European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.7, No.13, 2015
www.iiste.org

Credit Risk Grading Model and Loan Performance of Commercial Banks in Bangladesh

Niaz Mohammad*
Lecturer, School of Business, Department of Accounting, American International University Bangladesh, House 58/B, Road#21, Kemal Ataturk Avenue, Dhaka-1212
Email: mniaz@aiub.edu

Azimun Nahar Onni
MBA student, Faculty of Business Administration, American International University Bangladesh
Email: azimun.nahar@gmail.com

Abstract:
In modern banking concept one of the most important functions of a bank or financial Institution is "Management of Credit Risks". Risk is inherent in all aspects of commercial operations. However for Banks, credit risk is an essential factor that needs to be managed. Due to increase in the number of non-performing loans and competition in the banking market, most of the commercial banks are strongly focus on credit risk assessment. Credit risk arises due to the possibility that the borrower may fail to repay the loan. Following the recent global financial crisis, which originated from poor management of credit risk, it is the most discussed topic in the banking industry of Bangladesh. In order to establish the creditworthiness, credit analysts typically use a combination of financial or accounting data and non-financial variables as well as a number of different models, or analytical tools. Some of the methods involve a subjective approach; others are more systematic in that they use quantitative techniques to evaluate a credit against objective benchmarks. This study develops a credit risk grading model which will contribute significantly in the risk assessment.
Keywords: Credit risk, Credit risk management, Loan performance, Risk assessment, Risk grading model.

1. Introduction

Recently banks witnessed rising non-performing credit portfolios and these significantly contributed to financial distress in the banking sector. So, a banker likes to adopt a number of sophisticated financial techniques in credit appraisal process with a view to assessing the borrower's business as well as financial position rigorously. Credit risk grading plays a vital role to measure the risk identification. Well-managed credit risk grading systems promote bank safety and soundness by facilitating informed decision-making. Grading systems measure credit risk and differentiate individual credits and groups of credits by the risk they pose. This allows bank management and examiners to monitor changes and trends in risk levels. It is evident from the current financial and credit market crisis that credit institutions should pursue a more valid approach to credit risk assignment based on realistic assumptions. The primary factor determining the quality of the bank's credit portfolio is the ability of each borrower to honor, on timely basis, all credit commitments made to the bank. While assessing a credit proposal more emphasis shall be given on repayment potential of loans out of funds generated from borrower's business (cash flow) instead of realization potential of underlying securities. A formal evaluation of borrower's financial health and ability to repay debt obligation is called credit rating which helps the bank to grade the concerned customer. (Hossain, M. H. & Chowdhury, H.A. 2011)

2. Objectives of this study

2.1 General Objective:

The overall objective of the study was to assess the effectiveness of credit risk grading systems on loan performance in banks. This study was undertaken to get an in depth idea of the credit grading system of commercial banks and understand its importance.

2.2 Specific objectives:

(a) To determine the effect of credit appraisal of financial institutions on their loan sanction.
(b) To evaluate the effect of credit risk grading adopted by banks on their loan performance.
(c) To evaluate the existing credit risk grading systems and propose a risk management model.

3. Literature review

Marrison (2002) articulate that the main activity of bank management is not deposit mobilization and giving credit. Effective credit risk management reduces the risk of customer default. They add that the competitive advantage of a bank is dependent on its capability to handle credit valuably. Bad loans cause bank failure as the failure of a bank is seen mainly as the result of mismanagement because of bad lending decisions made with

wrong appraisals of credit status or the repayment of nonperforming loans and excessive focus on giving loans to certain customers. Goodhart (1998) states that poor credit risk management which results in undue credit risk causes bank failure.

Saunders and Cornett (2006) found that to address the credit risks, banks and other financial intermediaries should focus on the probability of default of the borrowers. There are several models available to analyze credit risks, some of which are qualitative models and some are quantitative models. Qualitative models indicate borrower specific factors and market specific factors.

