Research Paper
Impact Factor: 3.029
Peer Reviewed & Indexed Journal

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

CREDIT RISK MANAGEMENT SYSTEM AND FRAMEWORK IN BANKING SECTOR

Prashant Kumar*   Kavita**
** Research Scholar, Dept. of Business Administration, Chaudhary Devi LaL University, Sirsa, Haryana.*
*** Research Scholar, Dept. of Management Studies, BPS Women University, Sonipat, Haryana.*

Abstract
Recent financial changes and introduction of Basel II and Basel III has emphasized more stress on the credit risk management system in Indian banks. Basel justifies the capital requirements for credit risk, market risk, operational risk etc.To make banking operations efficient, there is a need to diversify the risk. Credit risk is the losing amount from a borrower who does not make payments as promised is called credit risk. Credit risk management process is a way to manage credit portfolio, it mainly includes identification of potential risk, measuring risk, risk treatment and actual evaluation of risk models. Approaches of credit risk management ensure financial stability as it clearly defines the policy of granting credit; therefore CRM practices play a crucial role in determining profitability, liquidity and soundness for banking operations.

Effective credit risk management practices enable bank to design a system and framework at corporate levels to attain the prescribed limit of risk exposure. CRM framework consist all components of credit process, for the purposeful understanding of credit risk management. An effective credit risk management system should be multidimensional therefore a comprehensive system should focus on banks profitability and long term survival. Significant among these constraints are coping with the environmental changes and determining a balanced tradeoff between risk and return and also helps in achieving overall bank objectives. The present study intends to explain the credit risk management framework and the axle of the study is to explore CRM system.

Key words: banking sector, Credit Risk,CRM (credit risk management) framework, CRM system.

I Introduction

Credit risk is inherent to the business of lending funds to the borrower. The exposure to that risk make situation more critical when counter party fails to meet the obligations on agreed terms. Credit risk may increase if banks lend to borrower without getting adequate knowledge about the person or his capability to repay the loan. Thus careful attention to the impact of credit risk level on bank's profitability is necessary because intense risk puts serious threat to banks and increasingly level of risk may create a chance of closing down the bank's operations. However credit risk directly hits the financial strength, earnings of banks. In view of this, various practices are followed to manage risk. There are many parameters to observe the intensity of risk. It is very critical for bank to ensure a healthy risk management practice for achieving its goal. Credit risk management encompasses with various steps such as identify, measure, monitor and control risk exposure. Thus credit management framework includes policies and rules relating to monitor risk. The main concern of the policies and rules are to maintain balance between risk and return, ensure asset diversification or quality of assets. Credit risk management plays crucial role in enhancing efficiency of banking operations. Credit risk management doesn't mean to eliminate credit risk entirely however it allows bank to bring the danger in acceptable parameters or take a reconciliation step between risk levels and profits so extreme risk couldn't have an effect on the earnings of banks, with the exception of that through healthy risk management techniques, the intensity of risk is additionally determined. As all activities of banks goes through raising funds and granting credit, That's why it's essential part of bank and essential for long run success and survival. CRM practices are being initiated by banks to strengthen their system.

II. Review of Literature

Abhiman Das Ghosh (2007) examined the determinants of credit risk of banks in emerging economies and factor affecting problem loans of Indian state owned bank, taking into account both macro-economic and micro-economic variable. Author concluded that bigger banks tend to have higher problem loans, the paper found that credit risk is significantly influenced by individual level, bank level variables. **Campbell (2007)** described there are many potential source of risk, including liquidity risk, credit risk, interest rate risk, market risk, foreign exchange risk and political risks. However credit risk is the biggest risk faced by banks and financial intermediaries.**Okan veli (2007)** outlined the determining effects of credit risk on banking sector which carries a lot of significance for the banking sector in northern Cyprus. From the point of view of stability of the banking sector, the administrative legal and financial measures are taken, the risk dropped. **Bhattacharya Sinha (2008)** made an attempt on macro prudential analysis of credit risk in public sector banks of India. They concluded banks are now extra cautious while screening loans, so there is less possibility of too many new defaulters on account of fresh loans disbursed, increasing interest rate will increase bank default risk.**Bostjan aver (2008)** presented the results of an analysis of credit risk factors of Solvenian banking system. He examined that certain macro-economic factors influence systematic credit risk on the Solvenian banking loan portfolio. The factors taken: employment or unemployment rate short term or long term

