



ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**ASSESSMENT OF CREDIT RISK MANAGEMENT: A CASE OF NIB
INTERNATIONAL BANK S.C**

BY

Zewdinesh W/Aregay

ID. SGS/0064/2008B

MAY, 2019
ADDIS ABABA, ETHIOPIA

**ASSESSMENT OF CREDIT RISK MANAGEMENT: A CASE OF
NIB INTERNATIONAL BANK S.C**

BY

Zewdinesh W/Aregay

**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE
STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
DEGREE MASTERS OF BUSINESS ADMINISTRATION**

**May, 2019
Addis Ababa, Ethiopia**

**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
MBA PROGRAM**

**ASSESSMENT OF CREDIT RISK MANAGEMENT: A CASE OF
NIB INTERNATIONAL BANK S.C**

APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies

Signature

Advisor

Signature

External Examiner

Signature

Internal Examiner

Signature

Declaration

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr. Abebaw Kassaye. All sources of materials used for the thesis have been duly acknowledged, the researcher further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Zewdinesh W/Aregay
St. Mary's University, Addis Ababa

May, 2019

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for Examination with my approval as a University Advisor.

Advisor's Name: Abebaw Kassaye (PhD)

Signature: _____

St. Mary's University, Addis Ababa

May, 2019

Table of Contents

CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study.....	1
1.1.2. Background History of NIB International Bank.....	3
1.2 Statement of the Problem.....	3
1.3. Research Questions	4
1.4. Objectives of the study.....	4
1.4.1. General Objectives	4
1.4.2. Specific Objectives	4
1.5 Significance of the Study	5
1.6 Scope of the Study.....	5
1.7 Definition of Terms.....	5
1.8 Organization of the Study	6
CHAPTER TWO	7
REVIEW OF THE LITRATURE.....	7
2.1. Theoretical Review	7
2.1.1 Credit Risk.....	7
2.1.2. Credit Risk Management	8
2.1.3. Operating under a Sound Credit Granting Process.....	10
2.1.4. Principles for the Assessment of Banks' Management of Credit Risk.....	10
2.1.5. Credit Risk Measurement	12
2.1.6. CreditRisk Models.....	12
ç2.1.7. Credit Scoring System	14

2.1.8. Credit Risk Mitigation	16
2.1.9. Credit Risk Mitigation Technique	16
2.1.10. Tools of Credit Risk Management.....	18
2.2. Empirical Studies	19
CHAPTER THREE	22
METHODOLOGY OF THE STUDY	22
3.1 Research Design	22
3.2 Research Approaches	22
3.3 Population and Sampling Method.....	22
3.3.1 Population of the Study	22
3.4 Data type and Source.....	24
3.5. Methods of Data Collection and Instruments.....	24
3.6 Methods of Data Analysis	24
3.7 Ethical Consideration	25
CHAPTER FOUR.....	26
DATA PRESENTATION, ANALYSIS AND INTERPRETATION	26
4.1 Demographic Information.....	26
4.2 Sectors in Credit Risk	27
4.3 Credit Granting Process.....	29
4.4 Credit Analysis and Approval Process.....	31
4.5 Credit Risk Mitigation	32
4.6 Control Over Credit Risk	34
4, 7 Internal Control of the Bank.....	35
4.8 Descriptive Analysis for Secondary Data.....	36
4.9. Analysis of Interview	37

CHAPTER FIVE	39
SUMMARY, CONCLUSION AND RECOMMENDATION	39
5.1 Summary of Findings	39
5.2 Conclusion.....	40
5.2 Recommendations	41
Reference.....	43
Appendix.....	47

List of Tables

<i>Table 4. 1 Demographic Information of Respondents</i>	<i>26</i>
<i>Table 4. 2 Sectors in Credit Risk</i>	<i>27</i>
<i>Table 4. 3Credit Ggranting Process of the Bank.....</i>	<i>29</i>
<i>Table 4. 4 Credit Analysis and Approval Process of the Bank.....</i>	<i>31</i>
<i>Table 4. 5 Credit Risk Mitigation</i>	<i>32</i>
<i>Table 4. 6 Control Over Credit Risk of the Bank.....</i>	<i>34</i>
<i>Table 4 7 Internal Control of the Bank C Bank.....</i>	<i>35.</i>
<i>Table 4.8 Descriptive Analysis for Secondary Data,,,</i>	<i>37</i>
<i>Table 4.9 Descriptive Statstic NPL</i>	<i>37</i>

ACRONYMS

CRM	Credit Risk Management
NPL	Non-Performing Loans
NBE	National Bank of Ethiopia
NIB	Nib International Bank
VAR	Value At Risk

Acknowledgement

First of all the researcher would like to thank the almighty God for his priceless concerns and supports all the way through my life and rally-round always for me since the inception of my learning to its achievement.

The researcher would also like to express deepest gratitude to my advisor Dr.Abebaw Kassaye for his unreserved follow up, invaluable comments and constructive guidance throughout conducting this study.

The researcher would also like to express the deepest gratitude for my friends and staff of the bank who have been providing me their advice and encouragement always including those hard times.

Abstract

Credit Risk management becomes major discussion issues in the financial institutions because of uncertainty related to borrower's business. The aim of this study is to assess credit risk management on how identify measure, monitor, evaluate and control of credit risk and to what extent the current performance of the bank is supported by proper credit policy, procedure and strategy. The study design is descriptive. The research applies quantitative research method and both primary data (questionnaire) and secondary data were collected to meet the objective of the study. 121 samples were involved at head office and branches who works on credit to get reliable and valid information about the study subject. The data was analyzed using descriptive statistics technique and frequency, percentage, table mean standard deviation, pie chart and graph used to analyzed and present data. From the findings the study concludes that the bank has well organized credit policy that counter to credit risk they are exposed and techniques including loan follow-up, risk identification, measuring, evaluating, monitoring and controlling mechanism. However, the study also concluded that the bank has pitfalls such as absence of independent credit risk management policy and procedure, absence of training for customers which results to loan diversion that predict the risk level of the business and the priority sectors of the bank in terms of credit facility are highly exposed to credit risk which directly contribute to the increment of NPL. Thus, it is recommended that Nib international bank should develop independent risk management policy and procedure from credit policy and procedure to overcome those problems and to take measure on the spot.

Key words: *Credit Risk, Credit Risk Management, NIB*

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Lending operations are core banking activities and the most profitable assets of credit institutions. Credit risk is defined as the risk of a credit institution suffering losses due to default, late or incomplete execution of the debtor financial obligations before the credit organization in accordance with the terms of the contract. Credit risk involves the risk of a particular bank and the borrower's portfolio risk. Credit risk management determines the effectiveness of a commercial bank. The range of clients and volume of credit transactions has dramatically increased recently, which resulted in the need to establish full-fledged risk management system. *Lapeiva (2009)*

Risks have always been of major interests for banks and financial institutions. Financial institutions assume risks in their bid to create as well as maximize shareholder wealth. Conversely risky investments pose the threat of diminishing shareholder returns and on the extreme the capital of the business. Risk is important for financial institutions as it affects the debt holders through capital adequacy and shareholders through return. However the level and magnitude of the risks need to be bench marked by regulatory benchmarks or self imposed benchmarks (Pazarbasioglu, 2003). The existence of cross border subsidiaries and the general regional and global financial integration has increased the appetite for understanding risk. Many forms of financial risks now occur and these include interest rate, liquidity, operational, foreign currency, reputational, strategic, legal and credit risk (Bessis J 1998). The understanding, experiences and knowledge of credit and other forms of risk has not helped prevented financial crises.

The most active work is being done to create units of assessment and management of retail and small business credit risk. In many markets, banks have to operate in the economic environment, characterized by the existence of objective obstacles to good credit management, which demonstrates the importance of strengthening this type of management. However, banks often do not have any established credit risk management process. Risk management is a specific area of economic activity that requires deep knowledge of business

analysis, methods to optimize business decisions, the insurance business, psychology, etc. Commercial Bank credit policy provides the basis of all the credit management; it establishes objective standards and parameters to be followed by bank employees responsible for the provision and processing of loans and management. If the credit policy is correctly formulated, carried out and well understood at all levels of the bank, it allows management to maintain proper standards of the bank loans to avoid unnecessary risks and correctly assess the opportunities for business development. Strategic credit risk management is an activity designed to develop risky bank lending policies, including the definition of the fundamental objectives and the means to achieve them. Strategic management can be seen as a continuous process of selecting and implementing the goals and strategies of the organization. The effectiveness of strategic management of credit risk depends on three main strategic goals of the bank: growth, protection and development(Marina, 2009).

In their study, Fernández, Jorge and Saurina, (2000) state that the growth of bank credit in Spain and its prudential implications is an ever-present item on the agenda of banking supervisors, since most banking crises have had as a direct cause the inadequate management of credit risk by institutions. They further assert that even though bank supervisors are well aware of this problem, it is however very difficult to persuade bank managers to follow more prudent credit policies during an economic upturn, especially in a highly competitive environment. They claim that even conservative managers might find market pressure for higher profits very difficult to overcome.

This problem along with the knowledge gap in the literature needs to study assessment of credit risk management in NIB International Bank

1.1 2. Background History of Nib International Bank

Nib International Bank S.C. was established on May 26, 1999 under license No. LBB/007/99 in accordance with the Commercial Code of Ethiopia and the proclamation for Licensing and Supervision of Banking Business No. 84/1994 with a paid up capital of Birr 27.6 million and authorized capital of Birr 150 million by 717 shareholders and commenced its operation on October 28, 1999.

The financial performance of the Bank during the financial year 2017/2018 the total asset of the Bank reached Birr 26.7 billion and the Bank's total outstanding loans and advances stood at Birr 13.5 billion and the total deposit mobilized by the Bank reached Birr 21.6 billion. The Bank's total equity, composed of paid up capital, share premium, regulatory risk reserve, retained earnings, legal and special reserve reached Birr 3.4 billion. Shareholders and employees number also increased to 4,332 and 4,554 respectively.

1.2 Statement of the Problem

Sound credit management is a prerequisite for a financial institution's stability and continuing profitability, while deteriorating credit quality is the most frequent cause of poor financial performance and condition. The prudent management of credit risk can minimize operational risk while securing reasonable returns.(Spring, 2005).

