ST.MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES

ASSESSMENT ON THE PRACTICES OF CREDIT RISK MANAGEMENT AND ITS EFFECT ON THE FINANCIAL PERFORMANCE OF BANKS IN ETHIOPIA

By

Daniel Ambaw Fentaye

ID NUMBER SGS/0106/2008A

Advisor

Dr. Asnake Minwyelet Abebe, M.Sc., Ph.D.
(Ass. Professor in Accounting and Finance)

July, 2017

ADDIS ABABA, ETHIOPIA

ASSESSMENT ON THE PRACTICES OF CREDIT RISK MANAGEMENT AND ITS EFFECT ON THE FINANCIAL PERFORMANCE OF BANKS IN ETHIOPIA

By

Daniel Ambaw Fentaye

ID NUMBER SGS/0106/2008A

Advisor

Dr. Asnake Minwyelet Abebe, M.Sc., Ph.D.
(Ass. Professor in Accounting and Finance)

A Research Project paper submitted to School of Graduate Studies, St. Mary's University in partial fulfillment of the requirements for the Degree of Master of Business Administration (MBA)

SCHOOL OF GRADUATE STUDIES

ST. MARY'S UNIVERSITY

ADDIS ABABA, ETHIOPIA

July, 2017

ST.MARY'S UNIVERSITY
School of Graduate Studies

ASSESSMENT ON THE PRACTICES OF CREDIT RISK MANAGEMENT AND ITS EFFECT ON THE FINANCIAL PERFORMANCE OF BANKS IN ETHIOPIA

By

Daniel Ambaw Fentaye

Approved by the board of examiners

_____	_____
Dean, Graduate studies	**Signature & Date**
_____	_____
Advisor	**Signature & Date**
_____	_____
Examiner	**Signature & Date**
_____	_____
Examiner	**Signature & Date**

Declaration

I, the undersigned, declare that this student research paper is my original work, prepared under the guidance of Dr. Asnake Minwyelet Abebe, M.Sc.,Ph.D.(Ass. Professor in Accounting and Finance) .All sources of materials used to this paper have been duly acknowledged.

Name: **Daniel Ambaw Fentaye**

Signature: _____

Place of Submission: **St. Mary's university School of graduate studies**

Date of Submission: **July, 2017**

Endorsement

This Research has been submitted for examination with my approval as Candidate's advisor.

Name: **Dr. Asnake Minwyelet Abebe, M.Sc., Ph.D. (Ass. Professor in Accounting and Finance)**

Signature: _____

Date: **July, 2017**

Table of Contents

AKNOWLEDGMENTS

I would very like to express my deepest gratitude to my advisor Dr. Asnake Minwuyelet (Asst. Prof.) for his encouragement, valuable comment, and support in my endeavor to undertake this thesis

It is also with great pleasure that I acknowledge my indebtedness to the help I have been given by my Staff members who take moral assistance and my special thanks goes to sileshi seifu and siabara abebe who help me in beautifying this thesis

I would like to express my immense thankfulness to all those who gave me the possibility to complete this thesis. Also, my most profound gratitude goes to my parents, friends and relatives for their unconditional love and steadfast support always.

Above all, I thank you Almighty **God** for all your mercies.

.

List of Abbreviations and Acronyms Used

CDO…….…….Collateralized Debt Obligation

CDS……..…..…Credit Default Swaps

CRM……...……..….Credit Risk Management

EBIT…….…….. Earnings Before Interest and Taxes

EL…….…Expected Loss

KYC……..Know Your Customer

LP……...…...Loan Provision

LRM…….…….Loan Review Mechanism

MVE……...…….....Market Value of Equity

NPL……Non Performing Loan

NPV……..…..Net Present Value

RE……Retain Earning

RM……...…Relation Manager

ROA……Return On Asset

ROE……Return on Equity

TAR…….....Total Asset Ratio

TL……..……..Total Loan

UL……Un Expected Loss

WC…….….Working Capital

List of tables

List of figures

Abstract

Credit risk management has become an important topic for financial institutes, especially since the business sector of financial services is related to conditions of uncertainty. The turmoil of the financial industry emphasizes the importance of effective risk management procedures. Consequently, this thesis studies "Credit Risk management and its impact on performance in Ethiopian Banks." This research objective was formulated in order to gain a better understanding of credit risk management and its impact on performance (return on asset).In this study Quantitative research design is employed. The data were collected by cross sectional survey method. The study uses secondary data gathered through content analysis of the selected banks' annual reports and accounts. Thereafter, these data is then analysed using descriptive statistics to depict pattern and robust standard errors OLS regression to estimate significant influence between banks' risk management practices and their financial performance. The study also analysis primary data by descriptive statistical tools and on hypothesis testing using regression model. This leads the researcher to conclude in the recommendation section that banks with good credit risk management policies have a lower loan default rate and relatively higher return on asset.

Chapter one

Introduction

This chapter is an introductory that consists of Background of the study, statement of the research problem, objectives of the study, significance of the study, scope of the study and organization of the research.

1.1. Background of the Study

The proper management of credit risk in financial institutions is critical for the survival and growth of financial institutions. Hull (2007) explains that one of the basic formation of every organization, most importantly a banker is to understand the portfolio of risk it faces currently and the risk it plans to take in future. Oldfield and Santomero (1997) posited that risks facing all financial institutions can be segmented into three separate types from a management perspective. These are :

(i) risk that can be eliminated or avoided by simple business practices
(ii) risk that can be transferred to other participants and
(iii) risk that must be actively managed at the firm level.

Credit risk is an investor‘s risk of loss arising from a borrower who does not make payments as promised. Such an event is called a default. Another term for credit risk is default risk. Investor losses include lost principal and interest, decreased cash flow, and increased collection costs, which arise in a number of circumstances: consumer does not make a payment due on a mortgage loan, credit card, line of credit, or other loan, a business does not make a payment due on a mortgage, credit card, line of credit, or other loan, a business or consumer does not pay a trade invoice when due, a business does not pay an employee‘s earned wages when due, a business or government bond issuer does not make a payment on a coupon or principal payment when due, an insolvent insurance company does not pay a policy obligation, an insolvent bank won‘t return funds to a depositor, and a government grant bankruptcy protection to an insolvent consumer or business (Hull (2007)

Credit management in a bank is a dynamic sector where a certain standard of long-range planning is needed to allocate the fund in diverse field and to minimize the risk and maximizing the return on the invested fund. The objective of the credit management is to maximize the performing asset and the minimization of the non-performing asset as well as ensuring the optimal point of loan and advance and their efficient management.) (Peter S. Rose & Sylvia Hudgins 2014)

1.2. Statement of the Research Problem

The success of banks largely depend on the effectiveness of their credit management systems because these institutions generate most of their income from interest earned on loans extended. The Central Bank Annual Supervision Report, 2010 indicated high incidence of credit risk reflected in the rising levels of non- performing loans by the banks in the last 10 years, a situation that has adversely impacted on their profitability. Banks assume various risks, which include credit risk, interest rate risk, liquidity risk, foreign exchange risk and operational risk. Managing these risks is essential for their survival and prosperity. Losses from a single loan or a material breakdown in controls can eliminate the gain on many other transactions (National Bank of Ethiopia, 2010).

The beginning of the Financial Services Modernization Act of 1999 was contained with a lot of excitement by all in the banking sector. The present possibility for banks to diversify into broader range of services and products make life really cool for banking entrepreneurs and managers. But this diversification advantage is a once in a life time opportunity that should be consumed with some caution and prudence as this involves a great deal of risk. This is in direct line with the saying that the higher you go, the colder life becomes.

The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors Banks use these deposits to generate credit for their borrowers, which in fact is a revenue generating activity for most banks. This credit creation process exposes the banks to high default risk which might led to financial distress including bankruptcy. All the same, beside other services, banks must create credit for their clients to make some money, grow and survive stiff competition at the market place. (Saunders, Cornett, 2005).

The principal concern of this research is to ascertain to what extent banks can manage their credit risks, what tools or techniques are at their disposal and to what extent their performance can be augmented by proper credit risk management policies and strategies.

1.3. Objective of the Study

General objective

The general objective of the study is to assess the effect of credit risk management on financial performance of Banks in Ethiopia.

Specific objective

The main objective of the study is to have bigger picture on credit risk management and its effect on their performance. In line with the general objective, the research try to achieve the following specific objectives;

- ✓ To know how banks use credit risk evaluation and assessment tools to mitigate their credit risk exposure.
- ✓ To assess the banks credit administration process.
- ✓ To distinguish the challenge that faced by the banks in credit risk management.
- ✓ To identify the effect of credit risk management on the banks financial performance.

1.4. Research Hypotheses

It is expected that with better credit risk management have high return on asset (ROA) and lower non-performing loan and loan provision. Accordingly with the help of empirical data on selected banks the study tries establish relation and test the following Hypotheses:

Hypothesis 1 (H0): credit risk management has an effect on the bank performance.
Hypothesis 2 (H1): credit risk management has no effect on the bank performance.
Thus, to test the hypothesis, the researcher uses the following regression model.

$$Y= \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3+ \beta 4X4+ \mu$$

Where: Y= return on asset =>dependent variable

The following are in dependent variables:

X1= non-performing loan to total loan

X2= loan provision to non-performing loan

X3= loan provision to total asset

X4= loan provision to total loan

μ= disturbance term

Also α is an intercept and β is the parameter of explanatory variable of dependent variable (return on asset).

1.5. Definition of Terms

Credit risk: is the risk of a loss resulting from the debtor's failure to meet its obligations to the Bank in full when due under the terms agreed (R.S. Raghavan 2003).

Financial intermediary: is defined as an institution that acts as a middleman in capital markets (Beck, 2001). It achieves this by matching supply and demand in the capital market. Therefore, a financial intermediary is an intermediary institution between lenders and borrowers

Return on asset (ROA): it measures how much income is earned for each birr invested by share holders.it is considered the best overall measure of a company's profitability.

Nonperforming loans: is an indicator to poor credit risk management. We therefore expect better credit risk management is related to lower non-performing loans.

Financial performance: banks financial performance can measured in terms of return on asset. If banks have higher return on asset it indicates they have higher profit.

1.6. .Significance of the Study

In addition to the academic importance, the significance of the paper is:

- It shows the relationship between credit risk management and performance.
- It shows the challenges faced by the banks with regard to credit risk management.
- It shows the major tools or techniques used by banks to manage their credit risk.
- To make the study as stepping stone for further study.
- It is useful for banks by providing information in credit risk management.

1.7. Delimitation/Scope of the Study

There are 20 banks in Ethiopia. Due to time and resource limitations it was impossible to cover the existing and preferred credit risk management of banks throughout the country. Having this fact, the focuses on six banks credit risk management with appropriate portion of sample size.

Moreover, the study was delimited to examine the credit risk management and its impact on performance of the selected six banks head office.

1.8. Organization of the Research

This section gives a structure of every chapter with in this research. The research consists four chapters. Chapter one introduction, it presents background of the study, statement of the problem, objective of the study, significance and scope of the study. Chapter two presents literature review. The methodology of the study employed: target population and sampling, and data used in the research, are included in chapter three. Chapter four presents result and discussion for the study. Finally, conclusions and recommendation are provided.

Chapter Two

2. Review of Related Literature

This chapter attempts to review theoretical concepts about credit risk management and staff performance. This review is organized into two parts. The first part deals with the concepts like Credit Risk, How to manage credit risk, Credit assessment & risk grading, What type of risk is being considered, Bank risk management systems, Credit risk measurement framework, Policy guidelines, Banks Performance and Its Determinants ,In the second part, Empirical results ,have been discussed.

2.1. The role of banks

The financial environment of most economies consists of typically five components namely: money, financial instruments, financial institutions, rules and regulations and financial markets. Among the various financial institutions, banks are a fundamental component and the most active players in the financial system (Dhanabhakyam & Kavitha, 2012).