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

interest rate, value of stock exchange index, twenty five macro-economic parameters were chosen to test the study. Author concluded increase in credit risk is highly influenced by the increase in short term interest rate, value of stock exchange, decrease in number of employees.**Bodla and Verma (2009)** made an attempt to have an in-depth analysis of credit risk management framework by commercial banks in India. Primary survey was conducted in context with sector and size of bank. Credit risk management framework in India is essential for banking system which would enhance the possibility of long term survival and growth. CRM practices are fully based on the RBI's guidelines. **Sharma P.N (2010)** estimated the risk index of all public sector banks together. In this context of banking, framework of credit risk management broadly covers the area of interest rate risk, liquidity risk, counterparty risk, default risk. Reforms have opened up new avenues for Indian bank along with new challenge under a protected environment. Author made an attempt to assess the risk of Indian public sector banks by examining the relationship, if any exists among risk index, asset size, capital adequacy and liquidity. In order to examine the relationship between risk index and profitability, NIM and asset utilization were taken as indicator of profitability for examining liquidity. This study concluded that Indian banks have the highest risk as far as their risk index was concerned. **Kishore Navin (2011)** presented an internal credit rating model for bank which improves their current predictive power of financial risk factors and explained how banks assess the credit worthiness of their borrowers and how can they identify the potential defaulters so as to improve their credit evaluation process. They examined the framework of credit risk management of scheduled commercial banks in India. **Gakure et.al (2012)** investigated the effects of credit risk management techniques on the performance of unsecured bank loan by commercial bank in Kenya. CRM is a structured approach to managing uncertainties through risk assessment. Risk management is a complex task for any organization. They measured the effects of CRM techniques on performance of loan and concluded that measurement of risk ensure financial stability.**Onaolapo R (2012)** made an attempt to analyses the relationship between efficiency of risk management and financial health in selected Nigerian banks and examined the validity of CRM efficiency using secondary data. Statistical methods of analysis were triangular gap model, cross sectional regression and correlation with credit exposure as dependent variable, efficiency of CRM, bank performance and operational efficiency used as independent variable. Author concluded that minimal causation between deposit exposure and management efficiency, the parameters provided the implications for bank strategic planning and regulatory authorities. Operational activities of a typical banking system were not sufficient optimized to ensure maximum earnings from credit creation cum loan and advances. **Ricardas (2012)** described the credit risk is one of the main risk in commercial banks and the ability to manage it directly affects bank's stability. Author elaborated the factors causing this risk in order to manage it, macro-economic determinants that significantly influence the changes of loan portfolios. Credit risk and its management depend on GDP, inflation, interest rate, money supply, Industrial production index. **T .Funso et.al (2012)** carried out an empirical investigation into the quantitative effect of credit risk on the performance commercial banks in Nigeria over the period of 11 years. They concluded the effect of credit risk on bank performance measured by ROA of bank was cross sectional invariant. Based on the findings authors recommended that bank in Nigeria should enhance their capacity in credit appraisal and loan administration while the regulatory authority pay more attention to bank's compliance to relevant provision of bank.**Abdullani et.al (2013)** opined that adequately managing credit risk in financial institutions is critical for the survival and growth of financial system. The study aimed at assessing the efficacy of CRM on banks performance and examined the relationship between interest income and bad debts of union bank. Time series analysis, correlation coefficient and regression were used for the analysis. Various financial ratios had been taken into consideration. He concluded that there is a significant relationship between bank performance and CRM. Better CRM results in better performance and management. The study summarized banks used different credit risk management tool. Techniques and assessment models to manage their credit portfolios, to reduce the amount of loan default. The study revealed that banks with sound CRM policies have low loan default ratio and higher interest income and vice versa and indicated inverse relationship between profitability (ROA, ROE) and the ratio of NPL.**Indiael Dickson (2013)** pointed out the relationship between bank performance and credit risk analysis in commercial banks. They employed data from 11 banks in Tanzania. They concluded that the increase in credit risk tends to lower bank performance. The banks need to balance the risk and maintain substantial amount of capital reserve to absorb credit risk in the event of failure meanwhile the adoption of sound management practices and corporate governance will reduce risk.**Yangwang and Jane (2013)** examined the importance of CRM for commercial banks in China and developed a CRM framework for banks. The framework considered financial and non-financial variables as predictor of bank failure significantly improve credit quality and accuracy. They concluded that credit risk factors work as predictor of bank failure significantly which improve credit quality and accuracy. Banks operate in a different business environment and expose some unique risk which requires accepting a different CRM approach to incorporate risks.**Abbas et.al (2014)** discussed the impact of credit risk on the performance of banking system of Pakistan. This study revealed that credit risk measured by financial ratios of NPL/TL, loan loss provision/NPL, negatively affects performance variable of ROA, ROE. They concluded that success of banks largely depends upon the successful management of risk. The more a bank is facing credit risk, the more deterioration in performance it experiences.**Arora (2014)** made an attempt to assess whether the size of branch has significant impact on the diverse range of CRM practices followed by commercial banks in India. Data were collected from 35 scheduled commercial banks in context of vast range of

