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Credit Risk Management (CRM) Practices in Commercial Banks of Bangladesh: "*A Study on Basic Bank Ltd.*"

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Abstract: This Paper is not only a way for getting acknowledged about the efficiency in managing credit risk of Bangladeshi Banks, but also a conclusive reference for studying how CRM practices helps to increase profitability and long term sustainability of commercial banks. Credit risk management encompasses identification, measurement, matching mitigations, monitoring and control of the credit risk exposures. For conducting this research, I have to collect secondary data relating to the financial status of Basic Bank Ltd.In my analysis I have divulged a comprehensive overview about CRM in different phase of my report. First, I have described about the CRM practice and performance of BBL. Then, I analyze the impact of CRM on financial performance of bank. I have used Ms Excel as well as SPSS software to compare relationship between CRM and banks profitability. After analysis and discussion I have identified some conclusive findings of my research paper.

Keywords: BBL, CRM Practice, ROA, NPLR, LLPR, CAR, STLR

1. Introduction

Risk is the element of uncertainty or possibility of loss that prevail in any business transaction in any place, in any mode and at any time. In the financial arena, enterprise risks can be broadly categorized as Credit Risk, Operational Risk, Market Risk and Other Risk. Credit risk is the possibility that a borrower or counter party will fail to meet agreed obligations. Globally, more than 50% of total risk elements in Banks and Financial Institution (FI) s are credit risk alone. Thus managing credit risk for efficient management of a FI has gradually become the most crucial task. Credit risk management encompasses identification, measurement, matching mitigations, monitoring and control of the credit risk exposures. As a leading bank of Bangladesh, Basic Bank Limited has a fully functioning department to perform the crucial task of Credit Risk Management (CRM).

1.1. Review of Literature

Credit Risk Management and Risk based Supervision in Banks has been the subject of study of many Agencies and Researchers and Academicians. There is a treasure of literature available on the subject. A careful selection of relevant material was a formidable task before starting the research. Efforts have been made to scan the literature highly relevant to the Context.

Rajagopal (1996) made an attempt to overview the bank's risk management and suggests a model for pricing the products based on credit risk assessment of the borrowers. He concluded that good risk management is good banking, which ultimately leads to profitable survival of the institution. A proper approach to risk identification, measurement and control will safeguard the interests of banking institution in long run.

Froot and Stein (1998) found that credit risk management through active loan purchase and sales activity affects banks' investments in risky loans. Banks that purchase and sell loans hold more risky loans (Credit Risk and Loss loans and commercial real estate loans) as percentage of the balance sheet than other banks. Again, these results are especially striking because banks that manage their credit risk (by buying and selling loans) hold more risky loans than banks that merely sell loans (but don't buy them) or banks that merely buy loans(but don't sell them).

Treacy and Carey (1998) examined the credit risk rating mechanism at US Banks. The paper highlighted the architecture of Bank Internal Rating System and Operating Design of rating system and made a comparison of bank system relative to the rating agency system. They concluded

that banks internal rating system helps in managing credit risk, profitability analysis and product pricing.

Bagchi (2003) examined the credit risk management in banks. He examined risk identification, risk measurement, risk monitoring, and risk control and risk audit as basic considerations for credit risk management. The author concluded that proper credit risk architecture, policies and framework of credit risk management, credit rating system, and monitoring and control contributes in success of credit risk management system.

Muninarayanappa and Nirmala (2004) outlined the concept of credit risk management in banks. They highlighted the objectives and factors that determine the direction of bank's policies on credit risk management. The challenges related to internal and external factors in credit risk management are also highlighted. They concluded that success of credit risk management require maintenance of proper credit risk environment, credit strategy and policies. Thus the ultimate aim should be to protect and improve the loan quality.

Khan, A.R. (2008) illustrates that Credit risk is one of the most vital risks for any commercial bank. Credit risk arises from non performance by a borrower. It may arise from either an inability or an unwillingness to perform in the pre-commitment contracted manner. The real risk from credit is the deviation of portfolio performance from its expected value. The credit risk of a bank is also effect the book value of a bank. The more credit of a particular is in risk, the more probability of a bank to be insolvent.

Banerjee, Prashanta K., &Farooqui Q.G.M. (2009) said that the objective of the credit management is to maximize the performing asset and the minimization of the non-performing asset as well as ensuring the optimal point of loan and advance and their efficient management. The lending guideline should include Industry and Business Segment Focus, Types of loan facilities, Single Borrower and group limit, Lending caps. It should adopt a credit grading system .All facilities should be assigned a risk grade.

Rose, Peter S. (2001) examined that for most banks, loans are the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout the activities of a bank, including in the banking book and in the trading book, and both on and off the balance sheet. Banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transactions.

1.2. Objective of the Study

The indispensible objective of this research is to examine how bank of Bangladesh especially "Basic Bank Ltd" is efficient in practicing credit risk management throughout its operation. Moreover there are some other subordinated as well as principal objectives regarding CRM of Banks as revealed below:

- To get cognizant about how much a bank especially my selected bank named "Basic Bank Ltd" is efficient in consistently practicing credit risk management.
- To know the importance and advantages of CRM on the perspective of banking institutions.
- To identify the standard process of credit risk management used by banking organization.
- To analysis the credit risk policy used by a bank specially my selected BASIC Bank Ltd.
- To know about what kinds of challenges are likely to faced by both the Bangladesh Bank and others commercial banks in adopting credit risk management practices.
- To scrutinize that how CRM practice impact on banks profitability and sustainability.
- To identify the functions of different wings as well as the whole department of CRM.
- To analyze how a bank make decision for a credit disbursement.
- To know how a bank collect the loan from its customers.
- To identify how a bank classify the loan category according to guideline of Central Bank.
- To know how a bank keep provision for the classified loan.
- To analyze how and when a bank reschedule a loan agreement.
- To analyze how Banks go after for a default loans.
- To identify the effectiveness of Banks to recover their bad portfolio.

