Influence of Bank Management on Non-Performing Assets: The Case of the State Bank of India

Davis Meela[1]	**Dr. R. Siva Rama Prasad**[2]
Research Scholar	PhD Research Guide
Department of Comm. & Bus. Admin.	Assistant Professor and HoD
Acharya Nagarjuna University,	Department of Comm. & Bus. Admin.
Guntur, Andhra Pradesh	Acharya Nagarjuna University, Guntur, Andhra Pradesh

Abstract: Banks and financial institutions in general are faced with a business risk inherent in their core business of lending. This is the risk that some of their customers who borrow will not honour their obligations stipulated in the loan agreement. These loans for which the borrowers have defaulted in repaying the amounts due (interest and/or principal) are called non-performing assets (NPAs). Reasons for default can be attributed to the borrowers, or to the bank (or financial institutions) or to factors external to both the borrowers and the lenders. Bank management should ensure that its loaning decisions are made correctly such that would be defaulters are not granted loans. In particular, banks should be cautious of aggressiveness in the credit market because this normally leads to making bad loans (NPAs)

Key words: NPA, loan-to asset ratio, loan growth percentage, capital-to-asset ratio, cost inefficiency, interest spread

I. INTRODUCTION

Non-performing assets (NPA) for banks are those loans that are in delinquency. With such loans, the borrowers default in the payment of the principal as well as the interest required (as stipulated in the loan agreement). Loans are considered to be assets for the bank since it is out of these loans that the bank earns revenue. The International Accounting Standards Board (IASB) define an asset as a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity. Interest from the loans is the expected benefit that flow to a bank as a result of the loaning transaction which the IASB refer to as a past event. Rao and Nirmada (2006) observe that an asset becomes non-performing when it ceases to generate income (interest) for the bank. All unpaid interest together with the whole amount of outstanding principal should be regarded as NPA regardless of whether some portion of the principal may not be due yet. Veerakumar (2012) observed that consequent to Basel II, the Reserve Bank of India came up with the following definition of NPA which became authoritative from March 31, 2004. That a non performing asset (NPA) shall be a loan or an advance where:

a) interest and/or instalment of principal remains overdue for a period of more than 90 days in respect of a term loan,

b) The account remains 'out of order' for a period of more than 90 days, in respect of an Over Draft / Cash Credit.

c) the bill remains overdue for a period of more than 90 days in case of bills purchased and discounted,

d) interest and/or instalment of principal remains overdue for two harvest seasons but for a period not exceeding two half years in the case of an advance granted for agricultural purpose, and

e) Any amount to be received remains overdue for a period of more than 90 days in respect of other accounts.

There is no doubt that NPAs is not desirable to banks. Banks would strive to eliminate incurrence of NPAs because the effect of NPAs is to reduce its profitability and threaten its survival as a commercial entity. However, the risk of default by some bank customers in repayment of their loans in accordance with the loan agreement is an inevitable one that cannot be entirely avoided by the bank. This is because some of the causes of NPAs are outside the control of the bank itself. The bank

can nevertheless be careful in its loaning decisions as a way of minimizing the incidence of NPAs. In this article an attempt is made to show how some management decisions have influenced the incurrence of NPAs for the State Bank of India (SBI) for the period of seven years from 2008. The SBI is an Indian government owned bank and is the largest commercial bank in the country in terms of asset ownership and capitalization.

II. LITERATURE REVIEW

K. Rao, Y. Rao and Kumar (2012) defined an NPA as any loan or advance where interest or an instalment of the principal remains overdue for a period of 90 days or more. This is the time period where the bank may start questioning the collectability of the amount due. The implication of this threshold of 90 days is that a delay of fewer days in payment of interest or instalment of principal should not render the amount non-performing. The bank should still consider the customer to be willing and able to fulfil his/her obligations as stipulated in the loan agreement.

