



**ST.MARY UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF GENERAL MBA**

**ASSESSMENT OF CREDIT RISK MANAGEMENT PRACTICE OF
AWASH INTERNATIONAL BANK S.C**

**BY
KASAHUN ASHINE**

**A THESIS SUBMITTED TO SCHOOL OF GRADUATE STUDIES OF ST.MARY'S
UNIVERSITY IN PARTIAL FULFULIMENT OF THE REQUIRMENTS FOR THE
DEGREE OF MASTER OF BUSINESS ADMINISTRATION**

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**JUNE 2017
Addis Ababa, Ethiopia**

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Statement of Declaration

I kasahun Ashine declare that this research, titled “Assessment on credit risk management practice of Awash International Bank S.C” is done with my own effort. I have produced it independently except for the guidance and suggestions of my research advisor. I assure that this study has not been submitted for any scholarly award in this or any other university.

Kasahun Ashine Signature _____ Date _____

II

Certification

Here with I state that kasahun Ashine has carried out this research work on the topic entitled “Assessment on credit risk management practice of awash international bank s.c” under my supervision. This work is original in nature and has not presented for a degree in any university and it is sufficient for submission for the partial fulfillment for the award of MSc degree in General management in business administration.

Tilahun Mehari (PhD) Signature _____ Date _____

III

Abstract

Credit Risk management becomes major discussion issues in the financial institutions because of uncertainty related to borrower's business. The aim of this study is to assess credit risk management tools and technique that are being used in the bank and to what extent the current performance of the bank is supported by proper credit risk management policy, procedure and strategy. The study design is descriptive. The research applies quantitative research method and both primary data (questionnaire) and secondary data were collected to meet the objective of the study. 61 samples were involved at head office who works on credit to get reliable and valid information about the study subject. The data was analyzed using descriptive statistics by using SPSS software. From the findings the study concludes that the bank has well organized credit policy but difficult to understand by concerned employees of the bank and it also conclude that the bank has good credit granting practice and uses suitable credit risk assessment tools and techniques including loan follow-up, risk identification, measuring, evaluating, monitoring and controlling mechanism. However, the study also concluded that the bank has drawbacks such as absence of training for customers which results to loan diversion, absence of credit risk model that predict the risk level of the business and the priority sectors of the bank in terms of credit facility are highly exposed to credit risk which directly contribute to the increment of NPL. Thus, it is recommended that awash international bank s.c should develop independent risk management policy and procedure from credit policy and procedure to overcome those problems and to take measure on the spot.

IV

Acknowledgement

First and for most I would like to thank the Almighty God for Its help. The completion of this thesis involved kindly contribution, support and encouragement of many people. I wish to express my sincere gratitude to my advisor Dr:TilahunMehari for his encouragement, and support . Without his understanding, patience and useful supervision, it could be more challenging for me to complete this thesis. I am also very thankful to my beloved Family and friends for their support and encouragement. Finally I also show appreciation to awash international bank head office staff for their patience and cooperation in filling questioners.

Acronyms and Abbreviations

AIB=Awash international bank

S.C =Share company

NBE= National Bank of Ethiopia

CRM= Credit Risk Management

SPSS= Statistical Package for Social Sciences

KYC= know Your Customer

NPL= Non Performing Loan

MIS= Management Information System

EL= Expected Loss

EAD= Exposure at Default

LGD= Loss Given Default

SET= Security Financing Transaction

OBS= Off Balance Sheet

GAAP= Generally Accepted Accounting Principle

VAR= Value at Risk

MTM=Mark to Market

DM= Default Mode

RCR=Rural Commercial Banks

SME=Small and Medium Enterprises

CSMI=Credit Scoring Methods for Individual

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Chapter one

1. Introduction

1.1. Background of the study

Banking industry is the largest and most dominant financial sectors which help the development and growth of countries economic transformation. Bank is a financial institution which collects deposit from depositors and lend to other business sectors as its main function.

For most banks, loans are the largest and most obvious source of credit risk Basel (1999). Kargi (2011) study and find out that there is a significant relationship between bank performance and credit risk management. Loans and advances and non-performing loans are major variables in determining asset quality of a bank. These risk items are important in determining the profitability of banks in Nigeria. Where a bank does not effectively manage its risk, its profit will be unstable.

Credit risk is defined as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization. (Greening & Bratanovic 2009).

Hinnies (2003) states that despite innovation in the financial service sector over the years, credit risk is still the major single cause of bank failures, for the reason that more than 80% of a bank's balance sheet generally related to this aspect of risk management. The consultative paper issued by Basel (1999) also pointed out that the major cause of serious banking problem continuous to be directly due to the loose of credit standards for borrowers and counter parties, poor portfolio risk management and so on.

Loan is typically the largest asset and the predominant source of revenue. As such it is one of the greatest sources of risk to a bank safety and soundness. The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors (Saunders and Cornett, 2005). 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 lead to financial distress including bankruptcy.

The key principles in credit risk management are establishment of a clear structure, allocation of responsibility and accountability, processes have to be prioritized and disciplined, responsibilities should be clearly communicated and accountability assigned thereto. Organizing and managing the lending function in a highly professional manner and doing so pro-actively can minimize whatever the degree of risk assumed losses. Banks can tap increasingly sophisticated measuring techniques in approaching risk management issues with the advancements of technology (Yang, 2013).

Historical background on banking industry in Ethiopia

The agreement that was reached in 1905 between Emperor Minilik II and Mr. Ma Gillivray, representative of the British owned National bank of Egypt marked the introduction of modern banking in Ethiopia. Following the agreement, the first bank called Bank of Abyssinia was inaugurated in February 16, 1906 by the Emperor. The bank was totally managed by the Egyptian National bank. By 1931, bank of Abyssinia was legally replaced by the bank of Ethiopia shortly after Emperor Haile Selassie came to power (www.scribd.com)

The National Bank of Ethiopia with more power and duties started its operation in January 1964. Following the incorporation as Share Company on December 16, 1963 as per proclamation No 207/1955 of October 1963, commercial bank of Ethiopia took over the commercial activities of the former state Bank of Ethiopia, which was formed in 1943 after departure of Italian and restoration of Emperor Haile Selassie (www.scribd.com).

Following declaration of socialism in 1974, the government extended its control over the whole economy and nationalized all larger cooperation's. Then Addis Bank and Commercial Bank of Ethiopia S.C. were merged by proclamation No 184 of August 2, 1980 to form the sole

commercial bank in the country until the establishment of private commercial banks in 1994. The saving and Mortgage Corporations S.C and Imperial saving and home ownership public association were also merged to form the housing and saving banks. The agricultural and industrial development bank continued under the same name until 1994 when it was renamed as development bank of Ethiopia.

From 1975-1994 there were four state owned banks namely: the National bank of Ethiopia (the central bank), the commercial bank of Ethiopia. The housing and saving banks and the development bank of Ethiopia (www.scribd.com).

Following the change in economic policy, financial sector reform also took place. Monetary and banking proclamation of 83/1994 established National Bank of Ethiopia as a judicial entity separated from the government and outlined its main functions. At present, there are many public and private banks operating in the economy (www.scribd.com).

Background of Awash International Bank S.C

Awash International Bank S.C (AIB) is the pioneer private commercial bank in Ethiopia after the downfall of the military regime and introduction of market economic policy in 1991. It was established by 486 founder shareholders with a paid-up capital of Birr 24.2 million. Licensed on November 10, 1994, it started banking operations on February 13, 1995. It was named after the popular river “**Awash**” which is the most utilized river in the country especially for irrigation and hydroelectric power. Awash River plays a pivotal role in the economic development of the country. the bank at present operates a paid up capital of over 2.2billion birr as of June 2016 .

Awash international bank have been performing commercial banking activities in Ethiopia. At present the bank has more than 240 branches and more than 6000 employees with capital of 31.1 billion assets. In general AIB is the leading bank from private banks operating in Ethiopia and serve as the major source of finance to the national development effect. The bank provides different types of credit facilities such as Overdraft, merchandise loan facility, Pre-shipment Export Credit facility, post shipment credit facility, letter of credit facility, Short term loan, Medium and long term loans, Agricultural Input Loan, Agricultural Investment Loan, etc. From these types of loans provided by the bank priorities are given to international trade sector accounted for 33.1%, domestic trade sector accounted for 30.1%, building and construction

accounted for 14.6%, manufacturing accounted for 10.8% and the remaining 11.4% was accounted for by the other sectors., As indicated in the 15/16 annual performance report of the bank, it has been possible to mobilize a total deposit of birr 4.73 billion(24.2%) as compared with last year same period that makes the Bank's deposit position 24.2 billion birr. During the 15/16 budget year, the Bank disbursed a total loan of 15.5 billion birr. Therefore, this research will assesses credit risk management practice of the bank and the policy environment and ways of alleviating credit risk will also assessed in the research.