1.3. Methodology of the Study

1.3.1. Research Type

This is a descriptive research which is relevant to an inquisitive study as it requires some analysis on the efficient management of bank's credit risk as well as the crystal clear concepts on how the CRM affect banks profitability and sustainability.

1.3.2. Types of Data

Secondary Sources: The secondary source of information is based on official website, Annual report, operation manual of Credit Risk Management and annual report of Basic bank, Bangladesh bank website as well as related different other websites, books etc.

1.3.3. Data Analysis Tools

After collecting the relevant data, I will conduct the relevant analysis of data consisting of both statistical analysis and financial analysis as mention below:

Statistical tools for analysis: The statistical tools that will be used for the purpose of deriving various relationships among various variables considered under research are given below:

- Trend Analysis
- Multiple regression analysis
- Testing Hypothesis

Financial Analysis: For conducting the financial analysis I will utilize the ratio analysis and other important financial

analysis to identify the efficiency of CRM practices of Bangladeshi Banks.

2. CRM Practice in BASIC Bank Ltd

2.1. Credit Risk Policy of BASIC Bank Limited

In order to minimize credit risk, BASIC Bank Limited has formulated a comprehensive credit policy according to Bangladesh Bank Core Risk Management guidelines. Credit policy of the Bank provided for the separation of the credit approval function from business, marketing and loan administration function. Credit policy of BBL recommended through credit assessment and risk grading of all clients at the time of approval and portfolio review. Credit policy also provides the guidelines of required information for credit assessment, marketing strategy, approval process, loan monitoring, early alert process, credit recovery, NPL account monitoring, NPL provisioning and write off policy, etc. The board of directors reviews the credit policy of the bank annually.

BASIC Bank credit principle:

1. Aggregate loans and advances shall not exceed ten times the Bank's net worth or 65% of customers' deposits whichever is lower.
2. Within the aggregate limit of loans and advances as mentioned in (1) above, 50% of lending will be to small industry sector in accordance with prescribed norms of the Government and the Central Bank in terms of the Bank's objectives with 50% to the commercial sector.
3. No term loans will be approved for the commercial sector. Exceptions will be rare and will require approval of the Executive Committee.
4. All lending will be adequately secured with acceptable security and margin requirements as laid down by the Head Office Credit Committee.
5. The Bank shall not incur any uncovered foreign exchange risk (currency exposure) in the lending of funds.
6. The Bank shall not incur any risk of exposure in respect of unmatched rates of interest on funding of loans and advances beyond 15% of outstanding loans and advances.
7. End-use of working capital facilities will be closely monitored to ensure lending user for the purpose for which they were advanced. Loans and advances shall be normally funded from customers' deposits of a permanent nature, and not out of short term temporary funds or borrowings from other banks or through short term money market operations.

2.2. Credit Risk Management Department

Considering the key elements of Credit Risk the bank has segregated duties of the officers/ executives involved in credit related activities. Separate division for Corporate, SME, Retail and Credit Cards have been formed which are entrusted with the duties of maintaining effective relationship with the customers, marketing of credit products, exploring new business opportunities etc. For transparency in the operations during the entire credit year four teams have been set up. Those are:

- Credit Approval Team
- Asset Operations Department
- Recovery Unit
- Impaired Asset Management

In credit management process, Sales Teams of the Corporate, Retail, SME, AND Credit Cards business units book the customers; the Credit Division does thorough assessment before approving the credit facility. Asset Operations Department ensures compliance of all legal formalities, completion of all documentation, and security of the proposed credit facility and finally disburses the amount. The Sales Team reports to the Managing Director & CEO through their line, the Credit Division reports to the Managing Director & CEO, while the Asset Operations Department reports to the Deputy Managing Director & COO. This arrangement has not only ensured segregation of duties and accountability but also helps in minimizing the risk of compromise with quality of the credit portfolio.

2.3. Credit Risk Management Wings

Credit Risk Management Department of BASIC Bank Limited conducted their functions by six wings. Those are:

- Wholesale Credit
- Retail Underwriting
- SME Underwriting
- Central Collection Unit

2.4. Credit Approval of BASIC Bank Limited

2.4.1. Approval Authorities of the Individual and Corporate Loans

The approval authority of individual loan is mainly done by the credit officer in a branch. However, the authorities of corporate loan mainly consist of I. Head of Credit, Wholesale Banking & Medium Business II. Chief Credit Officer. III. Managing Director & CEO IV. Board Due to large ticket size of loan facility, most of the proposals received by Wholesale Credit team is approved by the Board of Directors.

2.4.2. Lending Criteria for General Loan

To evaluate a general loan proposal, Credit team apply the General 5C‟s which are-

- Character
- Capacity
- Capital
- Conditions
- Collateral

2.4.3. Lending Criteria for SME and Corporate Loan

1. Entrepreneur: The promoter or entrepreneur of the proposed project should be creditworthy.

2. Viability of the Project: The project should be viable from organizational, technical, commercial, financial and economic points of view. The project should be technically

sound and environment-friendly. Technology transfer in case of borrowed know-how ought to be ensured. Building should be well planned and well constructed. Market prospect and potential for the product has to be fully assured at competitive prices. There should be reasonable debt equity ratio as determined by the Bank on individual case basis. Debt service coverage ratio should be at least 2.5 times at the optimum level of production. IRR should preferably be not less than 20 percent.

2.5. Credit Collection of BASIC Bank Limited

2.5.1. Collection Processes

Customers are provided with an Offer Letter or Banking Arrangement letter during Loan disbursement where the total payment mood and loan details are described. When a customer fails to fulfill the agreed terms or misses the required payment, the account then enters collections. Collection department is responsible for collecting the overdue amount from the delinquent customers. There are different stages involved in collection after an account enters delinquency till regularization of the account by recovering the overdue. Basically collection can be broadly divided into four stages which are servicing, locating, collecting and cancellation & write-off. The aging of an account in collections is with reference to the days since missed payment.

