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SCHOOL OF GRADUATE STUDIES

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ASSESSMENT OF CREDIT RISK MANAGEMENT IN NIB INTERNATIONAL BANK S.C

BY

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ASSESSMENT OF CREDIT RISK MANAGEMENT IN NIB INTERNATIONAL BANK S.C

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Ass, prof, Dejene Mamo. All sources of materials used for the thesis have been duly acknowledged. I 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.

____________________________ ____________________________

Name Signature

St. Mary’s University, Addis Ababa June, 2016

ENDORSEMENT

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

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Advisor Signature

St. Mary's University, Addis Ababa June, 2016

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LISTS OF ACRONYMS

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

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Abstract

This study is about assessing Credit risk management of Nib international Bank S.C to achieve the intended objective of the study, Descriptive research was employed. Purposive sampling techniques were used to focus on limited number of informants who have deep insight about the issue. Accordingly, the size of the sample ware 143 which include all city Branch Managers and loan officers, credit analysts, Follow-up officer Customer Relationship Manager and Controllers of the bank. Questionnaires and interview were used as a primary data gathering instrument while annual reports and information from book of account were used as an instrument to gather secondary data relevant for the study. Descriptive statistics was used to analyze the data. Accordingly, the research found out that, credit risk policy and strategy of the bank is not renewed timely, the bank has no procedure to detect borrows associated with crime, internal risk rating system is not utilized to total portfolio and value and existence of collateral is not checked periodically Based on the findings the research suggest that, the bank should review its credit risk management strategy and policy periodically, develop policy enable to identify borrowers associated with crime and adjust its Management Information system in a manner it provide adequate information for decision makers.

***Key words**: Credit Risk, Credit Risk Management, Loan and Advance, Non- Performing Loan*

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Banks are firms that efficiently provide a wide range of financial services for profit. Obviously, banks have an important role in the economy and the society as a whole. Their central role is to make the community's surplus of deposits and investments useful by lending it to people for various investment purposes (Tony Van Gestel and Bart Baesens, 2008). Banks have a main role as a financial intermediary that provides a steady flow of funds from savers to borrowers and users (Shanmugan & Bourke, 1990). They generate profits from transaction fees on financial services and interest charges for lending, which correspond to two of their main functions as financial intermediary; brokerage and asset transformation (Ngwa Eveline, 2010).

As financial intermediaries, banks play great role in assuring economic growth in a given country. They are also mentioned for the multiple deposit creation in other words, they have the capability to expand the amount of money that circulates in a country (Mishikin, 1992). Their central role is to make the community's surplus of deposits and investments useful by lending it to people for various investment purposes (Tony Van Gestel and Bart Baesens, 2009).

Banks established with the objective of providing various services to their clients, among the services credit facility took the lion's share in most banks. Sometimes, the activity of lending results in probability of being not repaid. Investor's risk of loss occurring from a borrower who defaults on a loan is called the credit risk (Browne and Moles, 2012). Credit risk is the risk that counterparties in a financial transaction, referred to as the obligor doesn't honor its payment obligations. Along with market risk (losses due to movements in level or volatility of market prices) and operational risk (losses resulting from failed or inadequate internal processes, people, technology, or external events), thus credit risk is one of three fundamental risk categories in the financial services industry.

In order to reduce the rate of default, banks are obliged to establish its own credit risk management strategy. According to (Laura Walsh, 2010) credit management is a system that is devised to prevent unwanted damage to the firm or institution from unforeseen but probable event. Credit risk management (CRM) in a financial institution starts with the establishment of sound lending principles and an efficient framework for managing the risk. Policies, industry specific standards and guidelines, together with risk concentration limits are designed under the supervision of risk management committee. “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 I, 2000).

CRM policies are designed and applied both internally as an operational tool by bank management and externally by bank regulatory authorities to manage the financial health of the banking sector. The focuses of such policies are the needs for asset diversification; maintenance of balance between returns and risk, bank asset quality and ensuring safety of depositors fund. The failure of various regulatory frameworks designed by the supervisory authorities and inability of technological innovations to stem rising “toxic assets in many banks constitute matters of grave concern for stakeholders in both developed and developing nations financial systems; Sinker (1998), Saunders and Cornett (2003).

As stated by Rekha Arun kumar (2005), “Better and effective strategic credit risk management process is a better way to manage portfolio credit risk.” The process provides a framework to ensure consistency between strategy and implementation that reduces potential volatility in earnings and maximize shareholders wealth. Beyond and over riding the specifics of risk modeling issues, the challenge is moving towards improved credit risk management lies in addressing banks’ willingness and openness to accept change to a more transparent system, to rapidly changing markets, to more effective and efficient ways of operating and to meet market requirements and increased answerability to stake holders. The rational to analyze the efficiency of CRM frameworks is particularly sensitive in a developing nation like Ethiopia accordingly; there is a need to study Credit Assessment of credit risk Management in NIB international Bank particularly, in view of Basel and NBE credit risk Guideline, NPLs and total Loan levels of the bank.

1.2. Background History of Nib International Bank

Nib International Bank S.C. was established on 26th May 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 28th October 1999. At the end of June 2015, the authorized and paid-up capital of the Bank reached Birr 2 billion and Birr 1.3 billion respectively. Shareholders' and employee's number also increased and reached to 3,941 and 2,678 respectively and has opened 114 branches throughout the country.

1.3. Statement of the problem

The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors (Saunders, Cornett, 2005). Like any other banks operating globally, banking business in Ethiopia raises these deposits to grant credit to their borrowers. This in fact is the foremost revenue generating source for most banks. The credit creation process exposes banks to high default risk which might lead to financial distress including bankruptcy.

In business, risk is defined as "a possibility of financial loss" (Dictionary of Finance and banking 2008, 386). Like other businesses, the banking business has to face with the banking risk. According to (The Basel II 2004) issued by The Basel Committee on Bank Supervision, there are three main types of risks in the banking business. They are credit risk, market risk and operational risk. Among the types of banking risks, credit risk is the biggest threat that banks have to prevent because it reduces profit of the bank and erodes their capital.

Credit risk occurs when the debtors cannot pay back their loans and interest accrued on loans. In order to prevent credit risk, banks put in place credit risk management system.

Credit risk emanates from both internal and external causes which ultimately result in the creation of bad debts or non-performing loans (NPLs). Bad debt is the amount owed by a debtor that is unlikely to be paid (Dictionary of Finance and Banking 2008, 31). Bad debt rate is the percentage of the bad debt in the total debt of a bank or the whole banking system.

The goal of credit risk management is to achieve maximum risk adjusted rate of return by identifying credit risk inherent in individual bank transactions as well as portfolios and controlling the credit risk exposure to an acceptable level. Thus, effective management of credit risk is a critical component of comprehensive approach to risk management and essential to the long-term success of any banking organization (Basel 1999a).

Looking NIB International Bank S.C. as a case, following the motivated economy frequency, the size of loans transacted in the bank has been raised considerably over the past decade. As of June 2006, the Bank's total loans and advances were Birr 1.4 billion whereas this figure has grown to Birr 6.89 billion in June 2015. (Annual Report, NIB Bank) Also, the asset quality of the Bank has been relatively good with the exception of slight increase seen during the last three financial years. Starting from the year 2013 up to 2015, the Bank's NPLs ratio of NIB ware above the minimum requirement set by NBE. This continuous increase in the Bank's NPLs position is against the regulatory body's rules and regulations. The National Bank of Ethiopia (NBE) under its circular dated September 2015 instructed all private commercial banks to keep their NPLs ratio below 3% during the Second Growth and Transformation Plan Period of 2015/16-2019/20 which repealed its previous circular which put this minimum tolerable limit to 5% therefore, this fact has aroused the researcher's interest to find out solution to maintaining the tolerable NPLs ratio limit which is set by the NBE by assessing Credit Risk Management of the Bank.

To date some related topics were made by different researchers like Tibebu (2011) and Girma (2011) and their studies mainly focused on Credit Risk Management and Profitability of Commercial Banks. Solomon (2013) assessed Credit Risk Management Techniques and Practices of NIB International Bank S.C but his research did not consider the Revised Risk Management Guideline of the NBE (2010) as a benchmark. Alebachew Fantu (2015) assessed Credit Risk Management Policy and Practice of the Bank but he has not considered the trend analysis of total loans and advances against total non-performing loans. So that, this research assess existing credit risk management of the bank in order to identify the strengths and weaknesses observed and more importantly exploring ways of improving up on them.

