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Credit Risk management in Banking Sector: A comparison of Non-Performing Assets of Public sector and Private sector Bank

Harendra Singh [1], Prof.(Dr.) Anil Vashisht[2]
Amity Business School[1,2], Amity University Madhya Pradesh [1,2]
Email: hsingh@gwa.amity.edu[1] , avashisht@gwa.amity.edu[2]

Abstract- Credit Risk is inherent to any firm, organization, bank etc. The management of such credit risk becomes a cumbersome task for the managers. The main reason for growth of the credit risk management area is the ongoing and pressing need to maximize a bank's risk-adjusted rate of return by maintaining credit exposure in acceptable parameters. NPA's can have a huge negative impact on a bank's profitability and can lead to complete erosion of its asset base. The objective of our study is based on such parameter. We have identified the factors affecting the NPAs, the reasons for increasing NPAs, the tools and techniques used for managing such NPAs and making a comparison between the NPAs of the top 5 public sector banks and private sector banks.

Keywords- NPA, t-Test, Credit Risk

1. INTRODUCTION

Credit Risk is the potential that a bank borrower/counter party fails to meet the obligations on agreed terms. There is always scope for the borrower to default from his commitments for one or the other reason resulting in crystallization of credit risk to the bank. Credit risk is inherent to the business of lending funds to the operations linked closely to market risk variables. Therefore, credit risk must be managed in the banks. So to reduce the lender's credit risk and for the proper functioning of any bank a credit check on the prospective borrower is the utmost important. Therefore, Credit Risk Management must be mitigated by techniques like tightening of credit norms, by using credit insurance and derivatives, etc. According to Reserve Bank of India, the following are the forms of credit risk:

- Non-repayment of the principal of the loan and/or the interest on it.
- Contingent liabilities like letters of credit/guarantees issued by the bank on behalf of the client and upon crystallization – amount not deposited by the customer.
- In the case of treasury operations, default by the counter-parties in meeting the obligations.
- In the case of securities trading, settlement not taking place when it is due.
- In the case of cross-border obligations, any default arising from the flow of foreign exchange

The objective of Credit Risk Management is to minimize the risk and maximize bank's risk adjusted return by assuming and maintaining credit exposure within the acceptable parameters. Credit risk management, in finance terms, refers to the process of risk assessment that comes in an investment. Credit risk management must play its role to help banks be in compliance with Basel II Accord and other regulatory bodies. The Credit Risk Management system used by many banks today has complexity; however, it can help in the assessment of risks by analyzing the credits and determining the probability of defaults and risks of losses. Credit risk management for banking is a very useful system, especially if the risks are in line with the survival of banks in the business world.

In this study, author has taken Credit Risk Management in Indian Banks with special reference to the Non-Performing Assets of the Banks. NPAs have been particularly emphasized upon because it has become a critical performance area for all banks in India. NPAs can have a huge negative impact on a bank's profitability and can lead to complete erosion of its asset base. Following is the RBI report of 2010-2012 and below that is the trend of the Gross NPAs and Net NPAs. It is evident from the table below that the NPAs are showing a cyclical pattern. The Gross NPAs from March 2008 to March 2012 have increased while the Net NPAs have increased from 2008 to 2010 and an abrupt decline happened in 2011 after which it again increased in 2012. It is quite clear that this mismatch and cyclicality happened because NPAs were not given proper attention and ignored. Therefore, the study further corroborates the need to further strengthen such a policy by basing it on a more systematic and rule-based footing to effectively address the concern of asset quality and NPAs of the banks.

