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ADDIS ABABA UNIVERSITY



ADDIS ABABA UNIVERSITY
COLLEGE OF BUSINESS AND ECONOMICS

**THE IMPACT OF CREDIT RISK MANAGEMENT SYSTEM ON BANK
CUSTOMERS SATISFACTION**

BY:

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MARCH, 2022

ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

**THE IMPACT OF CREDIT RISK MANAGEMENT SYSTEM ON BANK
CUSTOMERS SATISFACTION**

**A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS
ANDECONOMICS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE IN ACCOUNTING AND FINANCE**

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Declaration and Copyright

I, Natnael Walie, declare that this thesis is my own original work and that it has not been submitted and will not be presented to any other university for a similar or any other degree award.

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I certify that I have read and hereby recommend for acceptance by the Addis Ababa University, a thesis entitled “**The Impact of Credit Risk Management System on Bank Customers Satisfaction**” in partial fulfillment of the requirements for the award of a degree of Master of Science in Accounting and Finance.

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I, the under signed, certify that I have read and hereby recommend for acceptance by the Addis Ababa University a thesis submitted by Natnael Walie and entitled “**The Impact of Credit Risk Management System on Bank Customers Satisfaction**”, in partial fulfillment of the requirements for the award of the Degree of master of science in Accounting and Finance in Addis Ababa University.

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Table of Contents

Contents	Page
Declaration and Copyright	ii
Certification.....	iii
Approval.....	iv
Acknowledgement	i
Table of Contents.....	ii
ACRONYMS	v
List of Figures	vi
Abstract.....	viii
Chapter One.....	1
Introduction	1
1.1 Background of the Study.....	1
1.2 Statement of the Problem	2
1.3 Research Objectives.....	4
1.3.1 General Objective	4
1.3.2 Specific Objective.....	4
1.4. Research Hypothesis.....	5
1.5 Significance of the Study.....	5
1.6 Scope of the Study	5
1.7 Limitation of the Study.....	6
1.8 Organization of the Research Report.....	6
Chapter Two.....	8
2. Related Literature Review.....	8
2.1 Introduction	8
2.1 Theoretical Review.....	8
2.1.1 Definition of Risk in Banking	8
2.1.2 Types of Risk in Banks	9

2.1.2.3 Liquidity Risk	10
2.1.2.4 Market Risk	10
2.1.3 Sources of Credit Risk.....	11
2.1.4 Credit Risk Management.....	11
2.1.5 Risk Management and Basel Accords	13
2.1.6 Methods of Credit Risk Management	13
2.1.7 Determinants of credit Risk Management System	19
2.1.8 Credit assessment of banks	23
The choice on whether to deliver the credit lies within the hands of the credit officer, supervisors and now and then the Board of Executives.....	26
2.2 Empirical Literature Review	26
2.3 Conceptual Framework.....	27
Chapter Three	29
3. Research Design and Methodology	29
3.1 Introduction	29
3.2 Research Design.....	29
3.3 Sources of Data	29
3.4 Population, Sample Size and Sampling Technique	30
3.4.1 Population.....	31
3.4.2 Sample size.....	31
3.4.3 Sampling Techniques	31
3.5 Data Analysis.....	32
Chapter Four	36
Results and Discussion	36
4.1 Introduction	36
4.3. Demographic Characteristics of the Respondents.....	37
4.3.1 Gender Composition of the Respondents.....	37
4.3.2 Educational Level of Respondents	37
4.3.3 Type of Business of Respondents	38
4.3.3 Business Experience.....	38
4.4 Binary Logistic Regression Analysis.....	39
4.4.1Reliability Analysis.....	39

4.4.4 Binary Logistic Regression Analysis and Hypothesis Testing	47
Chapter Five	55
Summary, Conclusions and Recommendations.....	55
5.1 Introduction	55
5.2 Summary of Major Findings	55
5.3 Conclusion.....	56
5.4 Recommendations	57
APPENDIX I.....	I

ACRONYMS

NBE	National Bank of Ethiopia
AIB	Awash International Bank
BOA	Bank of Abyssinia
BIB	Bunna International Bank
BCBS	Basel Committee of Banking Supervisory
NPL	Non-performing loan

List of Figures

FIGURE 2.1 THE CONCEPTUAL FRAMEWORK.....	28
FIGURE 4.1: GENDER COMPOSITIONS OF RESPONDENTS.....	37
FIGURE 4.2 EDUCATIONAL LEVEL.....	38
FIGURE 4.3 WORK EXPERIENCE	39

LIST OF TABLES

TABLE 4.1 RELIABILITY STATISTICS.....	39
TABLE 4.2 THE CREDIT RISK MANAGEMENT PRINCIPLES.....	41
TABLE 4.3 DETERMINANTS OF CREDIT RISK	43
TABLE 4.4 CREDIT RISK MANAGEMENT TECHNIQUES AND TOOLS.....	44
TABLE 4.5 LIQUIDITY RISK.....	46
TABLE 4.6 CASE PROCESSING SUMMARY	47
TABLE 4.7 DEPENDENT VARIABLE ENCODING	47
TABLE 4.8 CLASSIFICATION TABLE	48
TABLE 4.9 VARIABLES IN THE EQUATION.....	49
TABLE 4.10 OMNIBUS TESTS OF MODEL COEFFICIENTS.....	49
TABLE 4.11 HOSMER AND LEMESHOW TEST	50
TABLE 4.12 VARIABLES IN THE EQUATION	51
TABLE 4.13 SUMMARY OF HYPOTHESIS TESTING	54

Abstract

The intention of this study is to examine the impact of credit risk management system on commercial bank's customer satisfaction. The study is conducted by quantitative research method by using descriptive and regression analysis. The study uses the primary data collected by using structured questioners. The data are expressed in terms of graphs, tables and the descriptive analysis mainly analyzed by using mean. The study also employs binary logistic regression in order to investigate the relationship between customer satisfaction and credit risk management system in commercial banks. The major variables are credit risk management principles, Credit risk management practices, determinants of credit risk, credit risk management techniques and tools and liquidity Risk. The result using the binary logistic regression reveals that there is a positive relationship between customer satisfaction and explanatory variables. The study finds out that credit risk management principles, credit risk management practices, determinants of credit risk, credit risk management techniques and tools are significant determinants of the customer satisfaction whereas liquidity risk management has insignificant impact in customer satisfaction in commercial banks. Therefore, credit risk management in commercial banks is important method for customer satisfaction and the researcher recommended that commercial bank managers should give special emphasis for major determinants.

Key Words: credit risk management, customer satisfaction, logistic regression

Chapter One

Introduction

1.1 Background of the Study

Financial institutions have confronted challenges over a long time for a huge number of reasons; the major cause of genuine managing bank issues proceeds to be specifically related to remiss credit measures for borrowers and counterparties, destitute portfolio hazard administration that can lead to disintegration within the credit standing of a bank's counterparties. So, banking operations have two viewpoints: taking stores from the public and issuing advances. The loaning and borrowing handle contains awesome bargain of instability. It is troublesome to maintain a strategic distance from chance within the conventional loaning movement of banks since it is impossible to estimate end of the dissolvability of banks (Freixas and Rochet, 2008).

As Almal (2012) pointed out financial organization risks divided into three the first one is credit risk, the second one is market risk and the last one is liquidity risk. Among the tree of them the most important risks are the credit risk. The credit risk management is defined as the potential of borrower to repay according to the agreement (Crouhy, Galai and Mark, 2014).

Similarly, increments in credit hazard will raise the negligible fetched of obligation and value which in turn increments the taken a toll of stores for the bank (Basel Committee, 1999). In addition, credit risk can too be characterized as legally binding party will fall flat to reimburse in understanding with the concurred terms. The credit risk is additionally differently alluded to as default risk, execution hazard or counterparty risk. Credit risk is by distant the foremost noteworthy chance confronted by banks and the victory of their commerce depends on exact estimation and productive administration of this chance to a more prominent degree than any other chance (Giesecke, 2004).

Credit risk administration may be a structured approach to overseeing instabilities through risk evaluation, creating methodologies to oversee it and moderation of chance utilizing administrative assets. The methodologies incorporate exchanging to another party, dodging the

chance, decreasing the negative impacts of the risk, and tolerating a few or all of the results of a specific risk (Basel I, 1999).

The credit risk administration is to maximize a bank's risk-adjusted rate of return by keeping up credit risk introduction inside satisfactory parameters. Banks should too consider the connections between credit hazard and other dangers. The viable management of credit chance could be a basic component of a comprehensive approach to chance administration and basic to the long-term victory of any managing an account organization (Basel Committee documents, 2000).

For most banks, credits are the biggest and most self-evident source of credit risk; be that as it may, other sources of credit chance exist all through the exercises of a bank, counting within the banking book and within the exchanging book, and both on and off the adjust sheet. Banks are progressively confronting credit risk. Consequently, even though there are few studies undertaken by Daniel Teka (2019), Girma Mekasha (2011), Wondimagegnehu (2012), and Atakelt Hailu in Ethiopia which are related with this title.

However, these studies were not comprehensive enough as result of different gaps. Since exposure to credit risk continues to be the leading source of problems in banks world-wide, rapid expansion of banking institutions in Ethiopia, complains of customers on bank services and inconsistent results in different studies among researchers are the gaps that lead the researcher to conduct a separate study on the impact of credit risk management system on bank customer satisfaction.

1.2 Statement of the Problem

Credit risk is the most obvious risk of a bank by the nature of its activity. In terms of potential losses, it is typically the largest type of risk. It can occur when the counterpart is unable to pay or cannot pay on time. There can be many reasons for a default. In most cases, the obligor is in a financially stressed situation and may be facing a bankruptcy procedure. Technical defaults result from a misunderstanding because of the flaw in the information system or technology. A credit loss also occurs when the bank invests in debt of a high-quality borrower of which the risk profile has deteriorated. In the case of liquidation, the price at which the debt is sold on the market is lower than the price at which the debt was bought by the bank, which makes a net loss.

In the case of a default, the loss for the bank is not necessarily high. A good risk management tries to avoid large exposures on high-risk counterparts (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens 2009)

The advance portfolio is regularly the biggest resource and the transcendent source of income for the bank. As such, it is additionally one of the major sources of hazard for the bank's security and soundness. Lending activities are important for banks to require their formal judgment related to the credit value of a borrower. In any case, the judgments don't continuously demonstrate to be precise and the credit value of a borrower may decay due to different components. Subsequently, banks confront credit dangers. Credit risk is the chance that commitments will not be reimbursed on time and completely as anticipated or contracted, coming about in a budgetary misfortune or non-Performing credits. The borrower may fall flat to meet the terms of the underlining credit agreement (Seifu, 2013).

According to Suleiman (2005), commercial banks presently known as stores cash banks (DMBs) have helped within the advancement of the economy through the arrangement of distinctive administrations to their clients such as making advance stores, giving of advance and propels, giving remote trades administrations, administration of customers' speculation and exhorting on protections things. So also, Peitzman (1989) kept up that stores cash banks provide out credit by channeling administrations from the excess units to the shortfalls investing unit of the economy.

In spite of the fact that banks have been playing their parts of encouraging financial advancement through cash creation and loaning administrations, the expanding competition within the managing an account industry has made client fulfillment the key issue to address (Amoah-Mensah 2010). It has been contended that the competitive control and survival of banks is connected to client's fulfillment (Titko and Bind 2010) subsequently making banks move center to client fulfillment (khattack and Rehman 2010).

The greater level of non-performing loan rate in banks records, poor loan processing, inadequate or absence of loan collateral are linked with poor and ineffective credit risks management that negatively affects customer's satisfaction Iwedi and Onuegbu (2014). According to Amoah-Mensah (2010) banks play a significant role in the economic development of any country. In spite of, before now the main aim of any bank was to increase the customers' base, but in recent

times to retaining the customers through increased satisfaction. Banks to retain their customers and increase the customers' loyalty, granting credit facilities are being considered a pivotal measure. The competitive power and survival of banks lies in the degree of its customers' satisfaction (Tike and Lace, 2010).

These prevailing problems along with the knowledge gap in the literature and the absence of previous study conducted on the impact of credit risk management on bank customer satisfaction, the researcher initiate to investigate the impact of credit risk management system on bank customer satisfaction.

The identified gap is filled by the researcher using primary data analysis by identifying credit risk important factor variables which have the significant impact on customer satisfaction using Binary logistic regression analysis. The model is important to identify the relationship between macroeconomic variables in a single equation. Therefore, the study is conducted in order to examine the impacts of credit risk management on customer satisfaction.

1.3 Research Objectives

1.3.1 General Objective

The general objective of the study is to examine the impact of credit risk management system on commercial bank's customer satisfaction.

1.3.2 Specific Objective

The study has the following specific objectives;

1. To examine the impact credit risk management principles on customer satisfaction
2. To scrutinize the credit risk management practices on customer satisfaction.
3. To investigate the determinants of credit risk impact on bank customer satisfaction.
4. To assess the impact of banks credit risk management techniques and tools on bank customer satisfaction.
5. To examine the effect of liquidity risk on customer satisfaction.