1.4 Research Questions

The study answers several key questions to assess the credit risk management of NIB International Bank S.C which include the following major questions:

1) What is the state of credit risk management in Nib international bank S.C in accordance to Basel Principles for credit risk management and NBE's Risk Management Guideline?
2) What are the major challenges encountered while executing credit risk management of the bank?
3) Is the existing credit risk management of the bank yielding the expected result which is reducing NPL to the minimum amount set by NBE?

1.5 Objective of the study

1.5.1 General objective

The main purpose of this study is to assess the effectiveness of Credit Risk Management in NIB International Bank S.C.

1.5.2 Specific objectives

Specifically, the study seeks to address the following issues from the general objective:

1. To assess the credit risk management system used to manage credit risk exposure of Nib International Bank S.C.
2. To identify the basic challenges, if any, facing while practicing credit risk management.
3. To assess whether the credit risk management of NIB conforms to Basel Principles for credit risk management and NBE's Risk Management Guideline; and
4. To check whether the existing risk management of the bank is yielding expected result or not.

1.6 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).

1.6 Significance of the study

The study on credit risk management will contribute to the existing knowledge and literature on the subject under investigation. Moreover, the study will serve as a reference material to other researchers. In fact, it is hoped that the study will have paramount importance 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. Additionally, it will give an insight to the management of the Bank on how to approach risks associated with credit management.

1.7 Delimitation /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. Moreover, the study is limited to the Credit Appraisal and Customer Relationship Management Departments which are heavily involved in credit management of the Bank and City branches.

The reason for limiting the reach-out of the research only to the afore-mentioned working units of the Bank is due to time and cost constraints. The target groups of the study are staffs

of the Bank in the above mentioned Departments and City Branches but who are directly involved in credit operations.

1.8 Organization of the study

The report study is organized in five chapters; the first chapter is an introductory part of the study which introduces the overall study. This part contains back ground of the study, Back ground of the company under study, statement of the problem, significance of the study, research questions, and objective of the study, definition of terms, limitation and organization of the study.

The second chapter deals with literature review, which review of scholar's work in the research topic, both theoretical and empirical literature, is presented.

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, data collection procedure and data analyzing methods are discussed.

The fourth chapter is devoted on 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.

The last chapter is mainly concerned with Summary, conclusion and recommendations. Here Summary, conclusions are presented and recommendations will be point out for the findings of the study.

CHAPTER TWO

REVIEW OF THE LITRATURE

2.1. Introduction

According to the Basel (1999a), credit risk is defined as “the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed term”. And the Monetary Authority of Singapore (2006) has defined it to be the “risk arising from the uncertainty of an obligor’s ability to perform its contractual obligations”, where the term “obligor” refers to any party that has either direct or indirect obligations under the contract.

Regarding the importance of this kind of financial risk management, Kaminsky and Reinhart, as cited by Jackson and Perraudin (1999), as

Credit risk is to be the largest element of risk in the books of most banks and if not managed in a proper way, can weaken individual banks or even cause many episodes of financial instability by impacting the whole banking system. Thus to the banking sector, credit risk is definitely an inherent and crucial part.

2.2. Sources of Credit Risk

Credit risk largely arises in assets shown on the balance sheet, but it can also show up on off balance sheet in a variety of contingent obligations.

The main source of credit risk include, limited institutional capacity, inappropriate credit policies, volatile interest rates, poor management, inappropriate laws, ineffective control processes, poor loan underwriting, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank (Kithinji, 2010).

Okorie (1998) identified poor project supervision, evaluation and management; untimely loan disbursement; diversion of funds; and dishonesty of loan beneficiaries as causes of loan default which ultimately leads to credit risk.

Tekele (2011), discussed the reasons behind the problem of loan recover may vary for different financial institutions as it depends upon the respective nature of loans and summarized some of the causes loan defaults as he retrieved from as improper selection of an

entrepreneur, deficient analysis of project viability, inadequacy of collateral security/equitable mortgage against loan, unrealistic terms and schedule of repayment, lack of follow-up measure and default due to natural calamities.

2.3. Credit Risk Exposures in Banks

Generally, credit risk is related to the traditional bank lending activities, while it also comes from holding bonds, interbank transactions, trade financing, foreign exchange transactions, in the extension of commitments and guarantees, and the settlement of transactions. Various financial instruments including acceptances, interbank transactions, financial futures, guarantees, etc. also increase banks' credit risk.

Basel (1999a) reports that for most banks, loans are the largest and most obvious source of credit risk; however, throughout the activities of a bank, which include in the banking book as well as in the trading book, and both on and off the balance sheet, there are also other sources of credit risk. The possible sources of credit risk for most banks are,

2.3.1 On-Balance Sheet Exposures

Loans

Credit risk is the predominant risk in bank loans. Since the default risk is usually present to some degrees in all loans (Saunders and Cornett 2006), the individual loan and loan portfolio management is undoubtedly crucial in banks' credit risk management.

Nonperforming Loan Portfolio

According to Hennie (2003), nonperforming loans are those not generating income, and loans are often treated as nonperforming when principal or interest is due and left unpaid for 90 days or more. Thus the nonperforming loan portfolio is a very important indication of the bank's credit risk exposure and lending decisions quality.

Debt Securities

Besides lending, credit risk also exists in banks' traditional area of debt securities investing. Debt securities are debt instruments in the form of bonds, notes, certificates of deposits, etc, which are issued by governments, quasi-government bodies or large corporations to raise

capital. In general, the issuer promises to pay coupon on regular basis through the life of the instrument and the stated principal will be repaid at maturity time. However, the likelihood that the issuer will default always exists, resulting in the loss of interest or even the principal to banks, which can be a damaging impact.

2.3.2 Off-Balance Sheet Exposures

Some of the off-balance sheet credit exposures are:

Derivatives Contracts

According to Saunders and Cornett (2006), banks can be dealers of derivatives that act as counterparties in trades with customers for a fee. Contingent credit risk is quite likely to be present when banks expand their positions in derivative contracts. Since the counterparty may default on payment obligations to truncate current and future losses, risk will arise, which leaves the banks un-hedged and having to substitute the contract at today's interest rates and prices. While trading in options, futures or other similar contracts may expose banks to lower credit risk since contracts are held directly with the exchange and there are margining requirements.

Guarantees and Acceptances

Bank Guarantee is an undertaking from the bank which ensures that the liabilities of a debtor will be met, while a bankers' acceptance is an obligation by a bank to pay the face value of a bill of exchange on maturity (Basel 1986). It is mentioned by Basel (1986) that since guarantees and acceptances are obligations to stand behind a third party, they should be treated as direct credit substitutes, whose credit risk is equivalent to that of a loan to the ultimate borrower or to the drawer of the instrument. In this sense, it is clear that there is a full risk exposure in these off balance sheet activities.

Interbank Transactions

Banks send the bulk of the wholesale payments through wire transfer systems such as the Clearing House Interbank Payments System (CHIPS). The funds or payments messages sent on the CHIPS network within the day are provisional, which are only settled at the end of the day. Therefore, when a major fraud is discovered in a bank's book during the day, which may

cause an immediate shutting down, its counterparty bank will not receive the promised payments and may not be able to meet the payment commitments to other banks, leaving a serious plight. As pointed out by Saunders and Cornett (2006), the essential feature of the above kind of settlement risk in interbank transactions is that, "banks are exposed to a within-day, or intraday, credit risk that does not appear on its balance sheet", which needs to be carefully dealt with.

Loan Commitments

A loan commitment is a formal offer by a lending bank with the explicit terms under which it agrees to lend to a firm a certain maximum amount at given interest rate over a certain period of time. In this activity, contingent credit risk exists in setting the interest or formula rate on a loan commitment. According to Saunders and Cornett (2006), banks often add a risk premium based on its current assessment of the creditworthiness of the borrower, and then in the case that the borrowing firm gets into difficulty during the commitment period, the bank will be exposed to dramatic declines in borrower creditworthiness, since the premium is preset before the downgrade.

2.4. General Principles of Sound Credit Risk Management in Banking

Reviewing the general principles of credit risk management can provide a clearer picture on how banks carry out their credit risk management, despite of the specific approaches that may differ among banks.