A Bank is a financial intermediary that channels funds from surplus units, the depositors, to the deficit units, the borrowers, in the process gaining from the spread of the different interest charged. By the scope of its functions, banks are the key to economic growth of any economy (Rashid, 2010). Further, banks are a fundamental component of the financial system, and are also active players in financial markets (Guisse, 2012). The essential role of a bank is to connect those who have capital (such as investors or depositors), with those who seek capital (such as individuals wanting a loan, or businesses wanting to grow).United bank s.c is also among the many well organized financial institution in our country, which were established in light of giving and fulfilling these services required under the rules and regulations established by the NBE

1.1. Credit Risk

Credit risk is the current and prospective risk to earnings or capital arising from an obligor's failure to meet the terms of any contract with the bank or otherwise to perform as agreed. Credit risk is found in all activities in which success depends on counter party, issuers, or borrower performance. It arises any time bank funds are extended, committed, invested, or otherwise exposed through actual or implied contractual agreements, whether reflected on or off the balance sheet. Credit risk according to Basel Committee of Banking Supervision (BCBS, 2006) and (Gostineau, 2008) is the possibility of losing the outstanding loan partially or totally, due to credit events (default risk).

.

1.2. Risk Management Practices and Processes in the Banking Industry

Risk management in banks is becoming a discipline that every participants and players in the industry need to align with. It is a process which involves:

1.2.1. Risk identification:

In order to properly manage risks, an institution must recognize and understand risks that may arise from both existing and new business initiatives; for example, risks inherent in lending activity include credit, liquidity, interest rate and operational risks. Risk identification should be a continuing process, and should be understood at both the transaction and portfolio levels.

1.2.2. Risk Measurement:

Once risks have been identified, they should be measured in order to determine their impact on the banking institution's profitability and capital. This can be done using various techniques ranging from simple to sophisticated models. Accurate and timely measurement of risk is essential to effective risk management systems. Banking institutions should periodically test their risk measurement tools to make sure they are accurate. Good risk measurement systems assess the risks of both individual transactions and portfolios.

1.2.3. Risk Monitoring:

Institutions should put in place an effective management information system (MIS) to monitor risk levels and facilitate timely review of risk positions and exceptions.

Monitoring reports should be frequent, timely, accurate, and informative and should be distributed to appropriate individuals to ensure action, when needed.

1.3. Risk Control:

After measuring risk, an institution should establish and communicate risk limits through policies, standards, and procedures that define responsibility and authority. These limits should serve as a means to control exposure to various risks associated with the banking institution's activities. Institutions may also apply various mitigating tools in minimizing exposure to various risks. Institutions should have a process to authorize and document exceptions or changes to risk limits when warranted.

1.4. How to manage credit risk?

(Greuning and Bratanovic , 2013) defined credit risk as the chance that a debtor or a financial instrument issuer will not be able to pay interest or repay the principal according to the terms specified in a credit agreement. It means that payments may be delayed or ultimately not paid at all, which may cause cash flow problems and affects banks liquidity. Credit risk is the most important area in risk management. More than 80 percent of all banks balance sheet relate to credit. All over the world exposure to credit risk has led to many banks failure. Credit risk exposure particularly to real estate led to widespread banking problems in Switzerland, Spain, The United Kingdom, Sweden, Japan and others. Here in Kenya, (Obiero, 2012) found that credit risk was only second to poor management in contributing to bank failures. On perception, (Brownbridge, 2011) found that credit risk was the most important area of risk management in Kenya. Risk management means, increasing the likelihood of success, reducing the possibility of failure and limiting the uncertainty of all the overall financial performance.

(Best, 2015) argued that the purpose of risk management is to prevent an institution from suffering unacceptable loss. He went on to explain that "unacceptable loss" is one which either causes an institution to fail or materially damages its corporate position. Banks must monitor the ever changing micro and macroeconomic environment to identify the risks therein and find ways of managing these risks. Developing economies in the world face -more uncertainties that the developed counter parts. Banking business in developing world's therefore faces more risks. Failure to manage risks effectively in the respective banks leads to bank failures. One bank failure may have a contagion effect on the other banks leading to a systematic failure of the whole banking industry in a country or even a whole region as witnessed during the Asian Bank crisis (20010-2012). Kenya has had its share of bank failures. (Obiero, 2012) noted that in 2003 alone, 14 banks in Kenya collapsed. In recognition of the high risks involved in banking, the Central Bank of Kenya published risk Management guidelines for the purpose of providing guidance to all financial institutions on the minimum requirements for a risk management frame work and strategy. It has classified the risks facing financial institutions into nine classes namely: strategic risk, credit risk, liquidity risk, interest rate risk, price risk, foreign exchange rate risk, operational risk, reputation risk and regulatory risk. Banks can project the average level of credit losses it can reasonably expect to experience.

When united bank grants credit to its customers, it also incurs the risk of non-payment. Credit risk management refers to the systems, procedures and controls which the bank puts in place to ensure the efficient collection of customer payments and minimize the risk of non-payment.

Credit risk management forms a key part of united bank's overall risk management strategy, because, Weak credit risk management is a primary cause of many businesses Failures. Many small businesses have neither the resources nor the expertise to operate a sound Credit management system (Richardson, 2002).Therefore they put the general public's fund in to a jeopardy called delinquency, which is a loan in which the full payment not received as per the loan contract. For purposes of managing this problem, united bank s.c should categorize its credit in to different portfolio groups, based on their nature then a specific provision should be set for each category, and appropriate credit risk management infrastructure should be implemented.

1.5. Credit assessment & risk grading

1.5.1. Credit assessment

A thorough credit and risk assessment should be conducted prior to the granting of loans, and at least annually thereafter for all facilities. The results of this assessment should be presented in a Credit Application that originates from the relationship manager/account officer (RM), and is approved by Credit Risk Management (CRM). The RM should be the owner of the customer relationship, and must be held responsible to ensure the accuracy of the entire credit application submitted for approval. RMs must be familiar with the bank‘s Lending Guidelines and should conduct due diligence on new borrowers, principals, and guarantors.(p.j, and Gustin,C.M.2012)

It is essential that RMs know their customers and conduct due diligence on new borrowers, principals, and guarantors to ensure such parties are in fact who they represent themselves to be. All banks should have established Know Your Customer (KYC) and Money Laundering guidelines which should be adhered to at all times.

Credit Applications should summaries the results of the RMs risk assessment and include, as a minimum, the following details(coleman 2009 ,Laurent cleck 2004)

- Amount and type of loan(s) proposed.
- Purpose of loans.
- Loan Structure (Tenor, Covenants, Repayment Schedule, Interest)
- Security Arrangements

In addition, the following risk areas should be addressed:

Borrower Analysis: The majority shareholders, management team and group or affiliate companies should be assessed. Any issues regarding lack of management depth, complicated ownership structures or inter group transactions should be addressed, and risks mitigated.

Industry Analysis: The key risk factors of the borrower‘s industry should be assessed. Any issues regarding the borrower‘s position in the industry, overall industry concerns or competitive forces should be addressed and the strengths and weaknesses of the borrower relative to its competition should be identified.

Supplier/Buyer Analysis: Any customer or supplier concentration should be addressed, as these could have a significant impact on the future viability of the borrower.

Historical Financial Analysis: An analysis of a minimum of 3 years historical financial statements of the borrower should be presented. Where reliance is placed on a corporate guarantor, guarantor financial statements should also be analyzed. The analysis should address the quality and sustainability of earnings, cash flow and the strength of the borrower‘s balance sheet. Specifically, cash flow, leverage and profitability must be analyzed.

Projected Financial Performance: Where term facilities (tenor > 1 year) are being proposed, a projection of the borrower‘s future financial performance should be provided, indicating an analysis of the sufficiency of cash flow to service debt repayments. Loans should not be granted if projected cash flow is insufficient to repay debts.

Account Conduct: For existing borrowers, the historic performance in meeting re payment obligations (trade payments, cheques, interest and principal payments, etc.) should be assessed.

Adherence to Lending Guidelines: Credit Applications should clearly state whether or not the proposed application is in compliance with the bank‘s Lending Guidelines. The Bank‘s Head of Credit or Managing Director/CEO should approve Credit Applications that do not adhere to the bank‘s Lending Guidelines.

Mitigating Factors: Mitigating factors for risks identified in the credit assessment should be identified. Possible risks include, but are not limited to: margin sustainability and/or volatility, high debt load (leverage/gearing), overstocking or debtor issues; rapid growth, acquisition or expansion; new business line/product expansion; management changes or succession issues; customer or supplier concentrations; and lack o transparency or industry issues.(G.Symon(Eds))

Loan Structure: The amounts and tenors of financing proposed should be justified based on the projected repayment ability and loan purpose. Excessive tenor or amount relative to business needs increases the risk of fund diversion and may adversely impact the borrower‘s repayment ability.

Security: A current valuation of collateral should be obtained and the quality and priority of security being proposed should be assessed. Loans should not be granted based solely on security. Adequacy and the extent of the insurance coverage should be assessed.

Name Lending: Credit proposals should not be unduly influenced by an over reliance on the sponsoring principal‘s reputation, reported independent means, or their perceived willingness to inject funds into various business enterprises in case of need. These situations should be discouraged and treated with great caution. Rather, credit proposals and the granting of loans should be based on sound fundamentals, supported by a thorough financial and risk analysis.

1.5.2. Risk grading

All Banks should adopt a credit risk grading system. The system should define the risk profile of borrower‘s to ensure that account management, structure and pricing are commensurate with the risk involved. Risk grading is a key measurement of a Bank‘s asset quality, and as such, it is essential that grading is a robust process. All facilities should be assigned a risk grade. Where deterioration in risk is noted, the Risk Grade assigned to a borrower and its facilities should be immediately changed. Borrower Risk Grades should be clearly stated on Credit Applications.(Dev,A. and Rao, V 2006, comptroller kunt hand book 2001)The more conservative risk grade (higher) should be applied if there is a difference between the personal judgment and the Risk Grade Scorecard results. It is recognized that the banks may have more or less Risk grades, however, monitoring standards and account management must be appropriate given the assigned Risk Grade.(Goddard,J, Molyneux,,P,Wilson 2004)

1.6. Requirements for Active Risk Management Techniques

Thus far it has been argued that risk is an essential ingredient in the financial sector, and that some of this risk will be borne by all but the most transparent and passive institutions. In short, active risk management has a place in most financial firms. In light of this, what techniques can be used to limit and proactively manage risk?

And, what are the necessary procedures to implement in order to adequately manage the risks which have been identified as the responsibility of firm management? The answers to these questions are straight forward and are the issues to which we now turn. If management is going to control risk, it must establish a set of procedures to obtain this goal.(prepawadee Na Ranong and Wariya phuenngam 2009).

In the financial community this is referred to as a firm-level risk management system. Its goal is to measure and manage firm level exposure to various types of risks which management has identified as central to their franchise. For each risk category, the firm employs a four-step procedure to measure and manage firm level exposure. These steps include:

(i) Standards and reports

(ii) Position limits or rules

(iii) Investment guidelines or strategies

(iv) incentive contracts and compensation

In general, these tools are established to accurately define the risk, limit exposure to acceptable levels, and encourage decision makers to manage risk in a manner that is consistent with management's goals and objectives. To see how each of these four steps of a risk management system achieves these ends, we elaborate on each part of the process below.(Raghavan 2003)

(i) Standards and Reports

The first step of these control techniques involves two different conceptual activities, i.e. standard setting and financial reporting. They are listed together because they are the sine qua non of any risk management system. Underwriting standards, risk categorizations, and standards of review are all traditional tools of risk control. Consistent evaluation and rating of exposure is essential for management to understand the true embedded risks in the portfolio, and the extent to which these risks must be mitigated or absorbed.

The standardization of financial reporting is the next ingredient. Obviously, outside audits, regulatory reports, and rating agency evaluations are essential for investors to gauge asset quality and firm-level risk.

These reports have long been standardized, for better or worse. However, the need here goes beyond public reports and audited statements to the need for management information on asset quality and risk posture. Such internal reports need similar standardization and much more frequent reporting intervals, with daily or weekly reports substituting for the quarterly GAAP periodicity(Santomero 1997).

(ii) Position Limits and Rules

A second step for internal control of active management is the establishment of position limits. These are imposed to cover exposures to counterparties, credits, and overall position concentrations relative to systematic risks. In general, each person who can commit capital has a well-defined limit. This applies to traders, lenders, and portfolio managers. Summary reports to management show counterparty, credit, and capital exposure by business unit on a periodic basis. In large organizations with thousands of positions maintained and transactions done daily, accurate and timely reporting is quite difficult, but perhaps even more essential. (Santomero 1997).