1.2. Statement of the problem

Banking industry is a major source of finance for any type of business it may be in the form of loan. Loan is one of the mechanisms used by financial institutions as a major source of income. Also the process of repayment default is also fraud for the institutions.

Non-performing loans or uncollectable loans or bad loans are reducing the profitability of the bank. This NPL are highly ties huge amount of capital that can be used for productive purpose by giving loans and advance to various economic sectors and profitable business and investments in different sectors. As of June 2016, from the total loans and advance disbursed amount 15.45 billion birr which is Birr 245 million or 2% is under the category of NPL in awash international bank S.C as at June 2016. Even-if the NPL ratio is below the required level of NBE(5%) there is no consistency of the NPL performance as shown in the past four consecutive years NPL to total loan ratio i.e

2013 = 2.4%, 2014=2.8%, 2015=1.5% and 2016=2% (Awash international bank annual report).

There are a number of studies on credit risk management in Ethiopia:

Tibebu (2011),Hagos(2010),Solomon(2013),Tesfaye2014) and other researchers in their study try to examine the impact, importance of management, the technique of alleviating, and the process of accessing credit risk which majorly emanate from huge investment of loans and advances in different private and government owned banks.

As mentioned above most of the researches are conducted on different private and government banks in which large amount of their loans are dispersed to private and government business but

there is no much research conducted In awash international bank the researcher prefer to study in one bank only(awash bank) because most of the studies made earlier are comparative studies which may not addressed in detail and since it is a case study .

Non-performing loan is a problem of the bank because the presence of NPL debt on banks' balance sheet weights on their ability to lend to the real economy since, it lower profitability, require higher capital and also investors and other banks are less willing to lend to banks with high NPL levels(higher funding cost).

Therefore, this gap and the above mentioned problem of NPL call research to assess the credit risk management practice of awash international bank S.C.

The major issue of this paper is to assess and find out what tools and techniques are used in the bank and to what extent their current performance are supported by proper credit risk management policy, procedure and strategy and to what extent awash international bank can manage its credit risk.

1.3. Research questions

The researcher tries to answer the following question:

- ✓ What are the gap between credit risk management practice of the bank and the theory of credit risk management?
- ✓ What are credit risk management techniques and tools used by the bank?
- ✓ How does the bank identify, measure, monitor, evaluate and control credit risk?
- ✓ Which of the priority sectors of credit facility is highly exposed to NPL?

1.4. Objectives of the study

1.4.1. General objectives

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

1.4.2. Specific objectives

- ✓ To assess the level of credit risk of AIB

- ✓ To assess credit risk management practice of NPL and other risks in AIB.
- ✓ To identify which of the priority sectors of credit facility is highly exposed to NPL?
- ✓ To measure the effectiveness of credit risk management of AIB.
- ✓ To identify the credit risk management techniques and tools used by the bank

1.5. Significance of the study

Since credit is the back bone of bank industry in generating income, the outcome of the study will help policy maker, loan processing and credit appraisal department, credit administration department and credit risk management department by forwarding relevant information from outcome of the study in order to improve their credit risk management practice.

Moreover, the study also have importance for being be input for further study in the area of credit risk management practice.

1.6. Scope of the study

The focus of the research is assessment of credit risk management of awash international bank and the researcher mainly focuses on credit administration, credit appraisal, and related area at head office level, risk management department in order to gather relevant information about the area of study.

Therefore, the study is limited to the credit activity and risk management area of awash international bank on the above mentioned departments because since it is the first private bank in the industry, it transacts a lot of loan transactions with customers and depending on the availability and accessibility of the data easily for the success of the study. Other operation of the bank is not the subject matter of this research.

1.7. Organization of the Research Report

This study comprises five chapters. Chapter one provides information on background of the study, general and specific objective, research question, significance, and definition of terms, scope of study and statement of the problem. Chapter two reviews literatures by different authors and theoretical framework and empirical studies on issues related to the study. Chapter three deals with method of the research, research design, target population, sampling and data

collection method. In chapter four findings, analysis and discussion will be present, chapter five the last chapter is discussion of the findings puts conclusion and recommendation of the study.

CHAPTER TWO

2. Literature review

2.1 Theoretical review .

2.1.1 Introduction

The basic goal of credit management is to maximize the value of the firm by achieving a tradeoff between liquidity (risk) and profitability. The purpose of credit management is not to maximize sales, nor to minimize the risk of bad debt. If the objective were to maximize revenue, then the firm will sale on credit to all. On the contrary if minimization of bad debt risk were the aim, then the firm would not extend credit to anyone. Thus to achieve the goal of maximizing the value, the firm should manage its trade credit; to obtain optimum (not maximum) volume of sales, to control the cost of credit and keeping at minimum and to maintain investment in debtors at optimum level.

Granting of credit and its management involves cost. To maximize the value of the firm, these costs must be controlled and they should remain within acceptable limit. These costs include the credit administration expense, bad debt losses and opportunity costs of the funds tied up in receivables. The aim of credit management should be to regulate and control the costs (Pandey, 1981). The cost of credit and its effects on profits and liquidity should be examined before granted. It is clear that uncontrolled credit can rapidly bring disaster. Demands for statutory interest to be paid on overdue accounts ignore the real problem, which is the need for better credit management.

2.1.2 Credit Risk

Beasens and Gestel(2009) defines credit risk as the risk that a borrower fails to pay and does not act according to their obligation to service debt. They state that the causes for the failure to pay could be incapability of the other party to pay or failure to pay on the due date. Besides they mentioned that by its character credit risk is the most apparent risk of a bank. In addition to this the writer characterize credit risk by ways of three aspect the first one is default risk is the possibility that payment is not issued at least within three month this delay will happen due to

Counterparts with a weak financial situation, high debt burden, low and unstable income have a higher default probability, sector information and management quality. The second aspect is loss risk or loss given default (LGD) which is a fraction of exposure in the case of failure to pay and exposure risk is ambiguity on the accurate amount at risk at the very instant of a future default.

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

Credit risk encompasses both the possibility that a borrower will default by failing to repay principle and interest in timely manner, and the possibility that the credit quality of the obligor will deteriorate, leading to an economic loss (Ong, 2006).

Credit risk occur when one of the counter parties to a transaction does not clear up in full either when the fund are outstanding or on some later date and it may result in bankruptcy of counterparty (C.Baker, 1998).

According to Anuj A. (2011), credit risk is delay of one's own obligation in accordance with stotted contractual financial obligation within the deadline of payment by counter party.

Credit risk is the possibility that debtors or borrowers incapability of paying its obligation in a way that predetermined contractual agreement made during credit approval process which adversely affect the working environment of the lender.

Credit risk is defined as the probability that a bank borrower or counterparty will fail to meet its obligations in accordance with contracted terms Basel (2000).

Credit risk arises whenever a lender is exposed to loss from borrower, counterparty, or an obligor who fail to honor their debt obligation as they have agreed and contracted Colquitt (2007) .

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

2.2 Types of credit risk

According to Brown and Moles (2014) there are two sub-types of credit risk, country risk and industry risk which affect multinational enterprises.

i. Country risk

Arise from having contact to individuals and institutions in countries that have legal systems, business codes and standards that differ from those of the lender. There are four factors relevant to this. The first is political risk, which arises when a country's government is challenged externally or from within national borders. Political risk is more problematic in long-term lending agreements than for short-term transactions. The second is Economic risk, which arises from depressed or declining economic stability in a country. The third factor is currency risk, which always arises with cross-border lending. Finally, the fourth factor is the enforcement risk from the legal system in the debtor country. Because a creditor has to go through a foreign legal system, it has been known for debtors to use their domestic legal process to stand or attempt to avoid paying, claiming that rules from their home country apply.

ii. Industry risk

This applies particularly when the domestic or international economy is in recession and the poor economic conditions particularly affect certain industries. Industry structure may have credit consequences because of the supply chain within which most firms operate. It is a form of concentration risk.

According to Baesens & Gestel (2009) Credit risk consists of pre-settlement and settlement risk:

iii. Pre-settlement risk

Pre-settlement risk is incapability of borrower to perform their obligation through the life of loan repayment period. It can occur over long period of time from contractual period up to settlement. And when the borrower residence countries forbid and block all foreign payment.

iv. Settlement risk

Settlement risk is the exchange of transaction through the involvement of third party this may create suitable environment for settlement risk because the default of the third party during the transaction will directly affect the other party (lender of bank). Longer time duration, payment in different time zone and different currency is the most important factor to increase settlement risk.