NPAs have been re-categorised in accordance with the perceived risk of default by the borrower. This risk is measured by the period of time by which the amount has been in the NPA category. It is the time by which the amount has been in delinquency. Bansal (2012) identifies the categories of NPAs as follows:

- » **Sub-standard assets** where the amount has remained NPA for a period less than or equal to 12 months. Kaur and Singh (2011) note further that sub-standard assets have the characteristic that the current net worth of the borrower or the guarantor or the current market value of the security charged is not enough to ensure recovery of the dues in full.

- » **Doubtful assets** where the amount has been in the sub-standard category for a period of 12 months. Kaur and Singh (2011) make the same note as with sub-standard category that on the basis of known facts, conditions and value, it is highly questionable and improbable that the amount may be collected in full.

- » **Loss assets** where the amount has been identified by the bank's internal or external auditors or the central bank inspectors as uncollectable and has not been written off wholly. In this case it is no longer of any value to continue showing the amount on the bank's balance sheet.

Selvarajan and Vadivalagan (2012) did write an article about the cost of NPA in Indian bank. They observed that NPAs affect the profitability, liquidity and competitive functioning of banks and financial institutions and finally the psychology of the bankers in respect of their disposition towards credit delivery and credit expansion. NPAs do not generate any income for the banks, but at the same time banks are required to make provisions for such NPAs from their current profits. Apart from internal and external complexities, increases in NPAs directly affects banks' profitability sometimes even their existence. The quality of loan assets is the most important factor for the basic viability of the banking system. He observed that the overdue advances of banks in India are mounting and in consequence, the NPAs in their portfolio are on the rise, impinging on the banks' viability. Lower level of NPAs helps the bank in consolidating their position and gives credence to efficiency of the management. They summarise that NPAs are not merely non remunerative but they add cost to the credit management. The fear of NPAs permeates the psychology of bank managers in entertaining new projects for credit expansion. NPA is not a dilemma facing exclusively the bankers; it is in fact an all pervasive national scourge swaying the entire economy. NPA is a virus causing a sore throat of the economy as a whole. The banks are only the ultimate victims, where life cycle of the virus is terminated.

Balasubramaniam (2013) summed up major effect of NPAs on banks into three areas as follows:

Liquidity: Money is getting blocked, decreased profit lead to lack of enough cash at hand which lead to borrowing money for shortest period of time which lead to additional cost to the company. Difficulty in operating the functions of bank is another cause of NPA due to lack of money.

Involvement of Management: Time and efforts of management is another indirect cost which a bank has to bear due to NPAs. Time and efforts of management in handling and managing NPAs would have diverted to some fruitful activities, which

would have given good returns. Now days, banks have special employees to deal and handle NPAs, which is additional cost to the bank.

Credit Loss: If a bank is facing problems of NPAs, then the value of bank is adversely affected in terms of market for credit. It will lose its goodwill and brand image and credit; something that has negative impact to the people who are putting their money in the banks Bihari (2012) observe that an account does not become an NPA overnight. It gives signals sufficiently in advance and that steps may be taken to prevent the slippage of the account into NPA category. An account becomes an NPA due to causes attributable to the borrower, the lender and for reasons beyond the control of both.

The causes for NPA are classified differently; into systematic and situational causes (Istrate cited in Siraj and Pillai 2013) or into overhand component and incremental component (Poongavanam, 2011) or into internal and external factors (Misra and Dhal cited in Siraj and Pillai 2013). The classification into internal factors and external factors is more common in literatures. Internal factors are the bank-specific variables while the external factors are mostly the macro-economic factors that influence the economy and happen without the knowledge of the bank. It is widely held that bank specific factors can be controlled by the bank while the macro economic factors are beyond the control of the bank management.

Dash and Kabra (2010) studied the factors that determined non-performing assets in Indian commercial banks for a period of 10 years from 1998/99 to 2008/09. They found out that there was a positive association between the loan to asset ratio and NPAs.

Das and Ghosh (2005) cited in Patnaik, Satpathy and Mohapatra (2011) studied the association between risk-taking and productivity using data from public sector Indian banks over the period 1995-96 to 2000- 01. They discovered that capital to risk-asset ratio and loan growths have significant negative effects on NPAs. Increases in advances may be caused by a weak or incompetent loan management or directed lending. These results are consistent with the findings of Dash and Kabra (2010) and Das and Ghosh (2005). Ahmad and Bashir (2013) studied bank specific factors that determined NPAs in the Pakistan banking sector. They also found out that there existed a positive association between NPAs and credit growth.