(iii) Investment Guidelines

Third, investment guidelines and strategies for risk taking in the immediate future are outlined in terms of commitments to particular areas of the market, the extent of asset-liability mismatching or the need to hedge against systematic risk at a particular time.

Guidelines offer firm level advice as to the appropriate level of active management - given the state of the market and the willingness of senior management to absorb the risks implied by the aggregate portfolio. Such guidelines lead to hedging and asset-liability matching. In addition, securitization and syndication are rapidly growing techniques of position management open to participants looking to reduce their exposure to be in line with management's guidelines. These transactions facilitate asset financing, reduce systematic risk, and allow management to concentrate on customer needs that center more on origination and servicing requirements than funding position. (Santomero 1997).

(iv) Incentive Schemes

To the extent that management can enter into incentive compatible contracts with line managers and make compensation related to the risks borne by these individuals, the need for elaborate and costly controls is lessened. However, such incentive contracts require accurate position valuation and proper cost and capital accounting systems. It involves substantial cost accounting analysis and risk weighting which may take years to put in place. Notwithstanding the difficulty, well designed compensation contracts align the goals of managers with other stakeholders in a most desirable way.

In fact, most financial debacles can be traced to the absence of incentive compatibility, as the case of deposit insurance illustrates (Santomero 1997).

1.7. Traditional Approach:

It is hard to differentiate between the traditional approach and the new approaches since many of the ideas of traditional models are used in the new models. The traditional approach is comprised of four classes of models (Wikipedia, 2008)

1.7.1. Expert Systems

In the expert system, the credit decision is left in the hands of the branch lending officer.

His expertise, judgment, and weighting of certain factors are the most important determinants in the decision to grant loans. the loan officer can examine as many points as possible but must include the five "Cs" these are; character, credibility, capital, collateral and cycle (economic conditions) in addition to the 5 Cs, an expert may also take into consideration the interest rate. (Wikipedia, 2008)

1.7.2. Artificial Neural Networks:

Due to the time consuming nature and error- prone nature of the computerized expertise system, many systems use induction to infer the human expert's decision process. The artificial neural networks have been proposed as solutions to the problems of the expert system. This system simulates the human learning process. It learns the nature of the relationship between inputs and outputs by repeatedly sampling input/output information. (Wikipedia, 2008)

1.7.3. Internal Rating at Banks:

Over the years, banks have subdivided the pass/performing rating category, for example at each time, there is always a probability that some pass or performing loans will go into default, and that reserves should be held against such loans. (Wikipedia, 2008)

1.7.4. Credit Scoring Systems:

A credit score is a number that is based on a statistical analysis of a borrower's credit report, and is used to represent the creditworthiness of that person1. A credit score is primarily based on credit report information. Lenders, such as banks use credit scores to evaluate the potential risk posed by giving loans to consumers and to mitigate losses due to bad debt. Using credit scores, financial institutions determine who are the most qualified for a loan, at what rate of interest, and to what credit limits (Wikipedia, 2008)

1.8. Credit risk measurement framework

Credit risk is conventionally defined using the concepts of expected loss (EL) and unexpected loss (UL). Because expected losses can be anticipated, they should be regarded as a cost of doing business and not as a financial risk. Obviously credit losses are not constant across the economic cycle, there being substantial volatility (unexpected loss) about the level of expected loss. It is this volatility that credit portfolio models are designed to quantify.(Groum abate 2008).

Volatility of portfolio losses is driven by two factors – concentration and correlation. Concentration describes the lumpiness 'of the credit portfolio (eg why it is more risky to lend £10m to 10 companies than to lend £0.1m to 1,000 companies). Correlation describes the sensitivity of the portfolio to changes in underlying macro-economic factors (eg. why it is more risky to lend to very cyclical industries such as property development).In all but the smallest credit portfolios, correlation effects will dominate.When quantifying credit risk, two alternative approaches can be used when valuing the portfolio. .(Groum abate 2008).

Loss-based method:

Under this approach an exposure is assumed to be held to maturity. The exposure is therefore either repaid at par or defaults, and thus worth the recovery value of any collateral. Using this approach credit migration has no effect on the book value of the obligation. .(Groum abate 2008).

NPV-based method:

Under this approach, the embedded value of an exposure is assumed to be realizable. If the obligation upgrades then it is assumed to be worth more than par, and if it downgrades it is assumed to be worth less than par. The value of the obligation can be calculated using either using market credit spreads (where applicable) or by marking-to-model using CAPM or similar method. .(Groum abate 2008).

In general, NPV-based methods are most applicable to bond portfolios and large corporate portfolios where meaningful markets exist for either the physical assets or credit derivatives. For the vast majority of commercial bank exposures, where such markets do not exist a more meaningful risk profile is obtained using a loss-based method. Loss-based calculations have the advantage of requiring less input data (margin and maturity information, for example, is not required) and being simpler to compute. However, many institutions are starting to run both methods in parallel, particularly for portfolios where securitization is possible. .(Groum abate 2008).

1.9. Policy guidelines

The fundamental credit risk management policies that are recommended for adoption by all banks in Bangladesh. The guidelines contained herein outline general principles that are designed to govern the implementation of more detailed lending procedures and risk grading systems within individual banks. .(Groum abate 2008).

1.9.1. Lending Guidelines

All banks should have established Credit Policies (Lending Guidelines‖) that clearly outline the senior management‘s view of business development priorities and the terms and conditions that should be adhered to in order for loans to be approved.

The Lending Guidelines should be updated at least annually to reflect changes in the economic outlook and the evolution of the bank‘s loan portfolio, and be distributed to all ending/marketing officers. The Lending Guidelines should be approved by the Managing Director/CEO & Board of Directors of the bank based on the endorsement of the bank‘s Head of Credit Risk Management and the Head of Corporate/Commercial Banking. .(Groum abate 2008).

Any departure or deviation from the Lending Guidelines should be explicitly in credit applications and a justification for approval provided. Approval of loans that do not comply with Lending Guidelines should be restricted to the bank‘s Head of Credit or Managing Director/CEO & Board of Directors.

The Lending Guidelines should provide the key foundations for account officers/relationship managers (RM) to formulate their recommendations for approval, and should include the following: .(Groum abate 2008).

Industry and Business Segment Focus

The Lending Guidelines should clearly identify the business/industry sectors that should constitute the majority of the bank‘s loan portfolio. For each sector, a clear indication of the bank‘s appetite for growth should be indicated (as an example, Textiles: Grow, Cement: Maintain, Construction: Shrink). This will provide necessary direction to the bank‘s marketing staff.(Grabowski , M and Roberts ,K 1999)

Types of Loan Facilities

The type of loans that are permitted should be clearly indicated, such as Working Capital, Trade Finance, Term Loan, etc.

Single Borrower/Group Limits/Syndication

Details of the bank‘s Single Borrower/Group limits should be included as per Bangladesh Bank guidelines. Banks may wish to establish more conservative criteria in this regard.

Lending Caps

Banks should establish a specific industry sector exposure cap to avoid overconcentration in any one industry sector.

Discouraged Business Types

Banks should outline industries or lending activities that are discouraged. As a minimum, the following should be discouraged:

- Military Equipment/Weapons Finance
- Highly Leveraged Transactions
- Finance of Speculative Investments
- Logging, Mineral Extraction/Mining, or other activity that is ethically or environmentally sensitive
- Lending to companies listed on CIB black list or known defaulters
- Counterparties in countries subject to UN sanctions
- Share Lending
- Taking an Equity Stake in Borrowers
- Lending to Holding Companies
- Bridge Loans relying on equity/debt issuance as a source of repayment.

Loan Facility Parameters

Facility parameters (e.g., maximum size, maximum tenor, and covenant and security requirements) should be clearly stated. As a minimum, the following parameters should be adopted:

- Banks should not grant facilities where the bank‘s security position is inferior to that of any other financial institution.
- Assets pledged as security should be properly insured.
- Valuations of property taken as security should be performed prior to loans being granted. A recognized 3rd party professional valuation firm should be appointed to conduct valuations.

Cross Border Risk

Risk associated with cross border lending. Borrowers of a particular country may be unable or unwilling to fulfill principle and/or interest obligations. Distinguished from ordinary credit risk because the difficulty arises from a political event, such as suspension of external payments

- Synonymous with political & sovereign risk
- Third world debt crisis

1.9.2. Credit Risk Models

Over the last decade, a number of the world's largest banks have developed sophisticated systems in an attempt to model the credit risk arising from important aspects of their business lines. Such models are intended to aid banks in quantifying, aggregating and managing risk across geographical and product lines. The outputs of these models also play increasingly important roles in banks' risk management and performance measurement processes, including performance-based compensation, customer profitability analysis, risk-based pricing and, to a lesser (but growing) degree, active portfolio management and capital structure decisions. (Saunders and Cornett, 2007).

The Task Force recognizes that credit risk modeling may indeed prove to result in better internal risk management, and may have the potential to be used in the supervisory oversight of banking organizations. However, before a portfolio modeling approach could be used in the formal process of setting regulatory capital requirements for credit risk, regulators would have to be confident not only that models are being used to actively manage risk, but also that they are conceptually sound, empirically validated, and produce capital requirements that are comparable across institutions. (Saunders and Cornett, 2007).

At this time, significant hurdles, principally concerning data availability and model validation, still need to be cleared before these objectives can be met, and the Committee sees difficulties in overcoming these hurdles in the timescale envisaged for amending the Capital Accord (BIS, credit risk modeling, 19th April 1999).

Credit scoring models use data on observed borrower characteristics either to calculate the probability of default or to borrowers into different default risk classes (Saunders and Cornett, 2007).

Prominent amongst the credit scoring models is the Altman’s Z-Score. The Z-score formula for predicting Bankruptcy of Dr. Edward Altman (1968) is a multivariate formula for measurement of the financial health of a company and a powerful diagnostic tool that forecast the probability of a company entering bankruptcy within a two year period with a proven accuracy of 75-80%.

The Altman's credit scoring model takes the following form;

$Z=1.2X1+ 1.4X2 + 3.3X3 + 0.6X4 +1.0X5$..... (2)

Where, X1 = Working capital/ Total assets ratio

X2 = Retained earnings/ Total assets ratio

X3 = Earnings before interest and taxes/ Total assets ratio

X4 = Market value of equity/ Book value of long-term debt ratio

X5 = Sales/ Total assets ratio.

The higher the value of Z, the lower the borrower's default risk classification. According to Altman's credit scoring model, any firm with a Z-Score less than 1.81 should be considered a high default risk, between 1.81-2.99 an indeterminate default risk, and greater than 2.99 a low default risk.

Critics: Use of this model is criticized for discriminating only among three borrower behavior; high, indeterminate, and low default risk. Secondly, that there is no obvious economic reason to expect that the weights in the Z-Score model – or, more generally, the weights in any credit-scoring model- will be constant over any but very short periods. Thirdly the problem is that these models ignore important, hard to quantify factors (such as macroeconomic factors) that may play a crucial role in the default or no-default decision. (Saunders and Cornett, 2007).

1.10. Studies on Banks Performance and Its Determinants

The role of bank remains central in financing economic activity and its effectiveness could exert positive impact on overall economy as a sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system (Athanasoglou et al, 2005).Therefore, the determinants of bank performance have attracted the interest of academic research as well as of bank management, financial markets and bank supervisors since the knowledge of the internal and external determinants of banks' profits and margins is essential for various parties.

During the last two decades the banking sector has experienced worldwide major transformations in its operating environment. Both external and domestic factors have affected its structure and performance. Correspondingly, in the literature, bank profitability is usually expressed as a function of internal and external determinants.

The internal determinants refers to the factors originate from bank accounts (balance sheets and/or profit and loss accounts) and therefore could be termed micro or bank specific determinants of profitability. The external determinants are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and performance of financial institutions. (Yuqi Li).