Mosharrafa, R.A. (2013) found that credit risk grading technique is an important tool for credit management as it helps a bank to understand various dimensions of risk involved in different credit transactions. Lahsasna et al. (2010) emphasized that credit risk decisions are key determinants for the success of financial institutions because of huge losses that result from wrong decisions. Poor evaluation of credit risk can cause money loss (Gouvea 2007). Wu et al. (2010) stressed that credit risk assessment is the basis for credit risk management in commercial banks and provides the basis for loan decision making. Furthermore, Angelini et al. (2008) stressed that risks continues to provide a major threat to successful lending despite advancements in credit evaluation techniques and portfolio diversifications. Credit risk assessment is an integral part of the loan process in banking business. Both credit scores and credit ratings are credit risk assessment tools. Credit scoring is a credit risk management technique that analyzes the ***individual borrower's*** risk and is expressed in numerical form. On the other hand, credit rating is often expressed as a letter grade, conveying the creditworthiness of a business or government. Without a thorough risk assessment, banks have no way of knowing if capital reserves accurately reflect risks or if loan loss reserves adequately cover potential short-term credit losses. Vulnerable banks are targets for close scrutiny by regulators and investors, as well as debilitating losses. The Basel committee has defined credit rating as a 'summary indicator' of the risk inherent in individual credit, embodying an assessment of the risk of loss due to the default of a counter party by considering relevant quantitative and qualitative information. Bangladesh has started preparations to implement the Basel-III framework for bank companies from 2014 in line with the global standard. The global financial crisis and the credit crunch that followed put credit risk management into the regulatory spotlight. As a result, regulators began to demand more transparency. They wanted to know that a bank has thorough knowledge of customers and their associated credit risk. And new Basel III regulations will create an even bigger regulatory burden for banks.

Treacy and Carey (2000) suggested that in designing a credit rating system, a bank should consider numerous factors, including cost, efficiency of information gathering, consistency of rating produced, staff incentives, nature of a bank's business, and uses to be made of the internal ratings. Despite the advances in science and technology that allow the development of expert system or statistical classification models, human judgment is still an important ingredient in the credit assessment process. Also the rating process almost always involves the exercise of human judgment because factors to be considered in assigning a rating and the weights given to each factor differ significantly among borrowers.

Ernst and Young (2011) on behalf of the Institute of International Finance (IIF), surveyed 62 of the largest banks to assess banks' progress in the implementation of risk governance principles and practices outlined in the 2008 IIF report. Across the board, banks have embraced the IIF's principles to advance risk management, risk governance and risk appetite. Among the 62 chief risk officers (CROs) and senior risk executives who participated in our survey, the most common improvements cited included strengthened management, increased control of liquidity risk and refined reporting systems.

Lawrence (2007) posits that lenders review the borrower's business plan and financial statements, they have a checklist (credit appraisal) of items to look at one of the being the number of financial ratios that the financial statements reveal. These ratios are guidelines to assist lenders determine whether the borrower will be able to service current expenses plus pay for the additional expense of a new loan.

Poudel (2012) appraised the impact of the credit risk management in bank's financial performance in Nepal using time series data from 2001 to 2011. The result of the study indicates that credit risk management is an important predictor of bank's financial performance. Mureithi, A.W (2010) found that credit appraisal is carried out for various reasons, these are; as a selection tool, to quantify risk, to aid in decision making, and to ensure good quality business with excellent credit worthiness. This makes the credit appraisal process an important activity among the lending institutions. Causes of non-performing loans include; unprofessional credit risk evaluation, moral hazard on part of management, lack of supervision of projects, lengthy litigation process and intentional default incomplete, poor and unprofessional credit risk assessment and valuation of credit appraisal model. An inefficient credit appraisal process is one of the causes of non-performing loans of various lending institutions. Moti, H.O. et al. (2012) found that a key requirement for effective credit management is the ability to intelligently and efficiently manage customer credit lines. In order to minimize exposure to bad debt, over-reserving and bankruptcies, companies must have greater insight into customer financial strength, credit score history and changing payment patterns.