2.5.2. Collection Steps

Table 2.1. *Credit Collection Steps of BASIC Bank.*

Days Past Due (DPD)	Collection Action
1-14	Letter, Follow up & Persuasion over phone
15-29	1st Reminder letter & Sl. No. 1 follows
30-44	2nd reminder letter + Single visit
45-59	3rd reminder letter (Annexure VI) Group visit by team member Follow up over phone Warning on legal action by next 15 days Call up loan (Annexure VII)
60-89	Final Reminder & Serve legal notice legal proceedings begin Telephone calls/Legal proceedings continue
90 and above	Collection effort continues by officer & agent Letter to different banks/Association

Source: (Prudential regulations for consumer financing 2004, Bangladesh Bank)

2.6. Classification & Credit Loss Recognition Policy

The objective of this policy is to ensure timely recognition of credit losses and consistent application of policies across all businesses.

The term "impaired accounts" encompasses all accounts classified as risk grades- Sub Standard (SS), Doubtful (DF), and Bad & Loss (BL). Such cases would normally be transferred to the Special Assets Management (SAM) team and/or Collections Team for remedial management. But, Managing Director may uniformly decide when classified account will be transferred to SAM.All accounts risk graded SS, DF & BL exhibit some degree of impairment are collectively termed "Impaired Accounts"/"Non Performing Assets".

Sub Standard Accounts:Any 180 (Days Past Due) DPD account and/or as per guidelines of Bangladesh Bank.

Doubtful Accounts:Any 270 DPD account (minimum) and/or as per guidelines of Bangladesh Bank.

Bad & Loss Accounts:Any 360 DPD account (minimum) and/or as per guideline of Bangladesh Bank.

Special Mention Accounts: Though Special Mention Accounts are not classified as impaired account under present rules of Bangladesh Bank, but such accounts are most likely to be turned into impaired accounts.Any 90 DPD account must be risk graded as SMA as per existing Bangladesh Bank Policies.

Table 2.2. *Loan Classification.*

Types of Facility	Loan Classification			
	SMA		Sub Standard	
	Overdue Period	Provision (%)	Overdue Period	Provision (%)
Continuous Loan	90 Days or more	5%	6 months or more but less than 9 months	20%
Demand Loan	90 days or more	5%	6 months or more but less than 9 months	20%
Term Loan up to 5 years	90 days or more	5%	6 months or more but less than 12 months	20%
Term Loan over 5 years	90 days or more	5%	12 months or more but less than 18 months	20%
Short Term Agricultural & Micro Credit	90 days or more	5%	12 months or more but less than 36 months	5%

Table 2.2. (*Continue)*

Types of Facility	Loan Classification			
	Doubtful		Bad & Loss	
	Overdue Period	Provision (%)	Overdue Period	Provision (%)
Continuous Loan	9 months or more but less than 12 months	50%	12 months or more	100%
Demand Loan	9 months or more but less than 12 months	50%	12 months or more	100%
Term Loan up to 5 years	12 months or more but less than 18 months	50%	18 months or more	100%
Term Loan over 5 years	18 months or more but less than 24 months	50%	24 months or more	100%
Short Term Agricultural & Micro Credit	36 months or more but less than 60 month	5%	60 months or more	100%

2.7. Provisioning Procedures of BASIC Bank

2.7.1. GeneralProvisions

A specific debt provision must be assessed and raised as soon as accounts are classified as SMA, SS, DF, and BL. The specific provision raised should be at least the minimum amount as per provisioning requirement of Bangladesh Bank.

Table 2.3. *Rate of Loan Provisioning.*

Business Unit		Rate of Provision				
		UC	SMA	SS	DF	BL
Consumer	House Building & Professional	2%	5%	20%	50%	100%
	Other than House Building & Professional	5%	5%	20%	50%	100%
Small & Medium Enterprise		2%	5%	20%	50%	100%
Short term Agricultural Credit & Micro Credit		5%	-	5%	5%	100%
All others		1%	5%	20%	50%	100%

2.7.2. Specific Provisions

Specific provisions are raised against a specific account, or any portion thereof, which based on known facts, conditions and values of eligible security, interest suspense, is considered to be uncollectible.

2.8. Loan Rescheduling

2.8.1. Rescheduling of Term Loans

The loans which are repayable within a specific time period under a prescribed repayment schedule are treated as Term Loans. For rescheduling such loans following policies will be followed:

- Application for first rescheduling will be considered only after cash payment of at least 15% of the overdue installments or 10% of the total outstanding amount of loan, whichever, is less;
- Rescheduling application for the second time will be considered after cash payment of minimum 30% of the overdue installments or 20% of the total outstanding amount of loan, whichever, is less;

2.8.2. Rescheduling of Demand and Continuous Loan

The loans which can be transacted without any specific repayment schedule but have an expiry date for repayment and a limit are treated as Continuous Loan. In addition, the loans which become repayable after those are claimed by the bank are treated as Demand Loans. If any contingent or any other liabilities are turned to forced loan (i.e. without any prior approval as regular loan) those also are treated as Demand Loans. For rescheduling of Demand and Continuous Loans, the rates of down payment shall be as under:

Table 2.4. *Rescheduling of Demand & Continuous Loan.*

Amount of Overdue Loan	Rates of Down payment
Up to Tk.1.00 (one) crore	15%
Tk. 1.00(one) crore to Tk. 5.00 (five) crore	10% (but not less than Tk.15.00 lac)
Tk. 5.00(five) crore and above	5% (but not less than Tk.50.00 lac)

2.9. Bad Portfolio Recovery of BASIC Bank Limited

2.9.1. Special Asset Management- SME and Retail Banking

The role of SAM is to recover the Bank's bad portfolio. SAM deals with Bank's non-performing loans through legal persuasion/procedure and facilitates external and internal recovery forces to maintain Bank's portfolio at risk (PAR) at a steady position.

File Transfer: Files transfer to SAM from SME when the loan reaches at DPD 180. SAM receives the file from Retail when the loan reaches at DPD 360.

Legal Notice: Legal notice issued to SME at DPD 145 and for Retail at DPD 360, SAM-S&R would arrange to serve 1st legal notice for warning the default borrower to adjust the total outstanding and 2nd legal notice would be served after bouncing the cheque or before litigation.