Berger and De Young cited in Louzis, Vouldis and Metaxas (2011) studied a sample of US commercial banks spanning the period from 1985 to 1994 and concluded that, generally, decreases in measured cost efficiency lead to increased future problem loans i.e. NPAs. Cost efficiency was implied from the computation of cost inefficiency using the formula

$$\text{Cost inefficiency was} = \frac{operating expenses}{operating income}.$$

Collins and Wanjau (2011) conducted a study on the effects of interest rate spread on the level of NPAs for commercial banks in Kenys. They concluded that interest rate spread affect performing assets in banks as it increases the cost of loans charged on the borrowers.

Controlling NPAs is very important for both the performance of an individual bank and the economy's financial environment (McNulty et al. 2001) cited in (Joseph et al. 2012). The bank should devise measures that will keep NPAs at the very minimum level in order to improve its performance and that of the economy in general. Banks should ensure that only qualified borrowers are granted loans. The loan applicants should be carefully scrutinized in order to segregate good from bad borrowers. CBM (n.d.) identifies 6C's which should form the basis and guide for banks in evaluating loan applicants. These criteria, if employed properly, will enable the banks to know the loan applicants well and make appropriate lending decisions, hence minimize the levels of NPAs in banks. Application of the criteria will screen good from bad customers (borrowers). The 6 C's that were identified are:

1. *Character or Credit Reputation:*

How trustworthy is the applicant? Is the applicant the type of person who will willingly repay the loan as agreed? Does the applicant have a history of paying other debts in the past? Are the payments made on time? Has the applicant contacted credit grantors directly and promptly in case of problems in repaying?

2. *Capacity:*

Does the applicant have the ability to repay the debt? If the applicant is an individual, does he have a steady job? How long has he worked for the present employer and previous employers? Does he earn enough to pay what he will owe? Is it likely he can continue to earn the present salary or even more in the future? How much does he already owe?

3. *Capital:*

What assets or financial resources stand behind the applicant's commitment to repay the debt? Does the applicant have savings in a bank? What about property in the applicant's name? It should be noted that cash reserves and other assets that are of tangible value at the time the application is being processed should be considered. Although capital is not expected to be a means of payment, it gives the bank a measure of assurance that the loan will be paid if a period of adversity arises.

4. *Conditions:*

What economic conditions might influence the applicant's ability to honour the loan agreement? If the applicant is an individual, is he likely to become unemployed? Is there talk of a strike which might affect his job? In assessing economic conditions the bank should look at both national and regional (or local) forecasts. For instance, a national forecast of the health of the economy is based on criteria such as inflation, unemployment, productivity and consumer confidence (as measured in spending). The national economy might be healthy, but regional or local economies such as unemployment could be negatively impacted by a company buyout, plant closure or strike.

5. *Collateral:*

What tangible possessions or other collateral is the borrower providing as a pledge for the amount applied as a loan? Collateral is property or an object of value, which the bank can take and sell in case of default. Note that a bank can issue a secured or unsecured loan. A secured loan is one in which collateral is required as security to the bank while an unsecured loan is one where there is no collateral required; just an agreement to repay what is owed as agreed.

6. *Common Sense:*

A borrower's inner ability to make wise decisions is often referred to as common sense. The bank might determine that a loan applicant has good common sense based on how questions are answered, either orally, from the written credit application or from information gleaned from other sources. Good decisions are reflected in answers such as reasons for changing employment, number and types of bank loans, balances outstanding, or references listed on an application. A successful borrower instils confidence in the lender by addressing all of the lender's concerns on the other Five C's. The loan application sends the message that the individual or company is professional, with an honest reputation, a good credit history, reasonable financial standing, and adequate collateral. This is the reason that this last 'C' is sometimes referred to as 'confidence'.