1.4. Research Hypothesis

H1: There is a positive relationship between credit risk management principles and bank customer satisfaction.

H2: The credit risk management practices of banks positively affect customer's satisfaction.

H3: There is a positive relationship between determinants of credit risk impact and customer satisfaction in Ethiopian private commercial banks.

H4: There is a positive relationship between the banks credit risk management techniques and bank customer's satisfaction.

H5: There is a negative relationship between liquidity risk and bank customer's satisfaction.

1.5 Significance of the Study

After the research has complete, the findings of this study will provide positive contribution for different parties those seek information on issues related to the study under investigation. Among these the following are the possible significance of the study;

- It will enhance the credit risk management system of commercial banks.
- It will use as an input or documentation for credit risk management procedure formulation for commercial banks.
- It shows the major tools or techniques used by financial institution to manage their credit risk.
- To pinpoint key point for policy makers towards credit risk management implementation in the Banking industry.
- The study will contribute to the existing body of knowledge regarding the credit risk management and can serve as an insight or input for further research on the area.

1.6 Scope of the Study

The overall scope of this study is focus on the extent to which the research objectives are concerned. The study is restricting in the impact of credit risk management system on bank

customer satisfaction in case of Awash International Bank (AIB), Bank of Abyssinia (BOA) and Bunna International Bank (BIB).

The research is emphasis on risk and compliance department and credit department mainly related to risk of those banks on their city branches and headquarter level located in Addis Ababa.

1.7 Limitation of the Study

In the process of conducting this research, the researcher encountered some problems which have an adverse effect on the output, quality, and efficiency of this research. The limitation of this study is that, although customer satisfaction has different types of factors this study is limited to determinants like credit risk management principles, risk management practices, determinants of credit risk, credit risk management techniques and tools and liquidity risk. Therefore, other factors that affect customer satisfaction are not addressed by this study because they did not pass econometric tests and in the study they are denoted by error terms. In addition, the study also limited to corporate customers and selected three banks because of massive customers and commercial banks due to time and budget constraint.

1.8 Organization of the Research Report

The paper is organized into five chapters; the first chapter is an introduction for the study which introduces the overall study. This part consists of introduction or back ground of the study, problem statement, objectives, significance, research question, research hypothesis and scope of the study. The second chapter is focuses on review of literatures in which previous studies were consulted. In this chapter general concepts and definitions, basic issues and empirical evidences on the impact of credit risk management system on bank customer satisfaction are discussed in detail. The major areas and results of previous studies also presented. The third chapter consist, research design and Methodology, emphasizes on the design of the study and the methodologies used. In this chapter; source of data, data collection, sample size & sampling techniques and selection of study organizations are discussed. The fourth chapter is devoted to data presentation, analysis and interpretation in which the primary data which is collected are analyzed and organized in meaningful manner so as to meet the objectives of the study. The fifth and last

chapter concerned with summary, conclusion and recommendations. Here the findings of the study are summarized, conclusions clearly presented and recommendations are provided for the findings in the study.

Chapter Two

2. Related Literature Review

2.1 Introduction

Literature review is ready in two parts, i.e. the theoretical review and the empirical review portion. Within the theoretical review portion the analyst will review theories on credit risk administration in keeping money. It examines issues on credit risk administration from diverse points of view and giving a theoretical establishment to consider. The major benchmarks utilized for credit risk appraisal of this think about are distinctive Books as well as different diary related to credit risk administration and a run of reports discharged by the Risk Administration Bunch of the Basel Committee on Managing account supervision with respect to standards which guarantee sound administration of credit dangers in banks.

The experimental writing portion examines past considers that were conducted on the range of credit hazard administration framework. In this part the factors that were included, the strategy that's utilized to embrace ponder and comes about of the think about beneath survey will be examined.

2.1 Theoretical Review

2.1.1 Definition of Risk in Banking

Risk in banking alludes to presentation to eccentrics of the result that contains a likelihood of variety within the craved or anticipated returns (Gallati, 2003; Fayyaz, 2006; Rahman, 2012). Risk could be a potential misfortune which will happen due to a few opposing occasions such as financial downturns, antagonistic changes in monetary and exchange arrangement, unfavorable developments in intrigued rates or remote trade rates, or declining value costs (Ghosh 2012). Therefore, risk is undesirable effect on return due to different unmistakable sources of instabilities Bessis (2002) and Schroeck (2002).

Risk-taking is characteristic component of keeping money and, without doubt; benefits are in portion compensate for effective hazard taking. In opposite, over the top, ineffectively overseen risk can lead to troubles and disappointments of banks. In this manner, dangers are justified

when they are justifiable, quantifiable, and controllable inside a bank's capacity to resist unfavorable comes about (NBE bank risk management guidelines, 2010).

On the other hand, statistically the term risk is depicted as the likelihood of an antagonistic result, Standard Deviation (SD) or Change around the anticipated return, or as defect likelihood; whereby the next hazard esteem is detailed in terms of greater deviation and higher dissimilarity within the likelihood of event (Cade, 1997; Van Horne, 2002).

Therefore, from the above point of view generally the term risk in banking can be characterize as a probability of any occasion or risk which has the potential to aggravate the center profit capacity of a bank, or to extend the instability of profit and cash streams caused by outside or inner exposures.

2.1.2 Types of Risk in Banks

The most vital sorts of risk in banks are credit risk, interest rate risk, market risk, liquidity risk, solvency hazard, operational risk, remote trade risk, nation risk, settlement risk, and performance risk (Bessis 2002).

2.1.2.1 Credit risk

Credit is ordinarily denoted to borrowing and loaning of cash. Fundamentally, it alludes to a credit that's allowed to a borrower or a money related instrument that includes pre-determined settled installments and is made over a set time period. Agreeing to Anita (2008), credit chance is characterized as the potential misfortune of important resources caused by probable disintegration within the financial soundness of counterparty or its failure to meet legally binding commitments.

According to the Basel (2000), credit risk is characterized as "the potential that a bank borrower or counterparty will fall flat to meet its commitments in understanding with concurred term". This hazard is one of the foremost head and the foremost vital sorts of keeping money hazard (Colquitt, 2007). Credit chance touch (advert) to the probability in which a legally binding counterparty does not meet its commitments due to decline in reimburse capacity or unwillingness to comply with the contract (Colquitt, 2007). Hence, credit chance rises when a bank is fizzled to recuperate the loaning cash from a borrower, counterparty and compulsory.

In addition, Greuning and Bratanovic (2009) characterize credit risk as the chance that indebted person or guarantor of a money related instrument whether person, a company, or a nation will not reimburse vital and other speculation related cash streams concurring to the terms indicated in a credit assertion. Inalienable to keeping money, credit hazard implies that installments may be postponed or not made at all, which can cause cash stream issues and influence a bank 's liquidity.

2.1.2.2 Operational Risk

According to State Bank of Pakistan (2003), operational risk includes the coordinate or circuitous misfortunes endured by a keeping money institution due to lacking or failed inner forms, frameworks and individuals or from outside natural factors. Similarly, the operational risk generally rises from the interior exercises of bank not at all like a few other shapes of dangers like advertise and credit chance. Be that as it may, a number of sources of operational hazard come from the outside environment such as competitive activities, common calamities (such as surges, seismic tremors) and fear monger assaults which are to a great extent erratic and wild by banks (Fayyaz, 2006; Crouhy, Galai and Mark, 2006).

2.1.2.3 Liquidity Risk

Saunders and Cornett (2008) define liquidity risk as the unexpected raise in withdrawals by depositors that may pursue banks to liquidate. In addition, Liquidity risk can be defined as the risk of being unable to liquidate a position timely at a reasonable price (Muranaga and Ohsawa, 2002).

Correspondingly, liquidity risk is the potential loss caused by a bank's inability to meet its obligations. The liquidity risk arises due to several reasons including a rapid increase of the bank's depositors and an inadequate market depth or market disruption (Bessie 2002). Liquidity risk is the risk that a bank will not be able to efficiently meet both expected and unexpected current and future cash flows and collateral needs without affecting daily operations or the financial condition of the firm.

2.1.2.4 Market Risk

This risk is connected to alter in resources esteem due to efficient variables. The showcase risk in banks develops from diverse sources counting securities portfolios, disobedient and values or in

shape of intrigued rate or remote trade hazard (Schroeck, 2002; State Bank of Pakistan, 2003; Crouhy, Galai and Check, 2006; Ishfaq, 2006). For occasion, this hazard is related with the ominous alter within the advertise esteem of the exchanging portfolio, caused by showcase developments, over the exchanges liquidation period (Bessis, 2002; Saunders and Cornett, 2008).

2.1.3 Sources of Credit Risk

According to the Basel Committee on Banking Supervision (2001) the foremost common cause that leads the banks to bankruptcy is credit hazard. The most sources of credit risk are restricted organization capacity, unseemly credit arrangements, unstable intrigued rates, destitute management, unseemly laws, moo capital and liquidity levels, enormous permitting of banks, destitute credit guaranteeing, careless loaning, destitute credit evaluation, laxity in credit evaluation, destitute loaning hones, government obstructions, insufficient supervision by the central bank, and data asymmetry (Stiglitz and Weiss, 1981; Chen et al., 2006; Ayayi, 2012).

Tekle (2011), in his study examined the reasons behind the issue of advance recoup may shift for diverse monetary educate because it depends upon the particular nature of advances and summarized a few of the causes advance defaults as he recovered from dishonorable choice of a business visionary, insufficient examination of extend reasonability, insufficiency of collateral security/equitable contract against credit, improbable terms and plan of reimbursement, need of follow-up degree and default due to characteristic calamities.

2.1.4 Credit Risk Management

Gestel and Baesens (2009) characterized credit chance administration as a handle that includes the distinguishing proof of potential dangers, the suitable treatment and the genuine execution of hazard models. Greuning and Iqbal(2007) characterized credit hazard administration as organized approach to overseeing instabilities through hazard appraisal, creating procedures to oversee it, and relief of hazard utilizing administrative assets. The techniques incorporate exchanging to another party, dodging the hazard, decreasing the negative impacts of the chance, and tolerating a few or all of the results of a specific risk.

The method of risk administration may be a two-step handle. The primary is to recognize the source of the chance, which is to distinguish the driving factors causing the hazard. The moment is to plan strategies to measure the chance utilizing scientific models, in arrange to get it the

hazard profile of the instrument. Once a common system of hazard recognizable proof and administration is created, the strategies can be Credit risk management is a variety of activities conducted by banks to identify measure, control and minimize threats associated with credit risk (IBFC Agosto Study Pack, 2012).

According to Kolapo et al. (2012), credit risk administration techniques utilized by banks to dodge or minimize the unfavorable impact of credit risk. Schmit and Roth (1990) depict risk administration as the achievement of distinctive exercises defined to diminish the unfavorable impact of instability with respect to potential misfortunes. Green (1992) clarifies risk administration in keeping money teach as a blend of approaches, methods and people, embraced to control the potential misfortunes. Moreover, Nnanna cited in Abdullahi (2013) submitted that credit chance administration could be a structure approach to overseeing vulnerabilities through hazard evaluation, creating methodologies to oversee it, and moderation of chance utilizing administrative assets.

Besides, Ibrahim (2010) opined that credit hazard administration can subsequently be put as the central to keeping money trade this is often since banks lock in in intermediations of stores and subsequently they carry hazard. The core objectives of credit risk management as outlined by Basel committee are the following:

- i. Maximize risk-adjusted rate of return by keeping up credit chance presentation inside worthy parameters.
- ii. Balancing client relationship administration and credit administration destinations. Accomplishing ideal benefit requires harmony between structures requested by credit hazard administration and lenience that tends to happen in client relationship management.
- iii. Seeks to adjust deals objectives (client development, hit rates, client maintenance) with that of ideal benefit and money related objectives (benefit era, terrible obligation arrangement and return on assets).
- iv. Fortifying the credit examination strategies of banks. This is often accomplished by creating precise and dependable credit data on bank borrowers from a central database. With such information accessible, banks will be in distant better; a much better; a higher; a stronger; an improved" an improved position to evaluate the

reimbursement capabilities of clients looking for unused or extra credit offices from them. This will diminish or kill the allowing of credits to clients who had no capacity to reimburse and/or as of now had non-performing and in some cases deserted advances in other banks.

- v. Capacity and spread of credit: The credit bureau (CB) captures all credits of N1 million (principal and intrigued) and over from banks' month to month returns on all their clients. Banks are too required to supply all other significant information on the offices.

2.1.5 Risk Management and Basel Accords

In arrange to make strides the adaptability of banks against the money related emergency within the worldwide keeping money framework, the Committee on Keeping money Controls and Supervisory Hones afterward named as Basel Committee on Keeping money Supervision (BCBS) was defined by the central bank governors of the G10 nations (Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, the Joined together Kingdom and the Joined together States) after the breakdown of Bankhaus Herstatt in West Germany and Franklin National Bank within the Joined together States in 1974 (Basel Committee, 2013).