2.3. Credit Risk Management

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

According to Atakelt (2015) Credit risk management practice define as the process of analyzing and renewing Credit risk management documents and apply constantly in actual Credit granting process, Credit administration and monitoring and risk controlling process with suitable Credit risk environment, understanding and identification of risk so as to minimize the unfavorable effect of risk taking activities and the effectiveness of credit risk management process is dependent on different variables such as proper application of best Risk management documents, Staff quality, Credit culture, devoted top management bodies, sufficient training program, proper organizational structure, ample level of internal Control and Performance of intermediation function. This indicates that credit risk management includes different issues such as developing and implementing suitable credit risk strategy, policy and procedure, accurate identifications of risk, best credit granting process, credit administration, monitoring and reporting process determining and controlling the frequency and methods of reviewing credit policy and procedure and setting authority and responsibility clearly. Besides he mentioned that by establishing suitable credit risk environment, acceptable level of credit limit, best credit granting process, proper monitoring and controlling credit risk and optimizing risk return of a bank credit risk management develop credit performance.

Cebenoyan & Strahan (2004) examine empirically how active management of credit risk using loan deal affects capital structure, lending, profits, and risk of banks. They find that banks which are Active in the loan sales market hold less capital and make more risky loans than other banks. They conclude that advances in credit risk management improve credit accessibility rather Than decrease risk in the banking system.

The management of credit risk has become a key objective for all financial institutions across the world. The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters Basel (1999).

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

“Credit risk management includes both preventive and curative measure. Preventive measure comprise risk assessment , risk measurement , and risk pricing , early warning system to pick signal of future default in advance and undertake better credit portfolio diversification. The curative measure aim at minimizing post sanction loan losses through steps such as securitization, derivative trade, risk sharing and legal enforcement” (Jain, 2014, p3).

2.4. Overall life cycle of credit risk management

Whither the institution in to bankrupts or profitability depends on the level of credit risk management strategy and proper implementation credit process in each credit risk management life cycle.

According to George, Sinba and Murat (2008) they put four levels of credit risk management life cycle:

1. Collect obligor (borrower) and loan data:

Parties needed here is borrower, loan and external data. The key task and challenges of this stage is interpretation of financial information, system integration, getting the borrower and loan data, data quality and getting external rating data.

2. Compute credit risk:

In this stage credit risk will be calculated in the form of risk rating of meaningful differential risk among different firms and exposure. The main task and challenges here is developing rating model, calculating the probability of default, rating approach, comprehensiveness of data, comprehensiveness of model, calculating loss given default (LGD), exposure at default (EAD) and expected loss (EL) are the major one.

3. Monitoring and managing risk rating:

This stage is a stage of monitoring and managing the risk rating system. The main activity and challenges here is interface with internal collection, perform back testing of rating, reduction of

manual dependency feedback and alert, develop workflow to manage approval of rating and ensure notification on external rating change.

4. Managing portfolio and allocation of capital: This level of credit risk management life cycle is the most difficult and challenging in the financial world today. The most important activities and challenges of this stage is compute and monitor portfolio risk, allow transfer of risk, reporting on risk, stress testing /scenario analysis and stress testing/back testing challenge are the most important activity expected to be performed at this level.

2.5. General measurement principle of credit risk exposure

“A bank should disclose balances of credit exposures, including current exposure and, where applicable, future potential exposure, by major categories.” Basel (2000)

According to Basel (2013 & 2014) a bank’s total Exposure Measure is the sum of the following exposures: (a) on-balance sheet exposures, (b) derivative exposures, (c) securities financing transaction exposures, and (d) other off-balance sheet exposures. The specific treatment for these four main exposure categories is defined below.

a. On-balance sheet exposures

Banks must include all on-balance sheet assets in their Exposure Measure including on-balance sheet derivative collateral and collateral for securities financing transactions (SFTs) (but excluding some of on-balance sheet derivative and SFT assets. GAAP recognizes on-balance sheet fiduciary assets, these assets can be excluded from the Exposure Measure. Physical or financial collateral, guarantees or credit risk mitigation purchased are not allowed to reduce on-balance sheet exposures.

On-balance sheet, non-derivative exposures are included in the Exposure Measure net of specific provisions and valuation adjustments (e.g. credit valuation adjustments).

b. Derivative exposures

Treatment of derivatives: derivatives create two types of exposure: (a) an exposure arising from the underlying of the contract and (b) a counterparty credit risk exposure. The leverage ratio framework uses the method set out below to capture both of these exposure types. Banks must

calculate their derivatives exposures, including where bank sells protection using a credit derivative, as the replacement cost for the current exposure plus an add-on for potential

Total Exposure = replacement cost (RC) + add-on

RC = the replacement cost of the contract (obtained by marking-to-market), where the contract has a positive value.

Add-on = an amount for potential future credit exposure over the remaining life of the contract calculated by applying an add-on factor to the notional principal amount of the derivative.

c. Securities financing transaction (SFT) exposure

Securities financing transactions (SFTs) are included in the Exposure Measure according to the following treatment. The treatment recognizes that secured lending and borrowing in the form of SFTs is an important source of leverage and ensures consistent international implementation by recognizing the main differences across accounting frameworks

d. Off balance sheet exposure

This section explains the incorporation into the Exposure Measure for off-balance sheet (OBS) items, as defined under the risk-based framework. For example, the OBS items include commitments (including liquidity facilities), unconditionally cancellable commitments, direct credit substitutes, acceptances, standby letters of credit, trade letters of credit, failed transactions and unsettled securities (Basel, 2014).

2.6. Operating under a sound credit granting process

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

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

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

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

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

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

2.7 Principles for the Assessment of Banks' Management of Credit Risk

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

i. Establishing an appropriate credit risk environment:

The strategy of the bank should reflect the bank's tolerance for risk and the level of profitability the bank expects to achieve for incurring various credit risks. Such policies and procedures should address credit risk in all of the bank's activities and at both the individual credit and portfolio levels. Banks should identify and manage credit risk inherent in all products and activities.

ii. Operating under a sound credit granting process:

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

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

iii. Maintaining an appropriate credit administration, measurement and monitoring process:

Banks must monitor the condition of individual credits, including determining the adequacy of provisions and reserves with consistent rating system in nature, size and complexity of a bank's activities with information systems and analytical technique.

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

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

2.8. Credit risk measurement

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

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

2.9. Credit risk Models

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

i. Value at Risk Model (VAR)

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

Credit VAR models can be gathered in two main categories: 1) Default Mode models (DM) and 2) Mark-to-Market (MTM) models. In the former, credit risk is identified with default risk and a binomial approach is adopted. Therefore, only two possible events are taken into account: default and survival. The latter includes all possible changes of the borrower creditworthiness, technically called “credit migrations”. In DM models, credit losses only arise when a default occurs. On the other hand, MTM models are multinomial, in that losses arise also when negative credit migrations occur (Altman, 2006).

ii. The Merton model

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

its outside debt and the volatility of the market value of a firm's assets (Altman & Saunders, 1998).

iii. Credit Metrics model

Credit Metrics is a tool for assessing portfolio risk due to changes in debt value caused by changes in obligor credit quality. We include changes in value caused not only by possible default events, but also by upgrades and downgrades in credit quality. Also, we assess the value-at-risk (VAR) the volatility of value not just the expected losses. Importantly, we assess risk within the full context of a portfolio. We address the correlation of credit quality moves across obligors. This allows us to directly calculate the diversification benefits or potential over-concentrations across the portfolio. In addition, Credit Metrics allows us to capture certain market risk components in our risk estimates. These include the market driven volatility of credit exposures like swaps, forwards, and to a lesser extent, bonds. J.P Morgan (1997)

iv. Internal Rating System

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

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

2.10. Credit scoring System

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

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

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

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

The judgmental techniques rely on the knowledge and both past and present experience of credit analysts, who evaluate the required requisites, such as the personal reputation of a client, the ability to repay credit, guarantees and client's character. (Abdou, El-Masry & Pointon, 2007).

Credit scoring is mechanical system for analysis of the loan applicant and used to increase the correctness in the approval of loans to creditworthy customers, which can result in increased profits or rejection of those customers who are not creditworthy.

The main reasons for the use of credit scoring are to reduce bad debts and to improve operational efficiency (Janeska, Sotiroski, & Taleska, 2014).

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

According to Beasens and Gestel(2009) Different customer scoring stage are listed as follows: Marketing score: a marketing activity aims to reduce the cost of customer acquisition and to minimize customer inconvenience and dissatisfaction. Application score: Application scoring systems summarize all applicant information into one overall score measuring the creditworthiness of loan applicants in order to predict the probability of repayment problem. Fraud score: simply by observing and counting the number of days in payment arrears, to claim as fraudulent or a credit application as containing fraudulent information. Performance score: The goal of performance scoring is to monitor the existing portfolio, its future performance and losses. Behavioral score: Behavioral scoring analyzes the risk of existing customers based on

their recently observed behavior once credit has been granted, banks can subsequently start to monitor the repayment and financial behavior of their customers. It allows lenders to make better decisions in managing existing clients by forecasting their future performance Thomas (2002). The behavior score analysis the customer's previous payment and purchase behavior as well as the customer's social demographic (Charlotte & Camilla, 2010). Early warning score: Early warning systems aim to early detect potential crises with counterparts. These counterparts are put on a watch list for closer inspection and follow up. Collection score: Collection scoring is a decision support tool to manage bad debt. One rank orders customers already in payment arrears based on the probability of successfully collecting the outstanding debt. Profit score: Developing customer level profit scoring models is typically very complex because of several practical implementation issues. Direct and indirect benefits and costs need to be considered and also the timing of the cash flows and the corresponding discount factors need to be taken into account. Credit lenders wish to change from minimizing the risk of a consumer defaulting to maximizing the profit a consumer brings them Thomas (2002).