Some of the principles of sound practices of bank credit risk management as outlined in the Basel committee publications (http://www.ibm.com/us, 2008) cover the following four areas:

2.4.1 Establishing an Appropriate Credit Risk Environment

To establish an appropriate credit risk environment mainly depends on a clear identification of credit risk and the development of a comprehensive credit risk strategy as well as policies. To banks, the identification of existing and potential credit risk inherent in the products they offer and the activities they engage in is a basis for an effective credit risk management, which requires a careful understanding of both the credit risk characteristics and their credit-granting activities. Besides, the design of objective credit risk strategies and policies that guide all credit-granting activities is also the cornerstone in bank credit risk management process.

It is stated that a credit risk strategy should clarify the types of credit the bank is willing to grant and its target markets as well as the required characteristics of its credit portfolio. According to Saunders (2005), these strategies should reflect the bank's tolerance for risk and the level of profitability the bank expects to achieve for incurring various credit risks. Again, Boateng's (2004) study shows that the credit risk strategy of a bank should give recognition to the goals of credit quality, earnings and growth. Every bank, regardless of size, is in business to be profitable and, consequently, must determine the acceptable risk-return trade-off for its activities, factoring in the cost of capital. Richard S.(2010).

While credit policies express the bank's credit risk management philosophy as well as the parameters within which credit risk is to be controlled, covering topics such as portfolio mix, price terms, rules on asset classification, etc. (Hennie 2003). According to Boating (2004), a cornerstone of safe and sound banking is the design and implementation of written policies and procedures related to identifying, measuring, monitoring and controlling credit risk.

Moreover, establishing an appropriate credit environment also indicates the establishment of a good credit culture inside the bank, which is the implicit understanding among personnel about the lending environment and behavior that are acceptable to the bank.

2.4.2 Operating under a Sound Credit Granting Process

The Basel Committee (2000; 2001) asserts that in order to maintain a sound credit portfolio, a bank must have an established formal transaction evaluation and approval process for the granting of credits. Approvals should be made in accordance with the bank's written guidelines and granted by the appropriate level of management. 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 (Boating, 2004).

A sound credit granting process requires the establishment of well-defined credit granting criteria as well as credit exposure limits in order to assess the creditworthiness of the obligors and to screen out the preferred ones. In this regard banks have traditionally focused on the principles of five Cs to estimate borrowers' creditworthiness. These five C's are:

i. Character. This refers to the borrower's personal characteristics such as honesty, willingness and commitment to pay debt. Borrowers who demonstrate high level of integrity and commitment to repay their debts are considered favorable for credit.

ii. Capacity. This also refers to borrowers' ability to contain and service debt judging from the success or otherwise of the venture into which the credit facility is employed. Borrowers who exhibit successful business performance over a reasonable past period are also considered favorable for credit facility.

iii. Capital. This refers to the financial condition of the borrower. Where the borrower has a reasonable amount of financial assets in excess of his financial liabilities, such a borrower is considered favorable for credit facility.

iv. Collateral. These are assets, normally movable or unmovable property, pledged against the performance of an obligation. Examples of collateral are buildings, inventory and account receivables. Borrowers with a lot more assets to pledge as collateral are considered favorable for credit facility.

v. Condition. This refers to the economic situation or condition prevailing at the time of the loan application. In periods of recession borrowers find it quite difficult to obtain credit facility.

Banks must develop a corps of credit risk officers who have the experience, knowledge and background to exercise prudent judgment in assessing, approving and managing credit risks. A bank's credit-granting and approval process should establish accountability for decisions taken and designate who has the absolute authority to approve credits or changes in credit terms.

2.4.3 Maintaining an Appropriate Credit Administration, Measurement and Monitoring Process

Credit administration is a critical element in maintaining the safety and soundness of a bank. Once a credit is granted, it is the responsibility of the bank to ensure that credit is properly maintained. This includes keeping the credit file up to date, obtaining current financial information, sending out notices and preparing various documents such as loan agreements, and follow-up and inspection reports.

Credit administration, as emphasized by Wesley (1993), can play a vital role in the success of a bank, since it is influential in building and maintaining a safe credit environment and usually saves the institution from lending sins. Therefore, banks should never neglect the effectiveness of their credit administration operations. Then talking about credit risk measurement in banks, it is required that banks should adopt effective methodologies for assessing the credit risk inherent both in the exposures to individual borrowers and credit portfolios, and this will be explained in details later. The last focus in this area of principles is related to credit risk monitoring, which is definitely a must in banks' risk management procedure.

A proper credit monitoring system will provide the basis for taking prompt corrective actions when warning signs point to deterioration in the financial health of the borrower.

2.4.4 Ensuring Adequate Controls over Credit Risk

In order to ensure adequate controls over credit, Ganesan (2000) asserts that there must be credit limits set for each officer whose duties have something to do with credit granting. Material transactions with related parties should be subject to the approval of the board of directors (excluding board members with conflicts of interest), and in certain circumstances (e.g. a large loan to a major shareholder) reported to the banking supervisory authorities.

The means for guaranteeing adequate controls over credit risk in banks lay in the establishment of different kinds of credit reviews. Regular credit reviews can verify the accordance between granted credits and the credit policies, and an independent judgment can be provided on the asset qualities.

2.5. Credit Risk Management Process

Credit risk management process is a set of outlined activities aimed at managing credit risk. These activities will cover the range from credit granting to credit collection. They are risk identification, measurement, assessment, control and monitor. The first step is to identify the risk involved in the credit process. After identification, the risk is measured by evaluating the consequence if it is not well managed. After the evaluation phase, the risk is the then assessed to know the impact, the likelihood of occurrence, and possibility for it to be controlled. The control and monitoring phase then comes in. these phase are not distinct like the other three.

In the control phase, measures which can be used to avoid, reduce, prevent or eliminate the risk are put in place. The monitoring phase is used to make a constant check so that all processes or activities which have been put in place for the risk management process are well implemented for desired results to be gotten and in case of any distortions, corrections are then made. All this is done because credit risk is a very important and delicate risk that banks face and needs to be managed with great care/ precaution because its consequences are always very detrimental to the bank. Despite the changes in the financial service sector, credit risk remains the major single cause of bank failure (Greuning & Bratanovic, 2003).

Credit risk management process should cover the entire credit cycle starting from the origination of the credit in a financial institution's books to the point the credit is extinguished from the books. (Bank of Mauritius, 2003). It should provide for sound practices in:

- credit processing/appraisal;
- credit approval/sanction;
- credit documentation;
- credit administration;
- disbursement;
- monitoring and control of individual credits;
- monitoring the overall credit portfolio (stress testing)
- credit classification; and
- Managing problem credits/recovery.

2.6. Credit Risk Measurement

Measuring risk is always a crucial part in risk management process, and as suggested by Fabozzi (2006), quantifying credit risk can be complicated due to the lack of sufficient historical data, the diversity of involved borrowers and the variety in default causes. In the following, the three categories of methods for bank credit risk measurement---credit rating, credit scoring and credit modeling will be explained.

2.6.1 Credit Risk Rating

A credit rating is for assessing the creditworthiness of an individual or corporation to predict the probability of default, which is based on the financial history and current assets and liabilities of the subject. As mentioned by the Federal Reserve (1998), credit risk ratings may

reflect not only the likelihood or severity of loss but also the variability of loss over time. For banks, both the internal credit rating and the external one are involved in their credit risk assessment.

A credit risk-rating framework deploys a number/alphabet/symbol as a primary summary indicator of risks associated with a credit exposure.

2.6.2 Credit Scoring Systems

Credit-scoring approaches, as stated by Reto (2003), can be found in virtually all types of credit analysis and share the same concept with credit ratings. A credit scoring system determines points for each pre-identified factor, which are combined to predict the loss probability and the recovery rate. According to Altman and Saunders (1998), there are two types of accounting based credit-scoring system in banks-univariate and multivariate. The first one can be used to compare various key accounting ratios of potential borrowers with industry or group norms while in the latter one, key accounting variables are combined and weighted for producing a credit risk score or a probability of default measure, which if higher that a benchmark, indicates a rejection to the loan applicant or a further scrutiny.