The Basel Committee has built up globally acknowledged set of standards to manage with the different dangers, formally known as the Basel Agrees (Basel I, Basel II and Basel III). At first, the Basel Concurs was primarily outlined for the G10 Nations. In any case, these rules have been arranged in such a way that they could be pertinent within the created countries as well as the creating nations (Al-Tamimi, 2008). Agreeing to these standards, banks are required to preserve endorsed level of capital against the operational and other budgetary dangers.

According to Basel Committee on Managing an account Supervision, (2009), credit hazard administration could be a set of sound hones such as building up fitting credit hazard environment, working beneath a sound credit-granting prepare, keeping up fitting credit hazard estimation and checking handle and guaranteeing satisfactory controls over credit risk.

2.1.6 Methods of Credit Risk Management

The credit chance administration strategies or procedures are measures utilized by banks to maintain a strategic distance from or minimize the antagonistic impact of credit chance. A sound credit chance administration system is significant for banks so as to improve productivity ensure

survival. Concurring to Lindergrén (1987), the key standards in credit hazard administration handle are sequenced as takes after; foundation of a clear structure, allotment of duty, forms have to be prioritized and restrained, obligations ought to be clearly communicated and responsibility relegated.

Strategies utilized by banks to relieve credit chance incorporate: Shirking, broadening, compensating equalizations and checking trade exchanges, screening, long-term client connections, advance commitments, collateral prerequisites, credit apportioning, specialization in loaning and credit subordinates, credit securitization, compliance to Basel Agreement, Selection of a Sound Inside Loaning approach and Credit Bureau (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008, Credit Chance Administration).

A. Avoidance

The self-evident approach to lightening credit hazard is to maintain a strategic distance from it. This may be accomplished by as it were giving advances to or buying the bonds of government. Government securities are known to be risk-free securities (Panayioti Koulafetis, 2017, Modern Credit Risk Management Theory and Practice)

B. Diversification

Enhancement is the primary guideline of chance administration as connected in portfolio hypothesis. Banks don't loan a major extent of their reserves to person borrowers. Or maybe, they limit the sum advanced to a rate of their capital. They are moreover expanded over financial divisions and nations. In most nations, the bank controller or administrator stipulates a strict imperative in terms of advance concentration (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008)

C. Compensating balances and monitoring of business transactions

Regularly, advances are allowed with the commitment by the borrower of keeping up adjust with the bank, this increments within the probability that the advance will be reimbursed. The commitment may moreover take the shape of a current account with an undertaking that all transactions by the borrower within the commerce for which the advance was allowed are conducted through the current account. This empowers the bank to screen the trade of the

borrower (Dr. Ir. TONY VAN GESTEL, 2009, Credit Risk Management Oxford University Press).

d. Screening

In arrange to overcome the unfavorable determination issue; the self-evident apparatus to relieve credit chance is the cautious screening of potential borrowers. This includes data gathering. Much individual data is accumulated in from of people who wish to borrow, and there are grades of data gathering. Within the case of little whole for the buy of say a washing machine, the data required is distant less than that required for the contract credit. Within the last mentioned case, the data required would incorporate: Work history and record, compensation and compensation history, other bank accounts, other obligation, credit card installment history, articulation of liabilities and resources. (Panayiota Koulafetis, 2017, Modern Credit Risk Management Theory and Practice).

In expansion, to this data, the loan specialist may require references, which in numerous cases are taken after up on, and a few moneylenders (especially the banks) put in put neighborhood sheets of chiefs comprised of people well known and associated in their significant regions in arrange to supply data on the borrower of the range. The data accumulated empowers the loan specialist to measurably calculate a score for each borrower. It ought to be clear that in numerous cases the score is border line in terms of credit chance and the bank employments a measure of caution, instead of send the client off to a competitor. Data gathering within the case of credits to companies is comparative but that much emphasis is placed on past monetary explanations and a trade arrange for the long, run counting of course the reason for which the advance is required . (Panayiota Koulafetis, 2017, Modern Credit Risk Management Theory and Practice).

e. Monitoring

Observing is additionally a data gathering work out, but after the occasion of allowing the advance, and this joins with the issue of ethical risk. A client may be reasonably screened and eventually chosen as a client, but may lock in in exercises completely distinctive than the actual loan reason once the cash is in his or her hands. To diminish the chance of this coming approximately, numerous moneylenders incorporate prohibitive contracts (arrangements) in their

credit contracts, and screen adherence or not to these on a standard premise (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008, Credit Risk Management).

f. Long-term relationship building

Loan specialists energize long-term relationship building between advance officers of the institution and their clients. This hone diminishes the taken a toll of data gathering since records as of now exist and observing methods are as of now input. The borrower too has a motivation for empowering a long-term relationship with the moneylender, and typically since a great credit record not as it were decreases the hazard for the bank but too the borrowing rate for the borrower (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008, Credit Risk Management).

g. Loan commitments

Usually another instrument of credit hazard administration and is related to the previous. Numerous loaning mediators give borrowers with a commitment of a credit up to a particular sum that can be utilized at any time. This gives the borrower with adaptability in credit utilization, and empowers a long-term relationship with the loan specialist, which in turn decreases the data gathering taken a toll. The credit intrigued rate reflects the long-term relationship. (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008, Credit Risk Management).

H. Collateral requirement

Collateral implies the ceding of resources (ordinarily property, gear financed, the indebted individuals book, store, approach at fitting marked down values) as security for the credit. Typically, a legitimate commitment to surrender the fundamental resources to the bank within the occasion of default, which the moneylender is able to offer in arrange to recuperate the sum of the credit. It is known as the misplaced common strategy of “insurance” against credit chance, and the issues of unfavorable choice and ethical risk. A questionable borrower will be hesitant to borrow in case collateral is required since she or he has much to lose within the occasion of default (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008, Credit Chance Administration).

i. Credit rationing

Credit proportioning takes on two shapes: by and large dismissal and giving less credit than looked for. Through and through dismissal alludes to advances where the borrower is willing to pay the next intrigued rate to compensate the moneylender for the hazard, but the bank rejects the application since the higher intrigued rate will contribute toward the disappointment of the venture. Giving credit less than looked for is frequently a strategy of the moneylender to prevent moral risk. A credit that's littler than looked for will tend to guarantee that the funds are proficiently apportioned, though advance of the required measure may bring around ethical danger (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008, Credit Risk Management).

j. Specialization in lending

A few banks hone specialization in loaning; this may allude to geographic region of industry. Within the previous case the banks depend on individual connections to guarantee incite and full reimbursement of intrigued and central. Certain other loan specialists specialize in making advances to particular businesses. For illustration, a bank may specialize in renting contracts with the therapeutic society. The line of thinking here is that the data costs are diminished since the loaning institution is concerned with gathering data almost as it were one industry (and its related businesses). The counter-argument is that a downturn within the specific industry may put the bank at chance. This brings one back to the primary device, broadening, which could be a major hazard moderation calculate (Dr. Ir. Tony Van Gestel and Prof. Dr. Bart Baesens, 2008, Credit Chance Administration).

k. Credit derivatives

This gives banks with an approach which does not require them to alter their credit portfolio. Credit subordinates give banks with a modern source of expense wage and offer banks the opportunity to decrease their administrative capital (Shao and Yeager, 2007). The commonest sort of credit subordinate is credit default swap whereby a dealer concurs to move the credit chance of advance to the assurance buyer.

Straight to the point Partnoy and David Skeel in Monetary Times of 17 July, 2006 said that credit subsidiaries energize banks to loan more than they would, at lower rates, to less secure

borrowers. Later advancements in credit subsidiaries markets have progressed lenders' capacities to exchange credit hazard to other educate whereas keeping up relationship with borrowers (Bog, 2008). The utilize of credit subsidiaries comprises of the buy and deal of credit hazard over divisions and nations. Credit subordinates are bi-lateral monetary contracts with payoffs joined to a credit related occasion such as a default, liquidation or credit minimize.

Credit derivatives are financial instruments that transfer credit risk related to an underlying entity or a portfolio of underlying entities from one party to another without transferring the underlying(s). Credit derivatives are structured or embedded in note, option or swap form. Typically, they have a tenor shorter than their underlying instrument maturity. Credit derivatives are financial instruments whose payoff is contingent on the credit quality or/and performance of an entity. Credit derivatives can be funded or unfunded. Unfunded credit derivatives are bilateral, privately negotiated, credit derivative contracts. With unfunded credit derivatives the seller makes no upfront payment to cover its potential future liabilities. In an unfunded credit derivative, the seller makes a payment only if the conditions to settlement are met. As a result, the buyer takes on the counterparty credit risk of the seller of being able to pay any physical settlement or cash settlement amount. A credit default swap is an example of an unfunded credit derivative, as the credit protection seller does not make any upfront payment to the protection buyer (Panayiota Koulafetis, 2017, Modern Credit Risk Management Theory and Practice).

L. Credit Securitization:

It is the exchange of credit chance to a figure or protections firm and this soothes the bank from checking the borrower and fear of the perilous impact of classified resources. This approach reveals insurrection the loaning movement of banks. The developing ubiquity of credit chance securitization can be put down to the truth that banks ordinarily utilize the instrument of securitization to differentiate concentrated credit hazard exposures and to investigate an elective source of financing by realizing administrative arbitrage and liquidity changes when offering securitization exchanges (Michalak and Uhde,2009). A cash collateralized advance commitment may be a frame of securitization in which resources (bank credits) are evacuated from a bank's adjust sheet and bundled (tranche) into attractive securities that are sold on to financial specialists through extraordinary reason vehicle (SPV) (Swamp, 2008).

M. Compliance to Basel Accord

The Basel agrees are universal standards and directions directing the operations of banks to guarantee soundness and steadiness. The Agreement was presented in 1988 in Switzerland. Compliance with the Agreement implies being able to recognize, create, track and report on risk-related information in coordinate's way, with full auditability and straightforwardness and makes the opportunity to move forward the hazard administration forms of banks. The Modern Basel Capital Agreement places expressly the onus on banks to embrace sound inside credit hazard administration hones to evaluate their capital ampleness necessities (Chen and Pan, 2012).

N. Adoption of a Sound Internal Lending Policy

The loaning approach guides banks in disbursing advances to clients. Strict adherence to the loaning arrangement is by distant the cheapest and most effortless strategy of credit hazard administration. The loaning approach ought to be in line with the by and large bank technique and the variables considered in planning a loaning approach ought to incorporate; the existing credit arrangement, industry standards, common financial conditions of the nation and the winning financial climate (Kithinji,2010).

2.1.7 Determinants of credit Risk Management System

The taking after are the determinants of Credit chance administration; bank estimate (BAS), Capital ampleness (CAD), Advance development (LG), return on Value (ROE), administrative effectiveness (ME), and possessions structure (Possess), credit to store proportion (LTD), Net household item (GDP) and swelling rate (INF) The variable of the think about are clearly portrayed underneath.

A. Bank Size (BAS)

It is measured by common logarithm of add up to resource (Thiagarajan et al., 2011); (Misman, 2012). It has been found as one of bank particular determinant of credit chance (Thiagarajan et al., 2011), (Zribi & Boujelbene,2011), (Das & Ghosh, 2007), (Misman ,2012), stated that expansive banks have capacity to bargain with credit chance by defining sound and viable Credit chance administration frameworks and adjusts negative affect of bank measure on credit chance. On the other hand, Das & Ghosh (2007), Zribi & Boujelbene(2011), Abdullah et al (2012) and

Misman(2012)), Awojobi & Amel (2011) found out bank measure and credit chance emphatically connected. In this case, there's enormous mobilization of support through department extension and paying alluring store rate. Hence, bank can expand credit, which uncovered the bank to credit chance. Bank estimate is included as an illustrative variable to deliver clarification for estimate related economies of scale or diseconomies of scale in Ethiopia's managing an account segment.

B. Capital Adequacy (CAD)

Capital ampleness, measured by adds up to Value to add up to resource proportion. It assesses of bank`s monetary quality and appears the capacity to withstand/tolerate with operational and irregular misfortunes. Makri et al. (2014), Hyun and Zhang., 2012), (Shingjerji, 2013) and (Swamy, 2012) Expressed that an increment in loaning rate diminish peoples' /commerce entity's' capacity to borrow, which diminishes the sum of credit and after that decrease NPLs. Adjacent to, measurably noteworthy and negative dissolvability proportion impact on NPLs, Besides, the higher the Dissolvability ratio, the lower the motivations to require less secure credit arrangements, and thus, diminish the sum of issue advances. Not at all like the ponder (Boudriga et al., 2009), and (Djiogap and Ngoms, 2012) is emphatically critical defending that profoundly capitalized banks are not beneath administrative weights to diminish their credit chance and take more dangers.