2.11. Credit Risk Mitigation

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

2.12. Credit Risk Mitigation technique

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

i. Funded credit protection

a. Collateral

Collateral is an asset that serves as security against counter party risk. Anderson and Joeveer(2014)

A collateralized transaction is a transaction where the credit exposure or potential credit exposure of the credit institution to a counterparty is hedged in whole or in part by collateral posted by the counterparty or by a third party on behalf of the counterparty. Basel (2004)

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

b. On-balance sheet netting

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

ii. Unfunded credit protection

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

a. Guarantees

A guarantee must represent a direct claim on the guarantor with the extent of the cover being clearly defined and unquestionable. A guarantee must be irrevocable; there must be no clause in the guarantee that would allow the guarantor to cancel unilaterally the cover of the guarantee or that would increase the effective cost of cover as a result of deteriorating credit quality in the

guaranteed exposure. A guarantee must also be unconditional; there should be no clause in the guarantee outside the direct control that could prevent the guarantor from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the due payment. The indirect guarantee covers all credit risk elements of the claim; both the original guarantee and the indirect guarantee meet all the operational requirements for guarantees except that the indirect guarantee need not be direct and explicit to the original claim. Basel (2008)

b. Loan Commitments

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

2.13. Tools of Credit Risk Management

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

a) **Exposure Ceilings:** Prudential Limit is linked to Capital Funds - say 15% for individual borrower entity, 40% for a group with additional 10% for infrastructure projects undertaken by the group, Threshold limit is fixed at a level lower than Prudential Exposure; Substantial Exposure, which is the sum total of the exposures beyond threshold limit should not exceed 600% to 800% of the Capital Funds of the bank (i.e. six to eight times).

b) **Review/Renewal:** Multi-tier Credit Approving Authority, constitution wise delegation of powers, Higher delegated powers for better-rated customers; discriminatory time schedule for review/renewal, Hurdle rates and Bench marks for fresh exposures and periodicity for renewal based on risk rating, etc are formulated.

- c) **Risk Rating Model:** Set up comprehensive risk scoring system on a six to nine point scale. Clearly define rating thresholds and review the ratings periodically preferably at half yearly intervals. Rating migration is to be mapped to estimate the expected loss
- d) **Risk based scientific pricing:** Link loan pricing to expected loss. High-risk category borrowers are to be priced high. Build historical data on default losses. Allocate capital to absorb the unexpected loss.
- e) **Portfolio Management:** The need for credit portfolio management emanates from the necessity to optimize the benefits associated with diversification and to reduce the potential adverse impact of concentration of exposures to a particular borrower, sector or industry. Stipulate quantitative ceiling on aggregate exposure on specific rating categories, distribution of borrowers in various industry, business group and conduct rapid portfolio reviews.
- f) **Loan Review Mechanism:** This should be done independent of credit operations. It is also referred as Credit Audit covering review of sanction process, compliance status, and review of risk rating, pickup of warning signals and recommendation of corrective action with the objective of improving credit quality. It should target all loans above certain cut-off limit ensuring that at least 30% to 40% of the portfolio is subjected to LRM in a year so as to ensure that all major credit risks embedded in the balance sheet have been tracked.

2.14 Measurement, Monitoring and Control

Failure to establish adequate procedures to effectively monitor and control the credit function within established guidelines has resulted in credit problems for many banks around the world. Compromising credit policies and procedures has been another major cause of credit problems. Accordingly, each bank needs to develop and implement comprehensive procedures and information systems to effectively monitor and control the risks inherent in its credit portfolio.

2.15. Empirical studies

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

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

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

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

Tibebu (2011) examined that credit risk management and profitability of commercial banks in Ethiopia. Find out that Both nonperforming loan ratio and capital adequacy ratio has a negative impact on profitability's of commercial banks in Ethiopia. He also state that the impact level of nonperforming loan ratio is negative which means, a single unit increase in nonperforming loan ratio leads in (.594077) decrease of profitability of commercial banks of Ethiopia.

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

Akotey J.O. (2012) the study has examined the credit risk management of selected rural banks in Ghana and has discovered that credit risk management plays a significant and dynamic role in the business of rural banking. The researcher find out sampled ruler commercial banks have poor credit risk management practices and hence the high levels of the non-performing loans in their loans portfolios. Despite the high levels of the NPLs, their profit levels keep rising as an indication of the transfer of the loan losses to other customers in the form of large interest margins. Therefore the findings indicate a significant positive relationship between non-performing loans and rural banks' profitability informative that, there are higher loan losses but banks still earn profit.

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

CHAPTER THREE

3. Research methodology

3.1. Research design

In this study the researcher used descriptive type of research and the researcher tries to describe the credit risk management practice, and the controlling mechanism and measurement tools and techniques of awash international bank S.C.

Besides, the study deeply described these variables by using both primary and secondary data. The primary data was collected by distributing structured questioner to credit administration and appraisal department, risk management, and loan recovery department, and other concerned parties and secondary data from annual reports (in order to know the progress of NPL), credit policy and procedures, central bank directive and other relevant document was used to analyze the extent of implementation.

Finally, the collected data from both primary and secondary data was analyzed, summarized, concluded and recommended accordingly.

3.2. Types of data collected and used

Besides qualitative and quantitative type of data, the researcher used both primary and secondary data. The primary data was collected through questioner and the secondary data was collected from credit policy and procedures and central bank directives to analyze the extent of implementation and AIB annual report to see the progress of NPL. In addition to this, Secondary data was used to collect the information which may not be addressed by the questioner or to get more clarification on other issues such as detailed policy, structure of credit risk management practice of awash international bank S.C. Secondary data are presented and analyzed by using trend rate and growth rate of non-performing loan of the bank calculated as:

$$\text{Trend rate} = \frac{\text{each year NPL}}{\text{Base year}}$$

$$\text{Growth rate} = \frac{\text{ending year NPL amount} - \text{beginning year NPL amount}}{\text{Beginning year NPL amount}} \times 100\%$$

3.3. Method of data collection and sampling technique

In order to select relevant respondent stratified random sampling was used and also systematic random sampling technique was used to determine the right respondents from each group. The population of the study was segmented at head office because most of the strategies for credit risk management are emanated from top level management found at head office. Respondent was selected from the segment randomly. The researcher selected this sampling technique because it helps to gather relevant information from the concerned department (i.e. credit and risk management area of the bank at head office)

3.4. Sampling size

Awash international bank has more than 240 branches, of these branches 126 and four district offices exist in Addis Ababa as of December, 2016. For this study only credit appraisal and management department, loan recovery, credit analyst expert and expertise in risk management department at head office level was selected as a sample. Because almost all grade one up to four branches do not involved on credit assessment and approval process of credit because the process of credit approval are under the authority of head office level departments for all district under Addis Ababa except consumer loan.

The total sample size selected from **72** individual were **61** employees from head office at different credit and risk management department. The total sample size selected and number of participants in the study was **61** determined by a formula developed by Cochran (1963) cited in Glenn (2013).

Formula

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

$$n = \frac{72}{1 + 72(.05^2)}$$

$$n = \underline{61}$$

Where

N = is the population size

n = required sample size

e =magnitude of error (5%) at confidence level 95 %(standard value of 1.96)

3.5. Target group

Everyone who works at bank has different qualification, knowledge and experience even for those who work at the same department.therefore,in order to gather necessary, valid and reliable information regarding credit risk management of AIB ,the sample selected was risk expertise, credit analyst officers, corporate risk management, credit appraisal, loan follow up department in the organization.

3.6. Data analysis

All data collected in this research was analyzed using descriptive statistic technique and trend analysis. Thus, percentage and frequency count and table has been used to analyze data collected by both primary and secondary data by using SPSS.

3.7. Ethical issues

The study was conducted in such a way that it will consider ethical responsibility. Ethical responsibility includes, providing information about the study for respondents(like who is conducting the research, for what and who will benefit from),also the study provided anonymity, which means the information gathered from the respondents was confidential and was not be used for any personal interest.

Chapter Four

Data Analysis, Finding and Discussion

4.1 Data Analysis

This chapter presents analyzed results and interpreted discussions of the data obtained from the primary source and secondary source. The primary data was obtained from the questionnaire which is designed to collect the necessary data to answer the research questions. The questionnaire is administered for sixty one respondents from all sections of credit office. Secondary data was obtained from annual reports in order to show the progress of NPL of loan disbursed to different economic sector and credit policy and procedures in order to know the extent of implementation.

