# CREDIT RISK MANAGEMENT IN THE INDIAN BANKING SECTOR: AN INSIGHT STUDY

DR. KISHORE KUMAR DAS\* & MS SUPRITA PALIT\*\*

\*Head: Department of Commerce & Department of Business Administration, Ravenshaw University, Cuttack, Odisha,

\*\*Senior Lecturer, Dept. of Business Administration, Academy of Management & Information Technology and Research Scholar, Dept. of Commerce and Management, Ravenshaw University, Cuttack, Odisha.

# ABSTRACT

Nowadays credit risk is a major risk for all banking institutions. It also affects the profitability of banks. Banks are also facing liquidity crisis. This situation gets aggravated if the banks are not efficient enough to handle credit risk. Credit risk refers to potential financial loss as a result of borrower's inability to timely repay the credit availed. Most of the share of the total revenue of the bank comes from credit operation and the existence of the bank depends on quality of assets portfolio. So efficient management of credit risk is of great importance and the study of credit risk management practices in the banking sector holds a lot of relevance in the present scenario .This paper attempts to explain the various aspects related to credit risk management in the banking sector in India in a simple and lucid manner.

KEY WORDS: Risk, Credit risk management, Banking Sector, Basel Norms, RBI.

# **1.0 INTRODUCTION**

Risk is inevitable in any walk of life in general and financial sectors in particular. Due to globalization, banks are exposed to competition and are compelled to encounter various types of financial and non financial risk. There are three main categories of risk: Credit risk, Market risk and operational risk. Credit risk is intrinsic to banking. It, therefore, becomes necessary to manage the risk in order to minimize it. Credit risk is defined as the possibility that a bank borrower will fail to meet its obligations in accordance with agreed terms, or in other words it is defined as the risk that a firm's customer and the parties to which it has lent money will fail to make payments. Credit risk is also the most common cause of bank failures. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to long term success of any banking

organization. This study will be an attempt to study the credit risk management by Indian banks and how the various risk management strategies are effective in mitigating the risks.

## 2.0 OBJECTIVE OF THE STUDY

- 1. To get a clear conceptual idea about credit risk management in the banking sector.
- 2. To understand the procedure of credit risk management by banks in India.
- 3. To study the role of RBI in the implementation of CRM procedures
- 4. To get a clear understanding of Basel Norms and their implementation in India.

## 3.0 RESEARCH METHODOLOGY

The present study is based on secondary data collected from various books, journals, research articles and related websites. Different statistical tools like trend analysis, average and graphical presentations have been applied in the study.

# 4.0 **REVIEW OF LITERATURE**

Some of the literature studied and analysed to get a better insight into the subject is stated as follows:

**J Bessis** (1998) has pointed out the fact that credit risk is perhaps the most significant of all risks in terms of size of potential losses. Credit risk can be divided into three; default risk, exposure risk, recovery risk. As extension of credit has always been at the core of banking operation, the focus of banks' risk management has been credit risk management. Credit risk management incorporates decision making process before the credit decision is made, follow up of credit commitments including all monitoring and reporting process.

**Coyle (2000)** defined credit risk as losses from the refusal or inability of credit customers to pay what is owed in full or on time. The main sources of credit risk are limited institutional capacity, inappropriate credit policies , volatile interest rates, poor management, inappropriate laws, low capital and liquidity levels ,, directed lending, massive licensing of banks, poor loan underwriting, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank. To minimize these risks, it was necessary for the financial system to have well capitalized banks, service to a wide range of customers, sharing of information about borrowers, stabilization of interest rates, reduction in non-performing loans, increased bank deposits and increased credit extended to borrowers. Loan defaults and non performing loans need to be reduced.

**Taori** (2000) has suggested that the surest way of containing Non Performing Assets is to prevent their occurrence by introducing proper risk management system and effective credit monitoring.

**Raghavan R.S** (2003) has discussed in detail the three main categories of risk viz. Credit Risk, Market Risk and Operational Risk. It has been discussed in the paper that credit risk consists of primarily two components viz. Quantity of risk which is the outstanding loan balance as on the date of default and the quality of risk which is the severity of loss defined by both Probability of default as reduced by the recoveries that could be made in the event of default. The instruments and tools through which credit risk management is carved out include exposure ceilings , review /renewal , risk rating model, risk based scientific pricing, portfolio management and loan review mechanism.