III. OBJECTIVES OF THE STUDY

This study had the following objectives:

» To determine the movement of NPAs for the period 2008 t0 2014 in the SBI

» To determine the movement of the five variables namely loan-asset ratio; loan growth percentage; capital-asset ratio; inefficiency and interest spread for the bank during the period

» To establish the influence of the five variables on the NPAs incurred by the SBI for the study period.

IV. METHODOLOGY AND MODEL

This study about the influence of management decisions on the incurrence of NPAs for the SBI made use of the data extracted from the financial statements of the bank for the period under review. Use was made of the quarterly financial reports and a standard regression analysis was made to establish the relationship between the five selected variables and NPAs. These variables namely the loan-asset ratio, loan growth percentage, capital-asset ratio, cost inefficiency and interest spread are all under the influence of the bank management.

A linear regression model that linked the ratio of NPAs to total loan assets and the identified variables was employed. The general regression equation is as follows:

$$NPL = c + \beta_1 LAR + \beta_2 LG + \beta_3 CAR + \beta_4 EFF + \beta_5 INTS + \varepsilon$$

Where:

C = constant

β = coefficient

LAR = loan asset ratio

LG = loan growth percentage

CAR = capital asset ratio

EFF = efficiency ratio

INTS = interest spread

ε = error term

This linear regression function was carried out in respect of the data that were collected for the bank.

V. RESULTS AND ANALYSIS

5.1 Movement of NPAs and the variables

The SBI data in respect of NPA ratio, LAR, LG, CAR, EFF, and INTS for the 28 quarters of the period under study is shown in the table below:

Year	Quarter*	NPA ratio	LAR	LG	CAR	EFF	INTS
2008	1	2.42	57.20	5.96	6.27	45.13	0.71
	2	2.51	59.32	11.77	5.82	46.23	0.72
	3	2.61	56.45	2.01	5.43	50.10	0.88
	4	2.84	56.91	7.60	6.01	44.80	0.52
2009	1	2.79	55.65	0.03	5.87	57.25	0.61
	2	2.99	57.60	5.84	5.74	47.07	0.61
	3	3.11	58.81	4.36	5.62	52.30	0.63
	4	3.05	60.80	5.61	5.50	53.75	0.63
2010	1	3.14	64.42	8.52	6.11	44.20	0.60
	2	3.35	62.72	-0.34	6.54	47.55	0.76

	3	3.17	63.51	6.74	6.21	45.29	0.75
	4	3.28	63.10	4.43	5.31	52.77	0.64
2011	1	3.52	63.97	2.17	5.39	45.27	0.79
	2	4.19	65.20	2.70	5.68	46.03	0.85
	3	4.61	67.48	7.36	5.84	46.59	0.78
	4	4.44	66.91	2.74	6.29	43.44	0.85
2012	1	4.99	68.10	5.75	6.44	44.06	0.73
	2	5.15	66.34	1.10	6.39	48.65	0.72
	3	5.30	67.10	5.57	6.41	47.60	0.60
	4	4.75	68.81	6.84	6.31	53.32	0.50
2013	1	5.58	67.40	1.26	6.44	60.31	0.42
	2	5.64	67.93	4.32	6.45	59.36	0.55
	3	5.73	67.93	3.94	6.27	54.74	0.58
	4	4.95	69.44	5.18	6.60	45.47	0.52
2014	1	4.90	67.99	-0.90	6.71	49.80	0.60
	2	4.89	66.24	0.67	6.68	52.81	0.62
	3	4.90	66.46	1.90	6.75	51.12	0.62
	4	4.25	65.17	5.50	6.27	46.57	0.51

The NPA ratio for SBI was observed to lie between 2.42 and 5.73%. The minimum ratio of 2.42% was observed only once in the quarter ending 30 June 2008. The NPA ratio did not take many values during the period. It is observed that the most frequent values lied between 4.67 and 5% (6 times), followed by values between 3 and 3.33% (5 times). The average NPA ratio was 4.04% and the standard deviation was 1.08

During the period under review, the average LAR for SBI was 63.89%. This shows that SBI was, on the average, able to lend a greater proportion of its assets to its customers. The lowest LAR was 55.65% while the highest ratio was 69.44%. The standard deviation of LAR for the bank was 4.32%.