However, it is necessary to rely on models and algorithms rather than human judgment in consumer

lending because of the vast number of decisions involved (Khandai et al., 2010). This highlights the need for accurate decision support model for credit admission evaluation and also for monitoring the ongoing health of credit customers (West et al., 2005).A small improvement in the accuracy of the credit decision might reduce the credit risk and translate into important future savings (Chen and Huang, 2003). Rahman, S. M. (2011) noted that at the very outset the banking sector in Bangladesh provided huge amount of soft debt facilities to trade, industry and farming activities for enhancing overall economic growth of the country and it was done as a part of social commitment of the nationalized sector. Therefore, the bankers were more concerned to disburse credit to the clients and not to control the credit flow. Credit Risk Grading system is a dynamic process and various models are followed in different countries and different organizations for measuring credit risk. A more effective credit risk grading model needs to be introduced in the Banking Sector of Bangladesh to make the credit risk grading mechanism easier to implement.

4. Research methodology and design

To perform the study data sources are to be identified and collected, they are to be classified, analyzed, interpreted and presented in a systematic manner. To furnish this, research information has been accumulated from both the primary and secondary sources. The quantitative data for descriptive purposes and empirical testing will be collected by a postal questionnaire. For the sampling purposes, this research will focus on the banking sector and ten banks are taken as the sampling unit. Thus, in order to ensure every subsample gets an appropriate representation, a stratified random sampling procedure is used.

4.1 Hypotheses

The following hypotheses were developed for empirical testing:

H_1: There is no significant relationship between credit appraisal and non-performing loan of commercial banks

H_2: There is no significant relationship between loan loss provisions and loan advances of commercial banks

5. Risk assessment and risk management

Risk assessment is the process of analyzing potential losses from a given hazard using a combination of known information about the situation, knowledge about the underlying process, and judgment about the information that is not known or well understood. The process of combining a risk assessment with decisions on how to address that risk is called risk management. Risk management is part of a larger decision process that considers the technical and social aspects of the risk situation. Risk assessments are performed primarily for the purpose of providing information and insight to those who make decisions about how that risk should be managed. Judgment and values enter into risk assessment in the context of what techniques one should use to objectively describe and evaluate risk. Judgment and values enter into risk management in the context of what is the most effective and socially acceptable solution.

The combined risk assessment and risk management process can be described as a six step process. The first three steps are associated with risk assessment and the last three with risk management:

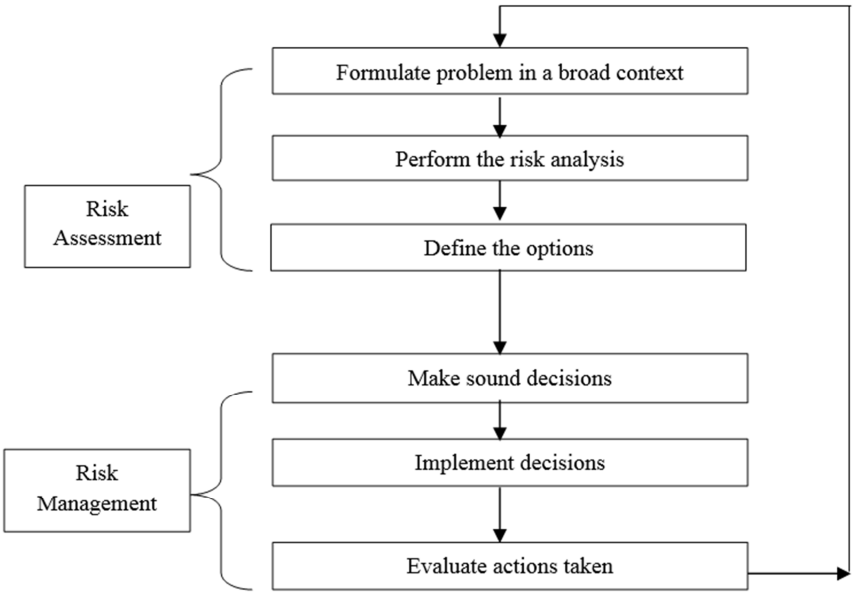

Figure 01: Combined risk assessment and risk management process

5.1 Credit risk grading

All banks should adopt a credit risk grading system. The system should define the risk profile of borrower's to ensure that account management, structure and pricing are commensurate with the risk involved. Risk grading is a key measurement of a Bank's asset quality and as such, it is essential that grading is a robust process. All facilities should be assigned a risk grade. Where deterioration in risk is noted, the Risk Grade assigned to a borrower and its facilities should be immediately changed. Borrower Risk Grades should be clearly stated on Credit proposal.