Write- off Management: BASIC Bank has a specific Write-off policy developed based on Bangladesh Bank circulars. SAM takes initiative to write-off bad portfolios as per policy if following criteria satisfied, a) Classification status will be Bad/Loss (BL) b) 100% provided c) Litigated (under any kind of Law of the land).

2.9.2. Special Asset Management & Credit Inspection - Wholesale Banking & Medium Business

Credit Inspection: Credit Inspection through file and field level area deals with all matters relating to credit inspection, ensuring compliance of BBL policy towards credit granting process, corporate portfolio review and physical inspection of client's premise and files

Early Alert Account (EAA): Early Alert Process is an effective tool & technique that help BBL in detecting any deterioration in corporate and medium enterprise clients account and trigger Bank's problem accounts at an early stage so that proper attention can be given to avoid any losses.

3. CRM Performance of BASIC Bank Ltd (Trend and Ratio Analysis)

3.1. Trend Analysis

Trend analysis is a forecasting technique that relies primarily on historical time series data to predict the future. For this research report the trends are discussed for the credit related factors like total loan disbursements, position of unclassified and classified loans amount etc.

3.1.1. Total Loans and Advance Trend

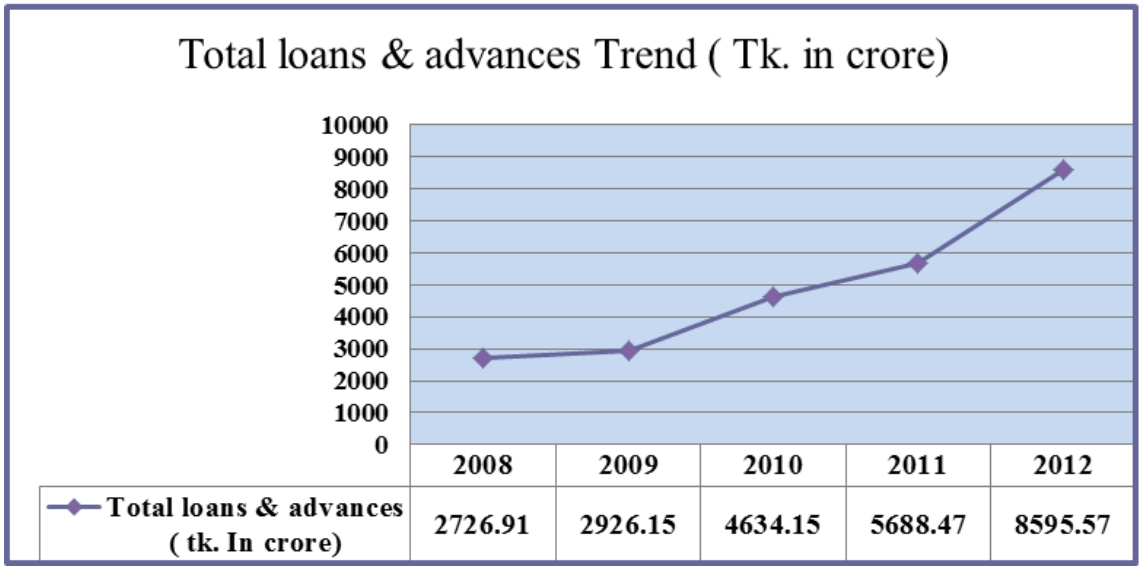

Figure 3.1. *Total Loans & Advances trend of BBL.*

The above graphical representation indicates that the amount of total loans and advance of BBL in the year of 2008 to 2012 was respectively BDT 2726.91, 2926.15, 4634.15, 5688.47, & 8595.57 Taka (crore). Over the five years from the year 2008 to 2012 almost all the years the amount of loans and advance has been increased. So it can be said that there is an increasing trend or upward trend over the last five years in the total loan facility provided by the BBL.

3.1.2. Trend of Classified Loans (NPL)

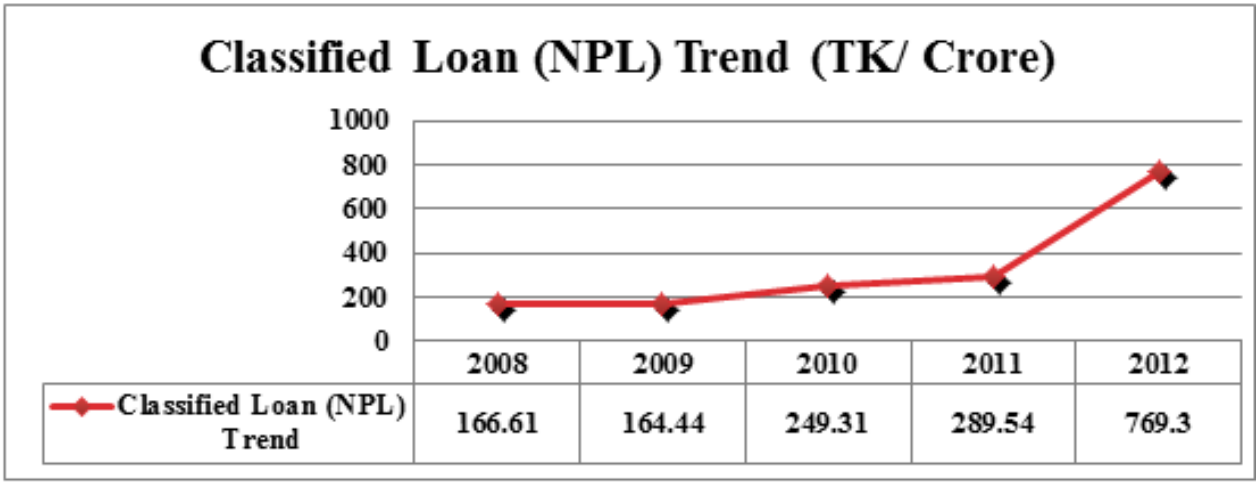

Figure 3.2. *Trend of Non Performing Loan of BBL.*

According to above graph, the NPL of BBL is in an increasing trend. From year 2008 to 2011 the NPL increased in a steady rate. However in 2012 the NPL amount is very high. This shows the inefficiency of CRM in the year of 2012.