Table No: 1.1 Bank group-wise performance regarding Gross and Net NPAs from the years 2010 to 2012

Bank Group	End March	Gross NPAs to Gross Advances	Net NPAs to Net Advances
Public sector banks	2010	2.28	1.09
	2011	2.32	1.04
	2012	3.17	1.47
New private sector banks	2010	3.22	1.18
	2011	2.62	0.60
	2012	2.18	0.40
Old Private sector banks	2010	2.31	0.82
	2011	1.97	0.53
	2012	1.80	0.59

Source: RBI Supervisory return

Table No. 1.2 Trends in Gross and Net NPAs ratio

Item	Mar 2008	Mar 2009	Mar 2010	Mar 2011	Mar 2012
Gross NPAs ratio (%)	2.39	2.45	2.51	2.36	2.94
Net NPAs ratio (%)	1.07	1.13	1.12	0.93	1.24

Source: RBI Supervisory return

In this study we have tried to study the difference in the credit risk between private banks by study the level NPAs due to Letter of credit, direct loans and advances etc.

2. LITERATURE REVIEW

Bodla. B.S.& Verma.R. (2009) conducted a research to study the implementation of the Credit Risk Management Framework by Commercial Banks in India. This literature is primarily concerned with the Basel Capital Adequacy Norms which are primarily initiated for applying Common Minimum Capital Standards to the banking industry. Findings from a sample of 26 SCB‟s comprising 18 PSBs, eight private sector banks and a foreign bank was made. Response was analyzed by using a seven point scale. Chi-square test and mean score were also computed. From the findings, it was examined that conceptual framework was followed by a majority of studies and no empirical evidence was brought in. Basel III norms were not implemented properly.

Nandi.K. & Choudhary.N. (2011) stated that accepting deposits from public and lending funds to public often gives rise to credit risk. A research was conducted to develop an internal credit rating model for banks which could improve their current predictive power of financial risk factors. The study also analyzed ways of improving the credit evaluation by assessing the creditworthiness of the borrowers and identifying the potential defaulters. A research had been conducted considering the data for the last six years. Altman Z-score model was used which helped the banks to predict future defaulters and take necessary actions accordingly. The model is an application of multivariate discriminate analysis in credit risk modeling. Therefore, there should be a check on credit risk management of loan portfolios of Indian banks, otherwise there would be an increase in the NPA‟s which in turn would result in bankruptcy.

Rajput.N. et al (2012) provides an empirical approach to the analysis of profitability indicators with respect to non-performing assets (NPAs) of commercial banks in the Indian context. The objective of the study was to analyze the nature, extent and magnitude of NPAs of SCBs and to identify the impact of NPA's on the profitability of the PSB's. For the purpose of analysis, research had been conducted by taking 27 public sector banks into consideration. Research relied upon the primary data from the annual reports of banks, Journal of Indian Banking Association, Reserve Bank of India‟s Bulletin and Internet (www.rbi.org.in). Reference period was 13 years from 1997-98 to 2009-10. Statistical tools applied were Correlation and OLS Regression Model. The study has concluded that there is an inverse relationship among profitability and NPAs.

Malyadri.P. & Sirisha. S.(2011) examined the state of affair of the NPAs of the public sector banks and private sector banks in India with special reference to weaker sections. The purpose of the study is to compare between Old private sector banks and New private sector banks NPAs pertaining to weaker sections and to evaluate the share of Old Private Sector NPAs and New Private Sector NPAs in the total private sector Advances and NPAs pertaining to Weaker Sections. Secondary data for the years 2004-2010 compiled from Report on Trends and Progress of Banking in India was used and the data was of seven years. For the purpose of analysis, percentage method was used. Findings revealed that the asset quality of public sector banks and private sector banks improved in the past few years and that the public sector banks had achieved a greater penetration compared to the private sector banks. Therefore, there is a significant improvement in the management NPAs of the public sector banks in India.