**Goyal, A.** (2010) highlighted the importance of risk management process and hrows light on challenges and opportunities regarding implementation of Basel II in Indian Banking Industry. The banking industry is exposed to different risks such as forex volatility risk, variable interest rate risk, market play risk, operational risks, credit risk etc. which can adversely affect its profitability and financial health.

**Arora, S. (2013)** attempted to identify the factors that contribute to Credit Risk analysis Indian banks and to compare Credit Risk analysis practices followed by Indian public and private sector banks . The study based on primary data collected from employees of public and private sector banks of Indore division found that Credit Worthiness analysis and Collateral requirements are the two important factors for analyzing credit risk. The study concluded that Indian banks efficiently manage credit risks and it was also indicated that there is significant difference between the Indian public and private sector banks in analyzing credit risks.

**Dr. A.Khalil(2013)** has analysed the features of credit risk management and the challenges facing the effectiveness of credit risk management of Saudi Banks. CAMEL model was used for analyzing the effectiveness of credit risk management. The low quality of assets, inadequate training, weak corporate governance, lack of credit diversification, granting of credit ceiling exceeding customer's capacity of repayment, absence of risk premium on risky loans, absence of proper analysis of customer's financial position, corruption of some credit officers were identified as the major challenges of effectiveness of credit risk management. Adoption of sophisticated credit risk mitigating techniques and strengthening the role of credit risk committee was recommended in the study.

**Chitra B, Vani U (2014)** have discussed in detail the credit risk management for banking. Apart from emphasizing on the constitution of a high level credit policy committee to deal with issues relating to credit policies and procedures. , three different types of future bank strategies with regard to credit risk management have also been discussed. They are The investment banking paradigm( banks as intermediaries without direct risk taking), The reinsurance paradigm (banks as risk takers buy insurance against large losses) or The asset backed finance paradigm ( banks as risk managers).

**Arora R, Singh A (2014)** evaluated the credit risk management practices of Indian public sector banks .They developed a conceptual model of CRM systems for commercial loans of Indian public sector banks. This model was used to identify the problem areas and obstacles in CRM through comparison of large and small banks. The problem areas were identified as insufficient training, data management, inappropriate IT support, system disintegration and inconsistent rating approaches which if addressed properly can reduce the nonperforming assets of banks.

**M. Rajeswari (2014)** had undertaken a study on credit risk management in scheduled banks with objective to identify the areas where there is a scope of improvement. Due training to bank managers regarding bad debts identification, reducing the credit limit on high risk customers, following up earlier with customers, communicating clearly the outcome if an account becomes bad debt were some of the recommendations made in the study.

**P. J.Bhaskar** (2014) has elaborately discussed the tools and techniques to manage credit risks in his study. The tools of credit risk management like Exposure Ceilings, Review/Renewal, Risk Rating model, Risk based scientific pricing, portfolio management, loan review mechanism have been discussed in detail. The paper also emphasized that the objective of risk management is not to prohibit or prevent risk taking activities, but to ensure that risks are taken in the light of full knowledge, clear purpose and understanding so that it can be measured and unacceptable losses are prevented.

**P.Rathod, Vidyashree D.V (2015)** suggested the need for banks to prescribe procedures for risk identification, measurement and assessment. They found in their study that the ratio of gross nonperforming advances (GNPAs)of scheduled commercial banks (SCBs) marginally increased between September 2014 and March 2015. They studied in detail the credit risk faced by all the sectors of banks particularly in 2014-2015 and measures taken by banks to recover NPAs. The study indicated that comparatively public sector banks had more nonperforming assets and had fallen in maintaining credit risk management.

**Dhar Satyajit, Bakshi Avijit (2015)** examined the factors that influence the variability of loan losses (NPAs) of Indian Banks in the public sector during a period of five years from 2001 to 2005. The study explored the impact of bank specific factors on NPAs of PCBs and not macroeconomic factors. The analysis was based on panel approach , which considers both the spatial and the time dimensions of observations. All the selected independent variables are key performance determinants of banks in terms of asset quality, earning capacity, management efficiency, capital adequacy and their liquidity. The results of the study indicated that banks should give adequate attention to variables such as advances to SEN, NIM and CARs to control the problems of loss issues.

**Lalon M.Raad** (2015) examined how CRM impacts the profitability and long term sustainability of commercial banks. The descriptive research based on secondary data of Basic Bank Ltd. Bangladesh found that CRM has a positive effect on the bank's profitability and therefore it is very important for banks and other financial institutions to manage credit risk properly.