4.2 Analysis of data gathered from questionnaire

This section has six parts in relation to data of questionnaires, the first part deals with demographic data of respondents, the second part deals with credit risk level of loan disbursed to different economic sectors. An internal and external factor that challenges implementation of credit risk management policy of the organization and factors which facilitates increase in NPL level of the bank are presented in third and fourth parts. Fifth and sixth parts deals with tools and techniques of credit risk management used by the bank and its credit risk mitigation mechanism respectively.

4.3 background information of respondent

Sixty one questionnaire was distributed to the respondents and all of them was collected with with a response rate of 100%.The study is reliable since the respondents was selected based on their duty and responsibility and their past experience on credit risk appraisal, credit follow up, credit analyst expert, loan recovery departments and their answer was expected to be reliable moreover, the research analysis considers not only finding from primary data but also secondary data also been gathered and interpreted. The demographic characteristic include job tittle, level of education, field of specialization and work experience.

Due consideration is given to obtain consent from each participant about their participation in the study. The finding of the research was presented without any variation from the outcome of the research. In addition, the research fully acknowledges all reference material used in the study.

Table 1: frequency distribution of respondents by level of education

Educational level	Frequency	Percent
Diploma	3	4.9
bachelor degree	42	68.9
masters degree	16	26.2

Source: survey and SPSS frequency output

Regarding the respondent educational qualification as indicated on table 1 above 4.9% of the respondents are diploma holders, **68.9%** of the respondents are undergraduate degree holders and the rest **26.2%** of the respondents are post graduate degree holders. The research tries to identify the respondents by their educational level in order to know the qualification of the respondent to analyze whether their responses are relevant. From this it is possible to suppose that the composition of the respondents includes well-qualified individuals to explain about the subject of the study.

Table 2: frequency distribution of respondents by field of specialization

Field of specialization	Frequency	Percent
Accounting	21	34.4
Management	19	31.1
Economics	14	23.0
Others	7	11.5

Source: survey and SPSS frequency output

As shown from the above table 2, **34.4%** are studying accounting, **31.1%** study management, **23%** study economics and the rest (**11.5%**) of the respondents are studying other fields of study. Therefore, the background of the respondents is from the business department and it is

possible for them to understand the term raised on the questionnaires that contribute to the validity of the information they provided to fill.

Table 3: frequency distribution of respondent by work experience

Work experience		Frequency	Percent
	0-3 years	14	23.0
	4-5 years	18	29.5
	6-10 years	26	42.6
	11-20 years	3	4.9

Source: survey and SPSS frequency out put

As indicated above in table 3, majority of the respondents (**42.6%**) have been working for AIB for 6-10 years and (**29.5%**) of them have been working for the organization for 4-5 years. Generally, most of the respondent have been working for AIB for more than 3 years, which shows their long period of experience and that contribute to the reliability and validity of the information they offer.

4.3 credit risk assessment

This section shows survey results regarding credit risk management practice of AIB.

4.3.1 level of credit risk

Table 4: Level of credit risk on loan category by economic sector.

Economic Sectors	Very less Risk(1)		less Risk (2)		Medium risk(3)		High Risk (4)		Very High Risk(5)		mean
	Fre q.	% age	Fre q.	% age	Freq.	% age	Fre q.	% age	Freq.	% age	
Agricultural loan	7	11.5	13	21.3	15	24.6	13	21.3	13	21.3	3.2
Manufacturing loan	-	-	18	29.5	29	47.5	14	23	-	-	2.9
Import and export loan	9	14.8	21	34.4	26	42.6	4	6.6	1	1.6	2.5
Domestic trade and service loan	12	19.7	19	31.1	25	41	5	8.2	-	-	2.4
Building and construction loan	6	9.8	32	52.5	18	29.5	2	3.3	3	4.9	2.4
Personal and ESL and mortgage loan	21	34.4	32	52.5	1	3.3	4	6.6	2	3.3	2

Source: survey and SPSS frequency out put

Table 4 above shows the response given by respondents regarding the level of credit risk being faced by the bank on loan category by economic sector. According to the results, agricultural loan (mean **3.2**) results higher risk level followed by manufacturing loan with (mean **2.9**), import and export loan (mean **2.5**), domestic trade and service loan (mean 2.4), building and construction loan (mean 2.4) results medium risk. Whereas, personal and ESL and mortgage loan (mean 2) has less risk as compared to the other credit risk level as replied by respondents. recently, the bank provide loan to three priority sectors (i.e. agricultural, manufacturing and international trade) which directly or indirectly contribute to the development of the country.

According to Wang (2013) find out that, as agricultural producers businesses are largely depends on weather and because of the unpredictability of natural environments, the sector is highly exposed to credit risk. Due to this and other reasons agricultural loan has more credit risk exposure. Most manufacturing companies take loan from the bank to facilitate their business but most of them may face difficulty to repay their loan on regular basis because of sudden shortage of raw materials, decrease in market share and by other factors. Therefore the bank fails to collect those loans regularly to diversify and get the intended return.

This research tries to see the levels of risk faced by each sectors in the credit portfolio of AIB and their contribution to NPL. According to result shown in the above table 4 agricultural loan sectors are highly exposed to credit risk according to respondent. According to C.Baker (1998) as indicated on literature review part Credit risk occur when one of the counter parties to a transaction does not clear up in full either when the fund are outstanding or on some later date and it may result in bankruptcy of counterparty. Therefore, the risk exposure of the above sectors are high and the bank should give due attention and follow up and when loan dispersed to all sectors exceptionally for sectors and should prepare efficient credit risk mitigation mechanisms in addition to the existing mechanisms.

4.4. Challenges in effective implementation of credit risk management policy

Table 5: internal factors and CRM policies of the bank

Internal Factors	Very Highly challenging (5)		Highly challenging (4)		Neutral (3)		Less challenging (2)		Not Challenging (1)		mean
	Freq	% age	Fre q	% age	fre q	% Age	fre q	% age	Fre q	% age	
High cost of information technology.	9	14.8	26	42.6	20	32.8	3	4.9	3	4.9	2.4
Lack of technical knowledge.	7	11.5	17	27.9	22	36.1	14	23	1	1.6	2.8
Lack of training with in the organization about CRM.	10	16.4	26	42.6	9	14.8	16	26.2	-	-	2.5
Lack of employee's motivation to implement.	19	31.1	18	29.5	16	26.2	4	6.6	4	6.6	2.3
Difficult to understand the policy and procedure.	7	11.5	11	18	13	21.3	28	45.9	2	3.3	3.1
Access to material related to CRM	3	4.9	14	23	28	45.9	14	23	2	3.3	3
Difficulty in quantifying risk	4	6.6	24	39.3	19	31.1	11	18	3	4.9	2.8
Information gap	16	26.2	25	41	11	18	5	8.2	4	6.6	2.3

Source: survey and SPSS frequency out put

Table 5 above shows the major challenges faced in successful implementation of credit risk management in the bank and ranked as difficult to understand the policy and procedure (mean 3.1) was highly challenging in implementation of credit management policy and (mean 3) of the respondents remain neutral regarding the issue raised but the other factors are less challenging ranging from mean value of 2.3 to 2.8 according to respondents.

According to Singh (2013) as indicated chapter 2 literature review part that for long term achievement of banking sector effective credit risk management practice is a vital issue in the current business environment and poor credit risk management policy will create serious source of crisis in the banking industry. This shows that the first higher challenge faced with in the bank is difficult to understand the policy and procedure. Therefore, the bank is expected to dig out the main problem to let the all concerning employees to understand and act accordingly and take remedial action in order to insure effective implementation of the policy and procedure of the bank at all credit department. In general effective credit risk management process is dependent in staff quality, good credit culture, devoted top management bodies, sufficient training program, effective internal control system, so the bank should adhere with these instruments so as to minimize credit risk management failurity.

4.5. External factor and the effectiveness of CRM

Table 6: external factors and CRM of the bank

Macro factor	Positively Affect(5)		Negatively Affect(4)		No effect (3)		Very highly affected(2)		Both side (1)		mean
	Freq	% age	Freq	% age			Freq	% age	freq	% age	
Government policy	13	21.3	14	23	8	13.1	12	19.7	14	23	3
Infrastructure facility	3	4.9	12	19.7	14	23	20	32.8	12	19.7	3.4
Background of the society	5	8.2	9	14.8	6	9.8	21	34.4	18	29.5	4
Level of Economy	7	11.5	20	32.8	3	4.9	26	42.6	5	8.2	2.3
Global economic crisis	4	6.6	19	31.1	2	3.3	25	41	11	18	3.3
Interest rate	9	14.8	8	13.1	18	29.5	18	29.5	8	13.1	3.1

Source: survey and SPSS frequency out put

The survey results indicated that background of the society(mean 4),infrastructure facility(mean 3.4) ,global economic crisis(mean 3.3) and interest rate(mean 3.1) affects the banks credit management negatively, on the other hand government policy(mean 3) and level of economy have no effect on the banks credit management. Since the bank is making a business by expanding its branches throughout the country by providing credit products to its customers which depends on the level of economy of the country determining customers paying capacity of their debt from their normal business operation.so the bank should consider the level of economy of the country before granting credit facility for example import and export credit facility and also the bank should comply with the government policy i.e national bank directives before granting loan to its customers because it may bear penalty to the bank and other corrective measures by the governing organ.