Kanchu.T. & Kumar.M.(2013), found in their study that the objective of risk management is certainly not to prohibit or prevent risk taking activity, but to ensure that the risks are consciously taken with full knowledge, clear purpose and understanding so that it can be measured and mitigated. It is also found that if banks can take risk more consciously, anticipates adverse changes and hedges accordingly; it becomes a source of competitive advantage, as it can offer its products at a better price than its competitors. The main objective of their study was to identify the risks faced by the banking industry, to trace out the process and system of risk management and to examine the techniques adopted by banking industry for risk management. The data has been collected from secondary sources i.e., from Books, journals and online publications. They found that banking industry experiences both financial and non- financial type of risk. To overcome the risk and to make banking function well they derived a process of risk management. And as a conclusion, they said that effectiveness of risk measurement in banks depends on efficient Management Information System, computerization and working of the branch activities.

Sudalaimuthu.S. & P.R. (2011) analyzed the credit risk assessment system in banking sector which is used to compute the capital requirements to overcome the credit risk. The main objective was to develop software to assess the credit risk and to compute the capital requirements to overcome the credit risk. They also studied the credit risk assessment and its standardized approach followed by the banks. The main focus in the research was on the various characteristics of the software developed. The domain analysis was used to identify the basic controls; boundary and entity need to make the system. The data manipulator helped in manipulating the data in an efficient and significant manner. The software was used to identify the credit risk factors and the ways to tackle them.

Debarshi.G. & Sukanya.G.(2011) has conducted a study on management of non- performing assets in public sector banks. This study emphasized on movement of non-performing assets in public sector banks by analyzing the financial performance of the banks and composition, trend and RBI norms on capital adequacy. The secondary data used for this study which was RBI reports, websites, journals and some data has collected from the report of trend and progress of banking in 2009-10. It was founded that banks adopted aggressive lending policies and the NPA‟s of priority sector are not decreasing but the quality of lending and recovery in non priority sector has improved. The Indian public sector banks has been consistently maintaining capital adequacy ratio well above the Basel II norm of 8 per cent and Reserve bank of India norm of 9 percent. The public sector banks have been able to manage the non performing assets with the stringent regulatory norms of RBI.

Sandeep. A. & Parul. M.(2012)has conducted a study on comparative position of non- performing assets in public and private sector banks. This study mainly focused on how public and private sector banks manage NPA‟s. The objective of the study was to find out the level of NPA‟s, position and variation of NPA‟s in ratio and comparative position of NPA‟s in public and private sector banks. The primary and secondary data is used for the study. In public sector banks, the authors took State bank of India and Punjab national bank. In private sector ICICI bank and HDFC bank has been taken. Averages, percentages, ratio analysis, Measure of central tendency, frequency distribution, Standard Deviations, coefficient of variation and ANOVA test have been used to analyze and interpret the data. The ratio of NPA‟s is less in PNB as compared to SBI and HDFC is performed better than ICICI. There is more variation in Gross non-performing assets and net non-performing assets ratio of PNB and in problem assets ratio ICICI has more variability. Level of NPA‟s is more in public sector bank as compared to Private sector bank.

Chandan.C. et al (2012) conducted a study on current scenario of management of non- performing assets. The authors explored the causes and consequences of NPA‟s and policy directives by RBI, initiatives and scenario of NPA sector wise and bank group wise. The main objective of the study is to compare the NPA‟s of public sector banks, private sector banks and foreign banks. They conducted this study to understand the relationship between NPA‟s net profit and advances and the channels for the recovery of NPA‟s. They collect data from the secondary sources, which were RBI reports and bulletins. They have studied the lending composition of SCBs by analyzing the three core sectors of economy i.e. priority sector, public sector and non-priority sector. It was concluded that the recovery through various channels have been increased. The NPA‟s of public sector and non priority sector have decreased and there is fallen in Gross NPAs percent to Gross Advances. The banks have to take a pivotal role to reduce NPAs in a time bound strategic approach.

3. RESEARCH METHODOLOGY

3.1 Research Objective

1. To study the factors affecting the NPAs of the bank

2. To study the reasons for increasing NPAs

3. To study the Practices or the Tools and Techniques used to reduce NPAs

4. To compare the NPAs of top five Private and Public Sector Banks

3.2 Sample unit

Banks covering the regions of Jalandhar, Phagwara and Ludhiana

3.3 Sample size: -

30 respondents

3.4 Research design

The research is both quantitative as well as qualitative. It is based on descriptive research design.