**Singh Shradhha** (2015) have examined solutions of risk management preferred by banks .It was pointed out that successful credit risk management included efficient data, adequate control on credit given to borrowers, supervising the transaction of loans, done in the banks and identifying and monitoring any possibility which could lead to arising of risks. It was suggested that new technologies for risk data analysis, separate module for managing the risk should be set up by the banks in order to effectively mitigate the risks.

**Prakash Prassana** (2016) have examined the process of risk management, laid stress on its importance and have analyzed the contingency plans to deal with risk. Risk management process included risk identification, risk assessment and measurement, risk control, risk monitoring and risk return trade off. Risk has been understood as an opportunity as well as threat in the paper. The importance of banks having adequate capital to support all the probable risks in their business was stressed in the study.

# 5.0 CONCEPT OF RISK

Risk can be understood as the chance an outcome or investment's actual return will differ from the expected outcome or return. Risk includes the possibility of losing some or all of the original investment (Investopedia).

#### **TYPES OF RISK**

Risk is a possibility of loss. It is an uncertain event or condition. The different types of risk a bank can face are as follows:

**i.Credit Risk** – As per the Basel Committee, credit risk is the risk in which borrower or counterparty fails to meet its payment obligations as per terms and conditions agreed by the bank.

**ii.Market Risk** – Market risk or systematic risk is the possibility of an investor experiencing losses due to factors that affect overall performance of the financial market.

**iii.** Liquidity Risk – This is the risk that a bank may be unable to meet short term financial demands .This usually occurs due to inability to convert a security or asset to cash without a loss of capital and/or income in the process.

**iv. Operational Risk** – It is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

#### 6.0 CREDIT RISK IN BANKS

A credit risk is the risk of default on a debt that may arise in case a borrower fails to make required payments .The risk is that of the lender and includes lost principal and interest, disruption of cash flows and increased collection costs. Credit risk can also be understood as a potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. In simple words, if a person borrows loan from a bank and is not able to repay it because of inadequate income, loss in business, death, unwillingness or any other reasons ,the bank faces credit risks. Also, if a person does not pay his credit card bill, the bank faces a credit risk. The main functions of the banks are mobilizing of funds and lending the same to the needy .The difference between both is the interest rate which is profit for the bank. Banks will be in a safe position till the borrower meets the obligations on agreed terms .In case the borrower fails to meet his obligations ,the bank suffer losses. There is always scope for the borrower to default from his commitments due to various causes .Credit risk is, therefore, inherent to the business of lending funds.

## 7.0 CREDIT RISK MANAGEMENT

"Credit risk management is the practice of mitigating losses by understanding the adequacy of a bank's capital and loan loss reserves at any given time" (SAS). The objective of credit risk management is to maximise a bank's risk adjusted rate of return by maintaining credit risk exposure within acceptable parameters.

In a bank, an effective credit risk management framework would comprise of the following:

#### i. Policy and Strategy

The board of directors of each bank shall be responsible for approving and periodically reviewing the credit risk strategies and policies. Every bank should have a credit risk policy document approved by the Board. The document must include:

- Risk identification, risk measurement, risk grading/aggregation techniques, reporting and risk control, mitigation techniques, documentation, legal issues and management of problem loans.
- Target markets, risk acceptance criteria, credit approval authority, credit maintenance procedures and guidelines for portfolio management

The approved credit risk policies should be communicated to branches controlling offices. It should be clearly understood by all dealing officers and should be held accountable for complying with established policies and procedures.

Like the credit risk policy, a well defined credit risk strategy defining the objectives guiding the bank's credit granting activities and policies for conducting such activities .The acceptable level of risk reward trade off should be clearly defined in the strategy. The strategy must also spell out the bank's willingness to grant loans based on the type of economic activity, geographic location, identification of target markets and business sectors, preferred levels of diversification and concentration, the cost of capital in granting credit and cost of bad debts.

#### ii. Organisational Structure

The Board of directors should have overall responsibility for management of risks. The Risk Management Committee will be a board level subcommittee and will be responsible for implementation of credit risk and ensure compliance with limits approved by the board, lay down risk assessment systems, develop MIS and be accountable for protecting the quality of loans.