4.6. Factors Contributing for Occurrence of NPL

Table 7: the extent of Factors contributing for occurrence of NPL in the bank.

	Most Important(5)		Important (4)		Neutral (3)		Less Important(2)		Not Important(1)		mean
	Freq	% age	Fre q	% ag	Fre q.	%ag e	Fre q	% age	freq	% age	
Interest rate	14	23	21	34.4	5	8.2	16	26.2	5	8.2	2.6
Poor credit assessment technique	27	44.3	17	27.9	8	13.1	3	4.9	6	9.8	2.1
Size of the institution or the bank	5	8.2	22	36.1	23	37.7	7	11.5	4	6.6	2.7
Ownership type	5	8.2	26	42.6	18	29.5	8	13.1	4	6.6	2.7
Knowhow of employees	4	6.6	42	68.9	11	18	2	3.3	2	3.3	2.3
Credit culture of the society	14	23	36	59	5	8.2	3	4.9	3	4.9	3.5
Know your customer (KYC) principle	25	41	26	42.6	2	3.3	5	8.2	3	4.9	1.9
Growth of loan demand.	11	18	26	42.6	21	34.4	3	4.9	-	-	2.2
Lack of follow up by credit department	17	27.9	21	34.4	11	18	6	9.8	6	9.8	2.4
Diversion of the loan for other activities	12	19.7	24	39.3	18	29.5	7	11.5	-	-	2.3
Behavior of the customer	17	27.9	35	57.4	9	14.8	-	-	-	-	1.9
Time duration of loan	15	24.6	18	29.5	10	16.4	12	19.7	6	9.8	2.6

Source: survey and SPSS frequency out put

Awash international bank provides different types of credit products being the largest bank in terms of financial and non-financial capitals from privately owned banks in Ethiopia. Therefore, the increase in the level of different types of credit products will create suitable environment for the increment of NPL unless otherwise the bank properly manage the factors causing the occurrence of NPL.

According to Solomon (2013) point out that the major contributing factors for the increment of NPL in NIB bank are poor risk assessment, poor monitoring/follow-up, credit culture and relaxed credit terms. Bajpai et.al. (2015) find out the causes for the increase in NPL of the commercial banks in Uganda are Poor credit risk management, Poor credit analysis, Economic development of the country, Unsuccessful financed project and Unsuccessful financed project were listed as the major one. The researcher also shows that mismatch of the bank's assets and

its profitability was caused by many factors including high rates of NPLs. In addition to this poor management of credit risk led to an increase of NPLs which lead to increase of bad debts provision and finally reduces profitability. Thus, if the credit policy is not effectively implemented the banks' profitability will be adversely affected.

The survey indicates that credit culture of the society(mean 3.5) is important factor contributing for the occurrence of NPL in the bank but behavior of the customer(mean 1.9) is not important for occurrence of NPL according to respondents, regarding the other factors of NPL to occur,the respondents are indifferent(neutral) that is somewhat they are important in some case and not important in other case.

4.7. Credit risk management process

Table 8: credit appraisal

Credit Appraisal	Strongly Agree(5)		Agree(4)		Neutral(3)		Disagree(2)		Strongly Disagree(1)		mean
	Fre	%	Fre	%	Fre	%	freq	%	freq	%	
There is credit policy and procedure with clearly steted eligible criteria.	34	55.7	24	39.3	1	1.6	2	3.3	-	-	1.5
There is independent risk management policy and procedure from credit policy and procedure in your organization.	17	27.9	25	41	12	19.7	6	9.8	1	1.6	2.2
The bank periodically prepare credit quality report for warning sign loan loss in any portfolio	24	39.3	24	39.3	11	18	2	3.3	-	-	1.9
The bank has appropriate criteria for credit classification provisioning and write off	28	45.9	18	29.5	13	21.3	2	3.3	-	-	1.8
The bank checks the borrower history before granting loans	24	39.3	28	45.9	4	6.6	2	3.3	3	4.9	1.9
Collateral coverage is regularly assessed and related to the borrowers financial health	22	36.1	21	34.4	11	18	5	8.2	2	3.3	3
The bank monitor the business of client after granting credit on regular basis	6	9.8	29	47.5	22	36.1	3	4.9	1	1.6	2.4
The bank properly assessed the customer ability to meet obligation	18	29.5	23	37.7	17	27.9	-	-	3	4.9	2.1

Source: survey and SPSS frequency out put

Credit appraisal is a process of investigating borrower's background history and sustainability of income of its business by using 5C's(character,capital,collateral,capacity and condition) As

shown in the survey above the respondents are disagreed on the statement there is credit policy and procedure with eligible criteria(mean 1.5),the bank has appropriate criteria for credit classification(mean 1.8),the bank periodically prepare quality report for warning sign loan loss in any portfolio(mean 1.9),the bank checks the borrower history before granting loans(mean 1.9), but they prefer to be neutral the other credit appraisal process. Thus has to check and implement suitable credit risk management process in order to mitigate the risk of loss.

4.8. Credit risk management tools and techniques

Table 9: tools and techniques of credit risk management

Techniques of credit risk management		Used		Not Used	
		Freq.	Percent	Freq.	Percent
	Collateral	44	72.1	17	27.9
	Risk rating	29	47.5	32	52.5
	Loan recovery	26	42.6	35	57.4
	portfolio management	39	63.9	22	36.1
	Credit approval authority	21	34.4	40	65.6
	Diversification	21	34.4	40	65.6

Source: survey and SPSS frequency out put

According to the survey collected above, all techniques are used in the bank as credit risk management technique except credit approval authority and diversification techniques. Thus collateral 72.1%, portfolio management 63.9%, risk rating 47.5% and loan recovery 42.6% ranked according to their usage in the bank. Credit approval authority and diversification techniques are used as least level in the credit management practice of the bank. For insuring effective credit risk management technique, the bank is expected to use all components together.

4.9. Factor of credit granting process

Table 10: the importance of factors considered in credit granting process in the bank.

5Cs	Most Important(5)		Important(4)		Neutral(3)		Less Important(2)		Not Important(1)		mean
	Freq	% age	Freq	% age	Freq.	% age	freq	% age	Fre q	% age	
Character	27	44.3	27	44.3	3	4.9	-	-	4	6.6	1.8
Capital	21	34.4	27	44.3	8	13.1	5	8.2	-	-	2
Collateral	37	60.7	17	27.9	7	11.5	-	-	-	-	1.5

Capacity	39	63.9	17	27.9	3	4.9	-	-	2	3.3	1.5
Condition	17	27.9	34	55.7	1	1.6	4	6.6	5	8.2	2.1

Source: survey and SPSS frequency out put

Regarding the question asked to the importance of credit granting process factors, all 5Cs are not highly used in credit granting process of awash international bank S.C.

As shown in the table 10 above, capacity to repay (mean1.5),collateral coverage(mean 1.5),characteristics of the business and owner(mean1.8),capital of the borrower(mean 2) are less important in the bank according to respondents. But regarding condition of borrower (mean 2.1) respondents are indifferent(neutral) that means in some case it is important and in other case it may not be important.

4.10. Risk mitigation mechanism

Table 11: Credit risk mitigation techniques

		Frequency	Valid Percent
Valid	YES	61	100
	NO	-	-

Source: survey and SPSS frequency out put

As indicated table 11 above, the bank uses collateral as the best way of credit risk mitigation technique. All of the respondents(100%) answers yes for the statement does the bank demand collateral before granting the loan? According to Anderson and Joe veer (2014). Collateralized credit exposures must have a risk biased exposure amount less than the same credit exposure without credit protection. Thus the bank demands collateral in the forms of real estate, building, car, merchandise etc. to mitigate its credit risk.

Table 12 collateral demand type of loan

		Frequency	Valid Percent
	YES	37	60.7
	No	22	36.1
	indifferent	2	3.3

Source: survey and SPSS frequency out put

As indicated table 12 above, the response given by respondents regarding the statement.is collateral demanded for type of loan? 60.7% of respondents answers that all type of loan needs to be secured by collateral whereas,36.1% of respondents answers that not for all type of loan is

collateral needed because as per their justification, some type of loan may be granted in clean basis, 110% guarantee coverage, export credit facility, staff and personal loan are granted without collateral requirement.