1.10.1. Studies on internal determinants

Studies dealing with internal determinants employ variables such as size, capital, risk management and expenses management. all link bank size to capital ratios, which they claim to be positively related to size, results indicated that as size increases. Especially in the case of small to medium-sized banks. Profitability rises. However, many other researchers suggest that little cost saving can be achieved by increasing the size of a banking firm which suggests that eventually very large banks could face scale in efficiencies. .(Hu (2002) and Goddard et al. (2004),)

Other internal factors, such as credit or liquidity are considered as bank specific factors, which closely related to bank management, especially the risk management. The need for risk management in the banking sector is inherent in the nature of the banking business. Poor asset quality and low levels of liquidity are the two major causes of bank failures and represented as the key risk sources in terms of credit and liquidity risk and attracted great attention from researchers to examine the their impact on bank profitability. .(Hu (2002) and Goddard et al. (2004),)

1.10.2. Studies on external determinants

Turning to the external determinants, several factors have been suggested as impacting on profitability and these factors can further distinguish between control variables that describe the macroeconomic environment, such as inflation, interest rates and cyclical output, and variables that represent market characteristics. The latter refer to market concentration, industry size and ownership status (Athanasoglou et al, 2005).

1.10.3. Empirical review

As Yuqi Li 2007 a number of explanatory variables have been proposed for both categories, according to the nature and purpose of each study. Studies dealing with internal determinants employ variables such as size, capital, credit risk or costs etc. while for external determinants, several factors have been suggested as impacting on profitability and these factors can further distinguish between control variables that describe the macroeconomic environment, such as inflation, interest rates and cyclical output, and variables that represent market characteristics.

The latter refer to market concentration, industry size and ownership status. A number of explanatory variables have been proposed for both categories, according to the nature and purpose of each study. Studies dealing with internal determinants employ variables such as size, capital, credit risk or costs etc. While for external determinants, several factors have been suggested as impacting on profitability and these factors can further distinguish between control variables that describe the macroeconomic environment, such as inflation, interest rates and cyclical output, and variables that represent market characteristics. The latter refer to market concentration, industry size and ownership status.

The empirical findings on the impact of bank profitability in the UK in our sample suggest the following conclusions. First, negative and positive effect of liquidity on bank profitability has been found, with weak significant coefficient. This is in consistent with previous studies as the results concerning liquidity are mixed. Therefore, the conclusion about the impact of UK bank’s liquidity on their performance remains ambiguous and further research is required. Second, the ratio of loan loss reserves to net interest revenue has a negative impact on ROAA with statistical significance.

This implies that higher credit risks results in lower profit. As the findings shows that liquidity and credit risks do have negative impact on bank profitability, and it provides further implication on the effective risk management practices in banks. Achou and Tenguh (2008) shows 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.

Regulation, proxied by the amount of Reserve Fund appears to have negative impact on all three measures of risk, significantly so for liquidity risk. Depositor behavior appears to significantly impact only liquidity management, but not capital nor credit risk management. We do not find evidence that shareholders act in a manner that reduces the credit risk of banks. The more efficient the management, the less capital the bank is likely to hold, subject to minimum capital requirement. The other evidence is that credit risk increases as management efficiency variable decreases (Tsorhe, Aboagye & Kyereboah-Coleman).

Chapter Three

Research Design and Methodology

3.1 Research Design

This research paper was employ quantitative research design. Quantitative research involves counting and measuring of events and performing the statistical analysis of a body of numerical data. Under the quantitative research design, descriptive research method was employed.

3.2 Population and Sampling

Currently in Ethiopia, 20 banks are in operation. From these six banks namely Dashn Bank, Awash International Bank, CBE, United Bank, Nib International Bank, and Abay Bank were selected by using purposive sampling technique. Purposive sampling targets a particular group of people. When the desired population for the study is rare or very difficult to locate and recruit for a study, purposive sampling may be the only option. Purposive sampling is chosen by considering the time concern, the cost allocated for the research and availability of data

3.3 Type of Data and Tools/Instruments of Data Collection

In this paper both primary and secondary data sources were used. The secondary data were collected from the financial statements of the selected banks by the sample and the primary data were obtained by questionnaire. Sixty questionnaires were prepared in order to collect primary data, because the questioner was distributed on Head office credit risk department of each banks only, and they were not more than seventy and some of them were not interested in filling the questioner.

The data from selected bank were used for analysis. A panel data of a 10 year financial data of banks under the study from 2007-2017, to examine the relationship between return on asset (ROA) which is performance indicators and loan losses (NPL/TL), loan provision to total loan (LP/TL), loan provision to non-performing loan (LP/NPL), and loan provision to total asset (LP/TA) .

.

3.4 Method of Data Analysis

The primary data collected through questionnaire were analyzed and interpret using descriptive statistical tools like table, figures and percentages. Eviews software was employed to analyze and interpret the regression model used by the researcher.

3.5. Specification of Model

In the study, the researcher was employ the following regression model.

$Y= \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3+ \beta 4X4+ \mu$

Where: Y= return on asset => dependent variable

Independent variables are:

X1= non-performing loan to total loan

X2= loan provision to non-performing loan

X3= loan provision to total asset

X4= loan provision to total loan

μ= disturbance term

Also α is an intercept and β is the parameter of explanatory variable of dependent variable (return on asset)

Chapter Four

Results and Discussion

In this part of the study, the empirical data collected from the researcher‘s self-completion questionnaire were presented. Firstly, it presents the percentage of each answer from the respondents and then summarizes the importance of each factor.

4.1 Results/Findings of the Study:

Analysis of Primary data

In analysis of primary data the researcher has been carried out using the attached questionnaire with the goal of assessing the credit risk management & its effect on performance. Structured questionnaires were sent to the selected banks. As shown below, 90% of them have responded.

Response rate

No. Selected banks Sample Population……Response

1 Commercial Bank of Ethiopia …….. 20……..17

2 Abay Bank …….....8…….7

3 Dashen Bank S.C ……8……. ……...8

4 Awash International Bank S.C…… …8……. ……7

5 United Bank S.C…….. 8……. ……8

6 NIB International Bank S.C ……...8…… ……7

Total…… 60……..54

Besides, the research has considered experience, authority to establish credit risk, way of communication to reduce credit risk, and expectation from credit risk management, to grasp what is possible and apparent for credit risk management.

(i) Risk management area

Response	Percentage
Less than one year	1.54%
1-2 years	35.53%
3-5 years	41.23%
More than 5 years	21.70%

Table 4.1 Experience of respondents in the area of risk management

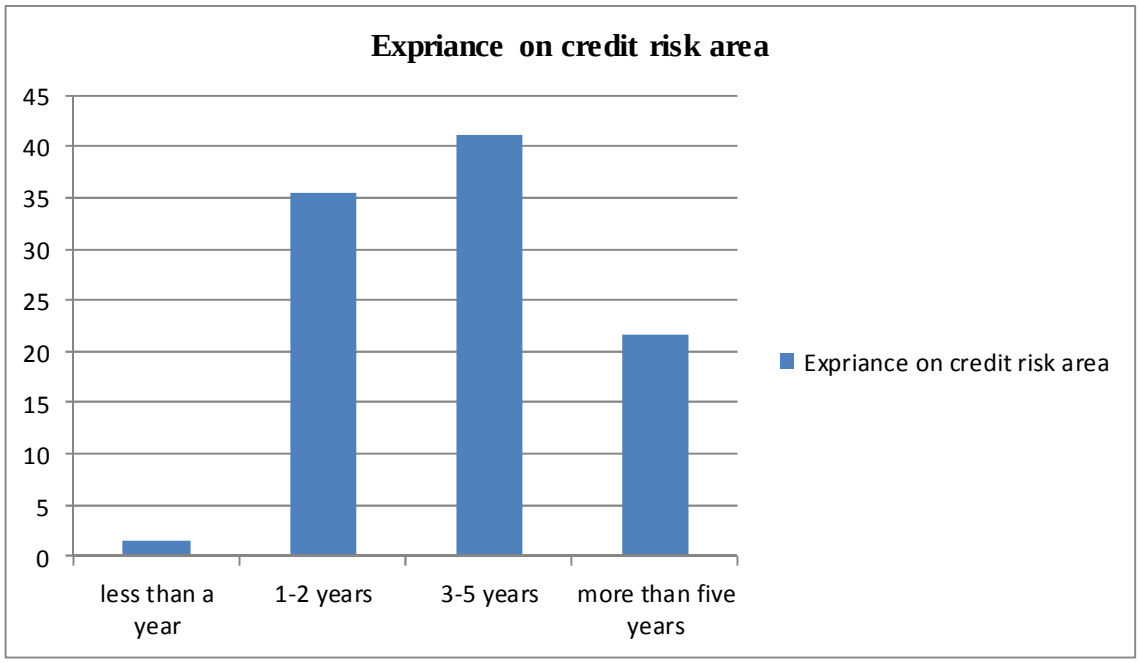

Figure 4.1 experience of respondent on risk management area

As far as the position of respondents was concerned, the study has tried to optimize study participants based on their working position. As the following figuer-4.1 summarizes, 35.53%) have experience working with risk management area 1-2 years, 21.70% more than 5 years Whereas, the respondents who have working experience in risk management 3-5 years was 41.23%, and, the respondents who have working experience in risk management 3-5 years was 41.23%. This data was used to know how experienced the respondents were in the area of risk management.

(ii). what is your expectation from effective risk management in your organization?

Response	Percentage
Reduce financial loss	60.81%
Improve communication with customers	20.14%
Improve decision making	40.23%
Improve resource allocation	21.18%

Table 4.2 The expectation from credit risk management

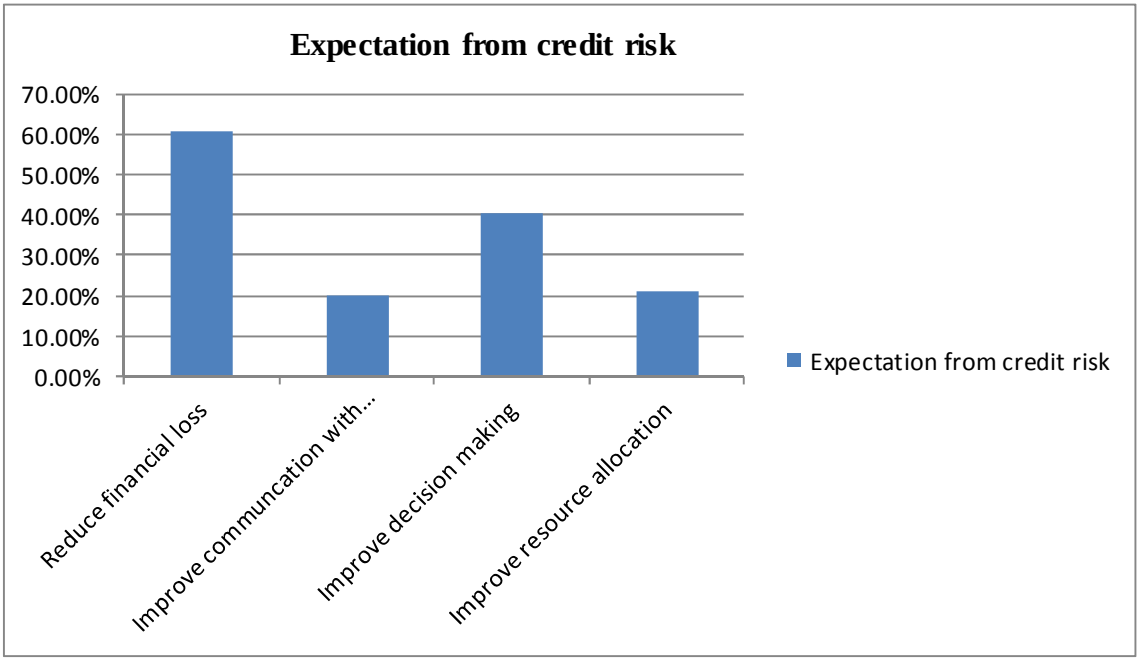

Figure 4. 2 the expectation from credit risk management

The second question was asked the respondents to indicate their expectations of credit risk management in their organization. The researcher asked this in order to find out how important the respondents think credit risk management is. The results show that most of the respondents expect risk management to reduce financial losses (60.81%). Additionally, 21.18% of the respondents expect effective credit risk management to improve resource allocation, 40.23% expect effective credit risk management to improve decision making and 20.14% improve communication with customers.

(iii). who has the authority to establish credit risk management policy in your organization?