3.1.3. Trend of Unclassified Loan (Standard)

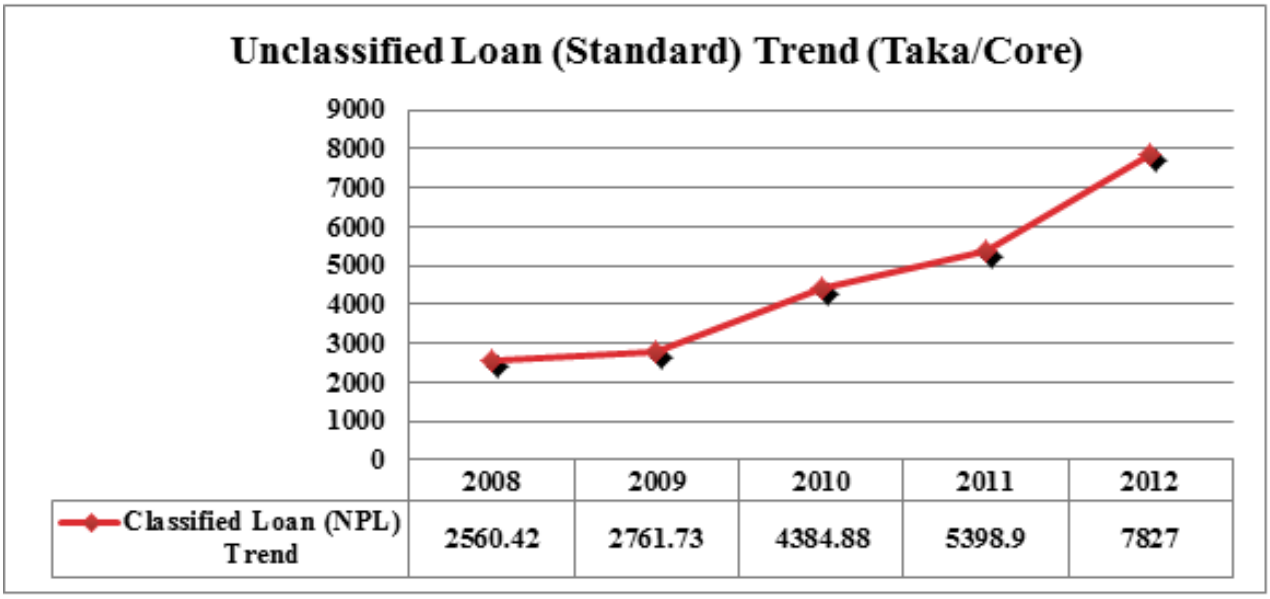

Figure 3.3. *Trend of Unclassified Loans of BBL.*

In the graph, it seems that the unclassified loans trend for 5 years is not very fluctuated; overall it was increasing in a steady rate. In the NPL trend section, I describe that high amount of NPL shows CRM efficiency in 2012, but this graph shows that the NPL is very high because the loan disbursement amount was large.

3.1.4. Provision against Classified Loans & Advances

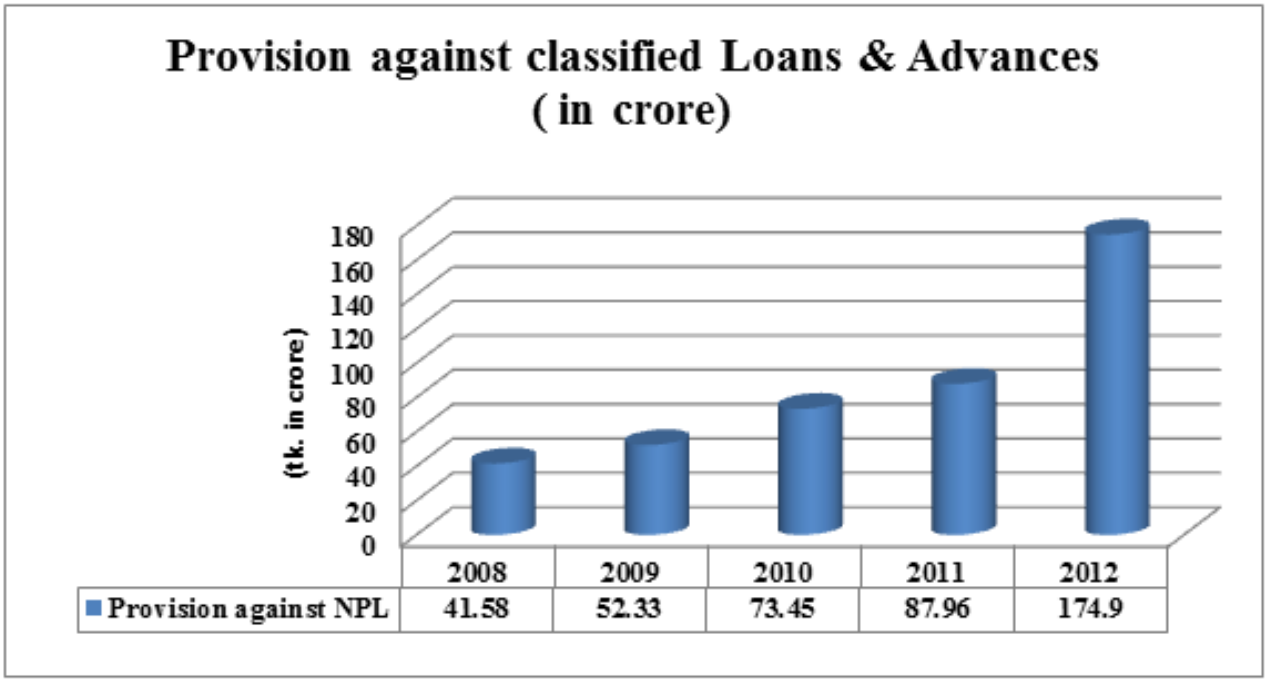

Figure 3.4. *Trends of Provisions for Classified Loans.*

From the above graph we can see there are an increasing trend in the provision for classified loans and advance of the BBL among the last five years. That means in the last five years they emphasized more on classified loans and advances. We see that in the year 2008 the amount of provision for classified loans and advances was 41.58 crore taka and in the next year the amount was 52.33 crore. The provision amount was higher in 2012, which was tk. 174.9 crore.