#### iii Operations / Systems

Banks should establish proactive credit risk management practices like annual/ half yearly. A system of review for extension of credit should be maintained. There should be a separation of credit risk management and credit sanction. Credit sanction should have approval at various stages. There should be an independent audit and risk review function. Systems and procedures should be there for monitoring the financial performance of the borrowers. Further, a conservative policy for provisioning in respect of non performing advances should be followed.

Successful credit management requires experience, judgment and commitment to technical development. Banks should have a clear, well documented, scheme of delegation of powers for credit sanction. Banks must have a Management Information System (MIS), which should enable them to manage and measure the credit risks and provide necessary information on the composition of the credit portfolio, including identification of any concentration of risk.

#### 8.0 BASEL NORMS

A clear understanding of the BASEL norms is essential to conduct a study on credit risk management by banks. Basel is a city in Switzerland. It is the headquarters of Bureau of International Settlement (BIS).BIS fosters cooperation among central banks with a common goal of financial stability and common standards of banking regulations. Basel guidelines refer to broad supervisory standards formulated by these groups of central banks called Basel Committee on Banking Supervision (BCBS). The set of the agreement by the BCBS, which mainly focuses on risks to banks and the financial system, is called Basel accords or Basel norms. The purpose of the accord is to ensure that financial institutions have enough capital on account to meet obligations and absorb unexpected losses .Basel norms for banking has been accepted by India.

#### **BASEL I NORM**

The Basel I norm was introduced in 1988. Its focus was mainly on credit risk., It defined capital and structure of risk weights for banks .Banks that operate internationally are required to maintain a minimum amount (8%) of capital based on a percent of risk weighted assets. India adopted Basel I guidelines in 1999.

#### **BASEL II NORM**

Basel II guidelines were published by BCBS in 2004. A more reformed version of the Basel I accord, these guidelines were based on three parameters:

- 1. Banks should maintain a minimum capital adequacy requirement of 8 % of risk assets.
- 2. Banks should develop and use better risk management techniques in monitoring and managing all the three types of risks
- 3. Banks need to mandatorily disclose their risk exposure to the central bank.

## **BASEL III NORM**

The Basel III guidelines were released in December 2010 in response to the financial crisis of 2008. These accords deal with the risk management aspects of the banking sector. It is the global regulatory standard on bank capital adequacy, stress testing and market liquidity risk. Its objective is to improve the banking sector's ability to absorb shocks arising from financial and economic stress, improve risk management and governance and strengthen banks' transparency and disclosures.

TABLE-1 SHOWING TIMELINE OF BASEL III IMPLEMENTATION IN INDIA

	(Figures are in Percentage)					
	MARCH	MARCH	MARCH	MARCH	MARCH	MARCH
	31, 2014	31,2015	<mark>31, 201</mark> 6	31, 2017	31, 2018	31, 2019
Minimum Common						
Equity Tier I	5.0	5.5	<mark>5.5</mark>	5.5	5.5	5.5
Capital Conservation						
Buffer	0.0	0.0	0.625	1.25	1.875	2.5
Minimum Common						
Equity plus Capital						
Conservation Buffer	5.0	5.5	6.125	6.75	7.375	8.0
Minimum Tier I				r		
Capital	6.5	7.0	7.0	7.0	7.0	7.0
Minimum Total	9.0	9.0	9.0	9.0	9.0	9.0
Capital						
Minimum Total						
Capital Plus Capital	9.0	9.0	9.625	10.25	10.875	11.5
Conservation Buffer						
Phase-in of all						
deductions from	40	60	80	100	100	100
common Equity Tier I						

SOURCE: Compiled from collected data

#### Calculation of CRAR under Basel III is as under:

Common Equity Tier I Capital Ratio= Common Equity Tier I Capital/(Market Risk(RWA)+Credit Risk (RWA)+Operation Risk (RWA) )

Tier I Capital Ratio = Eligible Tier I Capital/(Market Risk (RWA)+Credit Risk (RWA)+Operation Risk (RWA))

Total Capital (CRAR) = Eligible Total Capital (Tier I Capital Tier II Capital/(Market Risk(RWA)+Credit Risk(RWA)+ Operation Risk(RWA) )

It is noteworthy that Basel III was scheduled to be introduced from 2013 until 2015 but implementation was extended repeatedly to 31<sup>st</sup> March 2019 and then again until 1 January 2022.