3.5 Research instruments

The first assessment tool is the Credit Risk Management Questionnaire, the most utilized instrument for measuring the Credit Risk taking into account the NPAs.

3.6 Statistical tools:-

t-test: t-test is a statistical examination of two population means. In our research project, we have applied independent t-test because these types of test are used when two separate sets of independent and identically distributed samples are obtained, one from each of the two populations being compared.

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{S_1^2/n_1^2 + S_2^2/n_2^2}}$$

Here, we are using independent sample t-test because we have to compare the NPAs and other various aspects like factors affecting NPAs, tool and techniques used etc of public sector bank and that of private sector bank.

3.7 Data collection method

Primary sources:

i. Bank visit

ii. Asking the queries, if any from the manager or from any person of credit risk management department

iii. Using a questionnaire

Secondary Sources:

i. Reports from RBI,

ii. Business newspapers and magazines

iii. Web sites of different banks.

iv. Books of credit risk management and management of NPAs

v. Different Journals (References given)

4. DATA ANALYSIS

Hypothesis 1

H0: There is no significant difference between the level of Credit risk faced by Public Sector Bank and Private Sector Bank

H1: There is a significant difference between the level of Credit risk faced by Public Sector Bank and Private Sector Bank

To test the hypothesis we have applied the t-test level of Credit risk and to guarantees of letter of credit between public sector and private sector banks, the result of this test can be seen in table below:

Table 4.1: Result of t-test for mean difference between level of Credit risk regarding advances and direct lending of Public and Private sector banks

Type of bank	Mean	Value of t test	Significance level
Public sector bank	2.07	-1.896	.068
Private sector bank	2.93		

Source: Researcher's analysis

From the above findings, it was found that the advances and direct lending caused very low to moderate level of credit risk in the public sector banks as compared with private sector banks i.e.; moderate to neutral risk. Here, the significance level is more than 0.05. Thus, we haven't rejected the null hypothesis (H0) which means that there is no significant difference between the level of Credit risk faced by Public Sector Bank and Private Sector Bank.

Table 4.2: Result of t-test for mean difference between mean related to guarantees of letter of credit of Public and Private sector banks

Type of bank	Mean	Value of t test	Significance level
Public sector bank	2.07	-.498	.062
Private sector bank	2.27		

Source: Researcher's analysis

Guarantees of Letter of Credit caused very low risk in public sector banks and moderate in private sector banks. The significance level is more than 0.05. Thus, we haven't rejected the null hypothesis (H0) which means that there is no significant difference between the level of Credit risk faced by Public Sector Bank and Private Sector Bank.

Hypothesis 2

H0: There is no significant difference between the variation in the percentage of NPAs being faced by Public Sector Bank and Private Sector Bank

H1: There is a significant difference between the variation in the percentage of NPAs being faced by Public Sector Bank and Private Sector Bank.

To test the above hypothesis we have applied the t test on percentage of NPAs of public sector and private sector banks and the shown in table 4.3

Table 4.3: Result of t-test for mean difference regarding the variation in the percentage of NPAs of Public and Private sector banks

Type of bank	Mean	Value of t test	Significance level
Public sector bank	1.93	-1.789	.084
Private sector bank	2.47		

Source: Researcher's analysis

From the above findings, it was found that the percentage of NPAs in public sector bank is 0-1% and that of private sector bank is 1-4%. In this case, significance level is more than 0.05. Thus, we haven't rejected the null hypothesis (H0) which means there is no significant difference between the variation in the percentage of NPAs being faced by Public Sector Bank and Private Sector Bank

5. FINDINGS, RECOMMENDATIONS, CONCLUSION AND LIMITATIONS

5.1 Findings:

We found that there was no significant difference between the public and private sector banks with respect to the NPAs. The type of assets in both the banks was sub-standard and the most prevalent cause for the prominence of NPA was high cost of funds in public sector banks and in private sector banks the most prevalent cause was wilful defaulters. Hence, in a nutshell we can conclude that there was no significant difference between the public and private sector banks with respect to the NPAs and the tools and techniques used to reduce it.