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

CRM practices relating to organizational structure, policy guidelines, targets defined in CRM strategy, credit risk rating models, monitoring practices, risk estimation procedures and other operation and system. He concluded that practices of Indian banks are in sync with the global benchmark practices of centralizing CRM functions and revealed the banks with low branch network have vast potential for improvement with regard to monitoring procedures at transaction level and vice versa. **Michael Jacobs (2014)** made an attempt to survey supervisory requirements and expectations for counter party credit risk. Management and measurement of credit risk including prevalent practice and conceptual issues have been introduced. The supervisory requirements and valuable relevance of credit risk management extended for risk manager, trader and regulators. Counterparty credit risk management framework requires a combination of risk management techniques. They concluded that bank should use a range of risk metrics for a comprehensive understanding of this risk and summarized various supervisory requirements or guidance for banks such as model validation, collateral limits, concentrations, credit risk management system should have sufficient capacity to aggregate risk at varying levels of aggregation.**Patil Bhaskar (2014)** observed that credit risk is the most common cause of bank failure and is inherent to the lending fund to the operations linked closely to market risk variable. CRM practices are essential to minimize the risk and maximize bank's RAROR (risk adjusted rate of return). They discussed various tools, techniques to manage credit risk and defined the approaches of credit risk. Basel II norms require banks to accurately measure credit risk to hold sufficient capital to cover it. Basel II framework explains three principal approaches for estimating capital charge to cover risk. These are standardized approach determine the risk weight which would be applied to each asset based on its external credit rating agency, foundation IRB specify that bank would internally estimate the probability of default for each category, advanced approach. In addition to meeting all criteria they concluded bank must strike a tradeoff between risk and return. CRM practices are proactive action in the present for future.**Sairani pramod (2014)** explained that risk is the fundamental element that drives financial behavior. The future of banking will undoubtedly rest on risk management dynamics. The effective management of credit risk is critical component of comprehensive risk management essential for long term success of banking institution. Authors made an attempt to identify the risk faced by banking industry and the process of risk management. They concluded that the banks should take risk more consciously and need to change the approach and mindset so as to ultimately improve the quality of the asset, anticipate adverse changes and hedge accordingly. They analyzed different risk management techniques and developed the process of risk management. **Tondon and Batra (2014)** made an attempt to analyses the credit risk and suggest a model for credit risk. They highlighted the objectives and factors that determine the framework of credit risk analysis of banks in India. The challenges related to internal and external factors in credit risk analysis were also indicated. They concluded that public sector banks are financially sounder than private banks as their Z score value are greater.**Ahmed and Malik (2015**) evaluated the influence of credit risk management practice on loan performance while taking the credit terms and policy, client appraisal, collection policy and credit risk control as the dimensions of the credit risk management practices. The study concluded that the credit term has significant positive impact on loan performance. **Mohamed and Zhuwei Li (2015**) made an attempt to investigate banking performance and credit risk in Sierra Leone from 1997-2011. This study revealed that non-performing loans, loan loss provision and the quality of total loans were contributing factors for the poor performance of banks. Authors concluded that bank performance and effect on credit risk are similar across banks and crucial in the understanding of the overall stability of the banking sector and economic growth of a country.**Norlida Abdul et.al (2015)** investigated the determinants of credit risk and to examine the impact of earnings management on credit risk prediction. The results showed that the liquidity ratio was significant in determining credit risk before and after earnings of management was adjusted. This study provided knowledge about the effect of earning management on bankruptcy prediction. This could make their credit risk management more efficient and improve their decision making process and their credit risk exposure will be reduced.**Veena et.al (2015)**explored that the risk in banking sector have increased due to global competition, increased deregulation, introduction of innovative products and delivery channels. Risk Management system is the pro-active action in the present for the future. Managing risk is nothing but managing the change before the risk manages. In three types of banking risk operational, market and credit risk, managing of credit risk is very difficult.

III Objectives of the Study

The main objectives are

- To explore the previous studies on credit risk management practices.
- To understand the concept of credit risk management, advantages and framework of credit risk management.
- To identify the CRM (credit risk management) system.