3.2. Ratio Analysis

Here, I will analyze the CRM performance of BASIC Bank using some ratios of Standard and NPLs loans because I think ratio is the best tools for analyzing any types of performance of a financial institutions.

3.2.1. Standard Loan to Total Loans Ratio

Table 3.1. *Standard Loan of BASIC Bank (2008-2012).*

Year	Amount of Standard Loan (Taka)	Total Loans and Advance (Taka)	Ratio of Standard Loans to total loans and advance (Taka)
2008	25604245829	27269131180	93.89 %
2009	27617360130	29261534342	94.38 %
2010	43848867094	46341513504	94.62 %
2011	53989096940	56884757885	94.91 %
2012	78270032892	85955762411	91.05 %

Data source: Annual Report of BASIC Bank (2008-2012)

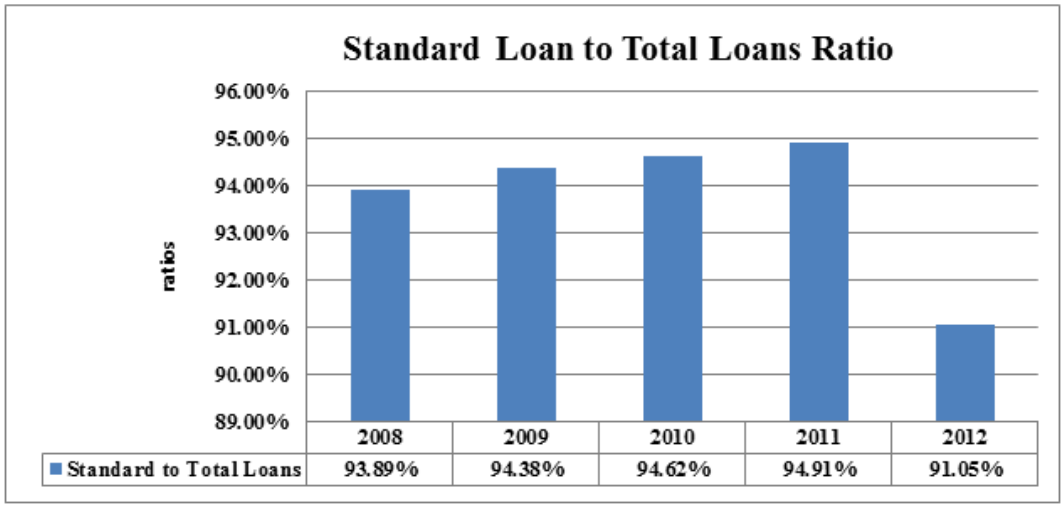

Figure 3.5. *Standard Loan to Total Loans Ratio.*

From the above figure of ratio of Standard Loan to Total Loans and Advances of BASIC Bank Ltd., we can see that in year 2012the ratio declined .Otherwise in other four years the ratio increases than the previous year.

3.2.2. Non Performing Loan to Total Loans Ratio

Table 3.2. *NPL Loan of BASIC Bank (2008-2012).*

Year	Amount of NPL (Taka)	Total Loans and Advance (Taka)	Ratio of NPL to total loans and advance (Taka)
2008	1666143915	27269131180	6.11 %
2009	1644498230	29261534342	5.62 %
2010	2493173427	46341513504	5.38 %
2011	2895434176	56884757885	5.09 %
2012	7693040736	85955762411	8.95 %

Data source: Annual Report of BASIC Bank (2008-2012)

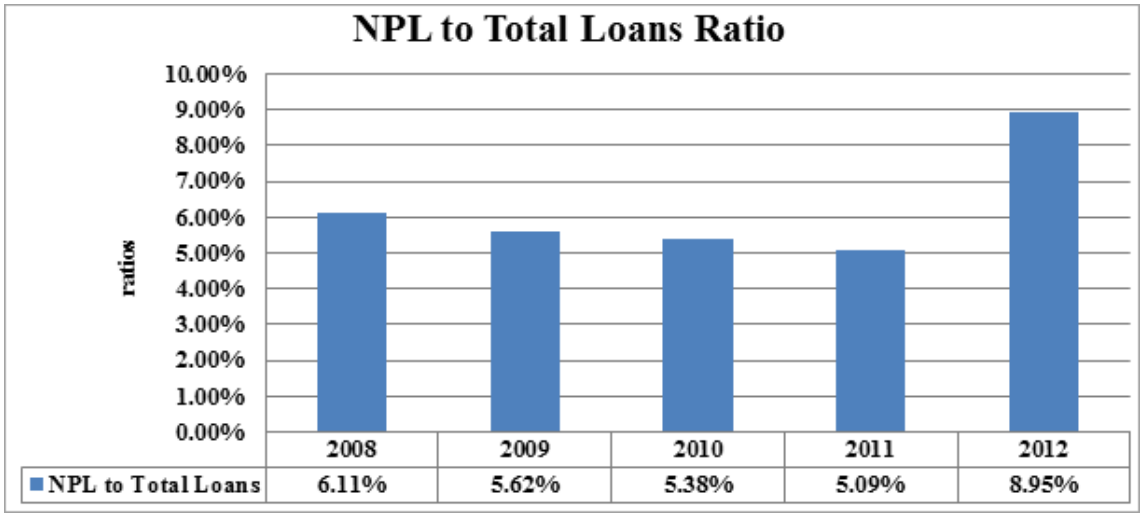

Figure 3.6. *NPL to Total Loans Ratio.*

From the above figure, it can easily be understand that from 2009 to 2011 the NPL to total loans ratio was in steady rate. However, in 2012 this ratio increases marginally higher than the previous years. The main reason of this increase is the recent credit scam of BASIC bank limited.