5.2 Decision matrix of credit risk grading (CRG)

Since the credit risk is involved in different stages of loan sanction process, the following stages are identified during credit risk grading calculation:

Table 01: Decision Matrix

Pre-sanction stage	Grading stage	Post sanction stage
(1) Feasible	SUPERIOR	(1) Performing
	GOOD	
	ACCEPTABLE	
(2) Conditional/ Exceptionally Acceptable	MARGINAL/WATCHLIST	(2) Early warning account
(3) Non-feasible	SPECIAL MENTION	(3) Non-performing
	SUB-STANDARD	
	DOUBTFUL	
	BAD/LOSS	

From the matrix presented in the Table 01, it is found that after conducting CRG at pre sanction stage based on clients information, a banker can select three risk categories viz. superior, good and acceptable as feasible and marginal may be treated as exceptionally acceptable subject to the quality of security may be offered by the client, his reputation etc. However, a borrower with special mentions, sub-standard, doubtful and bad/loss rating at pre-sanction stage will be treated as not-feasible. A borrower with superior, good and acceptable rating at post-sanction stage is a performing one. Borrower who is beginning to demonstrate above average risk i.e. marginal/watch list or special mention at post-sanction stage will require banker's attention because it has become as early alert (warning) account. And rest of the ratings of a borrower at the post sanction stage exhibit as non-performing or classified status.

5.3 Credit risk grading process

Despite a prudent credit approval process, loans may still become troubled. Therefore, it is essential that early identification and prompt reporting of deteriorating credit signs be done to ensure swift action to protect the Bank's interest. The symptoms of early warning signals are by no means exhaustive and hence, if there are other concerns, such as a breach of loan covenants or adverse market rumors that warrant additional caution, a Credit Risk Grading process is presented below:

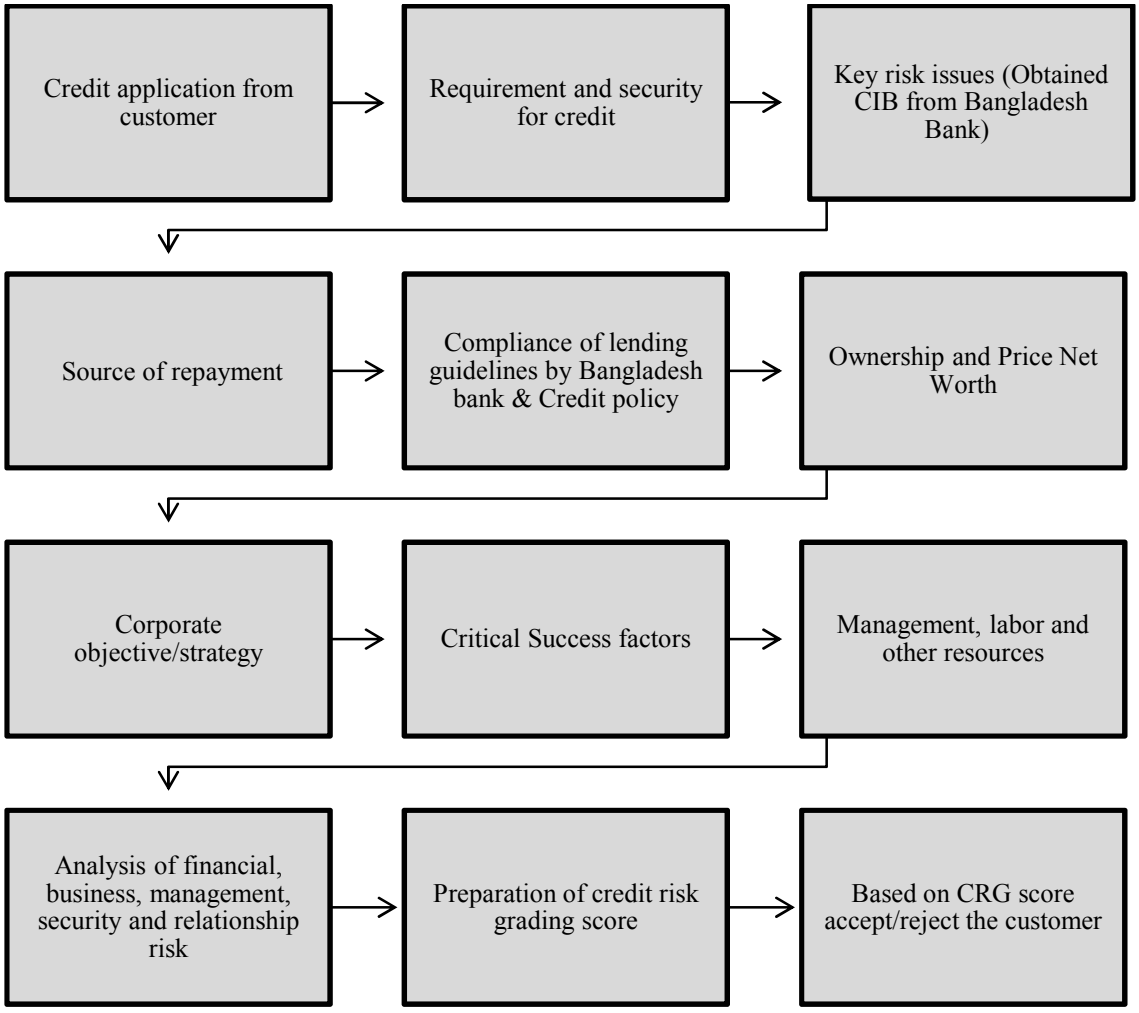

Figure 02: Credit risk grading process in commercial banks

According to the score obtained by the customer, the loan is sanctioned and approved. A credit score sheet is prepared for risk grading by the commercial banks.

5.4 Main components in credit risk grading model

Table 02: Main variables in credit risk grading

Variable	Description
Return on Asset(ROA)	The is the ratio of net operating profit that a company earns from its business operations in a given period of time to the amount of the company's total asset
Non- performing Loans (NPL)	These are credits which the banks perceive as possible losses of funds due to loan default.
Loan loss provisions (LLP)	This is an amount of money that a bank set aside from its annual earnings as a precaution against possible loss of a non performing loan, or to off-set a lost credit facility.
Loans and Advances (LA)	This is a facility granted to a bank customer that allows the customer make use of banks funds which must be repaid with interest at an agreed period
Liquidity (LR)	This is the ability of a bank to meet its short term obligation as and when due.
Capital Adequacy Ratio (CAR)	This is the index regulatory authorities use to determine the optimum amount of money (i.e equity, retained earnings, and other reserves) that a bank must have to be able to take certain levels of risk endangering deposits funds, or its existence

5.5 Basic Framework of Credit Risk Grading

As per recommendation of the Financial Sector Reform Project (FSRP), Bangladesh Bank made it mandatory for the Banks to conduct a "Lending Risk Analysis (LRA)" in the prescribed format before sanction of a loan which is still in force. Later, Bangladesh Bank instructed all commercial Banks to develop its own credit risk grading system vide its Guidelines on Credit Risk Management. In the said Guideline, Bangladesh Bank provided a

sample Risk Grading Model and advised Banks to design their own model in line with that one.

6. Findings of the study

6.1 Credit appraisal and non performing loans

The study sought to establish the linking between return on assets and the level of nonperforming loans in financial intermediaries by conducting a regression analysis with level of non-performing loans as the dependent variable as indicated by the loan repayments of the clients at any given time. Return on assets variables were identified as the lending period of the loans, frequency of review of loans given and credit approval considerations. Thus the regression model was:

$$NPL = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where NPL was the level of non-performing loans,

β_o is the regression constant, β_1..... β_3 are the coefficients of regression model,

X_1 is the lending period of the loans,

X_2 is frequency of loan review and

X_3 is the considerations in credit approval.

The regression statistics are given in the tables below.

R	R square	Adjusted R square	Standard error of the estimate
0.345 a	0.1190	0.031	0.46208

Here **a** denotes a constant means lending period of the loans, frequency of loan review, considerations in credit approval.