4.11. Activity performed to reduce credit risk

Table 13: level of listed Activities used in order to reduce credit risk by the bank.

	Highly used(5)		Used (4)		Neutral(3)		Less Used(2)		Not Used(1)		Mean
	Freq	% age	Freq	% age			Freq	% age	freq	% age	
Develop MIS	10	16.4	29	47.5	16	26.2	6	9.8	-	-	2.3
Periodic credit calls	13	21.3	36	59	9	14.8	3	4.9	-	-	2
Periodic visits of borrowers	4	6.6	43	70.5	11	18	3	4.9	-	-	2.2
Credit risk rating	10	16.4	35	57.4	13	21.3	3	4.9	-	-	2.1
Annual review of accounts	15	24.6	36	59	7	11.5	3	4.9	-	-	2
Risk scoring	6	9.8	24	39.3	25	41	3	4.9	-	-	2.3

Source: survey and SPSS frequency out put

The table 14 above shows the level of activity used by the bank in order to reduce the risk level of credit product. This question is asked by researcher in order to investigate the level of activities performed by the bank in order to minimize the credit risk level. Regarding develop MIS(mean 2.3), risk scoring(mean 2.3), periodic visit of borrowers(2.2) and credit risk rating(2.1) the respondents are neutral. On the other hand, periodic credit calls (mean 2) and annual review of accounts (mean 2) are used less.

Problems encountered during debts recovery from customers

Regarding the questions raised to get response about problem encountered during debts recovery from customers, respondents answered some of the following problems.

The main problems encountered during loan recovery are, client may not have proper information about the loan conditions, collateral may not be managed well, lack of information to find attachable properties and taking time for closure since it reported to legal actions, most defaulted customers does not diversify their business because it will be difficult for them to repay their loan, shortage of cash, etc are some of the problems responded.

Steps/procedures followed to recover non-performing loans

As per respondents answer, the bank follows steps to recover non-performing loan. Some of the procedures followed are: discuss with customers about the problem faced, arrange options to make the loan healthy, extension/rescheduling the loan, the bank gives warning letter three times and finally the collateral will be foreclosure to settle the outstanding of the loan in addition to other related costs.

Forms of penalty for officers or credit approval committee

If the officers or credit committee makes mistakes which turns the loan to bad, the bank may penalize the employee by giving first warning letter and then after 25% salary deduction finally the bank will give resignation letter if they are not corrected with the remedial actions taken.

4.12. Risk reporting

Table 14: risk reporting Schedules

Report		Frequency	Valid Percent
Valid	Quarterly	35	57.4
	Annually	8	13.1
	Monthly	34	57.7

Source: survey and SPSS frequency out put

As shown above on table 14 the respondent indicated that 57.7% monthly, 57.4 % quarterly, and 13.1% annually. This result shows that there is no regular and uniform risk reporting period in the bank which creates difficulty in estimating periodic status of the creditor or borrower. In order to properly monitor and control the creditor predict status and to know the NPL level in the credit portfolio the bank should establish effective and regular credit risk reporting schedule to all level of the employee working on credit.

4.13. Advisory service to credit customer

Table 15: Response to advisory service to credit customer

Advisory service		Frequency	Percent
Valid	Yes	48	78.7
	No	10	16.4
	Indifferent	3	4.9
	Total	61	100

Source: survey and SPSS frequency out put

As indicated on the above table15, 78.7% of respondent confirmed that there is type of advisor service to credit customers such as technical and financial aspect of proposed business entity and about loan process

Secondary data analysis

Awash international bank S.C

Comparison of total loans and non-performing loan(000's) birr

years	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Total loans and advances	3,986,464.9	5,504,610.4	7,709,998.13	9,176,359.9	12,482,041	15,450,777.4
NPL	79,729.3	178,450.2	186,185.1	260,157.3	184,650	245,456
NPL/Loan ratio	2%	3%	2.4%	2.8%	1.5%	1.5%
Trend rate	1	2.2	2.3	3.3	2.3	3.1
Growth rate	1.2	0.04	1.4	(0.3)	0.3	-

Source annual report of the bank

As shown above in the table, even if the NPL ratio of the bank is below the 5% threshold set by the national bank of Ethiopia, the bank has different growth rate varying from minimum **(0.03)** to maximum **1.4**, this shows that there is no consistency in the growth rate and the magnitude of non-performing loan which is because of the bank have no strict follow up mechanisms by which can maintain and minimize the level of non-performing loan risk. in addition to this, the trend rate of the bank shows an increasing rate from one year to the other.

The decline in NPL amount from 26.157.3 to 184,650 in year 2014/15 with growth rate (0.3) was due to strong monitoring and follow-up made during the fiscal year, this decline of NPL results increase in profitability, more credit supply and high growth of the company.

Countries that rely mainly on bank financing as in Ethiopia, high NPL reduce profitability, increase funding costs and tie up bank capital which negatively impact credit supply and ultimately growth. Thus, the bank could manage the credit risk level of loan processed to private sectors by using different risk measurement models, proper follow-up mechanism by visiting the business status and by creating effective mitigation mechanism in order to predict the future business conditions of borrowers and to minimize loss as well.

Chapter five

5. Conclusion and Recommendation

In this chapter, a conclusion of the research findings that has been discussed and analyzed in detail in the previous chapters is briefly presented. In addition, general conclusions that are highly related with the research objective of this paper are offered. Furthermore, possible recommendations based on the findings are made.

5.1.1. Conclusion

All commercial banks render different types of services for their customer, among which credit is the major one as bank lending is the core function of banking industry. It is commonly said that the successful banker is the successful lender. It is also noted that when a bank lends to a customer there are principles that should be considered in terms of safety, liquidity, effective utilization of the fund and diversification of investment. Even if the procedures of loan processing differ from one bank from the other in general the procedures includes prior discussion or interviewing of the customer, site visits, processing the application, gathering credit information etc. and finally the approved loan will be disbursed to customer.

The main objectives of this research has been to identify the level of credit risk, credit risk management practice of NPL, priority sectors and to measure the effectiveness of credit risk management of the bank

As the bank is the first privately owned financial institution, it is expected to contribute for the growth of its shareholders value and GDP of the country by financing different developmental sectors of the country. Depend on this the bank have three priority sectors naming agricultural loan, export and manufacturing sector. As the finding shows that agricultural loan is highly exposed to risk. The major challenges faced in successful implementation of credit risk management in the bank was understanding the policy and procedure this is because policies and procedures are ratified from top management but there is no awareness creation and give due emphasis on the policies to be understood by concerned employees of the bank.

The main problems encountered during loan recovery are, information gap between the client and the bank, mis-management of collateral and takes time for closure of the attachable properties. The bank also uses different credit risk mitigation mechanisms by grading the credit level and its best way of risk mitigation mechanism was collateral according to the survey result.

Some of the external factors which affect the effectiveness of credit risk management of the bank negatively are infrastructure facility, global economic crisis and interest rate as per the survey result, so the bank should assess and consider all this factors while granting the loan.

The survey result also confirms that the bank uses different credit risk measurement techniques like collateral, risk rating, loan recovery, portfolio management more but less often of credit approval authority and diversification techniques.

In respect of the factors affecting NPLs, the subjective questions in the survey identified factors such as poor credit assessment and monitoring, banks credit terms, aggressive lending and economic conditions attributes to the cause of loan default.

5.1.2 Limitations of the study

The research was not easily done without drawbacks, some of the limitations that the researcher faced was unable to support some of the output gained from primary data because of the confidentiality and unwillingness to share the required data by concerned body beyond confirmation given during unstructured interview about the subject matter for example, real data concerning level of credit risk in the bank categorized by each sector of loan and others.

5.1.3 Recommendations

Based on the above findings and conclusions the researcher recommended the following to the organization.

The greater extent of banks success depends on the efficient management of its financial resource. Thus management of finance in credit area is a very sensitive and complex issue in the operation of banks where one should be aware of minimizing risk in the course of administering loans and advances.

Administration of the loan involves the entire process starting from credit application to final disbursement of loan. Therefore, the bank should develop and put in place strong credit processing and appropriate exercise of KYC for proper customer selection.

As the research result indicates the bank gives least attention to periodic visit of borrowers, this is a serious problem because the bank has to check customers' usage of the loan for intended purpose or not and also whether their business is going well to refund the money on regular basis.

The finding also shows that the bank has no uniform risk reporting period which creates difficulty in estimating periodic status of the borrower, therefore, the bank should have effective and regular credit risk reporting schedule.

The bank should identify early warning signals if the is probability of default and initiate remedial measures in order to reduce loss the money borrowed.