Response	Percentage
Chief executive officer	-
Chief financial officer	-
Board/committee	91.75%
Executive management committee	8.25%
Internal auditor	
Staff	

Table 4.3 The percentage of who has the authority to establish credit risk management in organization

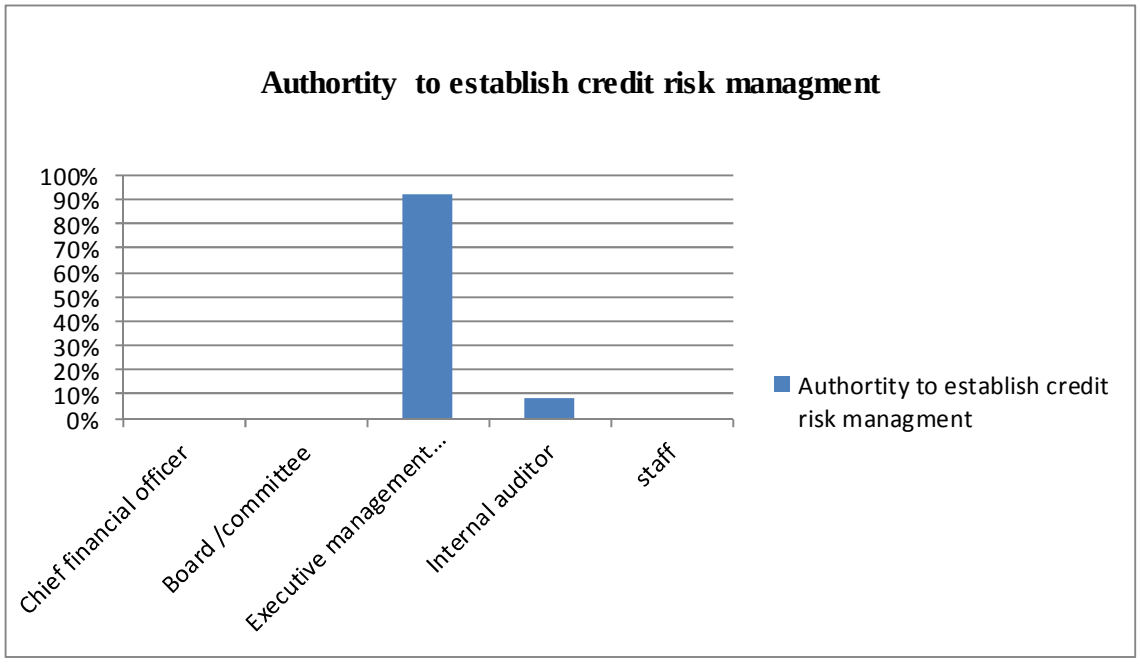

Figure 4.3 The authority to establish credit risk management in organization

In the beginning, the researcher asked a question about commitment and support from top management. In the table above, the respondents asked to identify who has the authority to establish credit risk management in their organization.

The results of this question were closely expected because it assumed the top-level should have the authority to establish risk management. As it can see in the table, the majority of the respondents (91.75%) specify that the board and committee have the authority to establish risk management. Next was the executive management team (8.25%).

The surveys show that respondents identified commitment and support from top management as the most important. Top-level management responds to business processes and manages credit risk. Most of the organizations believe that it is the responsibility of the Board of Directors or Committee and Executive Management team to establish credit risk management. Top management decides the objectives and strategies for organizational credit risk management activities, mission and overall objectives.

The respondents indicated that there are many ways in which top management can support risk management policy as showed in the table 4.3. They set up a particular credit risk management teams, regularly revision of risk management plans, clear to allocate credit risk management responsibilities, strictly obey in credit risk management policy, listen a problems from employees and allocate appropriate resources. Most of the organizations have a policy to support the development of credit risk management. The benefit of top management support is effective decision-making to manage risks .This is one of the expectations from the respondents.

(iv) Does your organization have a documented credit risk management guideline or policy?

Response	Percentage
Yes	100%
No	-
Total	100%

Table 4.4 The percentage of the yes/no question that was asked regarding if the respondents‘ organizations have a documented credit risk management guideline or policy.

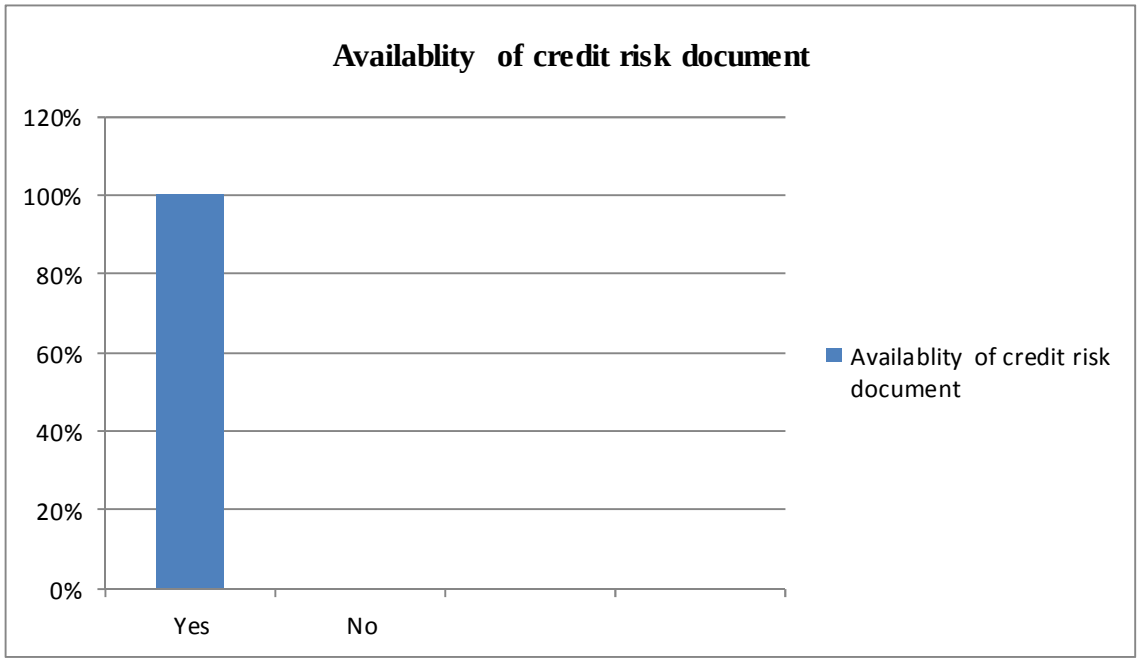

Figure 4.4 organizations have credit risk management guideline

In table 4.4, it was used a yes/no question to ask the respondents if their organizations have a documented credit risk management guideline or policy. 100% of respondent replied Yes‘. This helps the organization to manage their credit risk. Because the employees ‘of the organization works under the guideline or policy developed by the organization.

Organizational structure involves an organization‘s internal pattern in relationships, authority and communication. Structure is comprised of formal lines of authority and communication, and the information as well as data that flow along these lines (Stank, Daugherty and Gustin, 1994). Structure and processes of the organizations are most effective when their design function match their environment and impact to organization‘s strategies (Hunter, 2002).

(v). How often does your organization change its guidelines or policies to manage credit risks?

Response	Percentage
Once per year	74.76%
Once per two years	19.63%
Once in more than two years	5.61%
Never	-
Total	100%

Table 5 The percentage of how often the respondents‘ organizations change its guidelines or policies to manage risk.

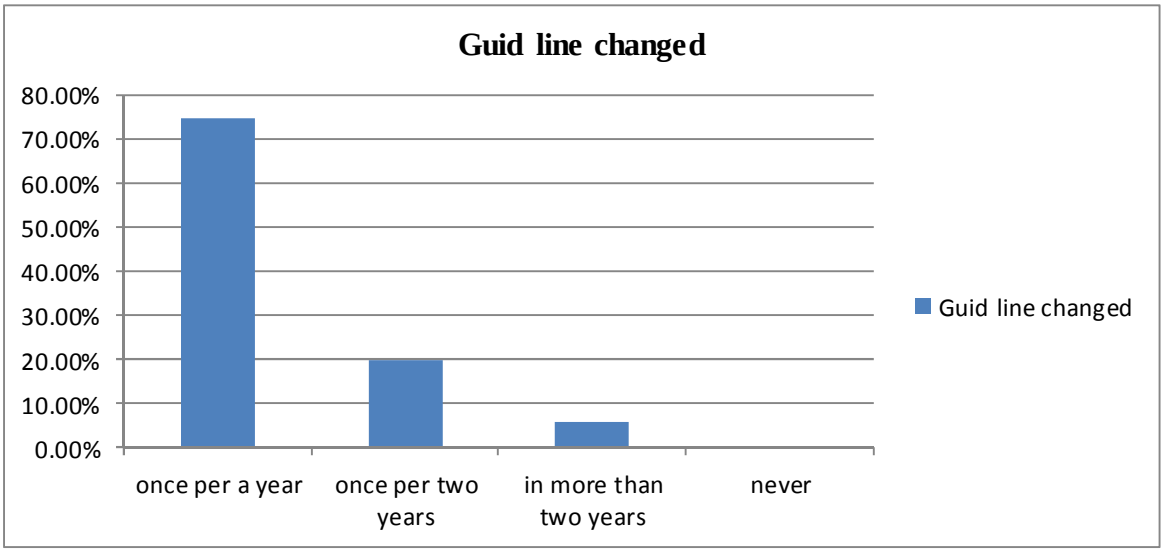

Figure 4.5 the change of guidelines to manage credit risk by the organization

In table 4.5, most of the respondents (74.76%) replied that their organization changes their guidelines or policies to manage credit risks once per year. 19.63% of the respondents replied that their organizations changed their guidelines or policies one every 2 years and changing once in more than 2 years had 5.61%. That means that most of the organizations think they should change their guidelines or policies to manage credit risks once per year.

Because the financial world is always in fluctuation, Carey (2001) suggests that organizational structure must be reviewed regularly and adjusted to adapt to changing financial environments. All of the respondents stated that their organization changes its guidelines or policies in order to manage credit risks. Most of the organizations implement changes and review their organizational structure every year. Moreover, Grabowski and Roberts (1999) suggest that risk management is primarily associated with the fluidity of organizational structures. It is a flexible approach to respond in different ways and respond quickly in the face of changing conditions.

(vi). In the future, does your organization have a policy to support the development of credit risk management?

Response	Percentage
Yes	96.21%
No	3.79%
Total	100%

Table 4.6 The percentage of organizations which have a policy to support the development of risk management

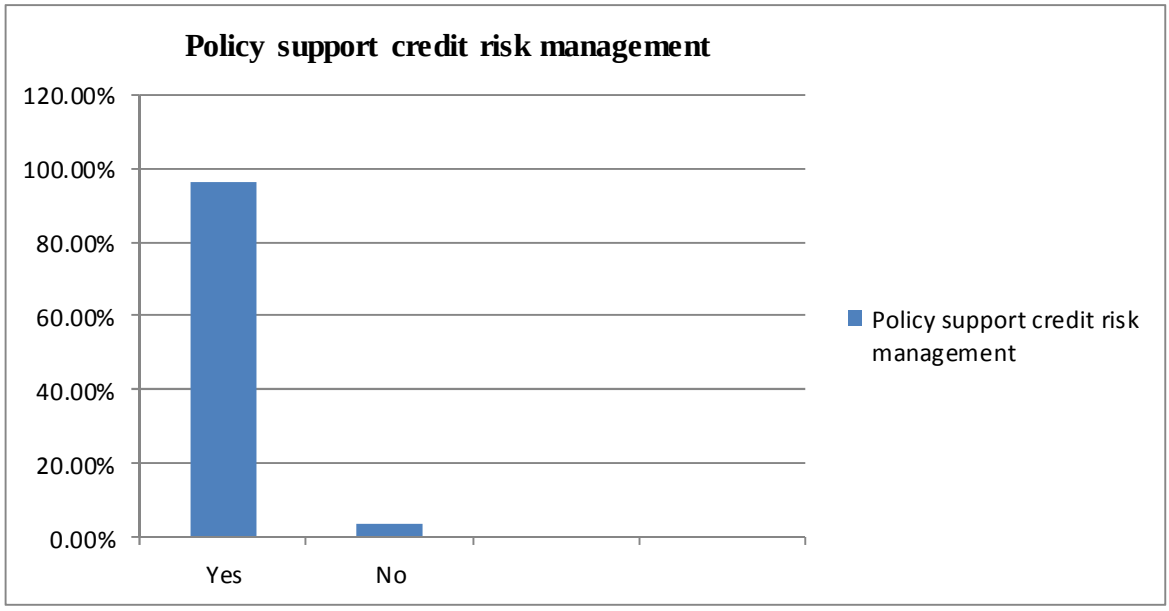

Figure 4.6 A policy to support the development risk management in future

In table 4.6, the researcher used a yes/no question to ask the respondents about future credit risk management policy. The results show that the amount of respondents who chose yes was 96.21%, which means that top management is willing to support the development of future risk management policy.