An important element of credit risk management is the establishment of exposure limits on single counterparties and groups of connected counterparties. Such limits are frequently based in part on the internal risk rating assigned to the borrower or counterparty, with counterparties assigned better risk ratings having potentially higher exposure limits. Limits should also be established for particular industries or economic sectors, geographic regions and specific products. Basel (2000)

Banks must establish a system of independent, ongoing assessment of the bank's credit risk management processes and the results of such reviews should be communicated directly to the board of directors and senior management.

The Bank does not establish overall credit limits at the level of individual borrowers and counterparties, and groups of connected counterparties in specific sectors are highly exposed to credit risk and this contribute to increase non performing loans (NPL) in specific sectors.

For instance the result shown in Table 4.2 and Figure 4.1 (pie chart) that the two priority sectors are highly exposed to credit risk. This indicates that the bank is highly vulnerable to domestic trade & service loan risk and building & construction loan.

The level of nonperforming loan in NIB international Bank S.C. is above the required set by the regulatory body (National Bank of Ethiopia) and forced the Bank to maintain a huge amount of provisioning expenses. There have been maximum and minimum NPL's throughout previous years. The mean average calculated from the years (2007-2016) is stated on the fourth chapter table 4.8 For instance as of June 2013 the level of NPL is 3.79% in Birr 172,074,441.76 and the provision expense is Birr 113,823,598.81, in 2014 total NPL is 3.19% in Birr 176, 234,237.33 the provision expense is Birr 115,845,619.11, in 2015 the level of NPL is 3.13% in Birr 219,104,278.91, the provision expense is Birr 105,157,694.93. In 2016 the level of NPL is 3.95% and the provision expense is Birr 121,844,270.33.

Therefore, this fact has awoken the researcher's interest to indentify credit risk problems area which might helps to reduce NPL position or Credit risks and also to create awareness or to awake the management of the Bank and the concerned organs or work unit and also to give a lesson that are in the same industry

1.3. Research questions

The researcher tries to answer the following question:

- i. How does the bank identify, measure, monitor, evaluate and control credit risk?
- ii. Which sectors of credit facility is highly exposed to NPL in the Bank?

1.4. Objectives of the study

1.4.1. General objectives

The general objective of the study is to assess the credit risk management practice of Nib International Bank S.C.

1.4.2. Specific objectives

- i. To evaluate how the Bank identify, measure, monitor, evaluate and control credit risk
- ii. To identify which sectors of credit facility is highly exposed to NPL in the Bank.

- iii. To identify credit granting process of the bank
- iv. To evaluate how the credit analysis and approval process of the bank
- v. To recognize the credit risk mitigation followed by the bank
- vi. To recognize the control over credit risk
- vii. To ascertain the internal control practices of the bank

1.5 Significance of the study

The study on credit risk management of Nib International S.C. can be benefited from the current research and also the study will serve as a reference material to other researchers. The study will have significance in providing information related to problems associated with credit risk management so that remedial action, especially in the area of providing information for enhancing policies and procedures on credit risk management at banks. In addition to this, it will give an insight to the management of the Bank on how to approach risks associated with credit management.

1.6 Scope of the study

The scope of the study is restricted to address the objective of the paper; i.e. Assessment of Credit Risk Management in Nib International Bank S.C. Even if, credit risk management is a concern of all banks operating in the country, the study limited to cover only on assessing credit risk management in Nib International Bank. Moreover, the study is limited to the Credit Appraisal, Customer Relationship Management and Risk & Compliance Management Departments which are deeply involved in credit and related operation of the Bank and Addis Ababa branches due to time and cost constraints.

1.7 Definition of Terms

Credit Risk: means the possibility of losing the outstanding loan partially or totally, due to credit events (default risk)(BCBS, 2001).

Loan and Advances: means any financial asset of a bank arising from a commitment to advance fund by a bank to a person that is conditioned on the obligation of the person to replay the funds, either on a specified date or dates or on demand, usually with interest (NBE, 2008).

Credit Risk Exposure: means the total amount of credit extended to a borrower by a lender (Croatian National Bank, 2010).

Credit Risk Management: means the process of risk identification, measurement, monitoring and control (NBE, 2010).

Non-Performing Loan (NPL): means loans as loans left unpaid for a period of 90 days (Basel 2001). Or under NBE definition non-performing loans are defined as “loans or advances whose credit quality has deteriorated such that full collection of principal and/or interest in accordance with the contractual repayment terms of the loan or advances are in question; or when principal and/ or interest is due and uncollected for 90 (ninety) consecutive days or more beyond the scheduled payment date or maturity (NBE Directive, SSB/43/008).

1.8. Organization of the Study

The paper is organized into five chapters. The first chapter deals with introductory part consisting of introduction/background of the study, statement of the problem, research questions, objectives of the study, significance of the study, scope of the study and organization of the study.

The second chapter reviews literatures related to the study. In this chapter various theoretical concepts that relates with credit risk and credit administration is discussed.

The third chapter, research design and methodology, it is emphasized on the design of the study and methodology used. In these chapter research design, sample size and sampling techniques, source of data and data collection tools, and data analyzing methods are discussed.

The fourth chapter is data presentation, analysis and interpretation in which the collected data are analyzed and organized in a meaningful manner so as to meet the objectives of the study.

Finally, the fifth chapter presents summaries of major findings, the conclusions and the possible recommendations

CHAPTER TWO

REVIEW OF THE LITRATURE

2.1. Theoretical Review

2.1.1 Credit Risk

In this chapter, we try and give a broad explanation on credit risk from various references. This references even though are from different time and place they have explained credit risk in their own unique way. On the theoretical review section we try and mention the literatures that were wrote about credit risk and credit risk management with other underlying factors that define credit risk as whole. Such as Operating under a Sound Credit Granting Process, Principles for the Assessment of Banks' Management of Credit Risk, Credit Risk Measurement, Credit Risk Models, Credit Scoring System, Tools of Credit Risk Management, Credit Risk Mitigation Techniques and many more credit risk associated literatures are stated. And in the second section there are researches that are made about credit risk and how to manage it.

Beasens&Gestel (2009) defines credit risk as the risk that a borrower fails to pay and does not act according to their obligation to service debt. They state that the causes for the failure to pay could be incapability of the other party to pay or failure to pay on the due date. Besides they mentioned that by its character credit risk is the most apparent risk of a bank. In addition to this the writer characterize credit risk by ways of three aspect the first one is default risk is the possibility that payment is not issued at least within three month this delay will happen due to Counterparts with a weak financial situation, high debt burden, low and unstable income have a higher default probability, sector information and management quality. The second aspect is loss risk or loss given default (LGD) which is a fraction of exposure in the case of failure to pay and exposure risk is ambiguity on the accurate amount at risk at the very instant of a future default.

In the same way Singh (2013) states that another term for credit risk is default risk and defines it as the bank's risk of loss arising from a counterparty that does not make payments in accordance with his/her promise. He also points out credit risk is the earliest and the main source of risk in the banking sector. Credit risk encompasses both the possibility that a

borrower will default by failing to repay principle and interest in timely manner, and the possibility that the credit quality of the obligor will deteriorate, leading to an economic loss. Credit risk occur when one of the counter parties to a transaction does not clear up in full either when the fund are outstanding or on some later date and it may result in bankruptcy of counterparty.

According Anuj (2011), credit risk is delay of one's own obligation in accordance with stted contractual financial obligation within the deadline of payment by counter party. Credit risk is the possibility that debtors or borrowers incapability of paying its obligation in a way that predetermined contractual agreement made during credit approval process which adversely affect the working environment of the lender. Credit risk is defined as the probability that a bank borrower or counterparty will fail to meet its obligations in accordance with contracted terms Basel (2000).Credit risk arises whenever a lender is exposed to loss from borrower, counterparty, or an obligor who fail to honor their debt obligation as they have agreed and contracted (Colquitt, 2007).

The Basel (2001), defines credit risk as a chance when borrowers fail to repay their loan partially or fully due to different circumstances. It also state that the extent to which the bank exposed to higher credit risk will lead to unexpected financial crises and lower credit risk will minimize the probability of the crises because large amount of profit will be generated from this department of the bank

2.1.2. Credit Risk Management

According to Singh (2013) credit risk management includes all management function such as identification, measurement, monitoring and control of the credit risk exposure. The writer further indicated that for long term achievement of banking sector effective credit risk management practice is a vital issue in the current business environment and poor credit risk management policy will create serious source of crisis in the banking industry.

According to Atakelt (2015) Credit risk management practice define as the process of analyzing and renewing Credit risk management documents and apply constantly in actual Credit granting process, Credit administration and monitoring and risk controlling process with suitable Credit risk environment, understanding and identification of risk so as to minimize the unfavorable effect of risk taking activities and the effectiveness of credit risk

management process is dependent on different variables such as proper application of best Risk management documents, Staff quality, Credit culture, devoted top management bodies, sufficient training program, proper organizational structure, ample level of internal Control and Performance of intermediation function. This indicates that credit risk management includes different issues such as developing and implementing suitable credit risk strategy, policy and procedure, accurate identifications of risk, best credit granting process, credit administration, monitoring and reporting process determining and controlling the frequency and methods of reviewing credit policy and procedure and setting authority and responsibility clearly. Besides he mentioned that by establishing suitable credit risk environment, acceptable level of credit limit, best credit granting process, proper monitoring and controlling credit risk and optimizing risk return of a bank credit risk management develop credit performance.

Cebenoyan & Strahan (2004) examine empirically how active management of credit risk using loan deal affects capital structure, lending, profits, and risk of banks. They find that banks which are Active in the loan sales market hold less capital and make more risky loans than other banks. They conclude that advances in credit risk management improve credit accessibility rather Than decrease risk in the banking system. The management of credit risk has become a key objective for all financial institutions across the world. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters Basel (1999).

According to Anuj A. (2011) through designing and implementing a Credit Risk Framework, Performing a Credit Risk Assessment, Building Credit Risk Scoring Models and Credit Risk Reporting control panel and Forecasting Loan Loss we can construct effective credit risk management and he also believe that most effective credit risk management focuses on processes, culture, people and organization because we are working with them.

“Credit risk management includes both preventive and curative measure. Preventive measure comprise risk assessment , risk measurement , and risk pricing , early warning system to pick signal of future default in advance and undertake better credit portfolio diversification. The curative measure aim at minimizing post sanction loan losses through

steps such as securitization, derivative trade, risk sharing and legal enforcement” (Jain, 2014).

2.1.3. Operating under a Sound Credit Granting Process

According to Saunders and Allen (2002) & (Thomas (2002)the expert analyzes five key factors, subjectively weights them, and reaches a credit decision:

1. Character: A measure of the reputation of the firm, its willingness to repay, and its repayment history e.g. age factor.

2. Capital: The equity contribution of owners and its ratio to debt (leverage). These are viewed as good predictors of bankruptcy probability. High leverage suggests a greater probability of bankruptcy.

3. Capacity: The ability to repay, which reflects the volatility of the borrower’s earnings.

4. Collateral: In the event of default, a banker has claims on the collateral pledged by the borrower. The greater the priority of this claim and the greater the market value of the underlying collateral, the lower the exposure risk of the loan.

5. Cycle (or Economic) Conditions: The state of the business cycle; an important element in determining credit risk exposure, especially for cycle dependent industries.

2.1.4. Principles for the Assessment of Banks’ Management of Credit Risk

Financial institutions are facing several problems due to lack of adequate credit risk management principles, proper implementation credit standards of borrower and counterparties and poor portfolio risk management or lack of attention to changes in economic or other circumstances that can lead to worsening in the credit standing of a bank’s counterparties. Sound principles of banks credit risk management will be covered on five areas as follows Basel (2000).

i. Establishing an Appropriate Credit Risk Environment: The strategy of the bank should reflect the bank’s tolerance for risk and the level of profitability the bank expects to achieve for incurring various credit risks. Such policies and procedures should address credit risk in all of the bank’s activities and at both the individual credit and portfolio levels. Banks should identify and manage credit risk inherent in all products and activities.

ii. **Operating under a sound credit granting process:** Banks must operate within sound, well defined credit granting criteria. These criteria should include a clear indication of the bank's target market and a thorough understanding of the borrower or counterparty, as well as the purpose and structure of the credit and its source of repayment.

Banks should establish overall credit limits at the level of individual borrowers and counterparties, and groups of connected counterparties that aggregate in comparable and meaningful manner different types of exposures, both in the banking and trading book and on and off the balance sheet.

Banks should have a clearly-established process in place for approving new credits as well as the amendment, renewal and re-financing of existing credits.

Kim (1987) state that Credit granting process involves an exchange between the supposed default risk of the credit application and possible returns from granting requested credit.

iii. **Maintaining an appropriate credit administration, measurement and monitoring process:** Banks must monitor the condition of individual credits, including determining the adequacy of provisions and reserves with consistent rating system in nature, size and complexity of a bank's activities with information systems and analytical technique.

Banks are encouraged to develop and utilize an internal risk rating system in managing credit risk. The rating system should be consistent with the nature, size and complexity of a bank's activities.

Banks must have information systems and analytical techniques that enable management to measure the credit risk inherent in all on- and off-balance sheet activities. The management

iv. **Ensuring adequate controls over credit risk:** Banks must establish a system of independent, ongoing assessment of the bank's credit risk management processes and ensure that the credit-granting function is being properly managed and their credit exposure level.

Banks must ensure that the credit-granting function is being properly managed and that credit exposures are within levels consistent with prudential standards and internal limits

Banks must have a system in place for early remedial action on deteriorating credits, managing problem credits and similar workout situations.

V. The Role of Supervisors: Supervisors should conduct an independent evaluation of a bank's strategies, policies, procedures and practices related to the granting of credit and the ongoing management of the portfolio and couch practical limits to restrict bank exposures to single borrowers or groups of connected counterparties.

2.1.5. Credit Risk Measurement

Credit risk measurement relies on the lenders analytics and risk measurement tools rather than the borrowers. It also has three goals the first one is to limit the credit risk exposure that the lender accepts when extending the debt. The second goal is to insure that adequate compensation is earned for risk undertaking. It is concerned with the revenue and profit margin earned on the products and services that lenders provide. The third goal is to mitigate the credit risk exposure by structuring transaction to protect against loss as well as in to asset classes that can be marketed to third party investor Colquitt (2007).

The risk measurement concerns the actual measurement of the risk in a risk grade or on a total portfolio. The measurement quantifies the actual default risk (probability of default), the loss risk (loss given default) and the exposure risk (exposure at default). A simple way of risk measurement is to learn from past data when available (Beasens and Gestel, 2009)

2.1.6. Credit Risk Models

Risk model deals with the understanding and prediction of risk levels (Beasens and Gestel, 2009) Credit risk modeling methodologies allow a tailored and flexible approach to price measurement and risk management. (Basel, 1999)

i. Value at Risk Model (VAR)

It is one of the newer risk management tools. The Value at Risk (VAR) indicates how much a firm can lose or make with a certain probability in a given time horizon. VAR summarizes financial risk inherent in portfolios into a simple number. Though VAR is used to measure market risk in general, it incorporates many other risks like foreign currency, commodities, and equities. (Thirupathi K. & M. Manojkumar (2013)

Credit VAR models can be gathered in two main categories: 1) Default Mode models (DM) and 2) Mark-to-Market (MTM) models. In the former, credit risk is identified with default risk and a binomial approach is adopted. Therefore, only two possible events are taken into

account: default and survival. The latter includes all possible changes of the borrower creditworthiness, technically called “credit migrations”. In DM models, credit losses only arise when a default occurs. On the other hand, MTM models are multinomial, in that losses arise also when negative credit migrations occur (Altman, 2006).

ii. The Merton Model

The basic intuition behind the Merton model is relatively simple: default occurs when the value of a firm’s assets (the market value of the firm) is lower than that of its liabilities.

The payment to the debt holders at the maturity of the debt is therefore the smaller of two quantities: the face value of the debt or the market value of the firm’s assets. Under these models, all the relevant credit risk elements, including default and recovery at default, are a function of the structural characteristics of the firm: asset levels, asset volatility (business risk) and leverage (financial risk). The RR is therefore an endogenous variable, as the creditors’ payoff is a function of the residual value of the defaulted company’s assets Altman (2006). The probability of a firm going bankrupt depends crucially on the beginning period market value of that firm's assets relative to its outside debt and the volatility of the market value of a firm's assets (Altman & Saunders, 1998).

iii. Credit Metrics Model

Credit Metrics is a tool for assessing portfolio risk due to changes in debt value caused by changes in obligor credit quality. We include changes in value caused not only by possible default events, but also by upgrades and downgrades in credit quality. Also, we assess the value-at-risk (VAR) the volatility of value not just the expected losses.

Importantly, we assess risk within the full context of a portfolio. We address the correlation of credit quality moves across obligors. This allows us to directly calculate the diversification benefits or potential over-concentrations across the portfolio. In addition, Credit Metrics allows us to capture certain market risk components in our risk estimates.

These include the market driven volatility of credit exposures like swaps, forwards, and to a lesser extent, bonds. J.P Morgan (1997)

iv. Internal Rating System

An internal rating system assist financial institutions to manage and control credit risks they face through lending and other operations by grouping and managing the creditworthiness of borrowers and the quality of credit transactions. Thirupathi K. & M. Manojkumar (2013)

Capital market looks to credit rating as a determinant of an obligor's financial health. Rating agencies use different grading system to rank borrower according to their ability to service their obligations (Ong, 2006).

2.1.7. Credit Scoring System

According to Hussein & John (2011) Credit scoring has been regarded as a core appraisal tool in which the idea of reducing the probability of a customer defaulting, which predicts customer risk, is a new role for credit scoring, which can support and help maximize the expected profit from that customer for financial institutions, especially banks. One of the most important things, to classify a bank's customers, as a part of the credit evaluation process to reduce the current and the expected risk of a customer being bad credit, is credit scoring. Hand & Jacka, (1998, p. 106)

Credit scoring is purely judgmental approach in which credit analyst decision is based on five Cs (i.e. character, capacity, capital, collateral and condition). Thomas (2002)

According to Beasens and Gestel (2009) Credit scoring is a credit risk management technique that analyzes the borrower's risk. In its early meaning, "credit scores" were assigned to each customer to indicate its risk level. The more highly discriminative the scoring system, the better are the customers ranked from high to low risk. Commonly focuses on the values of the 5 Cs of a customer (i.e., Character, Capital, Collateral, Capacity and Condition.)

Credit scoring is the set of decision models and their underlying techniques that aid lenders in the granting of consumer credit. These techniques assess, and therefore help to decide, who will get credit, how much credit they should get, and what operational strategies will enhance the profitability of the borrowers to the lenders (Thomas, 2000).

The judgmental techniques rely on the knowledge and both past and present experience of credit analysts, who evaluate the required requisites, such as the personal reputation of a

client, the ability to repay credit, guarantees and client's character. (Abdou, El-Masry&Pointon, 2007).

Credit scoring is mechanical system for analysis of the loan applicant and used to increase the correctness in the approval of loans to creditworthy customers, which can result in increased profits or rejection of those customers who are not creditworthy. The main reasons for the use of credit scoring are to reduce bad debts and to improve operational efficiency (Janeska, Sotiroski, &Taleska, 2014).

The main aspect generally used in credit scoring models include the borrowers'' personal characteristics such as income, age, gender, education, occupation, region, time at present address, residential status, marital status, and followed by the borrower'' banking relationship such as collateral value, loan duration, time with bank, number of loans, and current account (Marian G. &Fotini G., 2010, p.15).

According to Beasens and Gestel(2009) Different customer scoring stage are listed as follows: Marketing score: a marketing activity aims to reduce the cost of customer acquisition and to minimize customer inconvenience and dissatisfaction. Application score: Application scoring systems summarize all applicant information into one overall score measuring the creditworthiness of loan applicants in order to predict the probability of repayment problem. Fraud score: simply by observing and counting the number of days in payment arrears, to claim as fraudulent or a credit application as containing fraudulent information. Performance score: The goal of performance scoring is to monitor the existing portfolio, its future performance and losses. Behavioral score: Behavioral scoring analyzes the risk of existing customers based on their recently observed behavior once credit has been granted, banks can subsequently start to monitor the repayment and financial behavior of their customers. It allows lenders to make better decisions in managing existing clients by forecasting their future performance Thomas (2002). The behavior score analysis the customer's previous payment and purchase behavior as well as the customer's social demographic (Charlotte & Camilla, 2010).

Early warning score: Early warning systems aim to early detect potential crises with counterparts. These counterparts are put on a watch list for closer inspection and follow up. Collection score: Collection scoring is a decision support tool to manage bad debt. One rank

orders customers already in payment arrears based on the probability of successfully collecting the outstanding debt. Profit score: Developing customer level profit scoring models is typically very complex because of several practical implementation issues. Direct and indirect benefits and costs need to be considered and also the timing of the cash flows and the corresponding discount factors need to be taken into account. Credit lenders wish to change from minimizing the risk of a consumer defaulting to maximizing the profit a consumer brings them Thomas (2002).

2.1.8. Credit Risk Mitigation

According to Dohnal (2008) Credit Risk Mitigation (CRM) defined as a mechanism used by different credit institution in order to minimize their credit risk related with exposure which the institution continuous to hold. He also further point to that credit risk mitigation techniques can be distinguish in to two parts the first one is funded credit protection which includes real estate and financial instrument. The reduction of the credit risk exposure of a credit institution draw from the right of the credit institution in case of default to liquidate or retain, to obtain transfer or appropriation of certain assets, to retain certain assets, to reduce the amount of the exposure and to replace the amount of the exposure. The other one is unfunded credit protection which includes guarantee. The reduction of the credit risk exposure of a credit institution derives from the responsibility of a third party to pay an amount in the occasion of borrowers incapability to pay their loan or on the incidence unexpected events.

2.1.9. Credit Risk Mitigation Technique

“A bank should disclose the effect of credit risk mitigation techniques, including collateral, guarantees, credit insurance and legally enforceable netting agreements”.(Basel 2000)

i. Funded Credit Protection

a. Collateral

Collateral is an asset that serves as security against counter party risk. Anderson and Joeveer(2014)A collateralized transaction is a transaction where the credit exposure or potential credit exposure of the credit institution to a counterparty is hedged in whole or in part by collateral posted by the counterparty or by a third party on behalf of the counterparty. Basel (2004) Collateralized credit exposures must have a risk biased exposure

amount less than the same credit exposure without credit protection. The collateral can be in the form of real estate, receivable and other form of physical collateral. Dohnal (2008)

b. On-balance Sheet Netting

According to Basel (2004) Banks where legally enforceable netting arrangement for loans and deposits they may calculate capital requirement on the bases of net credit exposure. The claim between the credit institution and counter party may be recognized. They also indicated that Master netting agreements covering repurchase transactions and/or securities or commodities lending or borrowing transactions and/or other capital market driven transactions.

ii. Unfunded credit protection

The amount that the safety provider has carried out to pay in the event of the default or non-payment of the borrower or on the event of other specified credit situation is the value of unfunded credit protection. where the amount that the protection provider has carry out to pay is not higher than the exposure value, the value of the credit protection shall be reduced by 40%; where the amount that the protection provider has carry out to pay is higher than the exposure value, the value of the credit protection shall be no higher than 60% of the exposure value Basel (2004)

a. Guarantees

A guarantee must represent a direct claim on the guarantor with the extent of the cover being clearly defined and unquestionable. A guarantee must be irrevocable; there must be no clause in the guarantee that would allow the guarantor to cancel unilaterally the cover of the guarantee or that would increase the effective cost of cover as a result of deteriorating credit quality in the guaranteed exposure. A guarantee must also be unconditional; there should be no clause in the guarantee outside the direct control that could prevent the guarantor from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the due payment. The indirect guarantee covers all credit risk elements of the claim; both the original guarantee and the indirect guarantee meet all the operational requirements for guarantees except that the indirect guarantee need not be direct and explicit to the original claim. Basel (2008)

b. Loan Commitments

A loan commitment is a facility which gives the obligor the option to borrow at his own discretion. In practice, this essentially means both a loan (equal to the amount currently drawn on the line) and an option to increase the amount of the loan up to the face amount of the facility. The counterparty pays interest on the drawn amount, and a fee on the undrawn amount in return for the option to draw down further. For these exposures three factors influence the revaluation in future rating states: the amount currently drawn; expected changes in the amount drawn that are due to credit rating changes; and the spreads and fees needed to revalue both the drawn and undrawn portions. All of these factors may be affected by covenants specific to a particular commitment. J.P Morgan (1997)

2.1.10. Tools of Credit Risk Management

According to Sunitha and J. K. Raju (2013), Thirupathi & M. Manojkumar (2013) ,Bhaskar (2014) and Nayan&M.Kumaraswamy (2014) the tools through which credit risk management is carried out are:

- a) **Exposure Ceilings:** Prudential Limit is linked to Capital Funds - say 15% for individual borrower entity, 40% for a group with additional 10% for infrastructure projects undertaken by the group, Threshold limit is fixed at a level lower than Prudential Exposure; Substantial Exposure, which is the sum total of the exposures beyond threshold limit should not exceed 600% to 800% of the Capital Funds of the bank (i.e. six to eight times).
- b) **Review/Renewal:** Multi-tier Credit Approving Authority, constitution wise delegation of powers, Higher delegated powers for better-rated customers; discriminatory time schedule for review/renewal, Hurdle rates and Bench marks for fresh exposures and periodicity for renewal based on risk rating, etc are formulated.
- c) **Risk Rating Model:** Set up comprehensive risk scoring system on a six to nine point scale. Clearly define rating thresholds and review the ratings periodically preferably at half yearly intervals. Rating migration is to be mapped to estimate the expected loss
- d) **Risk Based Scientific Pricing:** Link loan pricing to expected loss. High-risk category borrowers are to be priced high. Build historical data on default losses. Allocate capital to absorb the unexpected loss.

e) **Portfolio Management:** The need for credit portfolio management emanates from the necessity to optimize the benefits associated with diversification and to reduce the potential adverse impact of concentration of exposures to a particular borrower, sector or industry. Stipulate quantitative ceiling on aggregate exposure on specific rating categories, distribution of borrowers in various industry, business group and conduct rapid portfolio reviews.

f) **Loan Review Mechanism:** This should be done independent of credit operations. It is also referred as Credit Audit covering review of sanction process, compliance status, and review of risk rating, pickup of warning signals and recommendation of corrective action with the objective of improving credit quality. It should target all loans above certain cutoff limit ensuring that at least 30% to 40% of the portfolio is subjected to LRM in a year so as to ensure that all major credit risks embedded in the balance sheet have been tracked.

2.2. Empirical Studies

Different researchers were conducted on this area of studies in different financial institutions.

Yang Wang, (2013) find out that the key principles in credit risk management are establishment of a clear structure, allocation of responsibility and accountability, processes have to be prioritized and disciplined, responsibilities should be clearly communicated and accountability assigned on his research title Credit Risk Management in Rural Commercial Banks in China.

Atkilti (2015) in his study find out that Credit risk, liquidity risk and operational risk are the three important types of risks the banks mostly facing. The three widely used Risk identification method were identified and ranked as Financial Statement Analysis firstly and followed by audit and physical inspection and then internal communication. The study further confirmed that four aspects of Basel's Credit risk management principles explain a significant level of variation on Credit risk management practice of Ethiopian commercial banks. Furthermore, Establishing an appropriate Credit risk environment and Ensuring adequate Controls over credit risk were found to be the most influential variables on level of Credit risk management practice. It is finally observed insignificant difference between

public and private commercial banks in all aspect of Credit risk management principles and practice.

Girma Mekasha(2011) point out on his study credit risk management and its impact on performance in Ethiopian commercial banks that the default ratio of any bank in Ethiopia depends on credit risk management quality of the institution.

Solomon Goshime(2013) studied credit risk management practice of Nib International Bank in his assessment the researcher come across that factors lead to wrong decision making and increase NPL level of the bank are concentration of credit in few sector and borrower, collateral as number one technique of credit risk management, absence of credit risk model of credit portfolio, lesser attention for MIS and advisory service to customers and absence of proper follow up.

Tibebu Tefera(2011) examined that credit risk management and profitability of commercial banks in Ethiopia. Find out that Both nonperforming loan ratio and capital adequacy ratio has a negative impact on profitability's of commercial banks in Ethiopia. He also state that the impact level of nonperforming loan ratio is negative which means, a single unit increase in nonperforming loan ratio leads in decrease of profitability of commercial banks of Ethiopia.

Tesfaye B. (2012) study factors influencing the level of credit risk in the Ethiopian Commercial Banks. The study find out that quantity of risk and quality of risk management related variables has got much influence on the credit risk level of banks. Nevertheless, risk direction related measures, which are mostly external focus, have limited influence on credit risk. More specifically the variation in the effect of stock and flow measures entails banks to further enhance mostly two of Basel principles: operating under a sound credit granting process and maintaining an appropriate credit, administration, measurement and monitoring process.

Akotey J.O. (2012) the study has examined the credit risk management of selected rural banks in Ghana and has discovered that credit risk management plays a significant and dynamic role in the business of rural banking. The researcher find out sampled ruler commercial banks have poor credit risk management practices and hence the high levels of

the non-performing loans in their loans portfolios. Despite the high levels of the NPLs, their profit levels keep rising as an indication of the transfer of the loan losses to other customers in the form of large interest margins. Therefore the findings indicate a significant positive relationship between non-performing loans and rural banks' profitability informative that, there are higher loan losses but banks still earn profit.

Bajpai et.al. (2015) The researcher find out that BPR Ltd has a credit management system however it needs to be reviewed and adopted more to current Rwandan environment. The researcher also indicated that there is a direct relationship between credit risk management and profitability of commercial banks and recommended that BPR Ltd should review and improve its credit policy and adopt it to Rwandan market and context and BPR Ltd should provide continuous training and bring up to date its staffs.

In summary, there have been many literatures written on credit risk suggesting the use of improved credit policy to reduce credit risk. The researches brought by TibebuTefera (2011) and Solomon Goshime (2013) both suggest some points that can explain the credit risk problems that banks in Ethiopia are facing today. A decreased non performing loan of a bank and the banks credit risk management policies must really align for a successful prevention of credit risk.

CHAPTER THREE

METHODOLOGY OF THE STUDY

3.1 Research Design

Designing a study helps the researcher to plan and implement the study in a way that help the researcher to obtain intended results, thus increasing the chances of obtaining information that could be associated with the real situation (Burns & Grove, 2001). This study used descriptive research design for the data through questionnaire. Kothari (2004) explains descriptive research as a situation or condition at hand, it is one in which information is collected without changing operating environment. From different methods of descriptive research design the utilized survey research design based on the purpose of the study.

3.2 Research Approaches

The three methods that are commonly implemented in a research are quantitative, qualitative and mixed, where one of them is not better than the others, all of this depends on how the researcher want to do a research of study (Creswell, 2005). Creswell (2005) asserted that quantitative research is a type of educational research in which the researcher decides what to study, asks specific, narrow questions, collects numeric (numbered) data from participants, analyzes these numbers using statistics, and conducts the inquiry in an unbiased, objective manner. Quantitative approach is one in which the investigator primarily uses postpositive claims for developing knowledge, i.e., cause and effect relationship between known variables of interest or it employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistics data. The study used quantitative research approaches.

3.3 Population and Sampling Method

3.3.1 Population of the study

Hair, et al (2010) states target population as a specified group of people or object for which questions can be asked or observed to collect required data structures and information. To collect data about credit risk management.

According to Alreck & Settle (2005) the choice of sample size is normally made after considering statistical precision, practical issues and availability of resources. A different sampling paradigm by Lowler (1984) noted that there is no a single precise way for the determinations of sample size hence there are a number of inadequacy for deciding on sample size. Malhotra & Peterson(2006) stated that, the larger the sampling size of a research, the more accurate the data generated. To determine the sample size of the study, the researcher used Yamane’s (1967) formula. It is a simplified formula to calculate the sample size. This formula is based on a 95% desired confidence level and a 5% desired level of precision.

$$n = \frac{N}{1 + N(e)^2} 121 = \frac{132}{1 + 132(0.02624)^2}$$

Where:- n = Sample size = 121

N = population size = 132

e = level of precision= 0.02624

According to the formula the population size for the study set to be 132 respondents. Hence, 100 respondents were selected from branches (Branch Managers and Loan Officers) and 32 from Head Office. The targeted population for the study was 50 Branch Managers and 50 Loan Officers from 50 branches of Addis Ababa and 32 Head Office staffs from three Departments that are Credit Appraisal, Credit Customer Relation and Risk & Compliance Departments. The population size was determined based on the number of Branch Managers and Loan Officers as well as Head Office staffs who are working on credit and related operations. During 2017/2018 fiscal year, the Bank has 108 branches in Addis Ababa out of which 50 branches above Grade II branches and 58 branches Grade I (New Branches). The study selected 50 branches which have credit exposure. Accordingly, 50 Branch Managers and 50 Loan Officers were selected from 50 branches of Addis Ababa as well as 32 staffs from Head Office who are working on credit and related operations. This has bring about the need for determine 132 staffs as a target population. Thus, a total population of 132 was considered for the study population. Non probability sampling method, Judgmental or purposive sampling techniques were used to focus on limited number of informants to get deep insight about the issue.

3.4 Data Type and Source

Both primary and secondary data types were used for the study from their respective sources. According to Biggam (2008) primary data is the information that the researcher finds out by him/herself regarding a specific topic. The main advantage with this type of data is that it is collected with the research's purpose in mind. It implies that the information resulting from it is more consistent with the research questions and objectives. The primary data was gathered from the employees of the Bank. Secondary data were obtained from published and unpublished materials such as magazines, reports and website, and marketing journals and articles. The researcher used Basel's (1990 a, 2000) credit risk management guideline discussed the questionnaire.

3.5. Methods of Data Collection and Instruments

In order to achieve the objectives of this study, the researcher used quantitative research methods that the study used questionnaire as a data collection instrument that helps to cover larger target groups than the interview, given the quality and chance of no response. Primary data collected from employees of the Bank who are working on credit and related operations and interview also employed for those who are at Division Head, Directors of Credit Appraisal and Risk & Compliance Management Departments. Secondary data also collected from annual reports, credit policy and procedure manual of the Bank, directives and regulation of National Bank as well as from different Books. The questionnaire was prepared using both close-ended and opened method questions; yes/no, multiple choices and 5 Point Likert-Scale approaches (i.e., from "Strongly Disagree to Strongly Agree"). For the 5-point likert scale the respondents were asked to indicate their level of agreement with the ratings of Strongly Disagree (1), Disagree (2), neutral (3), Agree (4) and Strongly Agree (5).

3.6 Methods of Data Analysis

The data collected from the respondent were analyzed using quantitative data analysis techniques. Quantitative analysis was used for the data which were collected through structured questionnaire.

In line with this, the study also used descriptive statistics to make data analysis. Data collected from respondents was analyzed by using statistical (quantitative) methods, For presenting data appropriately the researcher used different types of descriptive data analysis

methods such as frequency, percentage, pie chart, simple tabulation, cross tabulation, mean and standard deviation.

3.7 Ethical Consideration

Letter for the intention of the study and support of concerned was obtained from the University. Before the data collection, permission from the organization and tourist destinations was requested. During the distribution of the questionnaire, respondents were informed about the purpose and the benefit of the study along with their full right to refuse or accept the participation. The respondents` were told their response would be kept confidential and their identity shall not be exposed. Every person involved in the study was entitled to the right of privacy and dignity of treatment, and no personal harm was caused to subjects in the research. Information obtained was held in strict confidentiality by the researcher. All assistance, collaboration of others and sources from which information was drawn were acknowledged.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATIONS

This chapter presents results of data collected and interpreted on the results. The researcher distributed 132 questionnaires. The data is analyzed through descriptive analysis. But 121 questionnaires were returned fully filled with response rate of 91.67%.

4.1 Demographic Information

Table 4.1 below presents demographic profile of respondents.

Table 4.1 Demographic information of Respondents

Variable	Category	Frequency	Percent
Gender	Male	99	81.8
	Female	22	18.2
Age	18 to 30	8	6.6
	31 to 45	52	43.0
	46 to 60	59	48.8
	Above 60	2	1.7
Education	Diploma	9	7.4
	University degree	90	74.4
	Master Degree and above	22	18.2
Experience	Less than 5 year	20	16.5
	6 year to 10	81	66.9
	More than 10	20	16.5

Source: Survey, 2018

81.8% of respondents are males and 18.2% of the respondents are females. 6.6% of respondents are at age range of 18 to 30, 43% of them are at range of 31 to 45, 48.8% of the respondents are at range of 46 to 60 and remaining 1.7% of them are at category of age above 60 years. Only 7.4% of the respondents have educational qualification of diploma and 18.2% of the respondents have masters' degree. The largest share of respondents has bachelors' degree which comprises 74.4% of respondents. The above table 4.1 showed that male candidates ages between 46 and 60, who have university degree and with experience years between 6 to 10 years were more responsive to the questionnaire that was provided. Since the majority of responders were at a peak of their education level and experience years dealing with the bank, it becomes convenient to get accurate answers about the bank. Hence making it a lot easier to achieve the objectives that we stated on the previous chapters.

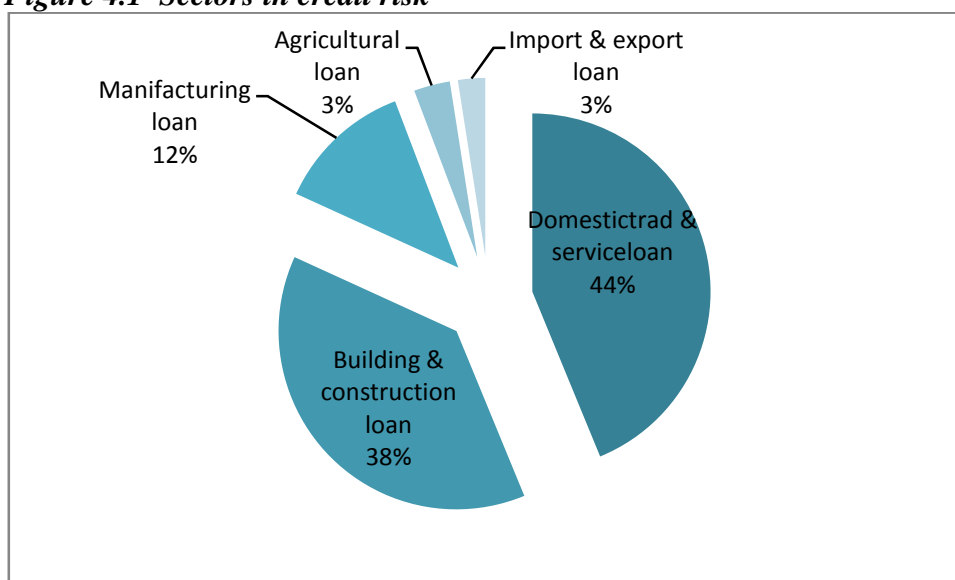
4.2 Sectors in Credit Risk

Table 4.2 Sectors in credit risk

Loan Type	Frequency	Percentage
Domestic trade & service loan	53	43.8
Building & construction loan	46	38.0
Manufacturing loan	15	12.4
Agriculture loan	4	3.3
Import and export loan	3	2.5

Source: Survey, 2018

Figure 4.1 Sectors in credit risk

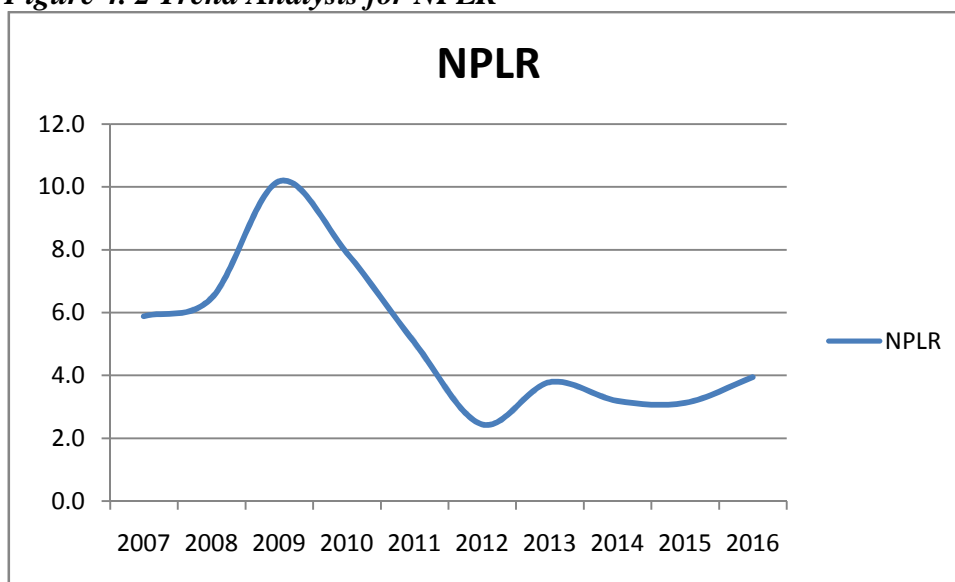


Source: Survey, 2018

The result in table 4.2 shows that domestic trade & service loan is 43.8% and building & construction loan 38% is the second riskiest loan in the bank, manufacturing loans the third riskiest loan types. It composes 12.4% of riskiest loans. These loan categories comprise 94.2% of total riskiest loans. According to Wang (2013) find out that, as agricultural producers businesses are largely depends on weather and because of the unpredictability of natural environments, the sector is highly exposed to credit risk. The export businesses are also highly affected by overseas market due to fluctuation in foreign exchange rate. According to Solomon (2013) manufacturing loan have the highest percentage share from overall credit portfolio and this leads to high level of credit concentration risk on single economic sector. According to result shown in the above table 4.2 the two priority sectors

are highly exposed to credit risk according to respondent. This indicates that the bank is highly vulnerable to domestic trade & service loan risk and building & construction loan risk. According to Singh (2013) as indicated on literature review part Credit risk occur when one of the counter parties to a transaction does not clear up in full either when the fund are outstanding or on some later date and it may result in bankruptcy of counterparty.

Figure 4. 2 Trend Analysis for NPLR



Source: Own computation, 2018

Trend of the NPLR indicates that NPL of the bank was decreasing from 2008 to 2012 but afterwards it is rising.

The result presented in table 4.8 indicates that on mean average the bank has 5.2% of non-performing loan during the period of 2007 to 2016. Even though the maximum NPL registered is 10.2 and the minimum being 2.4, the mean average of those mentioned years is 5.2%.

4,3 Credit Granting Process of the Bank

Table 4,3 Credit Granting Process of the Bank

S.No.	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The bank has clearly established processes in place for approving new credit, amendment, renewal and for re-financing of existing credit	In No.	75	46	0	0	0
		In %	61.98%	38.02%	0.00%	0.00%	0.00%
2	Approval is made in accordance of guideline and appropriate level of management	In No.	81	37	3	0	0
		In %	66.94%	30.57%	2.48%	0.00%	0.00%
3	The bank has well defined credit granting criteria for borrowers in terms of duration, amount and types of credit.	In No.	21	80	15	5	0
		In %	20.14%	61.15%	13.67%	5.04%	0.00%
4	The bank use comprehensive information enable to assess true risk profile of the borrowers.	In No.	4	15	21	47	34
		In %	4.32%	8.63%	13.67%	40.29%	33.09%
5	The bank has strict policy to identify borrows associated with fraudulent activities and other crime.	In No.	0	10	12	51	48
		In %	0.00%	10.07%	13.67%	39.57%	36.69%

Source: Researcher survey

All respondents agreed that the bank has clearly established process in place for approving new loan, amending and re-financing credit facilities. Banks should establish and put in place a credit policy regarding the information and documentation needed to approve new, renew existing and/or change the terms and conditions of previously approved credit

facilities. The information received will be the basis for any internal evaluation or rating assigned to the credit and its accuracy and adequacy is critical to management making appropriate judgments about the acceptability of the credit. In our case, the bank has already employed a clearly established policy and procedures.

Majority of the respondent which holds 97.52%.of the respondents agreed that the bank approves credit facilities in accordance to the pre-established guidelines by appropriate level of management while 2.48% remained neutral. This indicates that, each credit proposal the bank is subjected to careful and thorough analysis and decision commensurate with the size and complexity of the transactions

Majority of the respondent which holds 81.29% agreed on that, the bank has a well defined criteria for borrows in terms of duration, amount and types of credit While 13.67% remained neutral and the rest 5.04%% disagreed. This implies that, the bank has set criteria for identifying eligible parties for credit, types of credit are available, terms and conditions under which the credits should be granted and amount that should be granted.

12.95% of the respondents agreed that the majoring which holds 73.38.% disagree the rest 13.67% remain neutral. To obtain detail information concerning the borrower, information should include amount requested, purpose of the request, sources of repayment, the current risk profile including the nature and aggregate amounts of risks of the borrower or counterparty, collateral and its sensitivity to economic and market developments, borrower's repayment history and current capacity to repay based on historical financial trends , future cash flow projections under various scenarios for commercial credits, the borrower's business expertise , the status of the borrower's economic sector ,its position within that sector, The proposed terms and conditions of the credit including covenant designed to limit changes in the future, risk profile of the borrower, and adequacy and enforceability of collateral or guarantees. However, information being received by the bank is not sufficient enough to make rational and proper credit-granting decisions.

The respondent holding 76.26.% disagreed on the fact that, the bank has a strict policy to identify borrowers associated with fraudulent and crime activities while 10.07% agree to this the rest 13.67% stayed neutral. Prior to entering into any new credit relationship, a bank must become familiar with the borrower or counterparty and be confident that it is dealing

with an individual or organization with a sound, reputation and creditworthiness culture. In particular, strict policies must be in place to avoid fraudulent customers involved in criminal activities or related with one. However, the above result implies the vulnerability of the bank to credit risk is high as the borrower or counterparty who are familiar to the bank or perceived to be highly reputable are sometimes involved in crime activities or are related to one.

4.4 Credit Analysis and Approval Process of the Bank

Table 4.4 Credit Analysis and Approval Process of the Bank

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The credit analysis procedure of the Bank considers factors purpose of the credit and sources of repayment	In No.	65	56	0	0	0
		In %	53.72%	46.28%	0.00%	0.00%	0.00%
2	Borrower's repayment history, current capacity to repay, based on historical financial trends and future cash flow projections under various scenarios are considered on the credit analysis.	In No.	23	89	9	0	0
		In %	19.05%	73.55%	7.44%	0.00%	0.00%
3	Current risk profile of the counterparty (including the nature and aggregate amounts of risk), and sensitivity to economic and market developments, especially for major exposures are extensively considered in the credit analysis	In No.	2	14	0	63	42
		In %	1.65%	11.57%	0.00%	52.07%	34.71%

Source: Researcher survey

The credit analysis of the bank and the Credit analysis procedure of the Bank considers factors purpose of the credit and sources of repayment all respondents agree the credit analysis and approval procedure of the Bank give emphasis for such factor, knowing

purpose of the loan and the primary source of repayment helps the Bank to have information exactly how borrowers intend to repay the loan and the probability of successful repayment of the loan which further assist for proper loan sanction.

92.6.% of the respondent agree that borrower’s repayment history, current capacity to repay, based on historical financial trends and future cash flow projections under various scenarios are considered on the credit analysis the rest 7.44.% remain neutral. Over all the result shows employing proper credit analysis could increases the efficiency of the Bank in customer selection, helps to determine adequate credit conditions for a customer depending on the level of risk involved, Provides access to other antecedents, payment behavior and anticipated warnings, allows minimizing debt collection expenses of the Bank

Majority of respondents holds 86.78% are disagree as current risk profile of the counterparty (including the nature and aggregate amounts of risk), and sensitivity to economic and market developments, especially for major exposures are extensively considered in the credit analysis while the reaming 13.22.% respondents agreed. This indicates that the bank is not in the position for considering proposed economic development projects incorporating an analysis of risk and uncertainty as part of its overall feasibility analysis of such projects. Proposer analysis requires knowledge of risk analysis, economic and fiscal impact assessment approaches, reasonable development assumptions, and current information on the overall economic development market and trends, but failing to make a proper analysis on these area a head of loan sanctioning may increase probability of risks and uncertainty of collecting back the Bank’s granted credit.

4,5 Credit Risk Mitigation

Table 4,5 Credit Risk Mitigation

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The Banks have policy for acceptability of collateral and procedure for evaluation.	In No	21	99	1	0	0
		In %	17,36%	81,81%	0,83%	0.00%	0.00%

2	Value and existence of the collateral is checked periodically.	In No	9	16	18	76	2
		In %	7.44%	13.22%	14.88%	62.81%	1.65%
3	The bank utilizes its internal risk rating system to manage credit risk.	In No	0	0	0	42	79
		In %	0.00%	0.00%	0.00%	34.71%	65.23%
4	When individual credit and their portfolio is assessed future change in economic condition is considered.	In No	0	5	31	48	37
		In %	0.00%	4.13%	25.62%	39.67%	30.58%

Source: Researcher survey

The existence of policy for acceptability of collateral and procedure for evaluation 99.17% of respondent agree while 0.83% remained neutral. Banks should have policies regarding the degree of accepting various forms of collateral, procedures for their evaluation. As per the above response NIB has already established a policy about acceptable collaterals and procedures of evaluating them.

The value and existence of collateral is checked periodically by the bank 64.46% of the respondents disagreed while 20.67% agreed and the rest 14.88% remained neutral. Major credit risks occur due to a change in price and loss of collateral from time to time hence, Banks needed to be reminded that the value of collateral may be damaged which in turn might lead to a diminished recoverability of the credit facilities. Based on this fact, NIB is currently exposed to credit risk due to the failure of following the banks policy and procedure and re estimate the collaterals periodically.

The bank must also give due attention to collateral in the credit granting process as risk mitigation mechanism because collateral is an asset that serves as security against counter party risk. Anderson & Joeveer (2014) and Mark (2010) identified the extent that capacity/competition and conditions are mostly used as in screening and risk analysis before awarding credit to clients. It was further found that extent that collateral/security and character of borrower were used in screening and risk analyses before awarding credit to clients are moderate impact in financial institutions in Kenya

All respondent disagreed on question that, the bank utilizes internal risk rating system to manage its credit risk. In order to facilitate early identification of changes in risk profiles, the bank’s internal risk rating system is indicators of potential or actual deterioration in credit risk. A well-structured internal risk rating system is a good means of differentiating the degree of credit risk in the different types of credit. Given the above fact the bank is exposed to credit risks that should have been avoided if the designed risk rating system is enforced.

70.51% of the respondent disagree that individual credit and their portfolio is assessed by considering future change in economic condition while 27.34% replay neutral and 2.16% disagreed. The result indicates that, future changes in economic conditions that could have unfavorable effects on the bank credit exposures and ability to withstand such change.

4,6 Control Over Credit Risk of the Bank.

Table 4.6 Control Over Credit Risk of the Bank

J.S.N o	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	Internal control of the bank trail documentation and approval process.	In No.	43	78	0	0	0
		In %	35.54%	64.46%	0.00%	0.00%	0.00%
2	The bank has system in place for early remedial action on deteriorating credits.	In No.	3	15	13	68	22
		In %	2.48%	12.40%	10.74%	56.20	18.18%
3	The bank has workout function which is segregated from area that credit is originated.	In No.	17	91	13	0	0
		In %	14.05%	75.21%	10.74%	0.00%	0.00%

Source: Researcher survey

All respondents agreed that, internal control of the bank trail documentation and credit approval process. Credit Approvals process should be made in accordance with the bank’s

written guidelines and granted by the appropriate level of management so that there should be a clear audit trail documenting that the approval process was complied with and identifying the individual(s) and/or committee(s) providing input as well as making the credit decision. This result suggests that, controllers of the bank are performing their duty in protecting the banks credit risk arising from unfulfilled documentation. Such a system enables the banks management to monitor adherence of the established credit risk policy and procedure.

Regarding the question asked about whether the bank has placed a system for early remedial action on problem loans, respondents holding about 69.79 % agreed whereas 16.55% disagree, 13.67% remained neutral showing that Bank is in a good position to take proper remedial action and conducting work out solution for deteriorating loans.

All respondent agreed on the question that, the bank has workout function which is segregated from area where the credit is originated. Segregation of function enable the bank to effectively manage problem loan before deteriorating because workout specialized experts concentrate on rehabilitate a troubled credit or increase the amount of repayment ultimately collected. An experienced workout section can also provide valuable input into any credit restructurings organized by the business function, on this regard the function is entirely segregated from the credit origination place at NIB.

4,7 Internal Control of the Bank

Table 4.7 Internal Control of the Bank

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The Bank establishes a system of independent, ongoing assessment of credit risk management process.	In No.	14	7	5	52	43
		In %	11.57%	5.78%	4.13%	42.97%	35.53%
		In %	7.44%	66.94%	4.95%	0.00%	0.00%

2	The credit policy place exposure limits on single counter parties and groups of associated counter parties	In No.	10	5	2	54	50
		In %	8.26%	4.13%	1.65%	44.62%	41.32%
3	All relevant personnel clearly understood the Bank's credit policy and procedure and are accountable for complying with the established policies and procedures.	In No.	13	23	3	36	46
		In %	10.74%	12.39%	19.01%	29.75%	38.01%

Source: Researcher survey

The Bank establish a system of independent, ongoing assessment of credit risk management process, 17.35% of respondents agree with the statement while 78.5% respondents holding disagree that the Bank established proper system of independent, ongoing assessment of credit risk management process the rest 4.13% remain neutral.

85.95 % of respondents disagree the current credit policy of the Bank place exposure limits on single counter parties and groups of associated counter parties while only 12.39 % of them are agree the current credit policy of the Bank incorporate such statement where as 1.65% of respondents remain neutral In general the result proves that, the Bank has a poor system of internal control to mitigate its credit risk. The bank should have an efficient internal review and reporting system as an effective oversight mechanism in respect of its credit function. This system should provide the board of directors and senior management with sufficient information to evaluate the performance of account or relationship officers and the condition of the credit portfolio.

4.8. Descriptive Analysis for Secondary Data

Table 4.8 below shows the nonperforming loan position of the bank (in million Birr).

Analysis is given for nonperforming loan to total outstanding loan (NPLR).

Table 4.8. Secondary Data

Year	Total loan (TL)	Nonperforming loan (NPL)	NPLR (NPL/TL)
2007	1817.3	106.9	5.9
2008	2194.3	141.8	6.5
2009	2220.3	226	10.2
2010	2526.1	199.6	7.9
2011	2766.4	139.6	5.0
2012	3708.2	90.6	2.4
2013	4542.8	172.1	3.8
2014	5521.6	176.2	3.2
2015	7000.1	219.1	3.1
2016	7647.2	301.8	3.9

Source: NIB (2018)

Table 4.9 Descriptive Statistics NPL

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
TOL	10	1817.30	7647.20	3994.4300	2105.11592
TNPL	10	90.60	301.80	177.3700	62.62699
NPLR	10	2.40	10.20	5.1900	2.45875

Source: Own computation, 2018

The result presented in table 4.8 indicates that on mean average the bank has 5.2% of non-performing loan during the period of 2007 to 2016. Even though the maximum NPL registered is 10.2 and the minimum being 2.4, the mean average of those mentioned years is 5.2%.

4.9. Analysis of Interview

Interview response on major challenges of credit risk management of the Bank

According to the interview, NIB faced the following challenges in managing its credit risks.

- Diversion of the fund, the borrowers divert the fund other than the intended purpose of the business without the knowledge of the bank.
- False information by borrowers has presented that is false financial statement which do not show the correct financial performance of their business which greatly biases the amount to be approved by the concerned organ of the bank.

- Shortage of foreign currency for those businesses engaged in manufacturing activities with huge relay on imported raw materials and also on those businesses engaged in import trade and services.
- Non-compliance with credit policy and procedure
- Lack of trained lending personnel
- Poor projects feasibility studies from the customer sides
- Lack of business management skills by clients.
- Overestimated of collateralized properties and legal issue of transferability of collateral properties in case of defaults and also collateral re-estimation is not done as per the Bank's policy and procedure are among other mentioned by interviewee.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

Based on the results of the study obtained through the questionnaire distributed to 121 credit and risk related employees of the Bank and interviews made with higher official of the Bank so as to assess the Bank's credit risk management findings of both good points that are appreciated and areas that need improvements are summarized and conclusions were made accordingly

- The Bank does not established proper system of independent, ongoing assessment of credit risk management process.
- The value and existence of collateral is not checked periodically by the bank. The bank is exposed to credit risk due to the failure of following the bank's policy and procedure and re estimate the collaterals periodically.
- Regarding secondary data originated from financial report of the bank is not effective in meeting minimum NPL ratio required by NBE.
- The bank has clearly established process in place for approving new loan, amending and re-financing credit facilities
- 85.95 % of respondents disagree the current credit policy of the Bank place exposure limits on single counter parties and groups of associated counter parties. This shows very high concentration credit risk.
- All respondent disagreed that the bank utilizes internal risk rating system to manage its credit risk. Given the above fact the bank is exposed to credit risks
- 70.51% of the respondent disagree that individual credit and their portfolio is assessed by considering future change in economic condition. The result indicates that, future changes in economic conditions that could have unfavorable effects on the bank credit exposures and ability to withstand such change.

- The respondent holding 76.26.% disagreed on the fact that, the bank has a strict policy to identify borrowers associated with fraudulent and crime activities
- The bank approves credit facilities in accordance to the pre-established guidelines by appropriate level of management
- The Bank's credit risk management and policy affected with problems both internal and external factors, the research findings indicated that internal factors such as the credit policy is not effectively implemented, weak credit analysis, poor credit monitoring, inadequate risk management, negligence for proper procedures used for credit risk assessment and lack of trained lending personnel or experts on project loans, and overestimated of collateralized properties have a boundless influence towards the attainment of successful credit risk management in Nib International Bank and external factors from customer part such as diversion of loan funds, over presenting of project costs by borrowers, poor projects feasibility studies from the customer sides, are among other to be sited as a challenges.

5.2 Conclusion

Based on the findings, the researcher provides the following conclusions.

- As a result of failure to establish proper credit limit for particular economic sector and concentrated in specific types of loans with common characteristics such as common industries and/or geographic areas are negatively impacted by a catastrophic event within the business line, industry, or geography a high degree of concentration risk as this is justified by domestic trade services term loan alone contribute about 43.8 % and of the total non- performing credit of the Bank, This shows very high concentration credit risk.
- Secondary data originated from financial report of the bank is not effective in meeting minimum NPL ratio required by NBE.
- The value and existence of collateral is not checked periodically by the bank .Major credit risks occur due to a change in price and loss of collateral from time to time. Based

on this fact, the bank is exposed to credit risk due to the failure of following the bank's policy and procedure and re estimate the collaterals periodically.

- The Bank does not established proper system of independent, ongoing assessment of credit risk management process.
- The bank does not utilizes internal risk rating system to manage its credit risk.. Given the above fact the bank is exposed to credit risks
- Information being received by the bank is not sufficient enough to make rational and proper credit-granting decisions.

5.3. Recommendations

Based on the above conclusion the researcher forwarded the following recommendations to Nib International Bank.

- As indicated above the bank does not have independent credit risk management policy and procedure. As the bank is becoming large and complex it needs separated risk management policy and procedure. Therefore, the bank could develop or adopt independent risk management policy and procedure in order to build up proper and effective risk management system.
- The bank should utilize internal risk rating system to manage its credit risk. In order to facilitate early identification of changes in risk profiles, the bank's internal risk rating system is indicators of potential or actual deterioration in credit risk. A well-structured internal risk rating system is a good means of differentiating the degree of credit risk in the different types of credit.
- The Bank should check periodically the value and existence of collateral. The Banks needed to be reminded that the value of collateral may be damaged which in turn might lead to a diminished recoverability of the credit facilities. The Bank must also give due attention to collateral in the credit granting process as risk mitigation mechanism because collateral is an asset that serves as security against counter party risk.

- The Bank should assess Individual credit and their portfolio by considering future change in economic condition. Future changes in economic conditions that could have unfavorable effects on the bank credit exposures and ability to withstand such change.
- As stated from secondary data originated from financial report of the bank, the NPL of the bank was increasing from year to year. Hence, the bank credit activities should be made in compliance with credit policy and procedure and gives especial attention for early signal and also using the above mentioned credit risk mitigation techniques so as to minimize or avoid credit risks and to meet NBE requirements call for all banks, keeping their NPL ratio below 3% for strategic plan GTP-II period 2015/16-2019-20..
- The Bank should have a strict policy to identify borrowers associated with fraudulent and crime activities. Prior to entering into any new credit relationship, a bank must become familiar with the borrower or counterparty and be confident that it is dealing with an individual or organization with a sound, repute and creditworthiness culture. In particular, strict policies must be in place to avoid fraudulent customers involved in criminal activities or related with one.
- The goal of credit risk management is to maintain a bank's credit risk exposure within parameters set by the board of directors and senior management. The establishment and enforcement of internal controls, operating limits and other practices will help ensure that credit risk exposures do not exceed levels acceptable to the individual bank. This will enable the bank management to monitor adherence to the established credit risk objective

Reference

- Abdou, H. & Pointon, J. (2011). *Credit scoring, statistical techniques and evaluation criteria: a review of the literature*, Intelligent Systems in Accounting, Finance & Management, 18 (2-3), pp. 59-88.
- Anuj A. (2011). *Credit Risk Management: Trends and Opportunities*, Capgemini, Online available At: www.capgemini.com/risk
- Asia S. & Zaidi F.B. (2012). *Design and Development of Credit Scoring Model for the Commercial banks of Pakistan: Forecasting Creditworthiness of Individual Borrowers*, international Journal of Business and Social Science Vol. 3 No. 17. Available online www.ijbssnet.com
- Atakelt H.A. (2015). *Emphatically Study on Credit Risk Management Practice of Ethiopian Commercial Banks*. Journal of Finance and Accounting, Vol.6, No.3. PP.134-147.
- Basel Committee, (July, 1999a). *Principles for the Management of Credit risk*. Basel Committee on Banking Supervision.
- Basel Committee, (September 2000). *Best Practice for Credit Risk Disclosure*. Committee on Banking Supervision.
- Basel committee on banking and Supervision (2001). *Sound Practice for The Management of Operational Risk*. Basel committee publication No.86, Basel.
- Cebenoyan, A. S., Strahan, P. E. (2004). *Risk Management, Capital Structure, and Lending at Banks*, Journal of Banking and Finance, vol.28, p- 19-43
- Colquitt J. (2007). *Credit Risk Management: How to Avoid Lending Disasters and Maximize Earning*, McGraw-Hill, Two Penn Plaza, New York.
- Edward I. A. (2006). *Default Recovery Rates and LGD in Credit Risk Modeling and Practice*, Stern School of Business, New York, U.S.A.

- Ganopoulou M. & Giapoutzi F. (2010). *Credit Scoring and Bank Lending Policy in Consumer Loans*, International Hellenic University.
- Girma M. (2011). *Credit risk Management and Its Impact on Performance on Ethiopian Commercial Banks*, Unpublished Master's Thesis Addis Ababa University.
- Hagos M. (2010). *Credit Management (A Case Study of Wegagen Bank Share Company in Tigray Region)*, Unpublished Master's Thesis Mekelle University.
- Hand, D. J. & Jacka, S. D. (1998). *Statistics in Finance, Arnold Applications of Statistics*, London.
- Harrison O. A. (2012). *Credit Risk Management and Profitability of Selected Rural Banks in Ghana*, Catholic University College of Ghana.
- Hussein A., Ahmed E. & John P. (2007). *On The Applicability of Credit Scoring Models in Egyptian Banks, banks and bank systems*, Vol.2, No.1.
- Kargi, H.S. (2011). *Credit Risk and the Performance of Nigeria Banks*, Ahmadu Bello University, Zaria.
- Kolapo, T. F., Ayeni, R. K. & Oke, M. Ojo (2012). *Credit Risk and Commercial Banks' Performance in Nigeria: a Panel Model Approach*, Australian Journal of Business and Management Research, Vol.2, No.02.
- Korir Mark .K, (2012). *Effects of Credit Risk Management Practices on Financial Performance of Deposit Taking Microfinance Institutions in Kenya*, University of Nairobi.
- Margarita J., Kosta S. & Suzana T. (2014). *Application of the Scoring Model for Assessing the Credit Rating of Principals*, Tem Journal , Vol.3, No.1. Online available on www.temjournal.com

Michael K. Ong (2006), *Risk Management –A Modern Perspective*, Elsevier Inc, London, UK.

Million G., Matewos K. & Sujata S. (2015). *The Impact of Credit Risk on Profitability Performance of Commercial Banks in Ethiopia*, African Journal of Business Management Vol.9, No. 2, PP.59-66, Online available at: <http://www.academicjournals.org>

MS. Asha S. (2013). *Credit Risk Management in Indian Commercial Banks*, International Journal of Marketing, Financial Services & Management Research, Vol.2, No.7. Online available at www.indianresearchjournals.com

Nayan J. & M. Kumaraswamy (2014). *Retail Credit Risk Management in Indian Public Sector Banks*, Hemangotri University of Mysore.

Patil J.B. (2014), *Credit Risk Management in Indian Banks*, International Journal of Advance Research in Computer Science and Management Studies, Vol. 2, Issue 1, (P 309-313), Available online at: www.ijarcsms.com

Ronald W.A. & Karin J. (2014). *The Economics of Collateral*, The London School of Economics.

Sanaders, & C. Ornett, (2005). *Financial Markets and Institutions: An Introduction to the Risk Management approach*. McGraw Hill Publication.

Solomon G. (2013). *Credit Risk Management Practice on NIB International Bank*, Unpublished Master's Thesis, St. Mary University.

Sunitha R. & J. K. Raju (2013). *Risk Management in banking Sectoran Emperical study*, Davangere University, Davangere.

Tesfaye B. (2014). *Factors Influencing the Level of Credit Risk in the Ethiopian Commercial Banks: The Credit Risk Matrix Conceptual Framework*, University of South Africa, online available on <http://www.researchgate.net/>

Thirupathi K. & M. Manojkumar (2013). *Risk Management in Banking Sector -an Empirical Study*, International Journal of Marketing, Financial Services & Management Research, Vol.2, No. 2. Online available at: www.indianresearchjournals.com.

Tibebu T. (2011) *Credit Risk Management and Profitability of Commercial Banks in Ethiopia*, Unpublished Master's Thesis Addis Ababa University.

Thomas, L. C. (2000). *A survey of credit and behavioral scoring: forecasting financial risk of lending to consumers*. International Journal of Forecasting, Vol.16, No.2: p149-172.

Thomas L. (2002). *Survey of Credit and Behavioral Scoring; Forecasting financial risk of lending to consumers*, University of Edinburgh, Edinburgh.

Tony V. & Bart B. (2009). *Credit Risk Management: Basic Concepts, Financial Risk Component, Rating Analysis, Models, Economic and regulatory capital*: Published in the United States by Oxford University Press Inc., New York.

Yang W. (2013). *Credit Risk Management in Rural Commercial Banks in China*, Edinburgh Napier University.

Yong H.K. (2003). *Credit Granting: A Comparative Analysis of Classification Procedures*, The Journal of Finance, Vol.42, No.3. Online available at <http://www.jstor.org/>

Appendix

QUESTIONNAIRE

St. Mary's University

School of Graduate Studies

MBA Program

Dear Respondents,

This questionnaire is designed to collect data for the research to be conducted on the topic; **“Assessment on Credit Risk Management of Nib International Bank S.C** “which will be used as an input for the research in partial fulfillment of Masters in Business Administration (MBA).

The outcome of the study will be used to suggest possible solutions for problems identified on the captioned topic. Thus, your free will and cooperation in giving the reliable information is very important. I would like to assure you that all the information, written or otherwise, collected from you will remain confidential and be used for the intended purpose only.

General Direction

- There is no need of writing your name.
- To make the research more valid and reliable, your genuine responses are highly vital.

Thank you in advance for your cooperation and sacrifice of your precious time.

The researcher would be very grateful if you could return the questionnaire as soon as possible

General Instruction

Please Put ((✓) Mark for your choice in the box provided

Once again thank you for your cooperation.

Part I. Background Information

1. Sex Male Female

2.Age 18-30 31-40 41-50 Above 50

3.Educational back ground

Diploma Degree Masters and Above

4.Work experience/

1-5 years 6-10years Above 10 years

5. Which loan is the riskiest in the bank?

Agricultural loan

Manufacturing loan

Import and export loan

Domestic trade and service loan

Building and construction loan

6. To what extent do you agree on following *Credit Granting Process of the Bank*

S.No.	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The bank has clearly established processes in place for approving new credit, amendment, renewal and for re-financing of existing credit						
2	Approval is made in accordance of guideline and appropriate level of management						

3	The bank has well defined credit granting criteria for borrowers in terms of duration, amount and types of credit.						
4	The bank use comprehensive information enable to assess true risk profile of the borrowers.						
5	The bank has strict policy to identify borrows associated with fraudulent activities and other crime.						

7. To what extent do you agree on following Credit Analysis and Approval Process of the Bank

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The credit analysis procedure of the Bank considers factors purpose of the credit and sources of repayment						
2	Borrower's repayment history ,current capacity to repay, based on historical financial trends and future cash flow projections under various scenarios are considered on the credit analysis.						
3	Current risk profile of the counterparty (including the nature and aggregate amounts of risk), and sensitivity to economic and market developments, especially for						

major exposures are extensively considered in the credit analysis							
---	--	--	--	--	--	--	--

8.To what extent do you agree on following Credit Risk Mitigation

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The Banks have policy for acceptability of collateral and procedure for evaluation.						
2	Value and existence of the collateral is checked periodically.						
3	The bank utilizes its internal risk rating system to manage credit risk.						
4	When individual credit and their portfolio is assessed future change in economic condition is considered.						

9 To what extent do you agree on following Control Over Credit Risk of the Bank

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	Internal control of the bank trail documentation and approval process.						
2	The bank has system in place for early remedial action on deteriorating credits.						
3	The bank has workout function which is segregated from area that credit is originated.						

10 To what extent do you agree on following Internal Control of the Bank

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The Bank establishes a system of independent, ongoing assessment of credit risk management process.						
2	The credit policy place exposure limits on single counter parties and groups of associated counter parties						
3	All relevant personnel clearly						

understood the Bank's credit policy and procedure and are accountable for complying with the established policies and procedures.							
---	--	--	--	--	--	--	--

11. Interview Question (for Credit Officials who are directly related to credit)

What are the major challenges of credit risk management of the Bank?