**ST.MARY UNIVERSITY
SCHOOL OF GRADUATE STUDIES
DEPARTMENT OF General MBA**

Questionnaire to be filled by dear respondents

The purpose of this self-administered Questionnaire is to gather data relating to the **“an assessment of credit risk management practice of awash international bank S.C** For fulfillment of the requirements of the thesis for the Masters in **Business Administration in General Management** of St. Marry University (MBA). The research will be conducted to make an assessment of credit risk management practice of awash international bank S.C. I feel that your contribution which means information obtained from you is essential for success of this research. Thus, I appreciate your cooperation to give me your time for the success of this research thesis. I assure you that the information to be shared by you will be used only for academic purpose and kept confidential.

For further information and if you need my assistance while you fill the questionnaire please contact me:

E-mail:kasahun.ruv@gmail.com

Mob:0913081796/0912651078

Thank you for your cooperation

**Your sincerely
Kasahun Ashine**

Appendices:

Part I: Respondent profile

Please use this mark in the box “√” Where it applies

1) Job Title: _____

2) Highest educational level obtained

1. High school complete 2. Certificate 3. Diploma
 4. Bachelor Degree 5. Masters Degree 6. PhD

3) Area (field of specialization) or major field of study

1. Accounting 2. Management 3. CPA
 4. Economists 5. Others please specify _____

4) Years of work experience

- 1) 0-3 years 2) 4-5 years 3) 6-10 years
 4) 11-20 years 5) More than 20 years

Part II. Research related question

5. Please tick the level of credit risk being faced by your bank on the following economic sector.

	Very less Risk	Low Risk	Medium Risk	High Risk	Very high risk
Agricultural loan					
Manufacturing loan					
Import and export loan					
Domestic trade and service loan					
Building and construction loan					
Personal and ESL and mortgage loan					

6. Please rank which of the following best describe the major challenges faced in successful implementation of credit risk management policy within your organization?

- 1-very highly challenging, 2- highly challenging, 3.neutral
 4-less challenging and 5.-not challenging.**

	1	2	3	4	5
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High cost of information technology.					
Lack of technical knowledge.					
Lack of training within the organization about CRM.					
Lack of employee's motivation to implement.					
Difficult to understand the policy and procedure.					
Access to material related to CRM					
Difficulty in quantifying risk					
Information gap					

7. What is the following factor of the Ethiopian environment on your banks affect credit risk management practice?

	Positive	Negative	No effect	Very highly affected	Both side
Government policy					
Infrastructure facility					
Background of the society					
Level of Economy					
Global economic crisis					
Interest rate					

8. Which of the following bank specific factor do you think are facilitate the occurrence of nonperforming loans in your bank? Please rank the factor in order of their importance in contributing to the occurrence of nonperforming loans in your bank.

1-most important, 2-important, 3-neutral 4-less important and 5- not important

	1	2	3	4	5
Interest rate					
Poor credit assessment technique					
Size of the institution or the bank					

Ownership type					
Knowhow of employees					
Credit culture of the society					
Know your customer (KYC) principle					
Growth of loan demand.					
Lack of follow up by credit department					
Allocation of the loan for other activities					
Behavior of the customer					
Time duration of loan					

9. Please provide your level of agreement as follows:

1-Strongly agree, 2-Agree, 3-Neutral, 4-Disagree, 5-Strongly disagree

Credit processing/appraisal	1	2	3	4	5
There is credit policy and procedure with clearly stated eligible criteria.					
There is independent risk management policy and procedure from credit policy and procedure in your organization.					
The bank checks the borrower history before granting loans					
The bank properly assessed the customer ability to meet obligation					
Collateral coverage is regularly assessed and related to the borrowers financial health					
The banks periodically prepare credit quality report for warning sign loan loss in any portfolio.					
The bank monitor the business of client after granting credit on regular bases					
The bank has appropriate criteria for credit classification provisioning and write off					

Tools of credit risk management

10. Which technique do you use for credit risk management in your bank? You can choose more than one answer.

- 1) Collateral 2) Risk rating 3) Loan recovery 4) portfolio management
 5) Credit approval authority 6) Diversification 7) Please state if any

11. Please rank the importance of the following factors in your credit granting process.

1-most important, 2-important,3-neutral 4-less important, and 5- not important

	1	2	3	4	5
Character: measures the borrower's character and integrity					
Capital: measures the difference between the borrower's assets					
Collateral: measures the collateral provided in case payment problems occur					
Capacity: measures the borrower's ability to pay					
Condition: measures the borrower's circumstances					

12. Does the bank demand any collateral security before granting loan to its clients?

Yes No

IV

13. If yes, is collateral demanded for all type of loan?

Yes No

14. If No, specify the type of loan.

The bank lends up to Percent of the value of the security offered.

15. Does your bank perform the following technique for credit risk management? Please tick

	Highly Used	Used	Neutral	Less Used	Not used
Develop management information system					
Periodic credit calls					
Periodic visits of borrowers					
Credit risk rating					
Annual review of accounts					
Risk scoring					

16. What are problem encountered during debts recovery from customers?

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.....

.....

.....

17. What step /procedure do you follow to recover non performing loan?

.....
.....
.....
.....

18. What forms of penalties are there for officers or credit approval committee which later turns out bad?

.....
.....
.....
.....

19. Which of the following best describes the way risk management is reported within your organization? Risk reporting takes place:

- | | | | |
|--------------|--------------------------|-------------|--------------------------|
| 1. Never | <input type="checkbox"/> | 2. Annually | <input type="checkbox"/> |
| 3. Quarterly | <input type="checkbox"/> | 4. Monthly | <input type="checkbox"/> |

20. Does the bank provide any advisory service to its loan customer?

- | | | | |
|--------|--------------------------|-------|--------------------------|
| 1. Yes | <input type="checkbox"/> | 2. No | <input type="checkbox"/> |
|--------|--------------------------|-------|--------------------------|

If yes, what form does it take?

.....
.....

Please write if you have suggestion and comment.

.....
.....
.....
.....

Reference

Abdou, H. & Pointon, J. (2011). *Credit scoring, statistical techniques and evaluation criteria: a review of the literature*, Intelligent Systems in Accounting, Finance & Management, 18 (2-3), pp. 59-88.

Anuj A. (2011). *Credit Risk Management: Trends and Opportunities*, Capgemini, Online available At: www.capgemini.com/risk

Asia S. & Zaidi F.B. (2012). *Design and Development of Credit Scoring Model for the Commercial banks of Pakistan: Forecasting Creditworthiness of Individual Borrowers*, international Journal of Business and Social Science Vol. 3 No. 17. Available online www.ijbssnet.com

Basel Committee, (July, 1999a). *Principles for the Management of Credit risk*. Basel Committee on Banking Supervision.

Basel Committee, (September 2000). *Best Practice for Credit Risk Disclosure*. Committee on Banking Supervision.

Basel committee on banking and Supervision (2001). *Sound Practice for The Management of Operational Risk*. Basel committee publication No.86, Basel.

Cebenoyan, A. S., Strahan, P. E. (2004). *Risk Management, Capital Structure, and Lending at Banks*, Journal of Banking and Finance, vol.28, p- 19-43

Colquitt J. (2007). *Credit Risk Management: How to Avoid Lending Disasters and Maximize Earning*, McGraw-Hill, Two Penn Plaza, New York.

Edward I. A. (2006). *Default Recovery Rates and LGD in Credit Risk Modeling and Practice*, Stern School of Business, New York, U.S.A.

Ganopoulou M. & Giapoutzi F. (2010). *Credit Scoring and Bank Lending Policy in Consumer Loans*, International Hellenic University.

Girma M. (2011). *Credit risk Management and Its Impact on Performance on Ethiopian Commercial Banks*, Unpublished Master's Thesis Addis Ababa University.

Hagos M. (2010). *Credit Management (A Case Study of Wegagen Bank Share Company in Tigray Region)*, Unpublished Master's Thesis Mekelle University.

Hand, D. J. & Jacka, S. D. (1998). *Statistics in Finance, Arnold Applications of Statistics*, London.

Harrison O. A. (2012). *Credit Risk Management and Profitability of Selected Rural Banks in Ghana*, Catholic University College of Ghana.

Hussein A., Ahmed E. & John P. (2007). *On The Applicability of Credit Scoring Models in Egyptian Banks, banks and bank systems*, Vol.2, No.1.

Kargi, H.S. (2011). *Credit Risk and the Performance of Nigeria Banks*, Ahmadu Bello University, Zaria.

Kolapo, T. F., Ayeni, R. K. & Oke, M. Ojo (2012). *Credit Risk and Commercial Banks' Performance in Nigeria: a Panel Model Approach*, Australian Journal of Business and Management Research, Vol.2, No.02.

Korir Mark .K, (2012). *Effects of Credit Risk Management Practices on Financial Performance of Deposit Taking Microfinance Institutions in Kenya*, University of Nairobi.

Margarita J., Kosta S. & Suzana T. (2014). *Application of the Scoring Model for Assessing the Credit Rating of Principals*, Tem Journal , Vol.3, No.1. Online available on www.temjournal.com

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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