The average CAR was 6.12%. The lowest CAR was 5.31% while the highest was 6.75%. This indicates that CAR took values between 5.31 and 6.75% for the bank. The range of fluctuations does not appear to be very wide as indicated by the computed standard deviations of the CAR which was 0.43% for SBI.

The average LG percentage during the period under review was 4.25%. The lowest LG rate was -0.90%. In other words, there was a time when the loans issued declined by 0.90% for SBI. The highest LG rate was 11.77% indicating that LG rate fluctuated within a range of -0.90% and 11.77%. The standard deviation of LG was 2.96% for the bank.

During the period under review, the average EFF ratio was 49.34%. This observation indicates that the SBI was rather efficient in controlling its operating since its operating expenses were about 50% of its operating income. The lowest EFF ratio was 43.44% while the highest EFF ratio was 60.31%. EFF fluctuated between 43.44 and 60.31%, a range that does not raise an eye brow as indicated by its standard deviation of 4.74%.

The observed average INTS was 0.65% for the SBI. The observed minimum INTS was 0.42% and the maximum INTS was 0.88%. The standard deviation of INTS for SBI was 0.12% which is a sign that the fluctuation range of interest spread for the bank was a bit narrow which an indication of good bank management.

Davis et al.,

International Journal of Advance Research in Computer Science and Management Studies
Volume 4, Issue 1, January 2016 pg. 30-37

5.2 Association of NPAs with the variables

The output of the regression of the SBI data using the "enter" (simultaneous) method indicates that the model is fairly good with an R Square of 0.902. This indicates that the model itself accounts for about 90% of the variation in the level of NPAs for the SBI. The report on ANOVA about the significance of the model indicates that F = 38.692 and p< 0.001. This implies that the model is significant at 1% level of significance. That is to say, the model can be used to explain the determinants of NPAs for the SBI bank.

Now that the model is significant, the influence of the independent variables on the bank's NPAs could be assessed. According to the model, the significant variables were three as follows:

Variable	Beta (coefficient)	P
LAR	0.185	0.000
CAR	0.493	0.070
EFF	0.047	0.048

This indicates that the influence of other variables, the LG and INTS was not significant in explaining the variation in the levels of NPAs for the SBI. LAR was significant at 1% significant level; CAR at 10% while EFF was significant at 5% level of significance.

Loan asset ratio (LAR) was one of the variables that influenced NPAs in the bank. This ratio had a positive influence on NPAs incurred by the bank. Literature suggests that as more loans are given by a bank, the likelihood of incurring NPAs increases. Dash and Kubra (2010) relate increases in LAR as an indication of the appetite for risk. They contend that banks that value profitability more than the cost of higher risk are likely to incur higher levels of NPAs. Cost of higher risk in this case is represented by a high LAR. This was the case with SBI where the beta coefficient for this variable was 0.185 and was significant at 1% level of significance.

Capital asset ratio (CAR) was another variable observed to have a significant influence on the amount of NPAs for the bank. This variable is a measure of leverage. Since leverage is a measure of the use of debt financing in the capital structure of the bank, the higher the CAR, the lower the leverage of the bank. Ghosh (2005) found out that increase in bank leverage was associated with an increase of NPAs. This was indeed the case with the bank since the variable had a beta coefficient of 0.493 which was significant at 10% (p = 0.070), making CAR a significant determinant of the amount of NPAs incurred by the SBI.

Inefficiency of the bank management (EFF) was another variable that was found to have a significant influence on the amount of NPAs incurred by the SBI. This variable was defined as the operating expenses expressed as a percentage of the operating income for the bank. The variable had a beta coefficient of 0.047 which was significant at 5% (p = 0.048), making the variable a significant determinant of the amount of NPAs incurred by the SBI.