# 9.0 RBI GUIDELINES ON CREDIT RISK MANAGEMENT

The guidelines provided by the RBI for credit risk management by the banks are discussed as follows;

- 1. Measurement of risk through credit rating/ scoring. Banks must have a comprehensive credit scoring system that shall take into consideration diverse risk factors and result in a single point indicator of credit worthiness.
- 2. Quantifying the risk through estimating expected losses a bank shall endure in a specific time period
- 3. Banks must evolve a scientific system to price the risk where the person with weak financial position is priced higher than the person with good financial position
- 4. Controlling the risk through effective Loan Review Mechanism(LRM).LRM evaluates the quality of loan and brings about qualitative improvements in credit administration.
- 5. A Credit Policy Committee must be formed in order to analyse and control the risk.
- 6. Bank must develop a suitable framework in order to report and evaluate the quality of credit decision taken by the functional groups.
- 7. While investing an amount for a particular purpose, the banks must subject such approval to same degree of credit analysis as to that of loans.
- 8. Portfolio Management is a technique that enables in assessing the asset quality and is helpful in determining the non performing loans .

#### **10.0 CONCLUSION**

The objective of credit risk management is to maximize a bank's risk adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks are required to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. For banks, loans are the largest and most obvious source of credit risk. Implementation of CRM policy and monitoring of credit limit have a significant impact on banks' business. Banks should, therefore, follow the RBI guidelines and set up an effective credit risk management system for the long term success and prevention of bank distress.

## 11.0 **REFERENCES**

- 1. Arora Usha, "NPA Management in Indian Environment", The Banker, Vol47.2 (2000)
- 2. Arora Swaranjeet, Credit Risk Analysis in Indian Commercial Banks An Empirical Investigation, Asia Pacific Finance and Accounting Review, Vol 1, no. 2, (2013)
- 3. Arunkumar Rekha, Kotreshwar G, Risk Management in Commercial Banks (A Case Study of Public and Private Sector Banks), Indian Institute of Capital Markets 9<sup>th</sup> Capital Markets Conference Paper (2006)
- 4. Arora Renu, Singh Archana, "Problems and Obstacles in Credit Risk Management in Indian Public Sector Banks", Annala of the University of Petrosani, Economics, 14(1)pp 353-362 (2014)
- 5. Alam Md Zahangir, Md Masukujjaman, "Diagnosis of Some Selected Commercial Banks in Bangladesh", Journal of Business & Technology(Dhaka)(2011)
- 6. Bagchi S.K, "Credit Risk Management—A Panacea or Conundrum ?", SBI Monthly Review, Vol. 42,No. 10, pp 497-504 (2003)
- 7. 7. Bessis Joel, "Risk Management in Banking", University of Gothenburg, Sweden (1998).
- 8. Bodha B.S, Verma Richa, "Credit Risk Management Framework at Banks in India", retrieved from researchgate.net
- 9. 9. Campbell A, "Bank Insolvency and the Problem of Non performing Loans", Journal of Banking Regulations (2007)
- 10. Coyle B, "Framework for Credit Risk Management", Chartered Institute of Bankers Publishing, UK (2000)
- 11. Chitra V, Vani U, "Credit Risk Management for Banking", International Journal of Science and Research(IJSR), Vol 3, Issue 3, March 2014
- 12. Das .A, Ghosh. S, "Determinants of Credit Risk", paper presented at the conference on Money, Risk and Investment held at Nottingham Trent University (2003)
- 13. Dash Parvesh Chander, "Capital Adequacy Ratio- Issues in India, International Journal of Management Research and Review, (2006)
- 14. 14. Dhal Saratchandra, Rajan, Rajiv," Nonperforming Loans and Terms of Credit of Public Sector Banks in India: An Empirical Assessment", Reserve Bank of India occasional papers, Vol 24, No. 3 (2003)
- 15. Dr. Smita Shukla, Malusare Rakesh, Risk Analysis of Select Public and Private Sector Banks Operating in India, IOSR Journal of Economics and Finance
- 16. 16. Dr. Sharon Sophia, Stalin, "Credit Risk Management in Indian Banking System", www.ssrn.com, 18th April, 2013
- 17. 17. Dr. Khalil Elian Abdelrahim, "Effectiveness of Credit Risk Management of Saudi Banks in the light of Global Financial Crisis: Qualitative Study", Asian Transaction on Basic and Applied Sciences, Vol 3 pp 73-91(2013)
- 18. 18. Dhar Satyajit, Bakshi Avijit, "Determinants of Loan Losses of Indian Banks: A Panel Study", Journal of Asia Business Studies, Vol9, No.1, (2015)
- 19. Eveline Ngwa, "Credit Risk Management in Banks as Participants in Financial Markets "A Qualitative Study of the Perception of Bank Managers in Sweden(Umea Region)", Umea School of Business, Unpublished Master's Dissertation in Financed, Umea Scholl of Business
- 20. Garg Amit "RBI Requirements Relating to Risk Management in Banks"
- 21.21.JB Harelimana "The ROLE OF Risk Management on Financial Performance of Banking Institutions in Rwanda", January 28, 2017
- 22. Josiah Aduda, James Gitonga, "The Relationship Between Credit Risk Management and Profitability Among the Commercial Banks in Kenya", Journal of Modern Accounting and Auditing, Vol 7, pp 935-946(2011)
- 23. 23. K Roopa, "Credit Risk Management in Indian Banking System", Ambadnya, January (2015)
- 24. 24. Lalaon Mozib, "Credit Risk Management (CRM) Practices in Commercial Banks of Bangladesh: A Study on Basic Bank Ltd. ", International Journal of Economics, Finance and Management Sciences, Vol 3, NO. 2 pp 78-90, 2015