5.2 Recommendations:

1. While advancing loans, the three principles of bank lending viz., Principle of Safety, Principle of Liquidity and principle of Profitability must be adhered to.

2. Banks should properly find out the original reasons/purposes of the loan required by the borrower.

3. Banks should ensure credibility of the borrower. Proper identification of the guarantor should be checked by the bank including scrutiny of his/her wealth.

4. Framing reasonably well documented loan policy and rules.

6. CONCLUSION

In our descriptive study of management of NPA"s in Public sector banks as well as Private sectors banks, we found that there is no significant difference between how Public sector banks and private sector banks manage the NPA"s in their banks. Reasons for the failure of banks in context to NPA"s are mostly common and techniques used to avoid these situations in banks are similar. The further scope of the study can be extended by increasing more number of banks, factors, tools and techniques and by using the secondary data.

Limitations

1. Sample of the study is limited as we have taken only Top 5 Private sectors and Public sectors commercial banks.

2. The management hesitated in giving the true information about the NPAs.

REFERENCES

[1] Bodla B and Verma R,(2009), Credit Risk Management Framework at Banks in India, The Icfai University Journal of Bank Management,Vol. VIII, No. 1

[2] Nandi J and Choudhary N, (2012), Credit Risk Management of loan portfolios by Indian Bank, The IUP Journal of Bank Management, Vol. XI, Issue IV

[3] Rajput N.et al, (2012), Profitability and Credit culture of NPAs: An empirical analysis of PSBs, International Journal of Marketing, Financial Services & Management Research,,Vol.1 Issue 9, ISSN 2277 3622

[4] Malyadri P and Sirisha S, (2011),A Comparative Study of Non Performing Assets in Indian Banking Industry, International Journal of Economic Practices and Theories, Vol.1, No.2, e-ISSN 2247-7225

[5] Siraj K and Pillai P,(2012),A Study on the performance of NPAs of the Indian Banking during Post –Millenium period, International Journal of Business and Management Tomorrow, Vol. 2 No. 3

[6] Tiwari C and Sontakke R,(2013),Non Performing Asset – A cause of concern for banks" ASM"Ss International E-Journal of Ongoing research in management and IT, e-ISSN-2320-0065,Vol.VIII

[7] Balasubramaniam C,(2012), Non Performing Asset and Profitability of commercial banks in India:Assesment and Emerging issues, Abhinav Journal, Vol.1, Issue No. 1

[8] Kanchu T and Kumar M,(2013)Risk Management in banking sector: An empirical study International Journal of Marketing, Financial Services & Management Research, ISSN 2277-3622 Vol.2, No. 2.

[9] Sudalaimuthu S and PL R,(2011), Credit Risk Assessment System, International Journal of Multidisciplinary Research Vol.1 Issue 8, ISSN 2231 5780.

[10] Das A and Ghosh S,(2009),Determinants of Credit Risk in Indian State-owned Banks: An Empirical Investigation , Mich Personal RePEc Archive Paper No.1730149
[11] Kumar R and Kotreshwar G,(2006) Risk Management in Commercial Banks (A Case Study of Public and Private Sector Banks), Indian Institute of Capital Market 9th Conference paper
[12] Arora D and Agarwal R,(2009), Banking Risk Management in India and RBI Supervision , Social Science Research Network
[13] Ghosh D and Sukanya G,(2011) Management of NPA in public sector banks and private sector banks, International Journal of Research in Commerce, IT and Management, Vol.1, Issue No.4
[14] Introduction to Banking, Vijayaragavan Iyengar , Excel Publications
[15] Banking Theory and Practices, Gordan & Natrajan ,Himalaya Publication, 22nd edition