VI. CONCLUSION AND RECOMMENDATIONS

Non-performing assets result from poor lending decisions. The failure of bank management to isolate good borrowers from bad ones results into the bank making advances to customers who eventually fail to fulfil their obligations stipulated in the loan agreements. This study has shown that when the bank is very aggressive in the credit market and its risk appetite is high, the bank will tend to lend its money to bad customers who will fail to repay the borrowed amount. It is also found that a less cost efficient management is likely to advance its loans to bad customers and hence incur NPAs. When a bank has a high risk appetite, it will tend to value profitability more at the expense of the involved risk.

The SBI should review its risk policy so that its loans are only advanced to eligible borrowers who will respect their loan contract obligations. This may involve making more use of credit information provided by credit reference bureaus.

Davis et al.,

International Journal of Advance Research in Computer Science and Management Studies
Volume 4, Issue 1, January 2016 pg. 30-37

References

1. Ahmad, F. & Bashir, T. (2013). Explanatory power of bank specific variables as determinants of non-performing loans: Evidence from Pakistan banking sector. World Applied Sciences Journal, 22, 9, 1220-1231.

2. Balasubramaniam, C. S. (2013). Non performing assets and profitability of commercial banks in India: Assessment and emerging issues. ABHINAV Journal, 1, 7, 41-52.

3. Bansal, A. (2012). A study on recent trends in risk management of nonperforming assets (NPAS) by public sector banks in India. Journal of Information and Operations Management, 3, 1, 50-56.

4. Bihari, J. K. (2012) A study on NPA management in Indian banking industry. Asian Journal of Research in Business Economics and Management, 2, 6, 126-145.

5. CBM Credit Education Foundation, Inc. (n.d.). What qualifies you for credit? The six "C's" of credit. Retrieved 26 October, 2013from www.cbmfoundation.org.

6. Dash, M. K. & Kabra, G. (2010) The Determinants of non-performing assets in Indian commercial bank: An econometric study. Middle Eastern Finance and Economics,7, 94-106.

7. Ghosh, Saibal. (2005). Does leverage influence non performing loans? Evidence from India. Applied economics letters, 12, 15, 913-918.

8. International Accounting Standards Board. (2013). International Accounting Standard 36 Impairment of Assets

9. Joseph, M. T., Edson, G., Manuere, F., Clifford, M. & Michael, K. (2012). Nonperforming loans in commercial banks: A case of CBZ Bank Limited in Zimbabwe. Interdisciplinary Journal of Contemporary Research in Business, 4, 7, 467-488.

10. Kaur, K. & Singh, B. (2011). Non-performing assets of public and private sector banks (A comparative study). South Asian Journal of Marketing & Management Research, 1, 3, 54-52.

11. Louzis, D. P., Vouldis, A. T. & Metaxas, V. L. (2011). Macroeconomic and bank-specific determinants of non-performing loans in Greece: A comparative study of mortgage, business and consumer loan portfolios. Journal of Banking & Finance. 1-16.

12. Patnaik, B. C. M., Satpathy, I. & Mohapatra, A. K. (2011). NPA's side effect and it's curative mantra. International Journal of Research in Commerce & Management, 2, 7, 77-81.

13. Poongavanam, S. (2011). Nonperforming assets: Issues, causes and remedial solution. Asian Journal of Management and Research, 2, 1, 123-132.

14. Rao, K., Rao, Y. & Kumar, K. (2012). Management of nonperforming assets in Indian banks- A qualitative analysis. IQRA International Management Journal, 1, 1, 100-109.

15. Rao, R. V. & Nirmada, D. (2006). Performance evaluation of urban co-operative banks. The Indian Journal of Commerce, 59, 4.

16. Selvarajan, B. & Vadivalagan, G. (2012). Cost of nonperforming assets in Indian banks. European Journal of Economics, Finance and Administrative Sciences, 51, 27-43.

17. Siraj, K. K. & Pillai, P.S. (2013). Efficiency of NPA management in Indian SCBs – A bank-group wise exploratory study. Journal of Applied Finance & Banking, 3, 2, 123-137.

18. Veerakumar, K. (2012). Non-performing assets in priority sector: A threat to Indian Scheduled Commercial Banks. International Research Journal of Finance and Economics, 93, 6-23.