- 25. 25. Muniappan G, "The NPAs Overhang, Magnitude, Solutions and Legal Reforms", RBI Bulletin (2002)
- 26. 26. Muninarayanappa, Nirmala "Credit Risk Management in Banks --- Key Issues" Journal of Accounting and Finance, Vol 18.1 (2004)
- 27. M.Rajeswari, "A Study on Credit Risk Management in Scheduled Banks", Journal of Management, Vol 5, Issue 12, December (2014)
- 28. 28. MS Smriti Nagaria, "An Analysis of Risk Management : Role in Banking Sector", International Journal of Research in IT & Management, Vol. 6, Issue 5, may(2016)
- 29. 29. Nachane, Ray and Saibal, "Basel II and Bank Lending Behaviour: Some Likely Implications for Monetary Policy in India", Economics and Political Weekly (2006)
- 30. Njanike, K, The Impact of Effective Credit Risk Management on Bank Survival, Annals of University of Petrosani, Economics, vol 9.(2009)
- 31. 31. Oino, Isaiah, "A Comparison of Credit Risk Management in Private and Public Banks in India", The International Journal of Business and Finance Research, Vol. 10, No. 1 (2016)
- 32. 32. Patil Jaykar Bhaskar, "Credit Risk Management in Indian Banks", Internationaal Journal of Advance Research in Computer Science and Management Studies, Vol 2, Issue 1, January (2014)
- 33. 33. Pearl Seyram Kumar, Yakubu Awudu Sare and Bawuah Bernad, "Corporate Governance and Risk Management in the Banking Sector of Ghana", European Journal of Accounting, Auditing and Finance Research, Vol 2, pp 1-17(2014)
- 34. Prakash Prasanna MS, "A Study on the Significance of Risk Management in Banking Sector", International Journal of Research in IT and Management(IJRIM), Vol. 6, Issue 9, pp135-139, September (2016)
- 35. Raghavan R.S, "Risk Management in Banks", Chartered Accountant, February (2003)
- 36. 36. Singh Asha, "Effect of Credit Risk Management on Private & Public Sector Banks in India", International Journal of Academic Research in Business and Social Sciences, Vol 5, No. 1(2015)
- 37. Singh Shradhha, "The Measurement and Management of Risks in Banks", Academike, www.lawctopus.com, November 16, (2015)
- 38. 38. Taori K.J, "Management of NPAs in Public Sector Banks", Banking Finance, Vol13.8 (2000)
- 39. 39. Thiagarajan S, Ayappan S, Ramachandran A, "Credit Risk Determinants of Public and Private Sector Banks in India", European Journal of Economics, Finance and Administrative Services, Issue 34 (2011)
- 40. 40. Thiagarajan S, Ayappan S, "Market Discipline, Behavior and Capital Adequacy of Public and Private Sector Banks in India", European Journal of Social Sciences, Volume 23 (2011)
- 41.41.Vidyashree DV, Dr. Prahlad Rathod, "International Journal of Research in Finance and Marketing, Vol. 5, Issue 7, July (2015)
- 42. https://testbook.com