The model statistics show that when the independent variables (lending period of the loans, frequency of loan review and considerations in credit approval) and dependent variable interact, the model has a Pearson's correlation coefficient (R) of 0.365 and coefficient of determination (R Square) of 0.133 signifying a positive but weak or negligible association between the two.

6.2 Analysis of variance

	Sum of square	Degree of freedom	Mean square	F	Sig.
Regression	3.561	3	.544	1,360	0.192 a
Residual	23.133	25	.331		
Total	26.964	28			

The Analysis of Variance (ANOVA) shows that the f-value is 1.360 at 0.192 significance level ($p>0.05$) suggesting that the relationship between the two (independent and dependent variables) could be out of chance and nothing else.

6.3 Regression co-efficient

	Beta	Standard error
Constant	0.342	0.29
Lending period of loans	0.198	0.219
Frequency of loan review	-0.006	0.084
Credit approval	-0.071	0.132

So, the regression thus becomes Non-performing loan (NPL) $=0.342+0.198 X_1-0.006 X_2-0.71 X_3$

6.4 Results interpretation

It can be seen that taking the independents variables' value at zero, the level of non-performing loans would be 0.342. A unit increase in lending period of the loans would lead to a 0.198 increase in NPL, a unit increase in frequency of loan review would lead to a 0.006 decrease in NPL and a unit increase in considerations in credit approval would lead to a 0.071 decrease in NPL. This signifies that the period of loan repayment increases the chances of loan defaults while frequency of loan reviews and credit approval considerations decreases chances of loan defaults which ultimately lead to reduce loan loss provisions.

7. Problems in existing credit risk grading model

In the existing credit risk grading model in Bangladesh, qualitative and quantitative factors are considered in 40% and 60% weight respectively. These guidelines are prepared in June 2007 for banks are laid down in the table below:

Table 03: Existing credit risk grading score

Quantitative factors (60%)	Weight	Qualitative factors (40%)	Weight
Capital adequacy	15%	Management	10%
Asset quality	15%	Regulatory environment	10%
Earnings quality	15%	Risk management	5%
Liquidity and external fund mobilization	10%	Sensitivity to market risk	5%
Size of the bank & Market presence	5%	Ownership and corporate governance	5%
		Accounting quality	3%
		Franchise value	2%

In the existing grading manual risk management, sensitivity to market risk accounting quality and corporate governance issues are insignificant as compared to other qualitative factors. The importance of qualitative factors is increasing day by day and in 2012, corporate governance guideline is issued by Bangladesh bank. In risk management, focus is given on market risk management only but there are other risks like operational risk, liquidity risk and reputation risk must be taken into consideration. For accounting quality, whether policies for income recognition is documented and accounted for in the financial statements of the bank and provision and valuation of investments are taken into consideration but there is a possibility of window dressing of accounting figures. Accountants just play with the numerical numbers. They may manipulate the financial information if management wants. For this reason there is a need to modify the existing system of risk grading. Both qualitative and quantitative factors must be balanced to evaluate any client's performance. Only numerical facts and figures don't give guarantee that quantitative factors are presented in a true and fair view. So Bangladesh bank must increase more weight towards qualitative factors specifically accounting quality, corporate governance and risk management.

8. Proposed risk grading model

There is a need to modify the existing risk grading model and need more concentration on qualitative factors. Bangladesh Bank must make mandatory to environmental risk management guidelines to make to understand and manage risks that arise from environmental concerns which bring a focus on planning and implementing policies and procedures to mitigate environmental risks. The proposed risk grading model is laid down below:

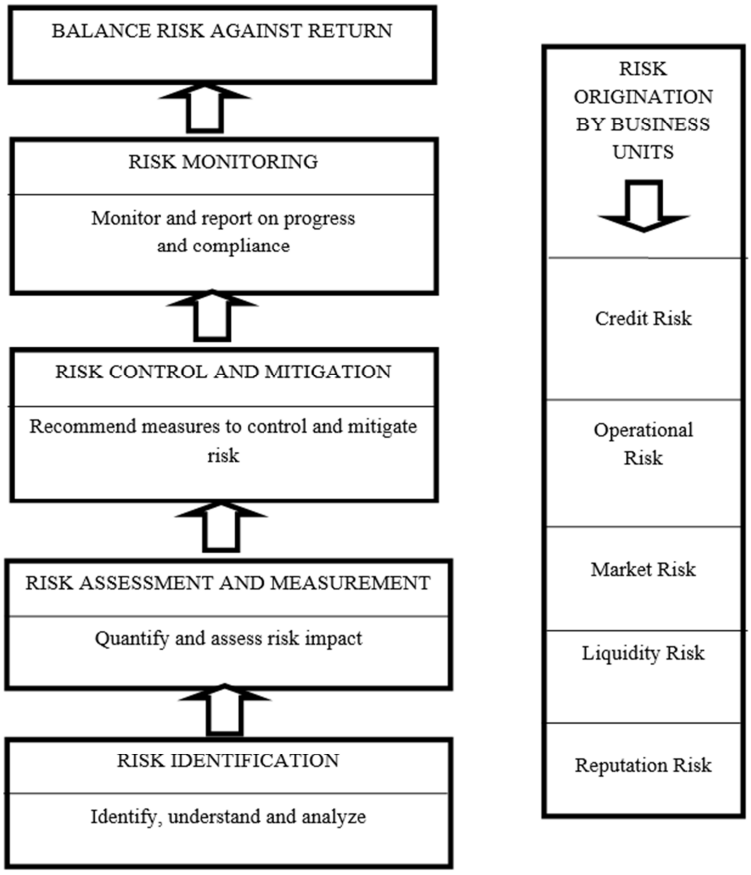

Figure 03: Proposed Risk Management Model

9. Conclusion and proposed courses of action

Recent global financial crisis has shown the dire effect of reckless lending. Following the global financial meltdown regulatory bodies all over the world have become conscious about implementing stricter credit risk management policies. Recently Commercial banks have been able to develop a coordinated system of Analyzing, Processing, Sanctioning, Controlling and Monitoring the Credits backed by fully automated system, which facilitates management of credit risk grading in an efficient manner. The quality of assets of the Bank improved gradually as a result of effective management of credit risks in recent time which would help to recoup the downturn and to boost up the overall financial conditions. To sum up the following points must be taken into consideration:

- The banking industry is extremely competitive and constantly changing. Rival banks are introducing new products and services and taking new measures to manage credit risk. Therefore it becomes mandatory for each market player to know what others are doing. This requires R&D activities and proactive action to meet challenges.
- There is no alternative of providing adequate training to the employees. More credit analysts may be recruited to reduce pressure on existing employees.
- Workshops may be arranged for employees working in credit department to keep them up-to-date. This will also increase their efficiency.
- Credit risk grading is an ever evolving subject. Banks must be flexible enough to incorporate any new practice in its credit risk grading policy.
- Whenever a potential borrower approaches for financing, environmental risk pertaining to his business/ collateral is to be assessed and the mitigating factors there against should be considered.
- Credit must be granted according to bank's delegation of authority. It means the branch manager is not authorized to sanction more loans which he/she is not authorized to do so.
- Banks must make proper and exhaustive documentation before disbursement and to ensure proper supervision, monitoring and follow up each credit so that the possibility of non-performing loan in reduced.

References

Angelini, E., Tollo, G,. Roli, A. (2008). A neutral network approach for credit risk evaluation, Quarterly review of economics and finance 48, pp 733-755

Chen, M., & Huang, S.,(2003) Credit scoring and rejected instances reassigning through evolutionary computation techniques Exp System Application 24, pp:433-441

Ernst and Young. (2011). "Making strides in financial services management" Institute of international finance.

Goodhart, C.A.E.(1998). The Central Bank and Financial System, London, McMillan press Ltd.

Gouvea, M.,(2007). Credit risk analysis applying logistic regression, neutral networks and genetic algorithms models. In: POMS 18th Annual Conference, Dallas, Texas, USA May 4-7, 2007

Hossain, M.M. and Chowdhury, H.A. (2011) Credit risk management strategies of private commercial banks in Bangladesh: A study on Prime Bank Limited, *Journal of banking and financial services*, Vol 5, No.1, pp-35

Khandani, A., Kim,A., lo, A., (2010) Consumer credit models via machine learning algorithms, Journal of banking and finance, 34, pp:2367-2787

Lawrence, J. Gitman, (2007)," Principle of managerial Finance." New Delhi, Dorling Kindersley (India) Pvt Ltd.

