a p-value of 0.471. Thus, it can be said that there is no significant relationship between net interest margin and Net NPA to Net Advances ratio. Thus it can said that net interest margin has a negative but insignificant relationship with the Net NPA to Net Advances ratio.

IV. Conclusion

It can be concluded from the study that non-performing assets have an adverse impact on the profitability of the Indian scheduled commercial banks. Return on asset and Return on equity which were used as a proxy variable for the profitability of the banks have been found negatively and significantly related to the Net NPA to Net Advances ratio, while Net interest margin and Net NPA to Net Advances ratio is found to be negatively but insignificantly related to each other. Similarly, Return on asset is found to be negatively related to the Gross NPA to gross advances ratio, while the ratio is found to be negatively and insignificantly related to the return on equity and net interest margin. Thus, overall it can be concluded that the profitability of the banks get reduced if there is an increase in the non-performing assets of the banks and vice-versa. It was also found from the data analysis that the level of Non-performing assets in the Indian scheduled commercial banks has increased after the global recession period.

V. Managerialimplication

The study is useful from the bankers' point of view and strategists; the study shows that there is a negative relationship between NPA and profitability of the banks. Thus, the level of NPA should be improved to improve the overall financial performance of the Indian scheduled commercial banks. The credit policy of the banks should be strict and the debt collection policy of the banks should be strong enough to reduce the amount of bed debts. The profitability of the banks will increase with the increase in the quality loans and less amount of bed debt to be written off from the profits of the banks.

VI. Limitations

Current study is to limited to measure the impact of NPA on the profitability of all the scheduled commercial banks, but the impact of NPA can be measured for group wise banks such as; private, public and foreign banks, or for individual banks for an in-depth knowledge. The variables taken in the study are two ratios only, while there are many other factors related to NPA, which have an impact on the profitability of the banks.

References

[1] Balasubramaniam, C.S. (2012), "Non-Performing Assets and Profitability of Commercial Banks In India: Assessment and Emerging Issues", ABHINAV National Monthly Refereed Journal of Research in Commerce & Management, Vol. 1 (7), 41-52.

[2] Joseph A. and Prakash M. (2014), "A Study on Analyzing the Trend of NPA Level in Private Sector Banks and Public Sector Banks", International Journal of Scientific and Research Publications, Vol. 4 (7), 1-9.

[3] Kiran K. And Jones M. (2016), "Effect of Non-Performing Assets on the Profitability of Banks – A Selective Study", International Journal of Business and General Management, Vol. 5 (2), 53-60.

[4] Laveena and Kumar Hitesh (2016), "Management of Non-Performing Assets on Profitability of Public and Private Sectors Banks",International Journal of Research in Management & Technology, Vol.6, No.2, 86-93.

[5] Narula S. and Singla M. (2014), "Empirical Study on Non-Performing Assets of Bank", International Journal of Advance Research in Computer Science and Management Studies, Vol.2 (1), 194-199.

[6] Rajput N., Gupta M. and Chauhan A. (2012), "Profitability and Credit Culture of NPAs:An Empirical Analysis of PSBs", International Journal of Marketing, Financial Services & Management Research, Vol.1 Issue 9, 91-109.

[7] Singh V. (2016), "A Study of Non-Performing Assets of Commercial Banks and it's recovery in India", Annual Research Journal of SCMS, Pune, Vol. 4, 110-125.

[8] Srinivas K. (2013), "A Study On Non- Performing Assets Of Commercial Banks In India", AbhinavInternational Monthly Refereed Journal of Research In Management & Technology, Vol.II, 61-69.