C. Loan Growth (LG)

Advance Development, measured by alter in Current Year Credits Short Past Year Credits to past year credit. It is clear that the likelihood of non-repayment of the advance will increment with the level of credit development. The impact of Credit development on nonperforming advance was broadly detailed in a few literary works. The finding of Das & Ghosh, (2007), Jimenez & Saurina (2006), Thiagarajan et al (2011), and Ahmad & Bashir (2013) discovered the positive affect of credit development on credit hazard.

In any case, (Pasha and Khemraj, 2009), (Jellouli et al, 2009), (Vogiazas and Nikolaidou, 2011), (Al-Smadi and Ahmad, 2009) and (Altunbas et al, 2007) who found noteworthy and negative relationship between development on advance and credit chance and the increase of any unit of credit isn't without bearing the chance. This see is backed by (Atakelt & Veni, 2015) Credit

development had critical negative affect on issue credits due to the solid and bound together credit chance culture of building the capacity of understanding the reimbursement issue.

D. Loan to Deposit (LTD)

Proportion Credit to store (LTD) proportion looks at bank liquidity by measuring the stores that a bank has utilized into credits from the collected stores. It illustrates the affiliation between advances and stores. Ranjan and Chandra (2003) analyze the determinants of NPLs of commercial banks' in Indian in 2002 and defending that generally more client inviting bank is most likely confront lower defaults as the borrower will have the desire of turning to bank for the monetary necessities. Be that as it may, it is in opposite to (Makri et al., 2014) who expressed that capacity of banks to resist store withdrawals and readiness of banks to meet advance request by diminishing their cash resources.

E. Managerial Efficiency (ME)

Administrative proficiency is measured by the proportion of working costs to working pay. Berger and DeYoung (1997), Podpiera and Weill (2008) creators found that current destitute execution, destitute credit assessment and observing abilities and off-base collateral valuation lead to the development in future NPLs. Be that as it may, negate to the discoveries of (Thiagarajan et al., 2011), (Ganic, 2012), (Rashid et al., 2014), (Das and Ghosh, 2007) who conclude that, Productive banks have sound and viable Credit methodology, arrangement and strategy with a solid credit culture that empower to attempt Credit chance administration work legitimately and diminish working cost whereas making strides working pay.

F. Return on Equity (ROE)

Speaks to the relationship of profit to value or Return on Value is of prime significance since administration must give a return for the cash invested by shareholders. It may be a measure of how well administration has utilized the capital contributed by shareholders conjointly tells us the percent returned for each dollar (or other financial unit) contributed by shareholders. In this way, ROE measures how much the bank is gaining on their value speculation. Numerous analysts were found diverse comes about between NPLs and bank productivity measured in terms of ROE. For instance: - Shingjerji (2013) and Ahmed and Bashir (2013) and Makri et al.

(2014) as note as ROE is imperative for execution examination uncommonly for showing long-term supportability and survival of the bank. In this way, ROE is one of the crucial measures of bank execution (productivity pointers) and negative sign will be anticipated on this proportion.

F. Ownership structure

Net Benefit Add up to Value Possession structure is utilized to see the impact of both state claimed and private commercial banks as determinant variables on credit hazard. Hu et al (2006) analyzed the relationship between nonperforming credits and proprietorship structure will not influence financial productivity as long as the exchange taken a toll is zero. Be that as it may, the genuine world is defective and the exchange taken a toll can be adequately tall. In flawed world with tall exchange costs, possession does matter to financial effectiveness and making distinctive possession sorts is related with distinctive exchange costs (Barth et al., 2004).

G. Gross Domestic Product (GDP)

GDP is the whole advertise esteem of all last products and administrations created inside a nation in one year. The genuine GDP is the entirety of the esteem included within the economy amid a given period or the entirety of livelihoods within the economy amid a given period balanced for the impact of expanding costs (Daferighe & Aje, 2009).

H. Inflation Rate (INF)

Theoretically, swelling ought to decrease the genuine esteem of obligation and thus make loaning less demanding. In any case, tall swelling may pass through to ostensible intrigued rates, diminishing borrowers' capacity to reimburse their obligation. Through its fascination with the charge framework, it can increment assess burden by misleadingly expanding pay and benefits. Other than, cost solidness is considered as prerequisites for ones' nations' financial development (Skarica, 2013).

Tall expansion rates are for the most part related with a tall credit intrigued rate. In this way, tall intrigued rate increments fetched of borrowing, which leads to an increment within the commitment of borrowers resulting in an increment within the credit hazard (Ravi, 2013).

2.1.8 Credit assessment of banks

The bank's division in charge of evaluating, analyzing and making suggestions on the fate of most credit applications is the credit office. Each credit application must be completely inspected some time recently the credit ask is allowed or denied and sometime recently advertising any credit. The strategies taken after by banks in credit assessment may contrast. These stages are the collection of data, credit examination, budgetary articulation examination, and extend assessment and flawlessness and the choice stages.

a. Collection of credit information

When a customer comes for a loan, he will not receive the loan on the same day. He must first fill a loan application form (LAF), giving information of him and other information. Usually, he will be asked by the bank to go and come back later. During this time, the banker will collect the information that will be used to investigate or carry out credit rating to evaluate the credit worthiness of the customer. This information can be from primary and secondary sources. For convenience, they may be classified into five categories:

- I. Those that come from the credit applicant (loan application form).
- II. Information from the bank's own records (financial statements).
- III. Information from other sources (credit agencies, credit bureau).
- IV. The customer's payment history with the firm.
- V. Credit reports on the customer's payment history with other firms.

This information ensures that the banks laid down policies and regulatory constraints are followed. The information collected will help to determine the applicant's character, condition, capacity, capital and collateral securities (Panayiota Koulafetis. 2017. Modern Credit Risk Management Theory and Practice).

b. Credit evaluation

Credit assessment can moreover be alluded to as credit examination procedures. These strategies are very imperative in keeping money since they ordinarily include a natty gritty ponder of the basic angles of advance application known as the 5 C's of credit, to be specific capital, condition, capacity, character, and collateral.

4. Capital

It may be a degree of a customer's resources. On the off chance that a credit customer's profit control comes up short, resources can be sold to repay the credit. It is hence an awfully significant viewpoint of assessing credit as well. In case budgetary articulations are drawn appropriately, the examiner ponders it with consideration to either over capitalization or under capitalization. In case of a drop within the customer's profit control, there's a threat that overdraft will increment or other credit offices will stay unpaid (Panayiota Koulafetis. (2017). Modern Credit Risk Management Theory and Practice).

4. Condition

Conditions of the person credit client (how well the commerce is doing at a given time) and of the economy in common have an imperative impact on financial soundness. In this manner, the advance officer and credit investigator must be mindful of later patterns within the borrower's industry and how changing financial conditions might influence the advance. A credit can see exceptionally great on paper, but one must get it that its esteem may alter since of a decrease in deals or wage in retreat or since of tall intrigued rates occasioned by swelling. In this sense, in arrange to survey the industry and financial changes, most banks keep up records of data such as daily papers clipping, magazines articles, and investigate reports on the businesses spoken to by their major borrowing clients.

e. Collateral

This is often anything of esteem that a borrower guarantees to provide the loan specialist in case the borrower is incapable to reimburse the credit. An advance for which collateral is held is said to be a secured credit which no security is held is called an unsecured advance. This is often an resource vowed by the client for security in case of default. In evaluating the collateral perspective of advance ask, the loan officer must inquire: Does the borrower have satisfactory net worth or claim sufficient quality resources to supply satisfactory back for the advance? The credit officer is especially delicate to such highlights as the age, condition and degree of specialization of the borrower's resources. Innovation plays an imperative part here as well. In the event that the borrower's resources are mechanically out of date, they will have restricted esteem as collateral since of the trouble of finding a buyer for those resources in case the

borrower's salary wavers (Panayiota Koulafetis, 2017, Modern Credit Risk Management Theory and Practice).

f. Character

The loan officer must be persuaded the client incorporates a well-defined reason for asking credit and a serious purposeful to reimburse. In case the borrower isn't beyond any doubt why the client is asking advance, this reason must be clarified to the lender's fulfillment. The credit officer must decide on the off chance that the reason is reliable with the loaning institution's credit arrangement. Indeed, with a good reason, the credit master must decide that the borrower includes a capable state of mind toward utilizing borrowed stores, is honest in replying the questions, and will make each exertion to reimburse what is owed. We must underline that duty, genuine reason and genuine purposeful to reimburse all monies owed make up what the advance officer calls character. On the off chance that the bank feels the borrower is undependable in promising to utilize borrowed reserves as arranged and in reimbursing as concurred, the advance ought to not be made, it may certainly end up issue credit.

g. Capacity

Here, the bank must be beyond any doubt the client has the specialist to ask a credit and the lawful official to sign a credit understanding. This characteristic is known as the client capacity to borrow cash. For case, in most ranges, a minor (beneath age 18 or 21) cannot lawfully be held capable for a credit assertion; banks will have incredible trouble collecting on such a credit. Essentially, the bank must be beyond any doubt that the agent from an enterprise inquiring for credit has appropriate specialist from the company's board of chiefs to arrange an advance and sign a credit understanding official the company.

Ordinarily, this may be decided by getting a duplicate of the determination passed by the corporate customer's board of executives, authorizing the company to borrow cash. In case of a trade association assentation, the credit officer must inquire to see the firm's association understanding to decide which people are authorized to borrow for the firm. It is vital to note that advance assentation marked by unauthorized people may demonstrate to be uncollectible and result in significant misfortunes for the loaning institution.

h. Financial statement analysis

Usually, the quantitative angle of credit appraisal the monetary articulations more often than not required are the Pay Articulation, the Adjust Sheet, Cash stream articulations, cash budgets, etc. investors are exhorted to inquire for cash streams articulation since they appear the genuine liquidity position of a trade. It is ideal to inquire for explanations arranged by free bookkeeping firms. When these articulations have been displayed by the client, the investor will carry out an execution evaluation by utilizing drift investigation (comparing the figures over a number of a long time) and proportion investigation. On the off chance that we are to utilize proportions, we must calculate proportions like productivity, liquidity, productivity and stock markets (for recorded companies).

iv. Decision stage

The choice on whether to deliver the credit lies within the hands of the credit officer, supervisors and now and then the Board of Executives.

2.2 Empirical Literature Review

Even though as to the knowledge of the researcher, there are few studies undertaken by Daniel Teka (2019), Girma Mekasha(2011),Wondimagegnehu (2012),and Atakelt Hailu in Ethiopia which are related with this title. However, these studies were not comprehensive enough as result of different gaps.

Ponder made by Daniel (2010) evaluation of credit hazard administration hones which centering on administration of non-performing credit on private commercial banks in Ethiopia. The consider utilized the blended sort of investigate. The result appeared that credit arrangement and supervision by the administration has less commitment to the NPLs and most of the NPLs are caused by components after the advance discharged.

The study made by Girma (2011) focuses on Credit Risk Management and Its Impact on Performance on Ethiopian commercial Banks. The study found that a significant relationship

between bank performance and credit risk management. Besides, better credit risk management results in better bank performance. However, the study examined only the extent at which credit risk affected by profitability of banks in Ethiopia.

The study of Wondimagegnehu (2012) found that few bank particular variables that cause NPLs by utilizing blended inquire about strategy through OLS estimation show by the assistance of SPSS program. The ponder found that destitute credit appraisal, fizzled credit checking, immature credit culture, indulgent credit terms and conditions, forceful loaning, compromised astuteness, powerless organization capacity, out of line competition among banks, willful default by borrowers and their information restriction, support redirection for unintended reason, over/under financing by banks credit to the causes of advance default. Be that as it may, the creators didn't address on bank client fulfillment.