4. The Impact of CRM on Bank's Profitability (Statistical Analysis)

4.1. Overview of the Research

The overall objective of this particular research is to investigate the impact of credit risk management on bank's profitability. To find the relationship between these two elements, I select one dependent variable and three independent variables. Then I conduct multiple regression analysis with the variables. Throughout the research, I focus on the main objective; however, I have tried to fulfill some specific objective too.

The specific objectives are to:

- Determine the extent to which non performing loans affect banks profitability.
- Investigate the impact of loan loss provisions on banks profitability.
- Determine whether banks capital adequacy contributes to banks profitability.

4.2. Previous Research about This Topic

There have been debate and controversies on the impact of credit risk management and bank's financial performance. Over the few decades, many scholars carried out extensive studies on this topic and produced mixed results; while some found that credit risk management impact positively on banks financial performance, some found negative relationship and others suggest that other factors apart from credit risk management impacts on bank's performance. Specifically, Kargi (2011) found in a study of Nigeria banks from 2004 to 2008 that there is a significant relationship between banks performance and credit risk management. He found that loans and advances and non performing loans are major variables that determine asset quality of a bank.

Kithinji (2010) analyzed the effect of credit risk management (measured by the ratio of loans and advances on total assets and the ratio of non-performing loans to total loans and advances on return on total asset in Kenyan banks between 2004 to 2008). The study found that the bulk of the profits of commercial banks is not influenced by the amount of credit and non performing loans. The implication is that other variables apart from credit and non performing loans impact on banks' profit.

4.3. Sample Selection and Model Specification

The sample data is gathered from the annual report of BASIC bank (2008-2012). For the analysis, I consider return on asset as dependent variable, and non performing loan ratio, loan loss provision and capital adequacy ratio as independent variables. So the model of this equation will be:

$$ROA = a + b_1 * NPLR + b_2 * LLPR + b_3 * CAR \quad (1)$$

Table 4.1. *Description of Model Variables.*

Variable	Description
ROA (Return on Asset)	It 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. It is a good indicator of Banks Profitability.
NPLR (Non Performing Loan Ratio)	The ratio of nonperforming loan to total loan is known as NPLR. It is a good indicator of Credit risk management.
LLPR (Loan Loss Provision ratio)	The ratio of amount of provision to the total classified loan. It is an indicator of credit risk management efficiency.
CAR (Capital Adequacy Ratio)	This is the index regulatory authorities use to determine the optimum amount of moneythat a bank must have to be able to take certain levels of risk endangering deposits funds, or its existence

4.4. Data Input and Regression Line

Table 4.2. *Inputted data for SPSS.*

Year	ROA	NPLR	LLPR	CAR
2008	1.30	4.59	24.76	12.02
2009	1.41	4.83	35.33	13.48
2010	1.24	4.83	32.80	9.41
2011	1.40	4.38	37.05	10.13
2012	.03	8.22	33.23	10.05

Figure 4.1. *Multiple Regression line.*

4.5. Result of Research and Interpretation

4.5.1. Regression Analysis

Table 4.3. *Summary of Regression analysis (Appendix 1).*

Name of Test	Result
R	.999
R^2	.998
Adjusted R^2	.991
SSE	.05464

Coefficient of correlation (R):In this table, the value of R = 0.999 expresses that there is a high degree of positive relationship between the dependent variable ROA and the independent variables NPLR, LLPR and CAR. If the independent variables increase at that point this will result in the dependent variable increase accordingly. So it can be said that, credit risk management affect on banks profitability.

Coefficient of determination (R^2): The term R Square is the multiple coefficient of determination interpreted as the proportion of variability in the dependent variable that can be explained by the estimated multiple regression equation. Hence, when multiplied by the 100, it can be interpreted as the percentage of the variability in Gross Premium that can be explained by the estimated regression equation. Here R^2 = 0.998 (99.8 % expressed in percentage) indicates 99.8% of the variability in obtained ROA is explained by the independent variables LLPR, NPLR and CAR.

Adjusted R Square: If a variable (say for 'NPLR') is added to the model, R Square = 0.991 becomes larger even if the added variable is not statistically significant. The Adjusted R Square compensated for the number of independent variables in this model.

Standard Error of Estimate: Standard Error of Estimate shows how much error or variability stands between the estimated result and actual forecasted result. Here the value is 0.0564 that show the amount of variability of our estimated result and the actual result of the observation.

4.5.2. Coefficients Analysis

Table 4.4. *Summary of coefficient analysis (Appendix 2).*

Name of Test	Result
Constant	2.195
NPLR	-.353
PPLR	.010
CAR	.041

From this table, we got the parameters of the regression line. Here, the constant 'a' is 2.195 and the slopes b1 and b2 are -.353, .010 and .041 respectively. From these data the regression equation can be constructed as:

$$ROA = 2.195 + (-.353*NPLR) + .10\ LLPR + .041\ CAR$$

The equation implies that a unit change in the independent variable NPLR causes the dependent variable ROA to change by an amount of -.353 when LLPR and CAR are constant. As b_1 is negative, this movement of the dependent variable ROA with the independent variable NPLR will be in the negative direction. That is when the amount of NPLR will increase, ROA will decrease and vice versa.

The equation also implies that a unit change in the independent variable LLPR causes the dependent variable ROA to change by an amount of .010 when NPL and CAR are constant. As b_2 is positive, this movement of the dependent variable ROA with the independent variable NPLR will be in the positive direction. That is when the amount of LLPR will increase, ROA will increase and vice versa.

In the equation we get the other coefficient of net regression as 0.041. This indicates that when NPLR and

LLPR are constant, ROA will change by 0.041 with a unit change in CAR the movement of these two variables will be also in the same direction as the LLPR.