IV Research Methodology

A systematic and organized methodology has been adopted for the present study.This is an exploratory research in which the CRM system and framework in which banks operate has been identified. This paper is based on secondary sources including online publications, books and article**.**

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

CRM Framework

Credit risk management framework is the combination of various approaches in which all aspects of credit risk are assessed and limits are determined. CRM framework consist all components of credit process, for the purposeful understanding of credit risk management, some approaches should be well defined such as policy for credit, classification of assets because these are the indicator of the financial soundness of banking industry. Appropriate policy, procedures should be designed in CRM framework.

The components of CRM framework are:

- ❖ Policy framework
  - ✓ Strategy and guidelines
  - ✓ Organizational structure
  - ✓ Operations support
- ❖ Credit risk rating framework
  - ✓ Credit scoring
  - ✓ Credit rating models
  - ✓ Credit rating analysts
- ❖ Credit risk limits
  - ✓ Total credit risk exposure for firm, industry
  - ✓ Risk exposure for region, banks
- ❖ Credit risk modeling
  - ✓ Altman's Z score model
  - ✓ KMV model
  - ✓ Merton model
- ❖ Credit risk mitigation
  - ✓ Collateral securities
  - ✓ Guarantees
  - ✓ Credit derivative
- ❖ Credit audit
  - ✓ Quality of credit portfolio
  - ✓ Review of credit administration and credit quality
  - ✓ Report on regulatory compliance

- ❖ Loan review mechanism
  - ✓ Identify promptly loan and potential problem area
  - ✓ Determine adequacy of loan loss provision
  - ✓ Proper loan documentation

Advantages of Credit Risk Management

Approaches of credit risk management guarantee monetary stability because it clearly defines the policy of granting credit, thus CRM practices plays a vital role in determinative profitableness, liquidity and soundness for banking operations.

- It act as a differentiating issue for the bank because it alter bank to face new challenges and tributary to risk taking that is crucial for survival & future success.
- It facilitates correct assessment of risk profile, for making certain healthy portfolios and serving to against monetary distress.
- It evolves associate integrated framework that give bank with associate objective and timely assessment of overall risk.
- It determines implications on quality of credit risk by categorizing low risk client and high risk client.
- It strengthens bank performance through designing appropriate watching mechanism.

Credit Risk Management System

Risk management system acts as an advance warning system for the bank's sensitivity to adverse changes in the environment. An effective risk management system should be multidimensional therefore a comprehensive system should focus on banks profitability and long term survival. Significant among these constraints are coping with the environmental changes and determining a balance between risk and return and also helps in achieving overall bank objectives.

The structure of credit risk management system:

Figure 1

ESTABLISHMENT OF CLEAR STRUCTURE

↓

ALLOCATION OF RESPONSIBILTY

↓

SET PRIORITIES

↓

COMMUNICATION OF RESPONSIBILITIES

↓

ASSIGNMENT OF ACCOUNTABILITY

Organization structure facilitates the credit risk management system as a separate unit in organization. The implementation of this system is critical for banks as it needs technical expertise to verify risk models, information system for communication and specialized skills and capabilities to perform the work assigned to the responsible person For an effective risk management system, banks need to appoint an independent risk management committee of top executives it means the management of credit risk should receive the top official's attention. The committee aims to empower one group with full responsibilities of assessing risk thus they should also design strategy, framework, policies that are used for mitigating risk.

V .Conclusions

Good management Practices may avoid the massive exposure of risk. It mainly focuses on better implementation of CRM system and formation of CRM framework. Some approaches should be well defined such as policy for credit, classification of assets because these are the indicator of the financial soundness of banking industry. Appropriate policy, procedures should be designed in CRM framework. An effective risk management system should be multidimensional therefore a comprehensive system should focus on banks profitability and long term survival. Significant among these constraints are coping with the environmental changes and determining a balanced tradeoff between risk and return and also helps in achieving overall bank objectives.At organizational level, overall risk management framework should be in line with market changes, size of banks, external environment and possess a quality of flexibility so that it can be changed according to the requirement of banks. In this way, effective system for managing risk is largely depends on support of top management and efficiency of functional department and availability of proper resources.