(vii). How often does your organization provide risk management training courses?

Response	Percentage
Never	
1 times per year	71.13%
2 times per year	12.37%
More than two times per year	16.50%
Total	100%

Table 4.7 the percentage of how often organizations provide risk management training courses

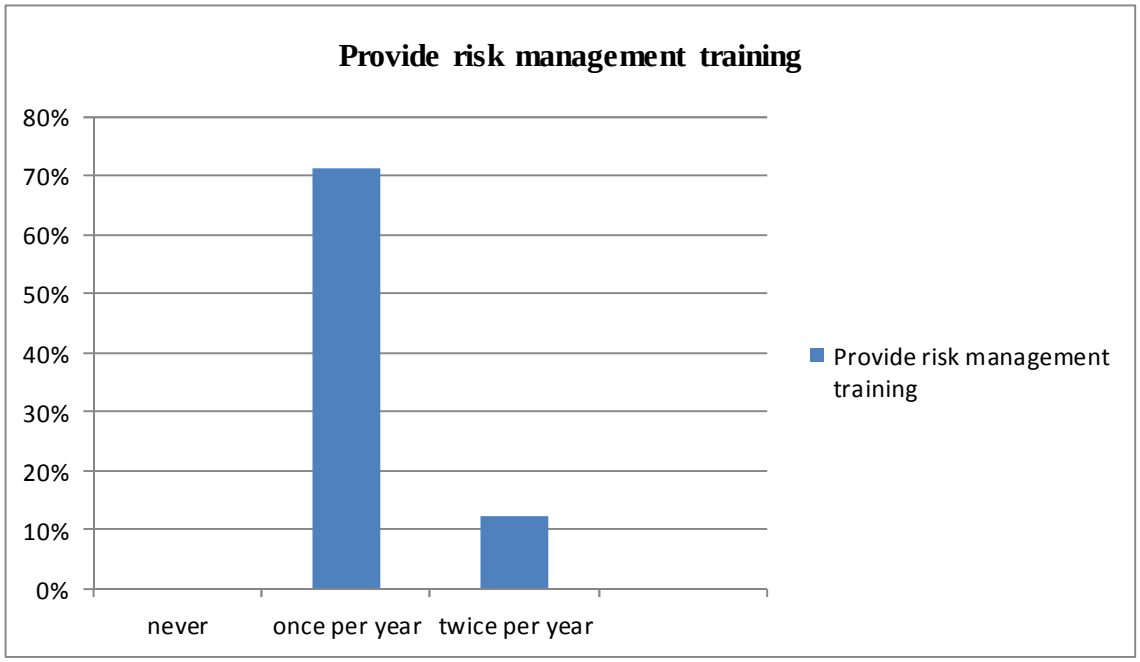

Figure 4.7 How often organizations provide risk management training courses

In table 4.7, it was asked the respondents about the frequency of credit risk management training in their organizations. The results show that most of the respondents'organizations (71.13%) have a risk management training course one times per year.12.37% have a risk management training course two times per year and, more than 2 times per year percentages, 16.50%.

Since the purpose of training is to improve knowledge, skill and attitudes to job satisfaction it is better to know how frequent the organizations provide training for employees. According to table 4.7 it can be concluded that the organizations give training to employees ' o n e times per year. This is short be period and enables employees to understand the credit risk management practices and to do better effort in the behalf of the organization benefit.

(viii). Does your organization have established procedures for keeping up-to-date and informed with changes in regulations?

Response	Percentage
Yes	93.12%
No	6.88%
Total	100%

Table 4.8 The percentage of organizations which have established procedures for keeping up to- date and informed with changes in regulations

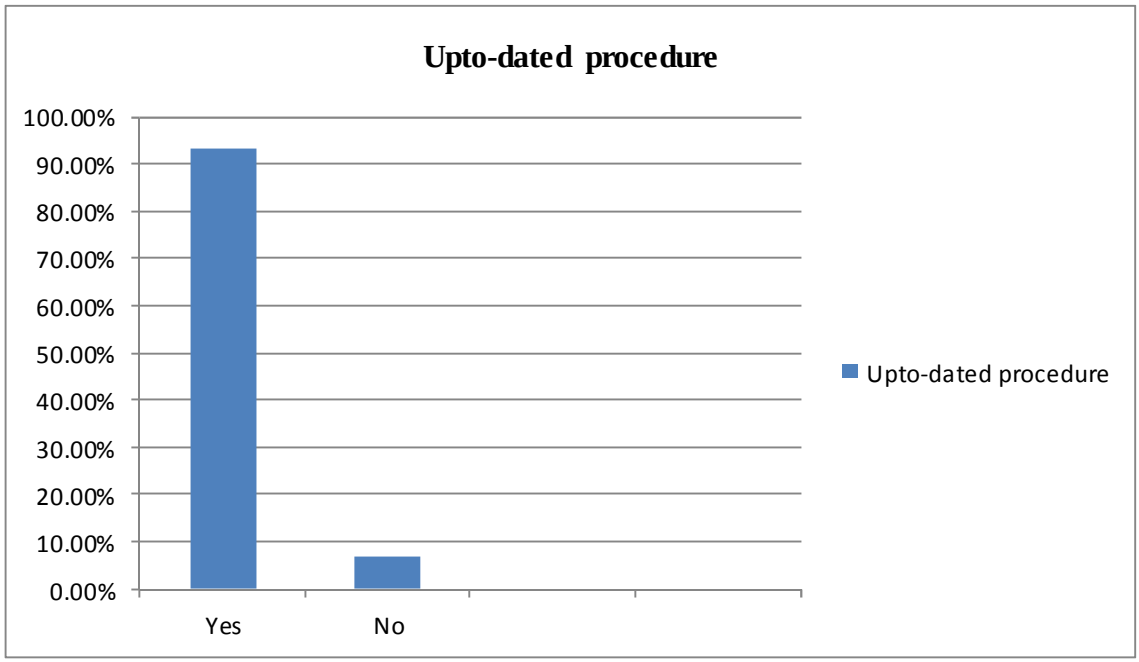

Figure 4.8 Organizations established procedures for keeping up to date and informed with changes in regulations

The results show that table 4.8 shows that 93.12% of the respondents answered _Yes', their organization does have established procedures for keeping up-to-date and informed with changes in regulations, But 6.88% do not. From the table it can be concluded that the organization is in the way to provide training to its employee for the changes that will be happen in the regulations of credit risk management.

The ability to respond to changing conditions in an organization's operation is related to a range of activities including the development of risk training courses and involvement of staff in responding to an early warning system (Carey, 2001). The respondents state that their organizations have established procedures for keeping up-to-date and informed with changes in regulations to their staff. In addition, they provide risk management training courses at least once per year. The other companies also offer training courses more than once a year.

(ix). How does your organization effectively communicate to reduce credit risk?

Response	Percentage
Creating clear and trustworthy information	38.10%
Developing understanding between management team and employee	47.62%
Fast communication between management team and customers	30.95%
Regularly communicating among management and staff	42.86%
Creating and maintaining a clear communication	28.57%

Table 4.9 The percentage of the processes of communicate to reduce credit risk

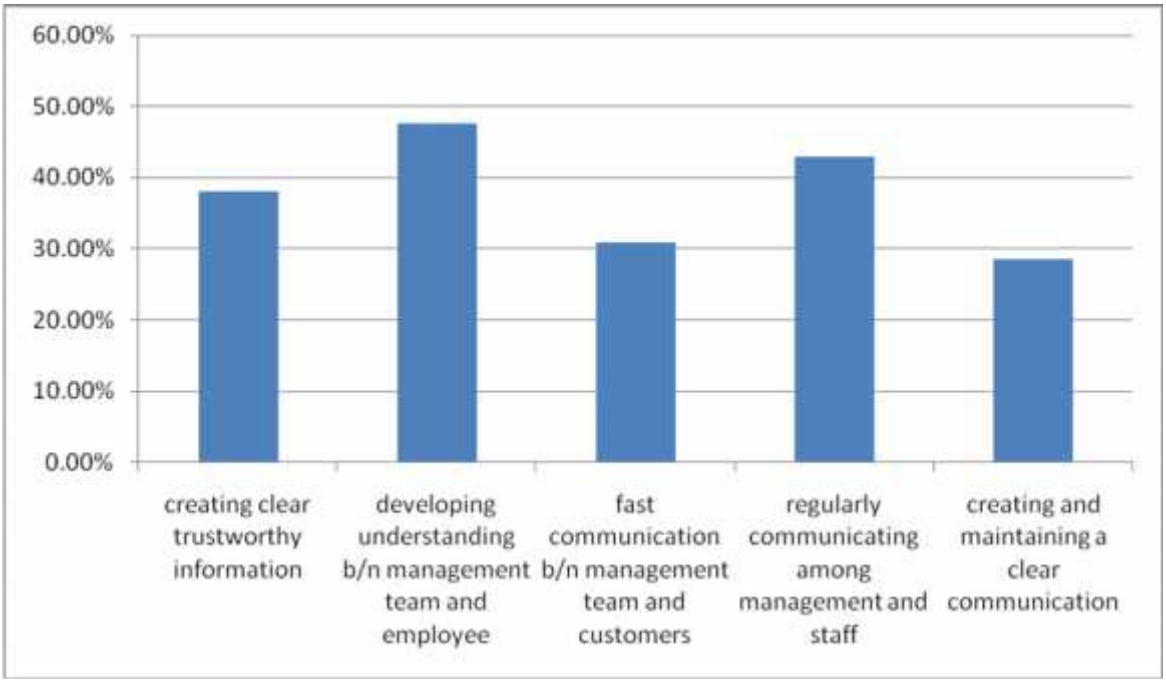

Figure 4.9 the process of communicating to reduce risk

In table 4.9, the researcher would like to know how the organizations effectively communicate in order to reduce credit risk. In this question, the respondents could choose more than one answer. The results show that the most common way of communicating effectively to reduce risk is developing understanding between management team and employee, with 47.62% of the respondents picking this answer. It means that most of the respondents think that developing this understanding is a first priority for organizations. The next results were regularly communicating among management and staff with

42.86%. Creating clear and trustworthy information and fast communication between management team and customers followed with 38.10%and 30.95% respectively. The lowest ranking was creating and maintaining a clear communication, with 28.57%. This means that Creating and maintaining a clear communication is not a common way of communicating to reduce risk and is outranked by creating understandable and clear information.

The responses believed that developing understanding between management team and employee, regularly communication between management and staff, create information clear and trustworthy, maintaining clear to communication and fast and sharp communication in organization all is support effective communication in risk management procedures.

(x). Do the banks use Altman Z score model for credit evaluation?