4.5.3. ANOVA Test

Table 4.5. *Summary of ANOVA Test (Appendix 3).*

Name of Test	Result
MSR	.462
MSE	0.003
F	154.620
Sig.	0.059

The F-test is used to determine whether a significant relationship exists between dependent variable named ROA and the set of all independent variables such as NPLR, CAR and LLPR; F-test is referred to the test of overall significance.

In this ANOVA model, the hypothesis for the F-test involves the parameters of the regression models:

Ho (Null Hypothesis): $\beta_1 = 0$

H1 (Alternative Hypothesis): $\beta_1 \neq 0$

If H0 is rejected, I have enough evidence to deduce that two of the parameters are not equal to zero and that overall relationship between ROA, NPLR, LLPR and CAR are significant. However, if H0 is accepted, I do not have the sufficient evidence to deduce that a significant relationship exists between dependent and independent variables.

If H0 is accepted, MSR provides an unbiased estimate of ∂2, and the value of MSR or MSE becomes larger. To determine how large values of MSR/MSE must be to reject H0, I make use of the fact that if H0 is true and the assumptions about the multiple regression model are valid, the sampling distribution of MSR/MSE is an F-distribution with p degrees of freedom in the numerator and (n-p-1) in the denominator . The summary of F- test is given below:

$$F = MSR/MSE = 0.462/.003 = 154.620$$

Significance of aptitude test: At a significance level of .05 any independent variable having a significant level around .05 will regard as significant. In our aptitude test significance level of 0.059 is significant.

Significance of overall model: At a significant level of .05 the overall model will be significant if the F ratio is large enough and the significance level is around .05. In our test the F ratio is 154.620 which is large enough to describe the overall test and the significance level is .059 which is close to .05. So we can conclude that the overall relationship is significant.

Here we accept alternative hypothesis. Thus there is relationship between ROA and the credit risk management.

5. Findings, Recommendations and Conclusion

5.1. Summary of Findings

- Credit risk is an investor's risk of loss arising from a borrower who does not make payments as promised. Such an event is called default. Other terms for credit risk are default risk & counterparty risk.
- The importance of credit risk management for banking is tremendous because Banks and other financial institutions make profit from their credit disbursement. So it is very important for banks and other financial institution to manage credit risk properly. Effective CRM helps to increase the present and future financial performance of a bank.
- The main challenges of CRM are additional cost for training and employee motivation.
- The process of CRM contains several elements such as Credit processing, Approval, Documentation, Administration, Disbursement, Monitoring Credit classification and Credit recovery etc.
- The BBL follows the rules and regulation given by the Bangladesh Bank in practicing Credit risk management. It generally focuses on industrial credit policy rather than general credit. The CRM department of BBL includes approval, operation, and recovery and asset management unit.
- BBL recover its bad portfolio by using some recovery methods such as file transfer, legal notice, write off management, early alert account and credit inspection etc.
- The level of credit risk of BBL is in moderate level. The amount of total loans, unclassified loans and classified loans is in increasing trend. BASIC Bank maintains good amount provision against the classified loans. The NPLR and STLR ratio is in good level for BBL.
- The relationship between CRM and Banks profitability is positive. Therefore, it can be said that effective CRM can contributes on Banks financial performance.

5.2. Recommendations

- BBL should have a clear written guideline for CRM. The lending guideline should include Industry & Business segment focus, types of loan facilities, single borrower & group limit, lending caps, discouraged business types, loan facility parameters, and cross border risk.
- It should adopt a credit grading system in which all facilities should be assigned a risk grade & the borrowers risk grades should be clearly stated on credit application.
- Approval authority should be delegated to individual executives rather than Executive Committee/ Board to ensure accountability. This system will not only ensure accountability of individual executives but also expedite the approval process.
- The organization structure should have to be changed to put in place the segregation of Marketing / Relationship Management function from approval / Risk Management / Administration function.
- The employees of BBL should carefully check the customers KYC form, and take enough collateral before

providing them loan.

- BBL should follow the CRG model provided by the Bangladesh Bank.
- BBL should keep as much as provision against the loans.
- BBL should lessen the NPL ratio low by the proper management of loan.
- BBL should provide better training to the employees about CRM.

5.3. Conclusion

To conclude the report, it is imperative to mention that default clients have been a major problem for the banking financial institutions for long and the financial institutions have been trying to minimize the default problem all along. The Bangladesh Bank has been striving to assist the financial institutions to get out of the default risk problem and formulating policies for that purpose. As a continuance to this, Bangladesh Bank has been providing directives when and where it seems to be necessary.

As a leading financial institution of Bangladesh, BASIC Bank Limited is maintaining its operation in a smooth way. Though the bank faced many problems, its experience in the field of corporate and proper lending policy make it very much cautious about the risk. A very skillful and technically enriched CRM department is always working with its full capacity to analyze the risk of its products and services. So far it has proved itself as a successful organization in assessing risk and thus takes care of it.

The main purpose of this paper is to show about the CRM practice of banks. It describes about the theoretical framework, importance, process, advantage and challenges of CRM. It also describes the CRM practice and performance of BBL. Finally it tries to find if there is a relationship between CRM performance and banks profitability. All these analysis is described on the perspective of BASIC Bank limited, Bangladesh.

Appendix

Appendix 1.*(Summary of Regression Analysis)*

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.999[a]	.998	.991	.05464	.998	154.620	3	1	.059

a. Predictors: (Constant), CAR, PPL, NPLR

Appendix 2.*(Summary of Coefficient Analysis)*

Coefficients[a]									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	2.195	.325		6.758	.094			
	NPLR	-.353	.018	-.962	-19.865	.032	-.991	-.999	-.921
	PPL	.010	.006	.081	1.707	.337	-.003	.863	.079
	CAR	.041	.017	.117	2.378	.253	.379	.922	.110

a. Dependent Variable: ROA

Appendix 3.*(Summary of ANOVA Analysis)*

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.385	3	.462	154.620	.059[a]
	Residual	.003	1	.003		
	Total	1.388	4			

a. Predictors: (Constant), CAR, PPL, NPLR
b. Dependent Variable: ROA

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