References

1. Abbas, A., Zaidi, A.H., Ahmad, W., & Ashraf, R.U. (2014). Credit risk exposure and performance of Banking sector of Pakistan. Journal of Basic and Applied Scientific Research, 4(3), 240-245.
2. Abdul Manaba, N.,Thengb, N., &Md-Rus R. (2015). The Determinants of Credit Risk in Malaysia. Procedia - Social and Behavioral Sciences, 172, 301 – 308.
3. Ahmed, S.F., & Malik, Q.A. (2015). Credit risk management and loan performance: empirical investigation. International journal of economics and financial issues, 5(2), 574- 579.
4. Arora, A. (2014). The impact of branch network on credit risk management practices in Indian Banking sector. The IUP journal of Financial Risk Management, XI(4), 31-44.
5. Aver, B. (2008). An empirical analysis of credit risk factors. Managing Global Transitions, 6(3), 317-334.
6. Bhattacharya, B., & Roy, T.N. (2008).Macroeconomic determinants of asset quality of Indian public sector banks. The ICFAI Journal of Bank Management, VII(1), 21-40.
7. Bodla, B.S., & Verma Richa. (2009). Credit Risk Management Framework in Banking sector of India, the IUP Journal of Bank Management, VIII (1), 47-72.
8. Campbell, A. (2007). Bank insolvency and the problem of non-performing loans. Journal of Banking Regulation, 9(1), 25-45.
9. Das, A., & Ghosh, S. (2007). Determinants of credit risk in Indian State-owned Banks: An empirical Investigation. Economic Issue, 12(2), 27-46.
10. Gakure, R.W., Ngugi, J.K., & Ndwiga, P.M. (2012). Effect of credit risk management techniques on the performance of unsecured bank loans employed commercial banks in Kenya. International Journal of Business and Social Research, 2(4), 221-236.
11. K.Vaidyanathan. (2013). Credit risk management for Indian Banks: Sage publications.

IJMSRR
E- ISSN - 2349-6746
ISSN -2349-6738

12. Kaaya, I., &Pastory, D. (2013). Credit risk and commercial Banks performance in Tanzania: A panel data analysis. Research Journal of Finance and Accounting, 4(16), 55-62.
13. M. Abbadi S., & M. Abu, S. (2013). Methods of evaluating credit risk used by commercial Banks in Palestine. International Research Journal of Finance and Economics, (111), 146-159.
14. M.Abbadi, S., & M.Abu, S. (2013). Methods of evaluating credit risk used by commercial Banks in Palestine. International Research Journal of Finance and Economics, (1 1 1), 146-159.
15. M.Ojo, Oke.,R.Kolade, A., & T.Funso, K. (2012). Credit risk and Commercial Banks performance in Nigeria: A panel approach. Australian Journal of Business and Management Research, 2(2), 31-38.
16. Michael, J.(2014). Supervisory requirements and expectations for portfolio level counterparty credit risk measurement and management. Journal of Financial Regulation and Compliance, 22(3), 252-270.
17. Mileris, R. (2012). Macroeconomic determinants of loan portfolio credit risk in Banks. Inzinerine Ekonomika-Engineering Economics, 23(5), 496-504.
18. Mohamed, K., Zhuwei Li, H. (2015). Commercial bank's performance and credit risk in Sierra Leone: panel evidence. Journal for studies in management and planning, 1(2), 125- 138.
19. Nandi, J.K., & Choudhary, N.K. (2011). Credit risk management of loan portfolio by Indian banks. The IUP Journal of Bank Management, X(2), 32-43.
20. Onaolapo, A.R. (2012). Analysis of credit risk management efficiency in Nigeria commercial banking sector. Far East Journal of Marketing and Management, 2(1), 39-51.
21. Patil, J.B. (2014). Credit risk management in Indian Banks. International Journal of Advance Research in Computer Science and Management Studies, 2(1), 309-313.
22. Safakli, O.V. (2007). Credit risk assessment for the banking sector of northern Cyprus. Banks and Bank Systems, 2(1), 21-33.
23. Sairani, P., & pramod, A. (2014). A study on risk management Altman Z score: A tool to measure credit risk. International Journal of Innovative Research & Development, 3(12), 186-190.
24. Saunders and Cornett (2007). Financial Markets and Institutions: an Introduction to the Risk Management Approach. McGraw Hill pub.2007.
25. Sharma, K., Mishra, P.N., & Sharma, V. (2010). Quantitative risk measurement: Public sector banks. SCMS Journal of Indian Management, 104-110.
26. Tandon, D., & Batra, A. (2014). credit risk analysis – new horizon in the Indian Banking Sector. Asian Journal of Research in Banking and Finance, 4(1), 158-180.
27. Veena, K.P., & Mahadeva, M. (2015). An overview of credit risk management: A study with reference to State Bank of Mysore and Karnatka Bank Ltd. International journal of business and administration Research Review, 1(11), 303-309.
28. Wang, Y., Gao, S., & Zhang, J. (2013). Credit risk management in rural commercial banks in China. The 7th International Days of Statistics and Economics, Prague September 19-21, 1542-1552.