Response	Percentage
Yes	-
No	100%
Total	100%

Table 4.10 The percentage of the use of Altman Z score for credit evaluation

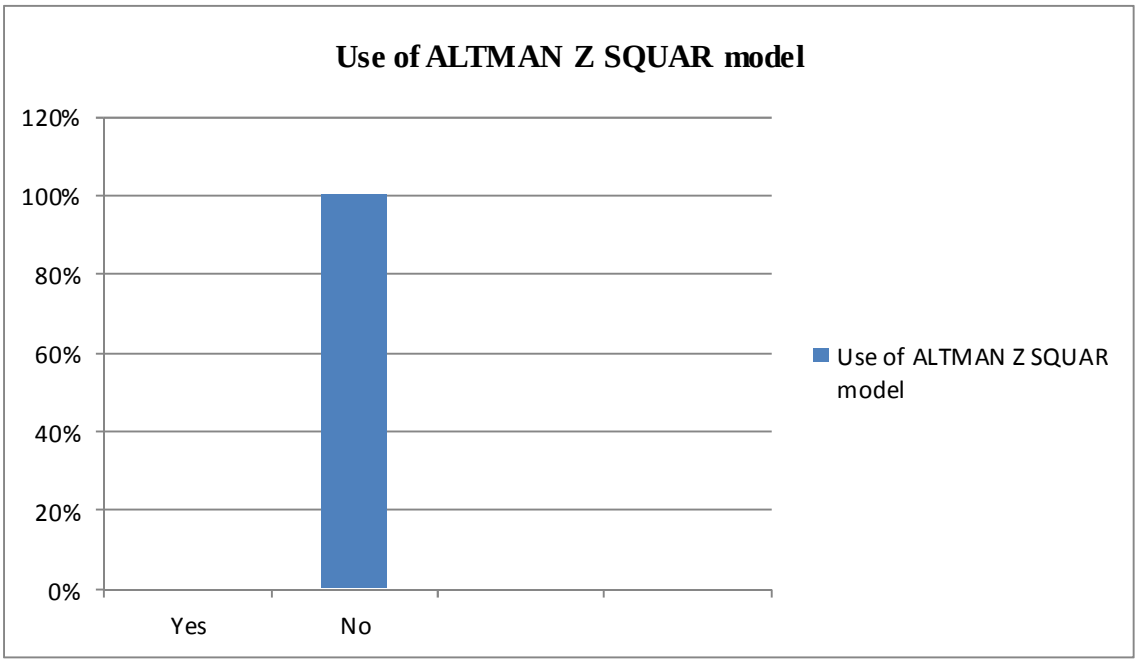

Figure 4.10 the use of Altman Z score model for credit valuation

The researcher also asked about the application of Altman Z score for credit evaluation to determine the bankruptcy of the organization which they provide loan to employees. The results show that 100% do not use Altman Z score. From the result it can be conclude that the financial institutions are not in the position to apply the model to evaluate what will happen to their customers‘ regarding the payment of their obligation. The Z-score formula for predicting Bankruptcy of Dr. Edward Altman (1968) is a multivariate formula for measurement of the financial health of a company and a powerful diagnostic tool that forecast the probability of a company entering bankruptcy within a two year period with a proven accuracy of 75-80

(Xi). Does the bank have internal credit rating system?

Response	Percentage
Yes	100%
No	-
Total	100%

Table 4.11 The percentage of organizations has internal credit rating system

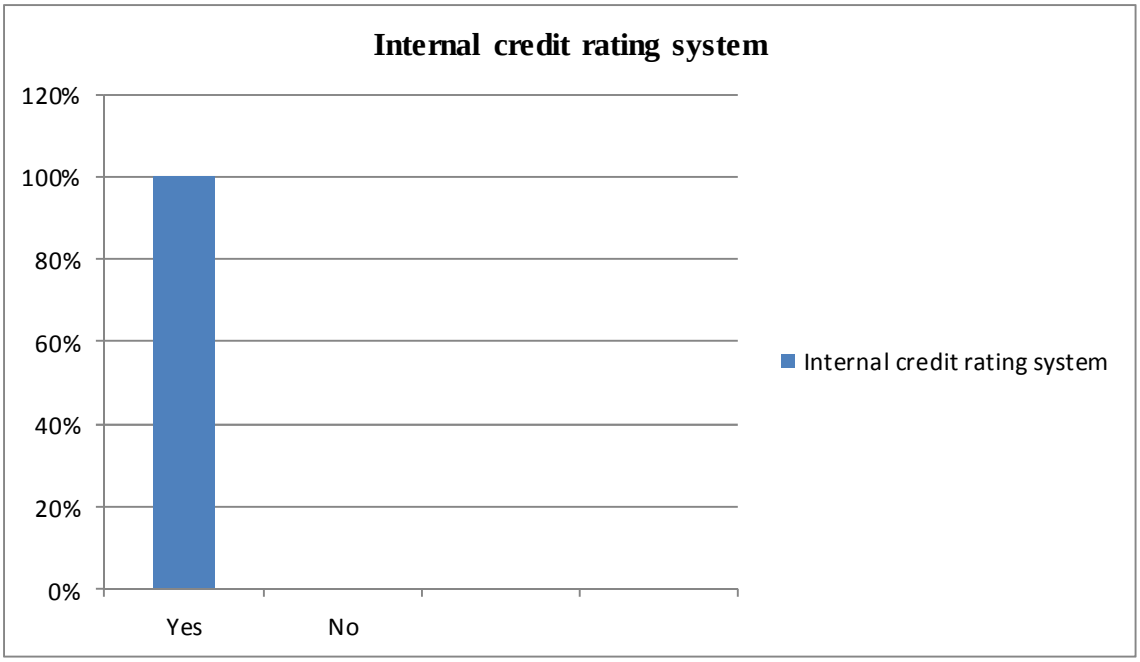

Figure 4.11 Internal credit rating system in the organization

The results show that table 11 show that 100% of the respondents answered ‗Yes', their organization does have internal credit rating systems. The internal credit rating system has been developed by looking different factors like term loan, merchandise loan, letter of guarantee, trade bill discount, advance on export bill, type of financial statement (financial standing), quality of management and banking relationship are some of them.

From the above table it can be concluded the financial institution have developed internal credit rating to manage their credit risk. Well-managed credit risk rating systems promote bank safety and soundness by facilitating informed decision making. Rating systems measure credit risk and differentiate individual credits and groups of credits by the risk they pose. This allows bank management and examiners to monitor changes and trends in risk levels. The process also allows bank management to manage risk to optimize returns (Comptroller's Handbook 2017).

4.2 Discussions

The challenges that the respondents' face in credit risk management lack of concentration of exposures to a particular borrower, miss interpretation of policies, unknowing the exact feature of customers especially individual borrower, effects of changing in government policy, inadequate human capacity, poorly organized of industries to evaluate their worthiness, problem of collateral registration, low level of awareness to ward credit risk management, unable to get full information about customer from external sources, and absence of relevant information on time

In addition the researcher identifies the major kinds of tools or methods used to manage credit risks. The tool that the banks used to manage their credit risks includes:

Loan portfolio management: Portfolio management shall cover bank-wide exposures on account of lending, investment, other financial services activities spread over a wide spectrum of region, industry, size of operation, technology adoption, etc. There should be distribution of borrowers in various industries & business group.

Loan review: Credit Approving Authority, constitution wise delegation of powers, sanctioning authority‘s higher delegation of 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

Credit Audit/Loan Review Mechanism: This should be done independent of credit operations, covering review of sanction process, compliance status, review of risk rating, pick up of warning signals and recommendation for corrective action with the objective of improving credit quality. Credit Audit is conducted on site, i.e. at the branch that has appraised the advance and where the main operative limits are made available.

Risk Rating Model: Set up comprehensive risk scoring system on different point scale. Clearly define rating thresholds and review the ratings periodically preferably at half yearly intervals.

The goal of credit risk management is to maintain a bank’s credit risk exposure within parameters set by the board of directors and senior management. The establishment and enforcement of internal controls through independent internal review ensure that credit risk exposures do not exceed levels acceptable to the individual bank. Such system will enable bank management to monitor adherence to the established credit risk objectives. Likewise, 100% of the banks said they do have an internal review system that performs the following functions:

- Determines whether loan approvals were in line with the banks credit policy and procedures
- Determines whether loan approvals were within the limits of the bank’s lending authority
- Determines documentations were satisfactory prior to the loan approved
- Determines new loans have been posted accurately.
- Examines entries and checks interest posting to various loan accounts and control ledgers and
- Confirms collaterals on a test basis
-

It should be noted that all the above functions are performed by internal auditors in all the banks under study.

Analysis of secondary data

The researcher were used the ALTMAN-Z-SQUARE method to study participants forecasting way of their customers.

Dependent Variable: ROA Method: Least Squares

Date: 05/21/17 Time: 04:01

Sample (adjusted): 280

Included observations: 59 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.132001	0.014063	4.219354	0.0023
LROA	0.599918	0.236040	2.968297	0.0282
NPL	-0.084467	0.016843	-3.951224	0.0105
LPNPL	0.013547	0.009870	0.987253	0.6971
LPA	0.025412	0.054009	0.638223	0.9205
LPL	-0.098297	0.089512	-0.988825	0.7463

R-squared	0.594348	Mean dependent var	0.037521
Adjusted R-squared	0.54592	S.D. dependent var	0.109990
S.E. of regression	0.017713	Akaike info criterion	-6.987990
Sum squared resid	0.012519	Schwarz criterion	-6.91177
Log likelihood	404.0001	Hannan-Quinn criter.	-6.978904
F-statistic	21.00526	Durbin-Watson stat	3.100930
Prob(F-statistic)	0.000001		

The result of return on asset (ROA) on the regression shows that non-performing loan and loan provision of the financial institution is significantly negatively related to performance. The parameter value shows that 1 percent increase in non-performing loans decreases return on asset by 0.084467 percent. In addition that a 1 percent increase in loan provision decreases return on asset by 0.098297 percent.

On the other side the regression result shows that loan provision to non-performing loan and loan provision to total asset of the financial institution is significantly positively related to return on asset. The parameter value shows that 1 percent increase in loan provision to non-performing loans increases return on asset by 0.013547 percent. In addition that a 1 percent increase in loan provision increases return on asset by 0.098297 percent.

The output tells us hypothesis that better credit risk management results in better bank performance. It means it has a great impact on performance of bank. The researcher aware that return on asset (profitability) is an endogenous variable which means that it can influence the magnitude of non-performing loans, since better profitability affords the financial institution to write off more bad loans.

Chapter Five

Conclusions and Recommendation

5.1 Conclusions

Risk is the fundamental element that drives financial behavior. Without risk, the financial system would be vastly simplified. However, risk is present in the real world. In other words, risk is a fact of life in every business and if not managed properly, it would adversely affect the very existence of any business. However, the damage could be more sever in the case of banks, therefore, they should manage the risk effectively to survive in this uncertain world. The futures of banking will undoubtly rest on risk management system. Only those banks that have efficient risk management will survive in the market in the long run.

The analysis of secondary and primary data revealed some interesting aspects about the credit risk management practices of the commercial banks under study. The important among them are listed below:

- Lack of coordination among lending banks, failure of due diligence and independent monitoring are the major reasons given by the banks for the frequency of the credit risk occurrence in their banks.
- All (100%) of the banks had credit risk management department, which is independent from the loan origination function.
- All Banks have written credit risk policy.
- Only 42.86% of the banks said that they regularly communicate their credit risk strategy and policy among management and staff.
- More popular credit evaluation techniques like KMV's Portfolio Manager, Altman’s Z score model, J.P. Morgan credit matrix, etc do not find a place in the credit evaluation tool kit of the commercial banks.

- Poor credit assessment in determining the viability of a project as a result of lack of relevant and reliable information is the reason that forces the banks to follow collateral based lending system

- All banks disclosed that NBE's centralized credit information data base was not properly serving them and the banks also lack cooperation on sharing customers' credit information.
- Subjective decision-making by credit personnel's of the banks also had contributed for the accumulation of non-performing loans and in a Weaken the credit risk management system.
- As expected the larger share of the banks' income has come from loans and related activities. Hence, we can conclude that lending is the major source of profit and credit risk for banks.
- The tools which are used in credit risk management by the banks are taking collateral, credit limits and diversification. They all have one main objective, i.e. to reduce the amount of loan default which is a principal cause of bank failure.
- The study shows that Top-level management responds to business processes and manages credit risk. Most of the organizations believe that it is the responsibility of the Board of Directors or Committee and Executive Management team to establish credit risk management. Top management decides the objectives and strategies for organizational credit risk management activities, mission and overall objectives.
- The whole respondent indicates that their organization has a documented credit risk management guidelines and Most of the respondents understand the guideline of credit risk management. The guidelines also help the banks to supports the objectives of credit risk management.
- Because the financial sector is not stable, almost more than half of the respondent suggests that organizational structure must be reviewed regularly and the changes made once per year when it is believed to make changes.
- The study also shows the respondents credit risk management should include training of staff appropriately. Since the purpose of training is to improve knowledge, skill and confidence, the organizations provide training for employees once per year as agreed by most of the respondents. In addition, the respondents state that their organizations have established procedures to keep informed with changes in regulations to their staff.

- The paper shows that the most common way of communicating effectively to reduce risk is developing understanding between management team and employee.
- The study also reveals that banks with good or sound credit risk management policies have lower loan default ratios and increase profitability.
- This study shows that there is an important 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 importance that banks practice credit risk management and safeguarding the assets of the banks and also protect the investors' interests.
- The study also discloses banks with higher profit potentials can better absorb credit losses whenever it happens and therefore record better performances.
- Moreover, the research shows that there is a direct but inverse relationship between return on asset (ROA) and the ratio of non-performing loans to total loan (NPL\TL) and loan provision to total loan.