2.7. Credit Risk Modeling

According to Basel (1999b), credit risk models attempt to aid banks in quantifying, aggregating and managing credit risk across geographical and product lines, and the outputs can be very important to banks' risk management as well as economic capital assignment. Those models, despite of the possible differences in assumptions, share the common purpose to forecast the probability distribution function of losses that may arise from a bank's credit portfolio (Lopez and Saidenberg 1999). Regarding the potential benefits from the application of credit risk models in banking sectors, Basel (1999b) has concluded that they are responsive and informative tools offering banks "a framework for examining credit risk in a timely manner, centralizing data on global exposures and analyzing marginal and absolute contributions to risk". According to Jackson, Nickell and Perraudin (1999), four types of Credit risk models that are better known or commonly used by banks are (a) Altman's Z score model, (b) Credit metrics model, (c) Value at risk model, (d) KMV Model.

1. Altman's Z score Model

Altman's Z score predicts whether or not a company is likely to enter into bankruptcy within one or two Years. The Altman Z-Score variables influencing the financial strength of a firm are: current assets, total assets, net sales, interest, total liability, current liabilities, and market value of equity, earnings before taxes and retained earnings.

2. Credit metrics model

One of the most widely used ratings-base models is the Credit Metrics from JP Morgan. It is a tool for assessing portfolio risk that arises from changes in debt value caused by changes in obligor credit quality, and causes of the changes in debt value include possible default events and upgrades as well as downgrades in credit quality (JP Morgan 1997). According to Jackson, Nickell and Perraudin (1999), the obligor credit quality change probability can be expressed as the probability of a standard normal variable falling between various critical values that are calculated from the borrower's current credit rating and historical data of credit rating migrations.

3. Value at Risk Model

Value at risk (VAR) is a statistical risk measure, which is used extensively for measuring the market risk of portfolios of assets and/or liabilities. Suppose a portfolio's value at risk is 2Mn with a 95% confidence level, then it means that the portfolio is expected to lose a maximum of 2Mn 95% of the times. The Value at risk is calculated by constructing a probability distribution of the portfolio values over a given time horizon. The values may be calculated on the daily, weekly or monthly basis.

4. Merton-based Models

Merton-based models are also referred to as structural models. The basic principle of this category of models, as suggested by Merton (1974) first, is that a firm is considered to be in default when the value of its assets falls below that of its liabilities. Merton has modeled a firm's asset value as lognormal process, with the equity modeled as a call option on the underlying assets, and the default is allowed at only a future time (Arora, Bohn and Zhu 2005). The current value and the volatility of the firm's assets, the outstanding debt and its

maturity are required as inputs, from which the borrower's default probability can be determined (Hull, Nelken and White 2004).

2.8. Tools of Credit Risk Management

The instruments and tools, through which credit risk management is carried out, are detailed below: R.S. Raghavan (2003), Thirupathi K. & M. Manoj kumar (2013)

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. Adopt the Risk Adjusted Return on Capital /RAROC/ framework.

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. The existing framework of tracking the non-performing loans around the balance sheet date does not signal the quality of the entire loan book. There

should be a proper & regular on-going system for identification of credit weaknesses well in advance. Initiate steps to preserve the desired portfolio quality and integrate portfolio reviews with credit decision-making process.

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, review of risk rating, and pick up of warning signals and recommendation of corrective action with the objective of improving credit quality. It should target all loans above certain cut-off limit ensuring that at least 30% to 40% of the portfolio is subjected to loan review mechanism in a year so as to ensure that all major credit risks embedded in the balance sheet have been tracked. This is done to bring about qualitative improvement in credit administration.

2.9. Other Techniques for Mitigating Credit Risks

The last step for any kind of risk management is to mitigate and transfer the risk in order to avoid or reduce losses. Credit risk mitigation means reduction of credit risk in an exposure by a safety net of tangible and realizable securities including third-party approved guarantees/insurance.

Banks use a number of techniques to mitigate the credit risks to which they are exposed. Exposures may be collateralized by first priority claims, in whole or in part with cash or securities, a loan exposure may be guaranteed by a third-party, or a bank may buy a credit derivative to offset various forms of credit risk. Additionally banks may also net the loans owned to them against deposits from the same counter-party.

The various credit risk mitigation tools laid down by Basel Committee are as follows:

1. *Collateral (tangible, marketable) securities:* to support various lending agreements for reducing credit risk.
2. *Guarantees:* a transaction in which security is offered for abstract payment undertakings. It creates a non-accessorial, abstract obligation to the beneficiary.
3. *Credit derivatives:* Credit derivative is an instrument designed to segregate market risk from credit risk and to allow separate trading of credit risk. Credit derivatives allow a more efficient allocation and pricing of credit risk. Credit derivatives are privately negotiated bilateral contracts that allow users to manage their exposure to credit risk.

For example, a bank concerned that one of its customers may not be able to repay a loan can protect itself against loss by transferring the credit risk to another party while keeping the loan on its books. This mechanism can be used for any debt instrument or a basket of instruments for which an objective default price can be determined.

4. *On-balance-sheet netting:* A netting agreement nets the amounts to be exchanged between counterparties, which reduce the credit exposure. For banks, netting agreements are mostly applied to interbank transactions, including bilateral payments netting, multilateral payment systems with net settlement and master derivative agreements (Emmons 1995).

The extent to which a particular credit risk mitigation tool helps depends on the quantum of exposure, or the strength of the mitigation tool.

2.10. Empirical literature

Solomon Goshime (2013) in his paper entitled “Credit risk management techniques and practice of NIB International Bank” has conclude that credit risk management system of commercial Banks should incorporate a check and balance for the extension of credit that integrate separation of credit risk management from credit sanction, credit processing/approval from credit administration and finally establishment of an independent credit audit and risk review function.

Alebachew Fantu (2014) in his paper entitled “Assessment of Credit Risk Management Policies and Practices in NIB International Bank” has conclude The Bank has to establish a clearly-established process in place for approving amendment, renewal and re-financing of existing credits and The Bank requires also to established a credit follow up system which control consistency of all credit approvals made as per the Bank’s written guidelines and granted by appropriate organ level of the Bank’s management.

Girma Mekasha in 2011 studied Credit Risk Management and Its Impact on Performance on Ethiopian commercial Banks; the researcher used empirical data analysis technique to investigate credit risk management on banks performance. He uses six private commercial banks as reference and used their annual report for reference; the researcher used quantitative research method and interpreted the output sing regression.

From the research he has arrived at there is a significant relationship between bank performance (in terms of return on asset) and credit risk management (in terms of loan performance). Better credit risk management results in better bank performance.

Credit risk management and profitability of commercial banks in Ethiopia was studied by Tibebu Tefera in 2011.In the study, the researcher took seven banks purposively that have been operating over ten years in Ethiopia. To examine its impact level the researcher uses multiple regression models by taking 10 years ROE (dependent variable), NPLR and CAR (independent variables) from each bank in addition; questioner was also distributed to the authorized personnel assigned to risk management position in each bank. From the study he has concluded that non-performing loan ratio and capital adequacy ratio has a negative impact on profitability‘s of commercial banks in Ethiopia.

Impact of credit risk management on credit risk exposure private banks in Ethiopia was studied by Martha G/Meskel in 2012; the scholar used four purposively selected private banks in Ethiopia. In her study she used four variables in SPSS regression model to illustrate impact of credit risk management on credit exposure of the bank. Based on the study she has concluded that statistically credit risk management and credit risk exposure has inverse relation.

Credit risk management and profitability of commercial banks in Sweden was studied by Ara Hosanna, Bakaeva Manzura and Sun Juan Juan in 2009. In the study the researchers intended to analyze effect of credit risk management on profitability of commercial banks in Sweden. They took four banks as a sample and collected the necessary data from different sources like annual report of the banks from 2000-2009 and journals developed by the banks. The researchers used multiple regression models using SPSS for analyzing the findings. The result shows that credit risk management has significant effect on the profitability of the banks.

Bank Performance and Credit Risk Management in Qatar were studied by Takang Feliz Achou and Ntui Claudine Tenguh in 2008 in their study the researchers' intention was to see the relationship between bank performance and credit risk management, by taking data from Qatar Central Bank (QCB). They used regression model to show the result of Return on Equity (ROE) and Total Losses (TL). In addition, tables and charts were used by the researchers for proper analysis of the data obtained. Lastly, their study result shows that there

is a significant relationship between bank profitability and credit risk management (in terms of loan performance). Better credit risk management results in better bank performance.