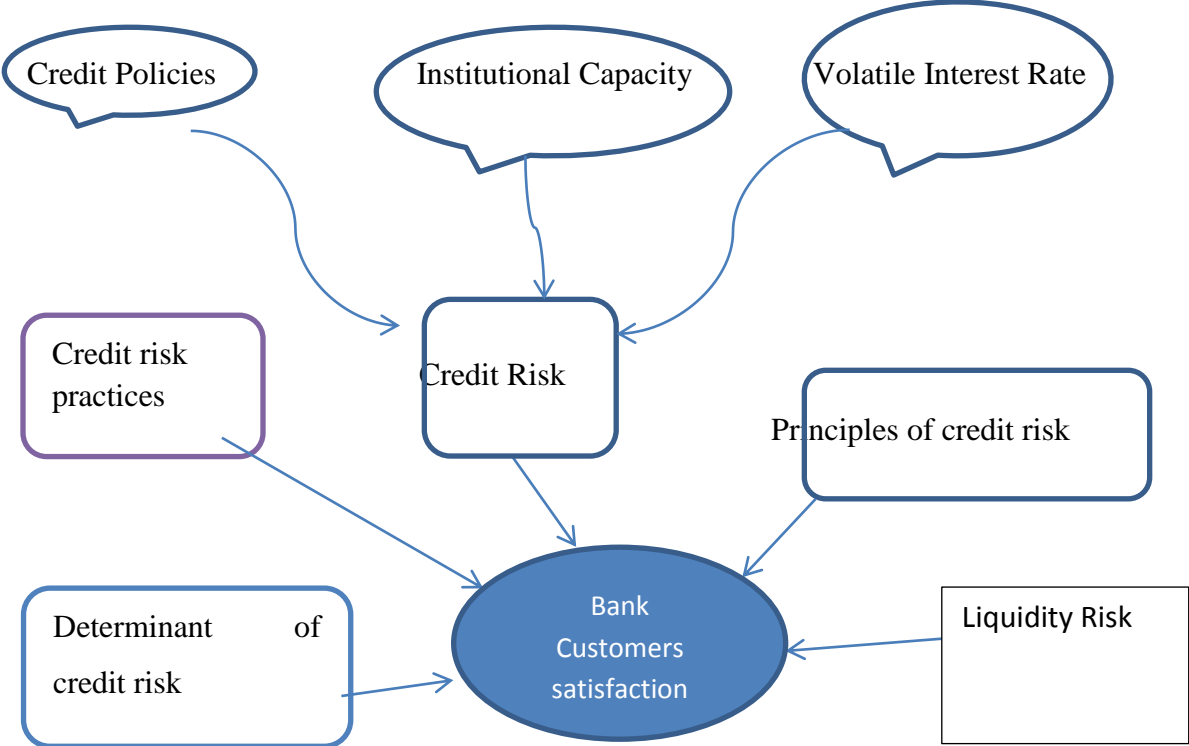
The study made by Atakelt & Veni (2015) examination on Ethiopian private commercial banks watched that bank particular variables by employing a board information set over the period of 2006- 2012. And found that the credit development and return on value had measurably noteworthy negative affect on Credit hazard pointer of the expansive Ethiopian private commercial banks. Moreover, Creators centered as it were private commercial banks inside six a long time reviewed budgetary articulation. Indeed, if those thinks about are a really later one, the holes are there that are not touched by those analysts and require assist examination by others.

These existing circumstances (issues) at the side the information crevice within the writing and the nonappearance of past ponder conducted on the effect of credit chance administration on bank client fulfillment start the analyst to examine the effect of credit chance administration framework on bank client fulfillment.

2.3 Conceptual Framework

From the theoretical and empirical literature reviews, the following conceptual framework of the study is developed by the researcher.

Figure 2.1 the Conceptual framework or model of the study



Chapter Three

3. Research Design and Methodology

3.1 Introduction

This chapter discusses the approaches and techniques that the researcher was used when collecting data, analyzing the data and presenting the findings. These include the research design, target population, sampling and sampling techniques, data collection methods, data analyzing and model specification.

3.2 Research Design

Research design is a detailed plan specifying the methods and procedures for collecting and analyzing the required data (Bryman& Bell, 2007). It provides a bridge between the study objectives and all the activities (data collection and analysis) required to achieve these objectives (Hussey and Hussey, 1997).

Research design refers to the way the study was designed, that is the method used to carry out the research (Mugenda and Mugenda, 2003). The investigate plan is the arrangement and structure of examination so conceived so as to get the proper result for the questions.

In arrange to attain the common objective of ponder, the analyst will utilize informative inquire about plan in arrange to investigate a modern finding that has not been considered prior. The investigation is primarily concerned with causes or why variables approximately a few wonder.

This design is further supported by quantitative research approach to simplify about the impact of credit risk management system on banks customer satisfaction.

3.3 Sources of Data

The study considers is from essential sources. The Essential information is collected utilizing organized and unstructured surveys. Essential information alludes to sort of information in which the analyst collects information specifically from the field. It is additionally eluded to as to begin with hand data obtained from the field; it is as a rule collected through surveys, perception and experiment. The essential strategies of information collection that were utilized in this think about were questionnaires:

Questionnaires

According to Leedy (1984), questionnaires are appropriate instruments widely utilized by researchers to obtain facts about current conditions, practices and also to make inquiries concerning attitudes and opinions. Furthermore, they were used due to their ability to collect as much information as possible within a short time which helped the researcher to save time. Thus, this study used close-ended questions that were very important to administer the respondents.

Questionnaires were used to address the specific objectives specifically, the credit risk management principles, the credit risk management practices, determinants of credit risk impact on bank customer satisfaction, banks credit risk management techniques and tools on bank customer satisfaction and liquidity risk on customer satisfaction.

3.4 Population, Sample Size and Sampling Technique

Sekaran (2003), Population alludes to the whole bunch of individuals, occasions, or things of intrigued that the analyst wishes to examine. The study population/participants are all private commercial banks customers in Ethiopia those exist in the fiscal year 2021/2022.

Testing measure can be characterized as the number of units in a populace to be considered. Thus the sample sizes of the study are mainly the borrowers of the three private commercial banks: the first one is Awash International Bank (AIB), the second one is Bank of Abyssinia (BOA) and the last one is Buna International Bank (BIB). A justification for the choice of AIB and BOA; They have large number of customers, high level of significance to the Ethiopian Economy and BIB has highest number of shareholders from private commercial banks.

Simple random inspecting methods will be connected to choose those tests since the populace considers is homogeneous and it gives each part of the populace has break even with chance of being chosen.

3.4.1 Population

The population of the study comprised of AIB=217, BOA= 225 and BIB= 138 total 580 corporate borrowers of the three private banks.

3.4.2 Sample size

Due to large number of borrowers, the entire population (census) was not considered; instead sample will be taken for the study. However, the data excludes staff borrowers and small or individual borrowers. Out of the total population of 580 samples will selected from the population and the sample size will determined using the following procedures.

$$No = \frac{N}{1 + N(e)^2} \text{ and corrected by } n = 1 + \frac{No}{\frac{-No - 1}{N}}$$

Where No = the sample size,

N= is the total population,

n= adjusted sample size

e =Sample error at (5%)

In the event that the populace is little at that point the test estimate can be diminished somewhat by the alteration called the limited populace rectification which can be decrease the fundamental test measure for little populace (Israel, 2009) based on the above formula the researcher will takes the sample size from the total 580 population.

The sample from the total employee's $n = \frac{580}{1+580(0.05)^2} = 237$

Hence, the entire sample size within ponder is 237.

3.4.3 Sampling Techniques

The researcher used simple random sampling techniques. Simple random sampling was used to select respondents from the population whom questionnaires were administered since it was not possible to study the whole population. Straightforward arbitrary testing was considered satisfactory since chances of determination were break even with at any arrange within the testing prepare.

3.5 Data Analysis

The inferential statistics utilized to create deduction based on the discoveries with respect to the impact and relationship between credit chance administration framework and bank clients fulfillment based on the factors demonstrated over. It usually done by setting up a relapse demonstrates. So to analyze and decipher the information the analyst will apply recurrence tables, rates and SPSS.

Data to be collected from interview discussion will be organized as per the questions designed and incorporated in the data discussion and interpretation part of the study.

The Statistical Package for Social Science (SPSS) version 23 utilized to analyze the information gotten from essential sources. Particularly, clear measurements tables, rates, bars and calculated relapse utilized for investigation of this ponder. In arrange to evaluate the unwavering quality and consistency of the instrument the Cronbach Alpha (α) examination was conducted. At that point to decide the relationship among the factors and to test the investigate theory calculated relapse were utilized.

Model Specification

Binary logistic regression is one of multivariable statistical analysis which used to calculate the probability of two possible outcomes (Bagley S. C. et al. 2001). The two conceivable results can be gotten either there's nearness of the impacts of chance administration on client fulfillment. Then the dependent variable(Y) is coded as 1 (credit risk management has impact on customer satisfaction) and 0 (Credit risk management has no impact on customer satisfaction).

For Binary logistic regression Gujarati (2003) was formulated and gave the general expression for logistic model: Then the equation was:

$$Li = \text{Ln} \frac{\pi(X)}{1-\pi(X)} = \beta_0 + \beta_i X_i + u_i, \quad i=1, 2 \dots 7$$

Where, Li - logs of odds ratio/logit

Ln- natural logarithm

β_i - coefficient for each independent variable

B_0 - intercept of the regression

X_i – denotes independent variable and
 u_i - error terms

From this general logit model, the following were derived and applied for this specific study

$$L_i = \beta_0 + \beta_1 \text{CRMP} + \beta_2 \text{RMP} + \beta_3 \text{DCR} + \beta_4 \text{BCRMT} + \beta_5 \text{LR} + u_i$$

Where, L_i - log of the odd ratio of total customer satisfaction in commercial banks

CRMP - Credit risk management principles

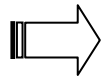
RMP – Risk management practices

DCR - Determinants of Credit Risk

BCRMT - Banks Credit Risk Management Techniques

LR - Liquidity risk

$$Y = \text{Ln} \frac{\pi(X)}{1-\pi(X)}$$



1= presence of customer satisfaction, let assume $P(Y=1) = \pi(X)$
0=absence of customer satisfaction... $P(Y=0) = 1 - \pi(X)$

Dependent variable is the degree of credit risk management at commercial banks which was measured by Binary logistic regression to identify factors that determine customer's satisfaction. Logistic regression is accommodating when one needs to anticipate categorical factors from a set of indicator factors (Pallant2005). Then here logistic regression was conducted to examine whether the 5 variables, credit risk management principles, credit risk management practices, determinants of credit risk, banks credit risk management techniques and liquidity risk significantly predict the customer satisfaction of commercial banks.

The autonomous factors were measured employing a five point Likert scales. It was ranging from strongly agree (5), agree (4), unsure (neutral) (3), disagree (2) to strongly disagree (1) as responses from respondents. The details are discussed below.

Credit risk management principles (CRMP):- this variable was assessed by employing a survey and measured by 5 Likert scale thing. It defining the patterns of the bank monitor borrows business transaction based on the loan granting, the bank checks the borrower's history some time recently allowing credits, the bank identify with due care and diligent the payment capacity of the newly credit applicant customer before loan approval, the bank has well-structured documentation tracking system for credit and collateral files and the collateral estimation of the bank considers the fair market value of the asset to examine the impact credit risk management principles on customer satisfaction.

Credit Risk management practices (RMP): - it was to determine by the perception of customers on the practice of credit risk management. This was weather credit risk management adding, the extent of implementation of customer satisfaction and measured through a five Likert scale-data.

Determinants of Credit Risk (DCR):- competent determinant of credit chance on the client fulfillment. It was measured in terms of profitability of the bank affects the loan appraisal of customers, the bank size (branch expansion) has a pivotal role for deposit mobilization, the bank size (branch expansion) can extend the credit of the bank, the bank has efficient credit risk management system, the bank loan provision strategy is committed prudently, the bank has efficient credit analysis and credit monitoring system and it was measured through a five Likert scale- data.

Banks Credit Risk Management Techniques (BCRMT):- this variable were evaluated by using a questionnaire and 5- Likert scale item by asking of whether credit risk management techniques have impact on customer satisfaction.

Liquidity Risk (LR): - it determines the involvement, identification, and loyalty of commercial banks to achieve goals and values through participation and commitment. This was measured through a five Likert scale-type thing.

Assumptions of Logistic Regression

Logistic regression does not require numerous of the guideline presumptions of direct relapse models that are based on conventional slightest squares method—particularly with respect to linearity of relationship between the subordinate and free factors, ordinariness of the mistake

dispersion, and homoscedasticity of the blunders (Tabachnick et al. 2001). Logistic regression requires large sample size, but if small sample used for the study it desirable to use bootstrap methods as suggested by different scholars (Anwar &Ng 2014). In addition, logistic regression can handle nonlinear connections between the subordinate and autonomous factors, since it applies a non-linear log change of the straight relapse.

Evaluation of a Logistic Regression Model and Decision

According to (Park 2013), there are several parts involved in the evaluation of the logistic regression model. Among strategies, the taking after is utilized within the ponder.

Goodness of fit	Individual parameter
Omnibus tests of model	Wald
Hosemer-Lemshow test	P-value (significance) and Odd

Research Hypotheses

In line with the wide reason explanation, the takings after speculations were defined for examination. Hypotheses of the study stands on the theory are related to the impact of credit risk management on customer satisfaction. Subsequently, based on the objective, this considers tried the taking after speculations:-

H₀: Credit risk management has impact on customer satisfaction;

H_A: Credit risk administration has no impact on consumer satisfaction;

Chapter Four

Results and Discussion

4.1 Introduction

This chapter discusses the analysis of data collected from various sources related with credit risk management system on bank customer's satisfaction. The data was gathered exclusively from the questionnaire as the research instrument and the questionnaire was designed in line with the objectives of the study.

The data collected from respondents related with credit risk management system has been discussed; the researcher focuses on data analysis and presentation in relation to a study on credit risk management system on banks. The data presentation and analysis of the data that collected from primary source was analyzed using themes from research questions and objectives. The crude collected data from representatives, authorities and altered, organized and analyzed utilizing both subjective and quantitative strategies. The quantitative data was converted into relevant information using analysis of ratios, frequencies and percentage; and was presented in tables and figures mainly to support the qualitative descriptions this is the way of data analysis.

As assigned within the strategy portion of the paper, measurable bundle for social science (SPSS) application has been connected to analyze the information.

4.2 Characteristics of Respondents

Structured questionnaires (attached in Appendix 1) were sent to 237 respondents in samples of the borrowers of the three private commercial banks: AIB, BOA and BIB. From the total distribution of 233 the respondents (98%) have filled and returned the questionnaires properly. The features of the respondents are accessible below as follows in terms of sex, literacy level, and work experience.

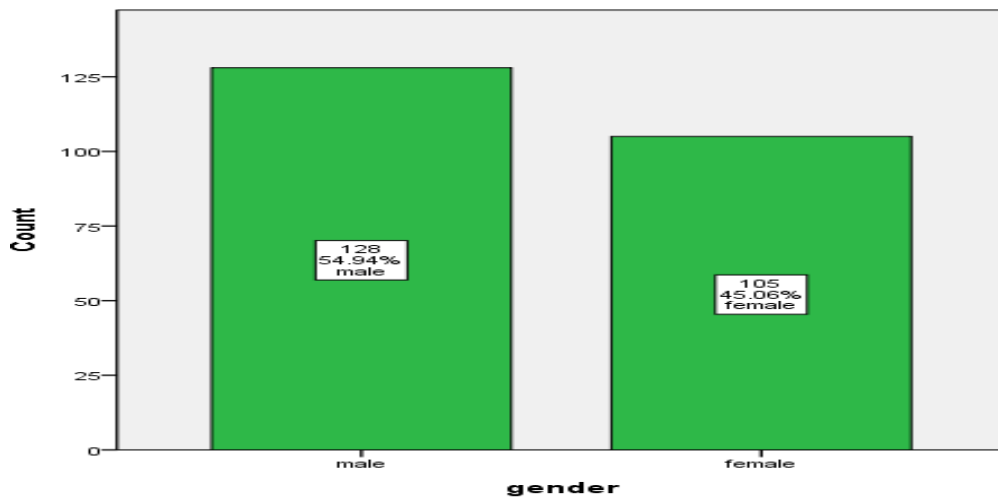
4.3. Demographic Characteristics of the Respondents

Demographic features of the defendants those Socio-demographics are nothing more than features of a populace.

4.3.1 Gender Composition of the Respondents

As it can be seen in the figure below there were a large number of male respondents which accounts for 128 (54.94%) and 105 (45.06%) of female borrowers of the three private commercial banks: AIB, BOA and BIB. This empowers the analyst that there's no predisposition within the overview instrument related to the sex of the respondents.

Figure 4.1: Gender compositions of respondents

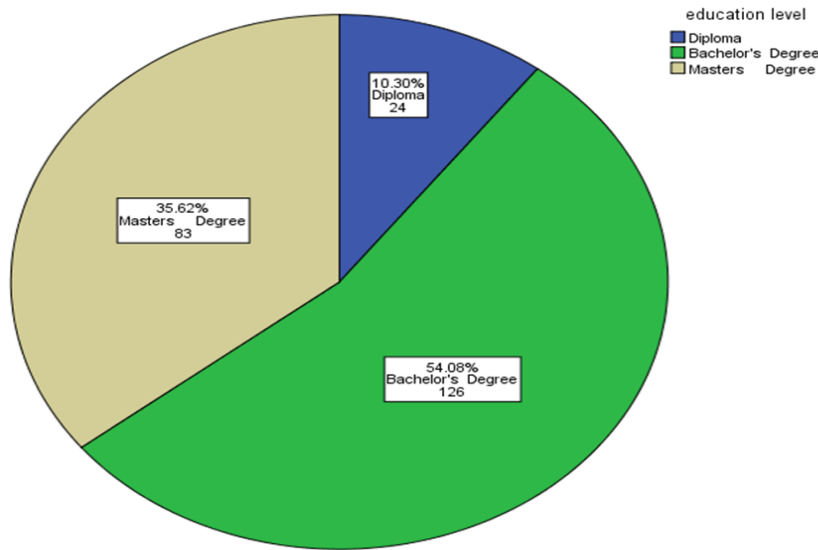


Source: Filed Survey (2022)

4.3.2 Educational Level of Respondents

Related to their education level of respondents, it is shown in the figure 4.2 below, the majority of the 126 (54.08%) of them are first degree holders, while 30 (10.24%) of them are holders of diploma and others. In addition, respondents 83 (35.62%) are master's degree and over. Subsequently, since the instruction level relates to the calling and, able to expect that the data given by the respondents was substantial and dependable.

Figure 4.2: Educational Level



Source: Filed Survey (2022)

4.3.3 Type of Business of Respondents

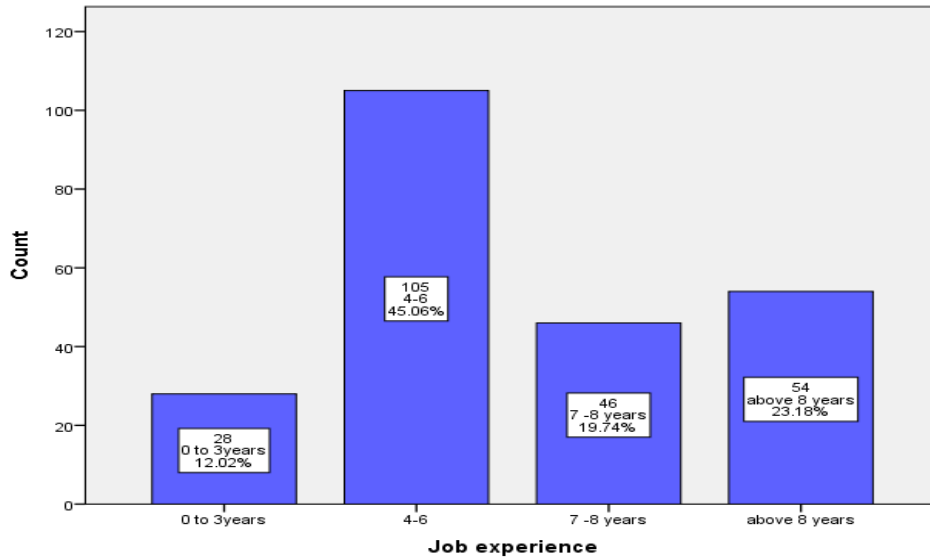
Related to their business type running of respondents, the majority of the 167(71.67%) of them are manufactures, while 30(12.87%) of them are operating merchandise. Moreover, respondents 36(15.45%) are under service sector. Therefore, the type of business relates to the business operation, we can assume that the information provided by the respondents was valid and reliable.

4.3.3 Business Experience

Concerning the commerce encounter of the defendant, the result appears that, 28 of them have work involvement on the commercial less than 3 a long time, 105 of the respondents have work involvement on commercial in between 4-6 a long time, though, 48 of the respondents have work involvement on commercial in between 7-8years. At long last, the other 54 of the respondent has work encounter over 8 a long time. Hence, as clearly demonstrated within the figure, most of the respondents, 105 have between 4-6 of work experiences, which may have a positive impact in the total activity of corporate business because of the respondent have a lot of work experience and they know very well rather than less than 3 years' work experience relatively and also the

others, therefore easily understand the questioners and fill the appropriate answers credit risk management system on bank customer’s satisfaction.

Figure 4.3 Work Experience



Source: Filed Survey (2022)

4.4 Binary Logistic Regression Analysis

4.4.1 Reliability Analysis

The reliability examination is basic in reflecting the generally consistency of the survey especially the Likert-type scale. To carry out the unwavering quality examination, Cronach’s Alpha (α) is the foremost common degree of unwavering quality scale and a esteem more noteworthy than 0.700 is exceptionally worthy (Field 2009; Cohen and Sayag 2010) and agreeing to Cranach’s (1951), a unwavering quality esteem (α) greater than 0.600 is additionally satisfactory.

Table 4.1 Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.747	.757	7

(Sources: survey data, 2022 SPSS output)

From table 4.1 above, the value for Cronach's Alpha (α) was 0.747 for all variables. When these calculated unwavering quality values are more noteworthy than 0.700, and compared with the least esteem of alpha 0.600 pushed by Cronach's (1951), at that point the reactions created for all of the factors utilized in this inquire about were dependable sufficient for information examination.

4.4.2 Assumptions of Binary Logistic Regression

Binary logistic relapses are important to overwhelm numerous of the prohibitive presumptions of straight relapses. For illustration, linearity, typicality and break even with fluctuations are not accepted, nor is it accepted that the blunder term fluctuation is regularly disseminated.

The major assumptions are:

1. The outcome of the analysis must be discrete, if not explained as, the dependent variable should be defined as dichotomous in nature (e.g., presence vs. absent);
2. there ought to be no exceptions within the information which can be evaluated by changing over the ceaseless indicators to standardized or z scores and evacuate values underneath -329 or more noteworthy than 329.
3. There ought to be no tall connect relationships (multi-co linearity) among the indicators. This will be evaluated by a correlation framework between the indicators. Tabachnick and Fidell (2012) propose the relationship factors between independent factors are less than 0.90 the presumption is met.

Moreover, there ought to be a direct relationship between the chances proportion, or EXP (B), and each free variable. Linearity with an ordinal or interim free variable and the chances proportion can be checked by making a modern variable that isolates the existing autonomous variable into categories of rise to interims and running the same relapse on these recently categorized adaptations as categorical factors. Linearity is illustrated in the event that the beta coefficients increment or diminish in straight steps (Garson, 2009). A bigger test is prescribed in fitting with the greatest probability strategy; utilizing discrete factors requires that there are sufficient reactions in each category.

4.4.3 The Main Determinants of credit risk management

To point out the essential determinants of credit hazard administration on commercial banks the information were collected by inquiring corporate clients utilizing likert scale and respondent appeared their level of understanding. The distinguished factors imply the degree of the

relationship between credit chance administration and client fulfillment. The respondent were shown their level of assertion with the components on the taking after estimations scale such as 1 denotes for strongly disagree, 2 designate Disagree, 3 entitle Neutral, 4 entitle Agree, and 5 designate strongly agree. Responses of workers organized analyzed within the taking after way.

1. Credit risk management principles

As characterized prior, credit risk administration as a prepare that includes the recognizable proof of potential dangers, the suitable treatment and the real usage of chance models. Compelling credit chance administration decreases the chance of client default additionally the competitive advantage of a bank is subordinate on its capability to handle credit valuably.

The taking after table appears the reaction of respondents in connection to the Credit Hazard administration standards and practices.

Table 4.2 the credit risk management principles

A	Credit Risk management principles and practices	N	Min	Max	Mean	Std. Deviation
1	The bank monitor borrows business transaction based on the loan granting.	233	1	5	3.93	1.155
2	The Bank examine the borrower's previous experience before granting loans.	233	1	5	3.95	1.130
3	The bank identify with due care and diligent the payment capacity of the newly credit applicant customer before loan approval.	233	1	5	3.93	1.081
4	The Bank has well-structured documentation tracking system for credit and collateral files.	233	1	5	3.81	1.225
5	The collateral estimate of the bank studies the fair market value of the advantage.	233	1	5	3.66	1.336
6	The bank has official operation evaluation method and approval process for the granting of credits.	233	1	5	3.74	1.204
7	The bank mainly selects, evaluates, process and approves the loan on time.	233	1	5	3.45	1.408
8	The bank critically identify and assessing the capital of the loan applicants.	233	1	5	3.19	1.543
9	The bank officials assessing the borrower's industry condition on time.	233	1	5	3.68	1.149

10	The bank loan officers critically assessing the collateral by considering the age and condition of the borrowers asset.	233	1	5	3.75	1.177
	Valid N (listwise)	233				

SPSS Results, (2012)

The above table shows the computed mean value of the response based on Likert scale indicated the average agreement of respondents on existence and practice of each element of the credit risk management principles. The credit risk management principles over all mean can be approximated to 3.65 which indicate agreement in practices of credit management principles. The highest mean 3.95 indicates that majority of respondents agreed that The Bank checks the borrower's history before granting loans. The result of the survey in line with the bank critically assessing the capital of the loan applicants and important for credit risk management principles is indicated by mean value of 3.19, the result is additionally the slightest cruel within the credit chance administration standards.

In addition, it has also the highest standard deviation (1.543) which means the response highly varies. This means majority of the respondents were agree and there is effective participation in credit risk management principles which leads to high practice of credit management practices. Then the finding indicates that credit risk management principles have its own importance in customer satisfaction.

2. Determinants of credit risk

The determinants of credit risk management of commercial banks are managing profitability, bank size, efficient credit risk management system, efficient credit analysis and monitoring system, loan provision, scheme collateral management, and the credit risk management of the bank. Because of the determinants of credit risks are important for managing bank business, identifying the level of them indicates customer's satisfaction. The result of the survey indicated in the table below shows that the degree of agreement ranged from 1 to 5 by respondents in all criteria's of managing the determinants of credit risks.

Table 4.3 Determinants of credit risk

B	Determinants of credit risk	N	Min	Max	Mean	Std. Deviation
11	Profitability of the bank determines and affects the loan evaluation of customers.	233	1	5	3.88	1.241
12	The bank size (branch expansion) has a pivotal role for deposit mobilization.	233	1	5	3.94	1.115
13	The bank size (branch expansion) can extend the credit of the bank.	233	1	5	4.11	1.112
14	The bank has efficient credit risk management system.	233	1	5	3.85	1.158
15	The banks have well defined and efficient credit analysis and credit monitoring system.	233	1	5	4.00	1.048
16	The bank loan provision strategy is committed prudently.	233	1	5	3.88	1.147
17	Using collateralizing loans important for the bank to secure its finances.	233	2	5	3.91	1.066
18	The bank makes continuous follow up on the collateral.	233	1	5	3.84	1.129
19	To award a credit the bank severely applied knows your customer (KYC) policy.	233	1	5	3.93	1.081
20	The credit risk management of the bank staffed by people with relevant experience, knowledge and skill.	233	1	5	3.81	1.225
	Valid N (listwise)	233				

(SPSS Results, 2022)

As we can observe from the above table, the overall mean of the management support response can be estimated to 3.915 which are very interesting and related to agreements. The most noteworthy standard deviation of the reaction which is 1.241 was appeared in address benefit of the bank affects the loan appraisal of customers which indicates that commercial banks profitability has significant role on loan.

The highest mean (4.11) indicated on above table confirm that majority of respondents agree that the bank size (branch expansion) can extend the credit of the bank. This means the commercial bank extension supports customers to access easily. Subsequently, the least mean of 3.81 indicated on the table also indicate that majority agree that the credit risk management was led

by the bank staffed with relevant experience, knowledge and skill. Then the above table also indicates that, the credit risk management effectively determines the customer satisfaction.

3. Credit risk management techniques and tools

The compelling credit hazard administration methods and devices are vital for deciding client fulfillment. The reliable data are vital for future adjustments in allocations of effective risk management systems. The overview examination result on the issue of credit risk administration procedures and devices presents as takes after.

Table 4.4 Credit risk management techniques and tools

C	Credit Risk management techniques and tools	N	Min	Max	Mean	Std. Deviation
21	To avoid credit risk the bank providing loans to government.	233	2	5	4.08	.946
22	The bank lends a major amount of their funds to separate customers.	233	1	5	4.11	.967
23	The bank diversified their lending across economic sectors.	233	2	5	4.12	.916
24	To moderate credit risks the bank carefully showing possible defaulters.	233	1	5	3.94	1.110
25	There is an extended period association between loan majors of the bank and their customers.	233	1	5	3.97	1.114
26	The advancing rule of the bank careful the current praises package, manufacturing norms and overall financial complaint of the republic.	233	2	5	4.10	.995
	Valid N (listwise)	233				

(SPSS Results, 2022)

The above table elaborates the mean value of the response computed based on Likert scale indicated the average agreement of respondents on credit risk management techniques and tools toward customer satisfaction is 4.05 which indicates most of the respondents agreed credit risk management techniques and tools are playing significant role on customer satisfaction.

The highest mean (4.12) indicated on the above table confirm that majority of respondents agree the bank diversified their lending across economic sectors improves customers satisfaction because there is access for seekers of loan. Therefore, the table indicates most of the respondent agreed the credit risk management techniques and tools are major indicators of banks customer satisfaction.

4. Liquidity Risk

Liquidity chance is the potential misfortune caused by a bank's failure to meet its commitments. The liquidity risk spring up because of various grounds including a rapid increase of the bank's depositors and an inadequate market depth or market disruption (Bessie 2002). Liquidity risk is the risk that a bank will not be able to efficiently meet both expected and unexpected current and future cash flows and collateral needs without affecting daily operations or the financial condition of the firm. Liquidity problems arise when there are differences at future dates between assets and liabilities in the balance sheet. Such gaps need to be anticipated to ensure the cost of funding at normal cost and to avoid extreme high funding costs by "last minute actions. The response computed based on Likert scale on the importance of information and communication elaborated.

Table 4.5 Liquidity Risk

D	Liquidity Risk	N	Min	Max	Mean	Std. Deviation
27	The senior management of the bank evaluating the design and implementation of an appropriate liquidity risk management system and standards, liquidity risk reporting and monitoring process.	233	1	5	4.09	1.029
28	The bank contains a sound prepare for recognizing, measuring, checking &Controlling liquidity hazard.	233	1	5	3.82	1.175
29	The banks have a formal possibility subsidizing arrange that clearly sets out the techniques for tending to liquidity shortages in crisis circumstances.	233	1	5	3.95	1.056
30	The bank Concentration of store is depending within the brief term Tenor.	233	2	5	4.03	0.919
31	To degree the liquidity condition the bank employments Credit to store proportion.	233	1	5	3.94	1.133
32	When liquidity problem arise the bank effectively communicate the counterparties and other stakeholders.	233	1	5	3.85	1.065
33	The bank has the potential to recover in a short period of time if faced liquidity problem.	233	1	1	5	3.95
34	Currently the bank meet the NBE requirement regarding liquidity is as expected.	233	1	1	5	1.065

(SPSS Results, 2022)

The above tables shows the minimum response to higher mean to Liquidity Risk is 4.09 most of respondents agree about understand the concept and importance of appropriate liquidity risk management system and standards, liquidity risk reporting and monitoring process. Similarly, the

mean 4.03 also shows that most of respondents agreed the bank concentration of deposit is relying in the short term tenor.

4.4.4 Binary Logistic Regression Analysis and Hypothesis Testing

The statistical analysis is conducted in order to know which determinant has its own significance on the relationship between credit risk management and customer satisfaction. The examination consolidates more than one indicator variable at a time. The twofold calculated relapse is connected which would permit the distinguishing proof of the impact of each of the chosen indicator factors on clients fulfillment for the impacts of other indicator variable. In expansion the theory testing moreover exhausted arrange distinguish it is noteworthy or not.

Table 4.6 Case Processing Summary

Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	233	100.0
	Missing Cases	0	.0
	Total	233	100.0
Unselected Cases		0	.0
Total		233	100.0

(SPSS output, 2022)

The above table shows the cases included the analysis, the missing cases and total. The included variables are 233 and 100 percent. There are no missing data on all of the variables included in the analysis and there are no unselected cases in the analysis.

Table 4.7 Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

(SPSS output, 2022)

The above table also designate the dependent variable encoding reminds us how outcome variable is encoded 0 for absence and 1 for presence of customer satisfaction.

The appraisal of Forecast Control of Base line Model/null demonstrate

In this description, table 4.8 shows that the null model of logistic coefficient (β) associated with the constant variable and the overall statistics prediction power of null models respectively. The table underneath appears the importance of the models with 0.000 which is less than the level of centrality of 0.05. In addition, the overall statistic is correct to extent of 68.2 % from here we can understand that it is better than a cut point 0.5.

Table 4.8 Classification Table ^a

Classification Table ^a					
	Observed		Predicted		
			there is customer satisfaction		Percentage Correct
		No	yes		
Step 0	there is customer satisfaction	No	0	74	.0
		Yes	0	159	100.0
	Overall Percentage				68.2
a. Constant is included in the model.					
b. The cut value is .500					

(SPSS output, 2022)

Classification Table ^b

	B	S.E.	Wald	df	Sig.	Exp (B)
Step 0 Constant	.765	.141	29.540	1	.000	2.149

(SPSS output, 2022)

The table over deciphered the significances of the show. The null model is $(B) = 0.765$ If we exponentiation both sides of this equation we find that our predicted odds $\text{Exp}(B) = 2.149$. At that point the finding of importance over demonstrates this invalid demonstrate ought to be rejected.

The Block 0 output is for a model that includes only the intercept (which SPSS calls the constant). Given the base rates of the two degree of agreement $159/233 = 68.2\%$ indicate the

presence of customer satisfaction, 31.8% there is less satisfaction, and no other information, the best strategy is to predict, for each case, that the subject chosen to know the determinants of client fulfillment.

Table 4.9 Variables in the Equation

			Score	df	Sig.
Step 0	Variables	Credit risk management principles	8.557	1	.003
		Risk management practices	11.429	1	.001
		Determinants of credit risk	6.373	1	.012
		Credit risk management techniques and tools	5.983	1	.015
		Liquidity Risk	17.419	1	.000
	Overall Statistics		34.623	5	.000

(SPSS output, 2022)

Block 1: Method = Enter

Table 4.10 Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	39.804	5	.000
Step 1 Block	39.804	5	.000
Model	39.804	5	.000

(SPSS output, 2022)

From the above table we can understand that the seven predictor variables are considered together, they significantly predict the customer satisfaction at $\chi^2 = 39.804$, $df = 5$, $N = 233$, $p < .05$. In addition, the table labeled variables not in the equation tells us that the residual chi-square statistic is 39.804 which is significant at $p < 0.05$ (it labels this statistic overall statics). The Credit risk management principles, determinants of credit risk, credit risk management techniques and

tools, Liquidity Risk at $p < 0.05$ could potentially make contribution to the model. Omnibus Tests of Show Coefficients gives us a Chi-Square of 39.804 which is critical at 0.05. Then researcher can conclude that adding the predictors to the model has significantly increased our ability to predict the presence of customer satisfaction because of effective risk management.

Goodness of Fit of Model

The Hosmer-Lemeshow test, which isolates subjects into 10 requested bunches of subjects and after that compares the number really in each bunch (watched) to anticipate probabilities of event in subgroups of the show populace. The categories are further divided into two groups based on the actual observed outcome which is presence of customer satisfaction, absence of customer satisfaction. A likelihood (p) esteem is computed (comparing the watched frequencies with those anticipated) beneath the straight demonstrate from the chi-square conveyance with 8 (number of bunches -2) degrees of opportunity to test the fit of the calculated show.

The Small values (with large p-value closer to 1) indicate a good fit to the data, i.e. an immaterial chi-square shows a great fit to the information and, so, great in general show fit. Since the p-value is 0.63 which is inconsequential hence our fitted calculated relapse demonstrates is sweet fit. Based on this, Hosmer-Leme appear test recommending that the show was fit to the information well at insights χ^2 , 15.313 & p value of .063 which is ($p > .05$) which means that the data fit the model adequately.

Step	Chi-square	df	Sig.
	15.313	8	.063

(SPSS output, 2022)

Parameters Estimates and Significance levels

Once the necessary section is described well, the next thing is identifying the coefficient of estimates and significance level of each independents variable in the model. The table presented below includes logistic coefficients β , Wald test, p value, and odd ratio.

Table 4.12 Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1 ^a	Credit risk management principles	.495	.121	16.636	1	.000**	1.641
	Risk management practices	.509	.171	8.918	1	.003**	.601
	Determinants of credit risk	2.500	1.334	13.221	1	.000**	12.186
	Credit risk management techniques and tools	.601	.192	9.783	1	.002**	1.824
	Liquidity Risk	.092	.172	.286	1	.593	.912
a. Variable(s) entered on step 1:							

*P<0.05,**P< 0.01, 95% level of Confidence, N =233

(SPSS output, 2022)

The over table depicts the coefficients of the equation and its noteworthiness. The Wald statistics has a chi - square distribution that provide an index of effect of the predictors on dependent variable in the equation which used to test whether all predictors coefficients are different from zero to show and to enable to understand that at least one predictors has effect on outcomes (Bewick et al. 2005).

The P value also shows the significance of each predictor in this case, if predictors p value is less than 0.05 (P<0.05); then each forecasters have a meaning effect on reliant variable. Likewise, EXP(β) is namely called as odd ratio, it meant that it is the exponential of the logistic coefficients revealed relationship type between the indicators and the results additionally presents the degree or impact level to which raising the comparing degree by one unit impacts the chances ratio. Subsequently, on the off chance that the EXP (β) esteem fair underneath 1 demonstrate the occasion is less likely to happen within the comparison than within the base bunch, and mean that there is no effect of that variable on the outcome at which result of the Wald measurement is

close and got to be to zero and result of p-value is non- critical, in case the EXP (β) esteem is fair over 1 to limitlessness demonstrate the occasion is more likely to happen within the comparator than within the base bunch.

For example, the EXP (β) value associated with the credit risk management principles is 1.641. Then, holding other factor constant, credit risk management principles is raised by one unit, the odds ratio is 1.641 times as large and the credit risk management principles are 1.641 time likely to present and significant at one percent. Likewise, all explanatory variable coefficients of Wald statistics are different from zero (16.63, 8.92, 13.22, 9.78 and 0.29) that confirm the explanatory variable effect on the outcomes.

The p value of predictors liquidity risk .593 is greater than 0.05, all other predictors are less than 0.05(i.e .0.000, 0.003, 0.000 and 0.002) which confirm that the above five explanatory variable (the Credit risk management principles, Risk management practices, Determinants of credit risk Credit risk management techniques and tools) are significance in determining the outcome.

Hypothesis Testing

Utilizing the over table the speculation of this think about is tried as takes after

H_{01} : Risk management principles have no major influence on customer gratification on profitable banks;

As illustrated in the above table: The individual test figures of credit risk management principles indicated by (Wald test = 16.636, $p = 0.000$, Exp (β) = 1.641). The result showed that the credit risk management principles has an effect on customer satisfaction as revealed by Wald test of 0.000 and the p esteem is additionally less than centrality level 0.05. The result clearly indicated that credit risk management principles have a positive significant effect in determining the outcomes. Therefore H_{01} hypothesis is rejected and the study shows that credit risk management principles contribute a lot for the customer satisfaction.

Hence, this result is consistent with Girma (2011) focuses on Credit Risk Management and Its Impact on Performance on Ethiopian commercial Banks. Consider found that a noteworthy relationship between bank execution and credit chance administration. Other than, way better

credit chance administration comes about in way better bank execution. In any case, ponder inspected as it were the degree at which credit chance influenced by benefit of banks in Ethiopia.

H₀₂: Risk management practices have non-significant effect on client satisfaction on commercial banks;

The result of logistic regression showed in the above table the test figures of Risk management practices indicated by Wald test = 8.918, $p = .003$, $\text{Exp}(\beta) = 0.96$. The result showed that risk management practices have effects on customer satisfaction as revealed by Wald test of 8.918 which is different from zero and also significant in determining the outcome with the p value (0.003) is less than significance level 0.05. Then the H₀₂ Risk management practices have non-significant impact on customer satisfaction on commercial banks was reject at 5 percent level significant. Therefore, the result appears that hazard administration hones have its possess centrality on client fulfillment.

H₀₃: Determinants of credit risk have no important influence on client satisfaction on commercial banks;

The determinants of credit hazard have no noteworthy effect on client fulfillment The calculated relapse result not upheld this speculation at 5 percent level of critical and demonstrated by Wald test = 13.22, $p = 0.000$, $\text{Exp}(\beta) = 12.186$. The result showed that Determinants of credit risk have effects on customer satisfaction as revealed by Wald test of 13.22 which is different from zero and also critical in deciding the result with the p esteem (0.000) is less than noteworthiness level 0.05. Then the H₀₃ Determinants of credit risk have no significant impact on customer satisfaction on commercial banks was rejecting at 5 percent level significant. Therefore, the result shows that Determinants of credit risk have its own significance on customer satisfaction.

H₀₄: Credit risk management methods and tools have no important influence on client satisfaction on commercial banks;

The Credit hazard administration strategies and instruments have no noteworthy effect on client fulfillment on commercial bank. The logistic regression result not supported this hypothesis at 5 percent level of significant and indicated by Wald test = 9.78, $p = 0.002$, $\text{Exp}(\beta) = 1.824$. The result showed that Credit risk management techniques and tools have effects on customer

satisfaction as revealed by Wald test of 9.78 which is different from zero and also significant in determining the outcome with the p value (0.002) is less than significance level 0.05. Then the H_{04} the credit risk management techniques and tools have no significant impact on customer satisfaction on commercial banks was rejecting at 5 percent level significant. Therefore, the result shows that credit risk management techniques and tools have its own significance on customer satisfaction.

H_{05} : Liquidity risk has no important influence on client satisfaction on commercial banks;

As shown in table above the Wald test= 0.286, $p = 0.593$ and $\text{Exp}(\beta) = 0.912$. Then the logistic regression result also showed that liquidity risk had no significant effect on customer satisfaction at 5% significant level by accepting H_{05} . Subsequently, we are able acknowledge the invalid speculation at 5 percent level of centrality. The result does not cruel there's no coordinate relationship between liquidity hazard and client fulfillment. But, the result can be happened because of there is no continuous and uniform monitoring and evaluation in liquidity risk.

4.13 Summary of Hypothesis testing under logistic regression

	Hypothesis	Result of the Finding
1	Credit risk management principles	Rejected
2	Risk management practices	Rejected
3	Determinants of credit risk	Rejected
4	Credit risk management techniques and tools	Rejected
5	Liquidity Risk	Accepted

Source: Own Summary

Chapter Five

Summary, Conclusions and Recommendations

5.1 Introduction

This study was conducted in order to examine the existence of customer satisfaction in commercial banks by using the major factors of credit risk management. To accomplish this study the primary data was collected in three prominent commercial banks' (AIB, BOA and BIB) corporate customers and analyzed using binary logistic regression. Subsequently, this chapter bargains with the major discoveries, conclusions and proposals.

5.2 Summary of Major Findings

The analyst dispersed 237 organized likert scale surveys and collected 233 of them. The collected information were analyzed utilizing the Factual Bundle for Social Sciences (SPSS 23) utilizing graphic insights and twofold calculated relapse examination was utilized within investigate to explore the effect of credit chance administration on client fulfillment. There are number of variables affecting customer satisfaction but the major of them are credit risk management principles, risk management practices, determinants of credit chance, credit chance administration methods and instruments and liquidity chance.

The logistic regression output shows all significant predictors were positively contributed for customer satisfaction of commercial bank customers. Especially, credit risk management principles, risk management practices, determinants of credit risk, credit risk management techniques and tools are statically significant determinates of customer satisfaction on practice of risk management. Therefore, the commercial banks should give emphasis to use these determinant variables to make their service delivery effective, efficient and economical throughout their offices. On the other hand liquidity risk has positive influence on client satisfaction but is not statically significant.

Thus, the conclusions and recommendations are drawn from the findings of the study specifically related to the major impact of customer satisfaction on practicing credit risk management.

5.3 Conclusion

The study conducted to scrutinize the impact of credit risk management on commercial bank customer satisfaction with case study of AIB, BIB And BOA. For this reason, it has been seen relevant literatures review and documents, and gathered primary data corporate customers.

Credit risk administration plays critical part for effectively accomplishment of client fulfillment. In addition, the existences of effective credit risk management play its role for improves organizational efficiency and effectiveness, reduce information asymmetry during decision making, and ensures internal steadfastness of monetary recording process linked to client satisfaction.

In this manner, this think about distinguished components that decide the impacts of credit hazard administration on client fulfillment and after that analyzed the organizational measurements in which the commercial banks ought to carry out to improve the client fulfillment. Moreover, the proposed hypotheses test identifies relations of these independent variables with the customer satisfaction by using binary logistic regression. Therefore, depending on the study the subsequent deductions were drowning in this study;

Applying credit hazard administration standards and hones of commercial banks increment the client fulfillment. Subsequently, in commercial banks credit chance administration is essential and the major components are credit hazard administration standards, chance administration hones, determinants of credit chance, credit chance administration strategies and devices and liquidity risk.

Moreover, the calculated relapse examination appears exceptionally solid commitments of these factors for the client fulfillment. Therefore, the overall effect of the credit risk management principles, risk management practices, determinants of credit risk, credit risk management techniques and tools in the commercial banks of customers satisfaction. In expansion, the calculated relapse result too outlines all the autonomous factors have a positive impacts on client fulfillment of commercial banks. Subsequently, the indented autonomous factors are critical to decide the client fulfillment.

5.4 Recommendations

Other than the discoveries and conclusions the analyst gives the taking after suggestions to the commercial banks.

- The discoveries of this investigate demonstrated that credit chance administration standards, chance administration hones, determinants of credit chance, credit chance administration methods and instruments were factually critical and emphatically related with the client fulfillment and credit hazard administration within the commercial banks. Thus, the commercial banks should support more for these main determinants in order to secure the customer satisfaction of commercial banks.
- In logistic regression liquidity risk is positively affect customer satisfaction on commercial banks but it is not statically significant therefore the commercial banks would increase their competency by empowering of them such as providing special working methods.
- Finally, the credit risk management techniques and tools also positively affect the customer satisfaction of the organization and statically significant therefore the commercial banks play pivotal role for applying these techniques.
- The researcher suggests for assist investigate think about by counting other vital factors. In expansion, encourage ponder can be done by counting distinctive clients.

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APPENDEX I
ADDIS ABABA UNIVERSIT

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF ACCOUNTING AND FINANCE

December, 2021

Dear Respondents:

This is a questionnaire designed to collect data on which will be used as an input for a partial fulfillment of. Researchers would like to assure you that the information you provided will be treated as strictly top secret and used only for the purpose of this research only.

The objective of this questionnaire is to examine the impact of credit risk management system on Bank customers' satisfaction to conduct a research for the partial fulfillment of the requirement Master of Science in Accounting and Finance in Addis Ababa University.

The questionnaires are distributed to Awash Bank S.C Bank of Abyssinia S.C and Bunna Bank S.C borrowers. The conclusions of the study will be drawn in aggregate terms, without any reference to specific Borrower or individual respondents. Hence, fill free to answer the real things which are practically happened at the organization.

In addition, Researchers would also like to assure you that the information you provided will be treated as strictly top secret and used only for the purpose of this research only.

Your straight forward response is valuable.

With best regards,

Natnael Walie – Mobile: +251-0912-68-60-74

Email: Natnael5300@gmail.com

Part I. The personal profiles:

General Instruction: Please indicate your choice by putting “√” mark in the bracket.

Table 4.1.General characteristics of the respondents

No	Variables	Category	Tick
1	Sex	Male	
		Female	
		Total	
2	Level of Education	Diploma	
		Degree	
		MA/MSC	
		Other	
		Total	
3	Type of Business	Manufacturing	
		Merchandise	
		Service	
		Total	
4	Business Experience	1-3 years	
		4-6 years	
		7-8 years	
		Above 8 years	
		Total	

Part II. Research related questions

Generously, please read the following statements and indicate the level of agreement by tick (√):
The values of scales are: - 5 = strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree and 1 = strongly disagree

Credit Risk management principles and practices

A	Credit Risk management principles and practices	Scale				
		5	4	3	2	1
1	The bank monitors borrower's business transaction based on the loan granting.					
2	The Bank checks the borrower's history before granting loans.					
3	The bank identify with due care and diligent the payment capacity of the newly credit applicant customer before loan approval.					
4	The Bank has well-structured documentation tracking system for credit and collateral files.					
5	The collateral estimation of the bank considers the fair market value of the asset.					
6	The bank has a formal transaction evaluation and approval process for the granting of credits.					
7	The bank process and approve the loan on time.					
8	The bank critically assessing the capital of the loan applicants.					
9	The loan officer and credit analyst assessing the borrower's industry condition.					
10	The bank loan officers critically assessing the collateral by considering the age and condition of the borrowers asset.					

Determinants of credit risk

B	Determinants of credit risk	Scale				
		5	4	3	2	1
11	Profitability of the bank affects the loan appraisal of customers.					
12	The bank size (branch expansion) has a pivotal role for deposit mobilization.					
13	The bank size (branch expansion) can extend the credit of the bank.					
14	The bank has efficient credit risk management system.					
15	The bank has efficient credit analysis and credit monitoring system.					
16	The bank loan provision strategy is committed prudently.					
17	Collateralizing loans help the bank to secure its loans.					
18	The bank makes continuous follow up on the collateral.					
19	To grant a loan the bank strictly applied know your customer (KYC) policy.					
20	The credit risk management of the bank staffed by people with relevant experience, knowledge and skill.					

Credit Risk management techniques and tools

C	Credit Risk management techniques and tools	Scale				
		5	4	3	2	1
21	To avoid credit risk the bank providing loans to government.					
22	The bank lends a major proportion of their funds to individual					

	customers.					
23	The bank diversified their lending across economic sectors.					
24	To mitigate credit risk the bank prudently screening potential borrowers.					
25	There is a long term relationship between loan officers of the bank and their clients.					
26	The lending policy of the bank considered the existing credit policy, industry norms and general economic condition of the country.					

Liquidity Risk

D	Liquidity Risk	Scale				
		5	4	3	2	1
27	The senior management of the bank evaluating the design and implementation of an appropriate liquidity risk management system and standards, liquidity risk reporting and monitoring process.					
28	The bank has a sound process for identifying, measuring, monitoring &Controlling liquidity risk.					
29	The bank have a formal contingency funding plan (CFP) that clearly sets out the strategies for addressing liquidity shortfalls in emergency situations.					
30	The bank Concentration of deposit is relying in the short term Tenor.					
31	To measure the liquidity condition the bank uses Loan to					

	deposit ratio.					
32	When liquidity problem arise the bank effectively communicate the counterparties and other stakeholders.					
33	The bank has the potential to recover in a short period of time if faced liquidity problem.					
34	Currently the bank meet the NBE requirement regarding liquidity is as expected.					

THANKS!!!