The above point informs us to accept our hypothesis and conclusion that banks with higher interest income have lower non-performing loans. In other word, they have good credit risk management strategies

5.2 Limitation of the study

It was difficult to completely verify the authenticity of certain claims regarding the bank's credit risk management since most of the information is confidential. The researcher encountered such challenges during the study.The major difficulties that the researcher faced in this study were limitation of time, data limitation, failure of some respondents to complete and return on time and,failure of software. These factors might have influenced the results of the study to some extent. Despite these challenges, the study shed light on credit risk management strategies of the bank which may be useful to policy makers and business organizations

5.3 Recommendation

Based on the above conclusions, In line with the findings obtained, the following recommendations are forwarded:

Accompanying these recommendations are proposed areas for further studies.

- ✓ Credit risk monitoring and supervision efforts should be intensified by the bank. The bank should ensure that credit officers perform periodic follow-ups on borrowers to ensure that loans are used for the intended purpose
- ✓ The bank should continue to diversify its lending activities and should allocate more funds to the productive sectors of the economy. Private sector businesses should be prioritized and supported accordingly.
- ✓ The bank should also ensure that there is adequate security (collateral) from customers in case they are unable to satisfy their part of the agreement.
- ✓ By introducing different variety of new fixed deposits to its customers it can increase its own long term fund and also by investing these funds to long term investment it could arrange the portfolio structure efficient way that will help to make more profit.
- ✓ As credit information is crucial for the development of the credit system and for addressing the problems of NPLs, banks should take the maximum caution in dissemination of credit information of borrowers.
- ✓ In order to be effective, credit polices must be communicated throughout the organization, implemented through appropriate procedures, monitored and periodically revised to take into account changing internal and external circumstance.
- ✓ Banks should diversify their credit portfolios by avoiding huge credit concentration on one or two sectors and /or on individuals or companies.
- ✓ Also, NBE made some regulations about risk management. But, Lack of sufficient data about credit risk measurement inputs is also one of these problems. Hence, its centralized credit information data base should also be reorganized to meet the requirements of banks.

✓ NBE should also regularly control and follow the banks financial performance and their adherence of its liquidity, capital adequacy and asset quality requirements.

✓ Specifically, as expected interest income has proven to be the main determining factors for the profitability of the banks. The negative relationship of credit risk to banks profitability may evident that the more commercial banks exposed them selves to credit risk, the more accumulation of unpaid loans, implying that these loan losses have produced lower returns to the banks. There should therefore prior concern to give due diligence in maintaining sound asset quality management, sound portfolio and risk management, prudent loan processing and selection strategies together with optimum utilization of the available financial resources and findings ways to maintain reasonably cheap source of loanable fund.

- ✓ Working with Business Groups and individual in creating credit risk awareness within the bank‘s risk taking capacity.
- ✓ Improving and maintaining credit approval authority structure and granting approval authority to qualified and experienced individuals.
- ✓ Providing training for the employee to enhance their capacity and reviewing the adequacy of credit training across.
- ✓ Developing advanced information technology system and data base to enhance communication and manage portfolio data on timely manner.
- ✓ Improve and follow up credit guidelines, policies and standards to regulator requirements and the bank‘s overall objectives.
- ✓ Establish external credit rating agencies to obtain the true information of the clients and use modern credit evaluation technique like Altman Z score
- ✓ Improve the collateral registration process and obtain cash equivalent collateral for each loan made to the customers.
- ✓ Increase the number of employee in the department.

Finally, the researcher hopefully expects that the company would take corrective actions to improve its credit risk management to reduce non-performing loan of the banks which in turn affect its performance and profitability.

References

- Anthony M. Santomero (1997), Commercial Bank Risk Management: an Analysis of the Process, Wharton Financial Institution Center.
- Hull 2007, peter s rose and Sylvia hundgins 2014naional bank of Ethiopia 2012.Beck , 2001,saundres,cornett 2005.
- Dhanabhankyam and kavitha 2012, Rashid 2010,Guise, 2012, bcbs , 2006 and Gostineau, 2008, Greving and Bratanovic ,2013.
- Obiero,2012, Brown bridge, 2011, Richardson,2002, Achou and Tenguh,Comptrollars hand book 2007.
- Bank Management & Financial Services(7th edition)- Peter S. Rose & Sylvia Hudgins 2014
- Modern Financial Management 8th edition. Commercial Bank Management McGraw Hill Cos. Inc. USA Saunders Cornett (2005).
- Athanasoglou, P., Brissimis, S N., and Delis, M D. (2005), ''Bank-specific, industry specific and macroeconomic determinants of bank profitability''. MPRA Paper No.153.
- Coleman 2009,Akhavein, J.D., Berger, A.N.2007. tsorhe ,aboagye ''The effects of mergers on efficiency and prices: evidence from a bank profit function''.
- (Greuning and Bratanovic , 2013) Cassel, C., & Symon, reghavan 2003 . Qualitative research in work contexts. In C. Cassell, &Carey, A. (2001), "Effective risk management in financial institutions: the Turnbull approach", *Balance Sheet*, Vol. 9(3).
- Comptroller's Handbook (2011), Rating Credit Risk, Comptroller of the Currency Administrator of National Banks.
- Demirguc-Kunt, A., Huizinga, H., (1998). ''Determinants of commercial bank interest margins and profitability: some international evidence''. World Bank Economic Review

- Dev, A. and Rao, V. (2006), Performance Measurement in Finance Institutions in an ERMFill, C.and Mullins, L. , "The Effective Management of Training", Industrial and Commercial Training, Vol. 22(1).
- Goddard, J., Molyneux, P., Wilson, J.O.S., (2004). ''The profitability of European banks: across-sectional and dynamic panel analysis''. Manchester School 72 (3).
- Greuning and Bratenovic 2013,Objiro 2012, Brownbidge 2011 credit risk management.
- Dhanabkakyah and kavitha 2012, Rashid 2010,Gusso 2012, the rol of banks in india.
- (National Bank of Ethiopia, 2010). Best 2003,(p.j, and Gustin,C.M.2012)
- Grabowski, M. and Roberts, K. (1999), "Risk mitigation in virtual organizations" Organizational Science. Vol. 10(6).
- G. Symon (Eds.), Qualitative methods in organizational research. Thousand Oaks, CA: Sage Publications.
- John A., (1968), .A statistical analysis of the relative profitability of commercial banks. Groum Abate (2008), Credit Risk Management for Ethiopian Banks Haslam,., Journal of Finance, Hunter, J. (2002), "Improving organizational performance through the use of effective elements of organizational structure", International Journal of Health Care Quality Assurance incorporating Leadership in Health Services, Vol. 15(3).
- Joan Selorm Tsorhe, Anthony Q. Q. Aboagye and Anthony Kyereboah-Economic Analysis and Research Directorate Coleman (2009),"Corporate Governance and Bank Risk Management in Ghana", University of Ghana Business School Laurent Cleck (2004), Credit risk management and financial stability Monetary and Financial Policy Research Division.

- Prapawadee Na Ranong and WariyaPhuenngam (2009) Critical Success Factors foreffective risk management procedures in financial industries: A study from theperspectives of the financial institutions in Thailand.*R.S. Raghavan (2003),*Risk Management in Banks. Ross, Westerfield (2008).
- Financial Institution Management. McGraw Hill. Saunders and cornett (2007). Financial Markets and Institutions; an Introduction to the Risk Management Approach.
- The relation between commercial bank profit rate and banking Concentration in Canada, Western Europe and Japan, Journal of Banking & Finance 3.Stank, T.P., Daugherty, P.J. , "Organizational Structure: Influence on Logistics Integration, Costs, and Information System Performance", the International Journal of Logistics Management, Vol. 5(2)
- Takang Felix Achou and Ntui Claudine Tenguh (2008), Bank performance and credit risk management. University of Skoved: School of technology and society YuqiLi, Determinants of Banks. Profitability and its Implication on Risk Management Practices: Panel Evidence from the UK in the Period 1999-2006.
- Hu(2002) and Goddard et at (2004),athanasoglou et al 2005,saunders & cirnett 2007,grabowski ,M and Robert, K1999,Wikipedia,2008.credit risk management.

Appendices:

i. QUESTIONARY

St Marry University

School of Graduate Studies

Master in Business Administration (MBA)

Dear respondents:

I am a post graduate Masters Student at St Marry University in Business Administration and conducting a final thesis, entitled "**credit risk management and its impact on bank performance** ". Please feel free to share your comments and you are kindly requested to provide answers to these questions as honestly and precisely as possible.

Your genuine response is solely used for academic purpose and the data will be treated utmost confidentiality. Therefore, your kindly cooperation is appreciated in advance.

General information

1. Name of the Bank .....

2. Years served in the bank.....

3. Your job position.....

Section one

Please put "✓"corresponding to your choice from each statement

1. Gender:

□ .Male □. Female

2. Your Age:

□. 18-25 years □. 26 - 33 years □. 34 - 50 years □. Above 50 years

3. Please indicate the highest level of education you have attained

□. Vocational □. Diploma □. B.A Degree □. Master's Degree and above

4. The number of years you have worked in this organization

□. Less than 3 years □. 3-7 years □. 7-10 years □. More than 10 years

5. How many years of experience do you have working with bank and on the area risk Management?

□. Less than 1 year □. 1-2 years □. 3-5 years □. More than five years

6. What is your expectation from effective credit risk management in your organization? (You can use more than one answer)

□ Reduce financial loss

□ Improve communication with the stake holders

□ Improve decision making

□ Improve resource allocation

□ other (please specify)

.....

.....

7. Who has the authority to establish credit risk management in policy or procedure of Your organization?

□ Chief executive officer (CFO) □ Executive management committee

□ Chief financial officer (CFO) □ Internal auditor

□ Board/ committee □ Staff

□ Other (please specify)

.....

.....

8. Does your organization have a documented credit risk management guideline or policy?

□ Yes □ No

9. Does the guideline support the goals and objectives of credit risk management?

□ Yes □ No

10. Do you understand the credit risk management guideline or policy?

□ Yes □ No

11. How often does your organization change its guidelines or policies to manage risks?

□ Once per year □ Once per two years

□ Once in more than two years □ Never

12. In the future, does your organization have a policy to support the development of Credit risk management?

□ Yes □ No

13. Does your organization offer training for employees?

□ Yes □ No

14. How does your organization effectively communicate to reduce credit risk? (You Can choose more than one answer)

□ creating clear and trustworthy information

□ developing understanding between management team and employee

□ Fast and sharp communication between management team and Stakeholders

□ Regularly communicating among management and staff

□ Creating and maintaining a clear communication

□ other (please specify)

15. How often does your organization provide credit risk management training courses?

□ Never □ 1 times per year

□ 2 times per year □ More than 2 times per year

16. Does your organization have established procedures for keeping up-to-date and Informed with changes in regulations?

□ Yes □ No

17. Do the bank uses Altman Z score for credit evaluation?

□ Yes □ No

18. Does the bank have internal credit rating system?

□ Yes □ No

19. Does Credit Risk Management affect the Performance of your Bank?

□ Yes □ No

Section 2

You are kindly requested to provide answers to these questions as honestly and precisely as possible

20. What challenges you face in credit risk management?

.....

.....

.....

21.What is the importance of managing Credit Risks into your Bank?

.....

.....

.....

22. What are the major kinds of method or process used by the management of Credit risk?

.....

.....

.....

23. How it was suitable for your bank?

.....

.....

.....

Thank you for your kind Cooperation!

Declaration

I, the undersigned, declare that this student research paper is my original work, prepared under the guidance of Dr. Asnake Minwyelet Abebe, M.Sc., Ph.D. (Ass. Professor in Accounting and Finance) .All sources of materials used to this paper have been duly acknowledged.

Name: **Daniel Ambaw Fentaye**

Signature: _____

Place of Submission: **St. Mary's University School of graduate studies**

Date of Submission: **June 01, 2017**

Endorsement

This Research has been submitted for examination with my approval as Candidate's advisor.

Name: **Dr. Asnake Minwyelet Abebe, M.Sc., Ph.D. (Ass. Professor in Accounting and Finance)**

Signature: _____

Date: **June 01, 2017**