Achou and Tenguh (2008) reveal that there is a significant relationship between bank performance (in terms of return on asset) and credit risk management (in terms of loan performance). Better credit risk management results in better bank performance. Thus, it is of crucial importance that banks practice prudent credit risk management and safeguarding the assets of the banks and protect the investors, interests.

In general from above literatures on credit risk management has decisive role in overall performance of the bank activity. The study conducted in Ethiopia had showed that the strong credit risk management has positive impact overall performance of the business. Similarly effective credit risk management practice profitability of the business. On the other hand according to the literatures credit risk management of and credit risk exposure of the banks has inverse relation towards profitability of the business. However, most of literatures under review were focused to part of credit management aspect such as performance, profitability, credit exposures instead of assessing the credit risk management of the bank Thus, researcher tried to fill the gap and contribute to the literature by giving addressing problems of credit risk management of NIB international bank by assessing in accordance with Credit Risk Guideline of Basel and NBE and also, checking total non-performing loan against total advance of by the bank for the last ten years to assessing effectiveness existing Credit risk management of the bank.

CHAPTER THREE

RESEARCH DESIGN AND METHEDOLOGY

3.1. Research Design

To achieve the intended objective this research paper was employed Descriptive research design.

3.2. Population and Sampling Techniques

Researchers usually draw conclusions about large groups by taking a sample. Ideally, the sample should be representative and allow the researcher to make accurate estimates of the thoughts and the behavior of large population (Leedey and Ormond, 2005).

Since objective of the study is assessing Credit Risk Management, target population of the study was all staffs of Nib international Bank S.C who are working on Credit and related Operations. From the bank, 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. Accordingly, the size of the sample is 143 respondents which include all city Branch Managers and loan officers, credit analysts, Follow-up officer Customer Relationship Manager and Controllers of the bank. The researcher believes that the selected samples represent the Survey.

3.3. Types of Data and Tools/Instrument of Data Collection

The study is undertaken mainly based on the data gathered from primary and secondary sources, which enable the researcher to meet the objective of the study outlined at the beginning. Primary data is obtained with intention that help in meeting ultimate objective of the study and secondary data is collected with the aim of addressing the issues that cannot be obtained otherwise.

To collect primary data, questionnaire is designed by the researcher on the based on Basel Principles for credit risk management and NBE's Risk Management Guideline, interview method also employed to get information from credit information and follow-up manager of the bank and Secondary data is also collected from book of account and annual report of the bank.

3.4. Procedure of Data Collection

Primary data is gathered by distributing questionnaires to all city branch loan officers, managers, controllers and head office credit staffs of the bank. Also, interviews were conducted as a primary source of date with the credit information and follow up manager of the bank. The questionnaires were organized in a way to comprise both open and close ended questions.

Additionally, in order to address the reliability of the data, secondary data source was consulted. For instance, the Bank's total loans and advances and non-performing loans data for 10 years starting from 2006 to 2010 were gathered from the book of account and annual report of the bank.

3.5. Method of Data Analysis

The collected data through questionnaires, interview, and data from book of account and annual report of the bank is analyzed using descriptive statistics. In this study descriptive analysis were chosen because of its simplicity and clarity to draw inferences. Percentages, frequencies, table and graph were used for the analysis of the collected data which assisted in the interpretation and analysis of the data collected to evaluate the effectiveness of credit risk management process of the bank. Data from interview is also narrated.

Secondary data collected from book of account and annual reports of the bank is analyzed using graph along with primary data to show in what extent the bank is exposed to credit risks.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATIONS

4.1 General Discussion

For the purpose of achieving the objectives of the study, the collected data is analyzed using descriptive analysis. Throughout the analyzing process, statistical analysis method such as frequency, total scores and percentage method is employed. Moreover, tables and graph is used to present the findings of the study.

As discussed earlier, questionnaire was designed and distributed to 143 respondents' which include all city Branch Managers and loan officers, credit analysts, Follow-up officer Customer Relationship Manager and Controllers of the bank. Accordingly, 139 questionnaires were returned. As a result, the usable number of questionnaires is reduced to 139, which is about 97.2% of the total distributed questionnaires. The response rate is fair enough to represent the sample.

4.2 Demographic characteristics of the respondents

The first part of the questionnaire consists of four items about demographic information of the respondents. It covers the personal data of respondents, such as sex, level of education, Work of experience in the bank. Current position, and work in the current position. The subsequent tables revealed the total demographic characteristics of the respondents.

Table 1: respondents' sex

Sex of respondents	Frequency	Percent
Male	125	89.92%
Female	14	10.08%
Total	139	100%

Source: own survey and computation

Gender wise distribution of the sample indicates, male respondent are significantly higher, constituting 89.92 % and remaining 13% are Females. This big variation is due to small no, of women working on managerial and credit position.

Table 2: Frequency distribution of respondents 'Level of Education

Educational status	Frequency	Percentage
Diploma	9	6.47%
BA Degree	114	82.14%
MSc/MA	16	11.39%
PHD	0	0.0%
Other	0	0.0%
Total	**139**	**100.0%**

Source: own survey and computation

Table 2 above revealed that, out the staff who works on credit and credit related departments, majority them i.e. 82.14% holds their first degree, whereas, 11.39% of them are holds their second degree and 6.47% of them are holds Diploma overall the result shows that the Bank is in a good position in terms of the necessary educated manpower as the human power policy of the Bank requires educational level of first degree and above on position of credit, risk management and managerial positions and this is justified with respondents rate that is 93.53% of them are holds their first degree and above.

Table 3: Frequency distribution of respondents' Current position

Years of work Experience	Frequency	Percentage
Analyst (Appraisal Officer)	12	8.63%
Loan officer	41	29.49%
Branch Manager	64	46.07%
Credit follow up officer	4	2.87%
Customer relationship manager	8	5.75%
Controllers	10	7.19%
Total	**139**	**100%**

Source: own survey and computation

Table 3 above discloses frequency distribution on respondents' current position it indicate that, (46.07%) are branch managers followed by 29.49% are loan officers and the remaining 24.44% are sum of Credit Analysts, Customer relationship Managers. Follow up Officer and Controllers. This discloses that, this study properly addresses the professional and managerial line employees who functionally and directly related to credit activities of the Bank. Accordingly, the responses give good ground for the study.

Table 4: Frequency distribution on respondents' work experience on their current position

Years of work Experience	Frequency	Percentage
< 1 year	5	3.59%
1-3 Years	12	8.63%
4-6 Years	21	15.10%
Above 6 years	101	72.68%
Total	**139**	**100%**

Source: own survey and computation

From the above table 4.The researcher asked the question to identify how experienced the respondents on their current position. Consequently, it is found that 72.68% of respondents' have working for more than 6 years on their current position. While, 15.1% of the respondents were working from 4 to 6 years and the remaining 12.2% have working experience on their current position between 0 and 3 years. Hence, this prevails that most of the respondents are familiar to bank and credit related activities. Therefore, this helps researcher to obtain appropriate information which can lead to correct conclusion.

4.3 Generalization and Comparison with Basel/NBE Guidelines

This section discussed current credit risk management of practices of NIB against NBE and Basel guide lines. Accordingly information gathered from respondents were analyzed and compared with in four major parts of Basel principle for management of Credit Risk (September 2000) and NBE's Credit Risk Management Guideline Revised in 2010, namely Guideline and credit risk environment the bank, credit granting process, credit risk mitigation and Control over credit risk. For the purpose of reporting the findings parameter values of strongly agree and agree were added since it represents the employees' agreement for the statement and the values of disagree and strongly disagree together represent employees disagreement.

Table 5: Respondents view on Guideline and credit risk environment the bank.

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
1	The bank has well-designed credit risk management Strategy and policy.	In No.	36	84	19	0	0
		In %	25.90%	60.43%	13.67%	0.00%	0.00%
2	The bank periodically reviews its credit risk management strategy and credit policy.	In No.	0	16	46	57	20
		In %	0.00%	11.51%	33.09%	41.01%	14.39%
3	Senior management of develop sound credit policy and procedure enable to evaluate, monitor and control credit risk.	In No.	41	67	23	7	1
		In %	29.50%	48.20%	16.55%	5.04%	0.72%
4	The bank has set Portfolio mix and Limit for single counterpart, group of connected counter party, sector, geographic region and product	In No.	9	11	25	51	43
		In %	6.47%	7.91%	17.99%	36.69%	30.94%

Source: own survey and computation

The above table illustrates response given by different respondents for the question regarding whether the bank has set a well-designed credit risk management Strategy and policy where Majority of respondents accounting 86.33% agreed while the rest 13.67% remained neutral. Banks should established credit risk management strategy by specifying credit facility to be granted, identifying the potential market and credit portfolio limit to be achieved by designing a policy. In this regard designing credit risk policy and strategy has been accomplished by NIB.

For the question regarding the availability of periodic review of its credit risk management strategy and policy 55.4% of the respondent disagreed while 33.09 agree and the remaining

11.51% stayed neutral. Managing credit risk is difficult for the bank without adjusting itself with cyclical aspects resulting on composition and quality of overall credit portfolio. Unless risk strategy and credit policy of the bank is assessed and amended periodically, it is difficult to be viable in the long-run and through various economic cycles.

For the question asked whether senior management of the bank developed a prudent credit policy and procedure 77.7% of the respondents agreed and the rest 16.55% remained neutral. This result indicates that, the bank maintains credit granting standards that enables it to evaluate, monitor and control credit risk. It is also helpful in identifying and administering problem credits through having a Credit policy framework for lending and guiding the credit-granting activities of the bank communicated throughout the organization, and implemented through procedures.

Respondents which hold about 67.63% disagree on the point regarding the proper setup of a portfolio mix and credit limit for single counterpart, group of connected counter party, sectors, geographic region and products While, 14.38 % of respondents agreed and 17.99 % remained neutral. The above result revealed the vulnerability of the bank to credit concentration risk whereby exposures of single obligors can reach imprudent levels while remaining within regulatory limits and risks arises from geographical region and group of associated borrower further has a negative impact on the Bank's overall performance by exposing it for credit risk in such areas.

Table 6: Respondents view on credit granting process of the bank.

S.No.	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
5	The bank has established exposure limit for both on and off- balance sheet facilities	In No.	52	58	29	0	0
		In %	37.41%	41.72%	20.86%	0.00%	0.00%
6	The bank has clearly established processes in place for approving new credit, amendment, renewal and for re-financing of existing credit	In No.	77	57	5	0	0
		In %	55.40%	41.01%	3.60%	0.00%	0.00%
7	approval is made in accordance of guideline and appropriate level of management	In No.	86	46	7	0	0
		In %	61.87%	33.09%	5.04%	0.00%	0.00%
8	Non arm-length lending (exceptionally approved Loan) is monitored with particular care	In No.	0	11	16	56	56
		In %	0.00%	7.91%	11.51%	40.29%	40.29%
9	The bank has well defined credit granting criteria for borrowers in terms of duration, amount and types of credit.	In No.	28	85	19	7	0
		In %	20.14%	61.15%	13.67%	5.04%	0.00%
10	The bank use comprehensive information enable to assess true risk profile of the borrowers.	In No.	6	12	19	56	46
		In %	4.32%	8.63%	13.67%	40.29%	33.09%
11	The bank has strict policy to identify borrows associated with fraudulent activities and other crime.	In No.	0	14	19	55	51
		In %	0.00%	10.07%	13.67%	39.57%	36.69%

Source: own survey and computation

Non arm-length lending is loan granted to related parties which include the bank's subsidiaries and affiliates, its major shareholders, directors and senior management, and their direct and related interests, as well as any party that the bank exerts control over or that exerts control over the bank.

On Table 6 above 79.13% of the respondents agreed to the establishment of exposure limit for on and off balance sheet credit transaction of the bank While, 20.86% remained neutral. For most banks, loans are the largest and most obvious source of credit risk; however, other sources of credit risk exist throughout all activities of a bank, including in the banking book and in the trading book, and both on and off the balance sheet. Banks are increasingly facing credit risk in various financial instruments other than loans, including acceptances, interbank transactions, trade financing, foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transactions. In this regard NIB is able to minimize credit risk arising from instrument in trading book and off balance sheet.

Does the bank has a clearly established process in place for approving new loan, amending and re-financing credit facilities? Was the next question and for this the Majority of the respondents holding 96.4% responded yes while, the rest 3.6% remained neutral. 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.

94.96%of the respondents have said that the bank approves credit facilities in accordance to the pre-established guidelines by appropriate level of management while 5.04% remained neutral.This implies that, each credit proposal of the bank is subjected to careful and thorough analysis and decision commensurate with the size and complexity of the transactions.

For the question asked about whether non-arm’s length lending of the bank is monitored with particular care respondent holding 85.29% disagreed while 7.91% agreed and the rest 11.51% remained neutral. A potential area of credit abuse mostly arises from granting credit to non-arms-length and related parties, whether it’s a company or individual. Consequently, it is important that banks grant credit to such parties on an arm’s-length basis and that the amount of credit granted should be properly monitored. In this regard the result suggests that, there is

an override on credit-granting and monitoring processes on non- arm length lending practice of the Bank.

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.

For the question whether the bank used comprehensive information which enables to identify true risk profile of the borrowers.73.38% of the respondents disagreed whereas, 12.95% agree as e rest13.6% remained. To get a detailed information about 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, the result indicates that, information being received by the bank is not sufficient enough to make rational and proper credit-granting decisions.

The Majority of 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, repute 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 venerability 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 are involved in a crime activities or are related to one.

Table 7: Respondents view on credit risk mitigation of the bank.

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
12	The Banks have policy for acceptability of collateral and procedure for evaluation.	In No	31	105	3	0	0
		In %	22.30%	75.54%	2.16%	0.00%	0.00%
13	Value and existence of the collateral is checked periodically.	In No	11	19	24	82	3
		In %	7.91%	13.67%	17.27%	58.99%	2.16%
14	The bank utilizes its internal risk rating system to manage credit risk.	In No	0	0	0	54	85
		In %	0.00%	0.00%	0.00%	38.85%	61.15%
15	When individual credit and their portfolio is assessed future change in economic condition is considered.	In No	0	3	38	55	43
		In %	0.00%	2.16%	27.34%	39.57%	30.94%

Source: own survey and computation

For the question asked about existence of policy for acceptability of collateral and procedure for evaluation 97.84% of respondent showed their agreement while 2.16 % disagreed and the rest 17.27% 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.

Regarding the question whether value and existence of collateral is checked periodically by the bank 61.15% of the respondents disagreed while 21.58 % agreed and the rest 17.27% 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 bank’s policy and procedure and re estimate the collaterals periodically.

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.

Table 8: Respondents view on Control over credit risk of the bank.

S.No	Item	Measurement	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
16	Controller of the bank trail documentation and approval process.	In No.	53	86	0	0	0
		In %	38.13%	61.87%	0.00%	0.00%	0.00%
17	The bank has system in place for early remedial action on deteriorating credits.	In No.	5	18	19	73	24
		In %	17.27%	52.52%	13.67%	12.95%	3.60%
18	The bank has workout function which is segregated from area that credit is originated.	In No.	16	123	23	0	0
		In %	11.51%	88.49%	0.00%	0.00%	0.00%

Source: own survey and computation

All respondents agreed that, controllers 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.

19. Additional Comment, opinion and experience of respondents on credit risk management of the bank.

As Most of the respondent gave repetitive comments and suggestions major comment and opinions are summarized by the researcher as follows.

- Even if the bank has established clear policy and procedure to grant and monitor credit facilities some problems often arise due to frailer on strict implementation.
- Senior management of the bank overrides credit procedure of the bank and enforces branches to disburse, corporate customer loans without fulfilling criteria set by the bank.

- Borrower’s loan file is reviewed only once in a year by internal auditors of the bank. To minimize and completely avoid credit related risks emanated from such practice the bank should arrange for review of loan file at least two times a year.

4.4 Analysis of Interview

To gather more information about the cause for Non- Performing Loan of the bank, weakness and major challenges faced while managing credit risks of Nib international bank S.C, interview questions were forwarded to credit information and follow-up Manager of the Bank as most of credit risk management activities starting from repayment follow up of all branches loans , workout solution to sick loans and transferring loans which has no chance of recovery to litigation are conducted in this division. Accordingly, responses from interviewee are shown briefly as follows.

4.4.1 Interview responses on major causes for non-performing loans of the bank

As per response of credit information and follow up division manager of the bank, the major causes for non-performing loan of NIB originated from two main areas which are internal and external. The internal factors are further classified as into pre and post-disbursement of the loan while the external factors are composed of many social, economic and environmental phenomena.

- **Internal Causes**

Pre- disbursement: poor appraisal techniques like KYC (knowing your customer) before delivering credit and internal risk rating to differentiate and manage levels of risk in individual exposures not done properly by the bank.

Post-disbursement: poor and inadequate technique of follow up regarding the proper utilization of credit facility for its intended purpose, Weak follow up on loans manifested by lack of proper and persistent performance in collecting repayments from borrowers, poor stock control of pre-shipment facilities, poor personal as well as business relationship of the branch with the customer and poor knowledge of the market and the industry on which their borrower is operating in and the like.

- **External Causes**

Slowdown in economic activities: decreasing in price of exportable commodities in international market which enforced the borrower to sale the product below its purchase price which in effect hinders the repayment capacity of a business.

Pressures from regulatory organ: Issuance of directives by the regulatory body such as, 40/60 portfolio proportions which has seriously contributed for increase in NPLs share as most of the business cycles take more than a year to generate income and repay loans. And NBE Bills Purchase Directive affected the Bank's liquidity position causing shortage of funds to avail loans to those who need additional financing. This in turn enforces borrowers from using their loan repayment as a means of financing.

4.4.2 Interview response on major challenges in administering credit risk of the bank

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

False information presented by the borrowers'; Most borrowers has presented false financial statement which do not indicate the correct financial performance of their business which greatly biases the amount to be approved by the concerned party 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.

Willful-defaulters**:** these are borrowers who intentionally divert the fund other than the intended purpose of the business without the knowledge of the bank.

4.4.3 Summary of interview response on major weaknesses of existing credit risk management of the Bank

The manager responded that, NIB has the following weaknesses in managing its credit risks.

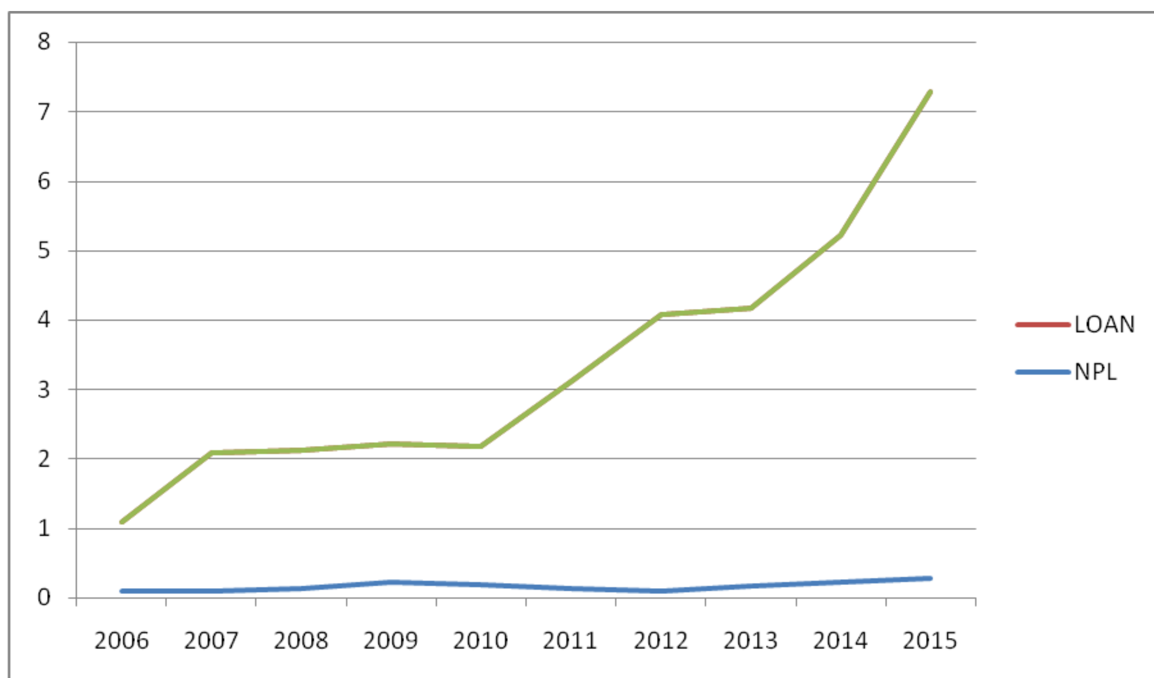
- A portfolio limit of the bank is not revised timely and also there is problem on its implementation. Currently, the Bank has portfolio limits but it was revised in 2012 and this is not yet updated and the Bank's management itself does not give attention to complying the limits set already set while granting loans and advances.

- Lack of proper follow up on securities held as collateral and which serve as second way out to minimize credit risk. Even collateral re-estimation is not done as per the Bank's policy and procedure.
- Unavailability of MIS which enables the Bank to properly manage its credit and other operational risks.

4.5 Trend Analysis on NPL and Total loan of the bank.

In this section, the study undertakes a trend analysis of total advance made by the bank against total non-performing loans. The rational is to examine whether implemented credit strategy and policy of NIB are yielding the expected result by reducing the amount of NPL.

Figure 5.1 graph of total loan and advance and Non- Performing Loans (2006-2015)
N.B: *Outstanding NPL and total loan s taken in Billions (000,000,000.00)*



Source: The bank's book of account and published Annual report

From the graph above it is evidenced that, total loan granted by the bank showed an increasing trend indicating that, credit expansion drive of the bank in support of business in the economy.

The graph also revealed the fact that, total loan of the bank showed a substantial increasing trend starting from year 2006 to 2015 while, non-performing ratio of the bank has been

fluctuating until it reach its highest point in the year 2009 and begun to decrease starting from year 2010 to the year 2012 on which lowest rate is registered and Starting from the year 2012 to the latest year 2015 the ratio begun to increase. Based on the line graph of Non-performing Loan, NIBs effort at reducing a credit risk can best be described as an average effort. This is because, the bank has succeeded in reducing its non-performing loans in some of the years, but for past three consecutive years the default rate has begun to rises slightly and the result reveled that existing CRM (Credit Risk Management) of the bank is not effective in meeting the minimal NPL requirement set by NBE.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of findings

Based on the results of the study obtained through questionnaire distributed to credit and risk related employees of the Bank, interviews made with credit information and follow-up manager and secondary data obtained from the book of account and annual reports of the bank in order to assess credit risk management in NIB the researcher has found good points which are appreciated and issues that needed to be improved. Based on that, the following summary and conclusions are made accordingly.

- Demographic characteristics of the Bank revealed that the Bank is in a good position in terms of the necessary educated manpower and experienced staffs as 93.53% staff who are working on credit and risk related functions are holder of BA degree and or above as well more than 72.6% of respondents have a worked for more than 6 and above on their current working position and all respondent are professional who work on managerial line, credit and credit related functionality areas.
- Regarding guideline and credit risk environment of the bank, it is found that there is well designed credit risk strategy and policy, prudent credit policy and procedure however, credit risk strategy and policy is not revised periodically and also portfolio mix and limit of the bank is not properly set.
- Related to credit granting process of the bank, the bank has established procedure for approval of new credit, amendment and re-financing, exposure limit for both on and off balance sheet credit facilities, approval is conducted in accordance to guideline and appropriate level of management and also, there is appropriate credit granting criterion in terms of duration amount and types while comprehensive information is not utilized by the bank to assess true risk profile of the customer, non- arm length lending of the bank is not monitored with special care and there is no policy to identify borrowers with fraudulent and crime activities.

- Concerning to credit risk mitigation, Even if the bank has policy for acceptability of collateral and procedure for evaluation, value of existing collateral is not checked periodically similarly, future economic change is not considered while assessing individual credit and their portfolio.
- Regarding control over credit risk of the bank Controller of the bank properly trial documentation and credit approval process, remedial action is conducted by the bank before credit facilities of the bank being deteriorated and also there is separation between workout and loan origination function.
- Problem of implementing policy and procedure of the bank, long time interval to review customer loan file and senior management of the bank pressure branches on disbursement of corporate customer loan is also indicated as an additional comment.
- The interview result revealed that. Internally, poor appraisal technique, weak follow up and externally, economical condition of the country, pressure from regulatory organ and natural disaster are main factor for increase NPL of the bank as well as false information presented by the customer, shortage of foreign currency and willful defaulter are some of the challenges encountered in monitoring credit of the bank.
- Failure in revising Portfolio limit, lack of proper follow-up on security held, unorganized and insufficient training for credit staff's, poor MIS are weakness of the bank on managing credit risks.
- Regarding secondary data originated from financial report and the bank's book of account, CRM of the bank is not effective in meeting minimum NPL ratio required by NBE.

5.3 Conclusion

- Despite the fact that the bank has well designed credit risk strategy and policy, nothing is done on revising it periodically so that, it is difficult for the bank to be effective in the long-run and through various economic cycles, in addition, the bank exposed to credit risk because of it's failure to set limit for single counter party and connected counter party and improper portfolio mix based on geographical region, product and sector.

- On the subject of, credit granting process. the bank has established exposure limit for both of and on balance sheet credit facilities credit procedure is also sated, criterion is defined by the bank for every loan request by borrowers in terms of duration amount, time loan amendment and re-finance, approval is made in accordance to guideline and appropriate management level in which loan application documents carefully be analyzed by a competent credit officer with the appropriate expertise commensurate with the size and complexity of the transaction however, information utilized by the bank is not sufficient to distinguish true risk profile the borrowers, this biased credit approval process of the bank. Future economic change while assessing individual credit and their portfolio, non-arm length lending is not monitored carful and the bank has no strict policy to identify borrowers engaged on fraudulent and crime activities.
- It is proved that, The Banks have policy for acceptability of collateral and procedure for evaluation to mitigate credit risk, however, value of existing collateral is not checked periodically this practice expose the bank for credit risk by decrease possibility of recovering loans using its second way-out (recovering the loan by selling security held as collateral).
- It is confirmed that, Controller of the bank trial documentation and appraisal process, proper action is taken on early remedial and workout solution and workout function of the bank segregated from area from where credit is originated which enable them to give more weight for the case.
- Internal factors like poor appraisal technique, weak follow up and externally, economical condition of the country, pressure from regulatory organ and natural disaster contribute for increase NPL position of the of the bank.
- False information presented by customers, shortage of foreign currency and will-full defaulter who divert the granted from the intended purpose adversely affects repayment capacity of the borrower's and challenge Credit risk administration practice of the bank.
- As a result of the poor and inaccurate management information system, decision makers in NIB Bank are in short of getting timely, accurate, reliable and verifiable information that accelerate their decision-making process, lack of follow-up on security held as a collateral, fail to revise portfolio limit of the bank and less emphasis

from management of the bank on loan follow-up loan are weakness of NIB CRM adversely affected the bank.

5.2 Recommendations

After analyzing the results gathered from questionnaire, interview and secondary data from the bank books of account the researcher has compared it with credit risk Guideline of Basel, NBE and with other theoretical framework in various literatures, the following recommendations are made with the objective to improve credit risk management of NIB:

- In accordance to Basel principle for management of Credit Risk (September 2000) the bank has to review (at least annually) its credit risk strategy and significant credit risk policies in line with cyclic aspects resulting on credit composition and quality of overall credit portfolio of the bank.
- The bank has to develop proper limit for single borrower, connected counter party and portfolio mix based on sector geographical location and products so as to protect the bank from concentration risk arising from those areas.
- In order to, minimize risks associated with non-arm's length lending, loans granted in such a way should be monitored with special care and other appropriate steps should be taken.
- Great emphasis should be given by the bank in developing procedures that enables to identify whether, new borrowers and even, borrowers familiar to the bank or perceived to be highly reputable are associated with fraudulent and crime activities before granting a loan.
- To mitigate credit risks of the bank, existence and value securities held as collateral held should be checked periodically and Internal risk rating system of the bank should be utilized so as to differentiate degree of credit risk at individual and portfolio level and it result should be considered while analyzing every loans.
- Review on borrower file should be undertaken at least semiannually and due attention should be given for proper implementation of credit policy and procedure of the bank, the bank should strictly adhere Policy and discourage any personal intervention if necessary requirement are not meet.

- Portfolio limit of the bank should be reviewed periodically considering change in economic condition, regulatory change on government policies and demographic factors.
- Management information system of the bank should be adjusted in a manner it provide adequate information on composition of credit portfolio, including identification of any concentration of risks.

- Finally, to meet NBE requirements call for all banks, keeping their NPL ratio below 3% for strategic plan GTP-II period 2015/16-2019-20 NIB should apply all recommendation obtained from the study.

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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).

To arrive at appropriate conclusion, you are kindly requested to provide with accurate, complete and genuine data to the best of your knowledge. 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.

Note: For any enquiry please contact through this number 09 13-36 99-39

General Instructions: Please Put **(**✓**)** Mark in the box provided next to each choice.

Part I. Background Information

1. Respondent's sex
   - A. Male ☐ B) Female ☐
2. Respondent's Level of Education?
   - A. Diploma ☐ D. PH.D ☐
   - B. First Degree ☐ E. Any other, specify ____________
   - C. Master Degree ☐
3. Current position;
   - A. Analyst (Appraisal officer) ☐ D) Credit Relationship manager ☐
   - B. Credit Follow-up Officer ☐ E) Branch Manager ☐
   - C. Loan Officer ☐ F) Any other (please specify)__________
4. Work Experience in this position;
   - A. < one year ☐ C) 4-6 Years ☐
   - B. 1-3 Years ☐ D) > 6 years ☐

Part II. Research Related Questions

- ❖ Please respond to the following statements by indicating the extent to which you agree or disagree as per the given choices by Putting (✓) Mark in the box provided next to each choice.

S.No.	Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	Credit risk environment Guideline of the bank.					
1	The bank has well-designed credit risk Strategy and policy.					
2	The bank periodically reviews its credit risk strategy and credit policy					
3	Senior management of develop sound credit policy and procedure enable to evaluate, monitor and control credit risk.					
4	The bank has set Portfolio mix and Limit for single counterpart, group of connected counter party, sector, geographic region and product					
Credit granting process						
5	The bank has established exposure limit (both on and off- balance sheet)					
6	The bank has clearly established procedure for approving new credit, amendment, renewal and for re-financing existing credit and					
7	approval is made in accordance of guideline and appropriate level of management					
8	Non arm-length lending (exceptionally approved Loan) is monitored with particular care					
9	The bank has well defined credit granting criteria for borrowers in terms of duration, amount and types of credit.					
10	The bank use comprehensive information enable to assess true risk profile of the borrowers.					
11	The bank has strict policy to identify borrows associated with fraudulent activities and other crime					

Credit Risk Mitigation						
12	The Banks have policy for acceptability of collateral and procedure for evaluation					
13	Value and existence of the collateral is checked periodically					
14	The bank utilizes internal risk rating system to manage credit risk.					
15	When individual credit and their portfolio is assessed future change in economic condition is considered.					
Control over credit risks						
16	Controller of the bank trail documentation and approval process					
17	The bank has system in place for early remedial action on deterioratingcredit..					
18	The bank has workout function which is segregated from area that credit is originated.					

19. Please write any comment, opinion and experience you have on credit risk management of Nib the bank.

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Thank you!

N.B: ''Off- balance sheet exposure'' according to NBE are standby letters of credit, money guarantees, bid bonds, indemnities, warranties and cash against document.

Interview Questions

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

Check list for in-depth Interview question For Credit information and Portfolio manager of the bank.

Dear respondents;

The objective of this interview is to gather and analyze relevant and in-depth information that will provide insights about credit risk management of NIB international Bank S.C This study is undertaken as a partial requirement for the completion of Masters in Business Administration.

Part II. Interview Questions

1 What are the major problems/causes for non-performing loans?
2 What are the challenges in administering credit risk of the bank?
3 What are the major weaknesses of existing credit risk management of the Bank?

SECONDARY DATA

Total Loan and Advance and NPL of NIB (2006-2015)

S.No	YEAR	NPL	TOTAL LOAN	% increment of loan amount
1	2006	100,857,055	1,418,048,451	
2	2007	106,897,497	1,755,831,156	23.8
3	2008	141,835,609	2,033,788,606	15.80%
4	2009	226,004,021	2,118,055,100	4%
5	2010	199,533,581	2,446,830,784	15.50%
6	2011	139,626,919	2,652,420,293	8.40%
7	2012	90,565,749	3,608,327,548	36%
8	2013	222,074,442	4,429,319,286	22%
9	2014	290,234,237	5,407,739,082	22%
10	2015	395,104,279	6,894,044,536	27.40%