Lahsasna, A., Ainon, R., Wah, T. (2010). Credit scoring model using soft computing methods: a survey, International Arab Journal of Information and Technology 7(2), pp-115-123

Marrison, C. (2002). Fundamentals of Risk Management, New York, Mcmilan Press.

Mosharrafa, R. Al. (2013) Credit Assessment Practice of a Commercial Bank in Bangladesh. *International Journal of Economics, Finance and Management Sciences*. Vol. 1, No. 6, pp. 382-387.

Mureithi, A.W (2010) Relationship between credit appraisal process and the level of non-performing loans of the women enterprise fund loans offered through financial intermediaries in Kenya, A Management research project submitted in partial fulfillment of the requirement for the award of the Degree of Masters of Business Administration (M.B.A), School of Business, University of Nairobi.

Moti, H. O., Masinde, J. S., Mugenda, N. G., & Sindani, M. N. (2012). Effectiveness of credit management system on loan performance: Empirical evidence from micro finance sector in kenya. *International Journal of Business, Humanities and Technology, 2*(6).

Poudel, R. P. S. (2012), "The impact of credit risk management in financial performance of commercial banks in Nepal*". International Journal of arts and commerce*, Vol 1, No 5, pp-9-15

Rahman, S. M. (2011). Credit risk management practices in Banks: An appreciation, *Journal of Islamic Economics, Banking and Finance,* Vol. 7, No. 3, pp: 37-38

Saunders, A., and Cornett, M. M.,(2006) "Financial Institutions Management: A Risk Management Approach", 5th edition, McGraw-Hill 2006, pp. 304 – 309

Treacy, W. F. and Carey, S. M. (2000). "Credit risk rating system at large US banks". *Journal of Banking and Finance*, 24, pp 167-201
West, D., Dellana, S., Qian, J., (2005) Neutral networks ensemble strategies for financial decisions applications Computer Operational Research, 32, pp:2543-2559

First Author: Niaz Mohammad
Date of Birth: 17-01-1987

EDUCATIONAL QUALIFICATION

CMA from ICMAB (The Institute of Cost & Management Accountants of Bangladesh)
- Studying CMA at Professional Level – III (Ongoing)

MBA (Masters in Business Administration)
- Completed from Faculty of Business Studies, University of Dhaka
- Passing Year: 2009 (Exam held in 2010)
- Major: **Accounting & Information Systems**
- CGPA: **3.96 out of 4.00**
- Distinction: Included in **Deans Merit List and Deans Honor List** for MBA result

BBA (Bachelor of Business Administration)
- Completed from Faculty of Business Studies, University of Dhaka.
- Passing Year: 2008 (Exam held in 2009)
- Major: **Accounting & Information Systems**
- CGPA: **3.89 out of 4.00**
- Distinction: Included in **Deans Merit List and Deans Honor List** for BBA result

HSC (Higher Secondary Certificate)
- Institution: Notre Dame College
- Group: Business Studies
- Board: Dhaka
- GPA: **5.00 out of 5.00**
- Got Dhaka Board Scholarship for HSC result.

SSC (Secondary School Certificate)
- Institution: Motijheel Model High School
- Group: Business Studies
- Board: Dhaka
- GPA: **4.38 out of 5.00**

Second Author: Azimun Nahar Onni
Date of Birth: 14-07-1990

EDUCATIONAL QUALIFICATION

Degree	Major/Subjects	Institution	Year of passing	Result
MBA	Major: Accounting	American International University Bangladesh	2015 (ongoing)	CGPA: 3.94 (current)
BBA	1st Major: Finance & Accounting 2nd Major: HRM	American International University Bangladesh	2014	CGPA: 4.00
		AS: International School & College of Pakistan, Kuwait	2008	1A, 2B GPA: 4.50
A level	Mathematics, Chemistry and Physics	**A2:** Sunshine Grammar School and College Chittagong	2009	
O level	Mixed: Science, English, Economics, Business Studies and Information technology	International School & College of Pakistan, Kuwait	2007	4 A*, 1A, 2B GPA: 5.00

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar