

**Addis Ababa University
College of Business and Economics
Department of Management
Executive MBA Program**

**Agricultural Financing by Banks of Ethiopia the Case of
Commercial Bank of Ethiopia**

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STATEMENT OF DECLARATION

I declare that, this study “Agricultural Financing by Banks of Ethiopia the Case of Commercial Bank of Ethiopia” is my own work. It has not been submitted for any award in this or any other institution. And that all sources of material used for the thesis have been duly acknowledged

Fitawek Abebe

Signature.....

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ABSTRACT

This study is conducted to assess the agricultural financing in the Commercial Bank of Ethiopia, with particular emphasis on pre sanction appraisal and post sanction control of agricultural lending. The study also looked at the trend of non performing agricultural loans during the past ten-year period and the factors that account for agricultural bad loans. It also aimed to identify the different credit risks inherent to agricultural loans and the challenges in agricultural credit risk management of the bank. Both Primary and secondary data were used in the study. Data is collected through questionnaire & interview. It is found that the percentage share of agricultural non-performing loans to total non-performing loans showed a rapid increment from 2011 onwards except in the year 2015. The study also found that, the major risks the bank faced in agricultural lending are production risk, price risk and over indebtedness. Further the study identified that lack of technical experts providing their independent evaluation of the agricultural feasibility study, lack of properly trained consultant to prepare agricultural project feasibility study, less availability of data and up to date information, less capability of credit performers of the bank to evaluate the technical and financial projections of agricultural projects, are some of the major challenges to proper management of agricultural credit risk in the bank. Regarding the causes for agricultural loan default, crop damages, inadequate supervision or follow up, diversion of borrowed funds, willful default, lack of proper investigation before lending and lack of good communication facilities are the major causes for agricultural non-performing loan. To minimize the agricultural credit risk, some measures are recommended to the management. These are; hiring more agricultural expertise, strengthening the bank's MIS and the marketing, research and development departments, providing regular training for all credit performers, revising the sufficiency of loan delivery time to evaluate the bankability of agricultural loan requests.

Key words: *Agricultural financing, Commercial Bank of Ethiopia*

Acronyms

ADLI	Agriculture Development Led Industrialization
GOE	Government of Ethiopia's
CBE	Commercial Bank of Ethiopia
CPP	Credit Process Procedure
DBE	Development Bank of Ethiopia
GDP	Gross Domestic Product
MIS	Management Information Services
NBE	National Bank of Ethiopia
NPL	Non Performing Loans

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Chapter One

Introduction

1.1 Background of the study

Agriculture is the core driver for Ethiopia's growth and long-term food security. The stakes are high: 15 to 17 percent of the Government of Ethiopia's (GOE) expenditures are committed to the sector; agriculture directly supports 85 percent of the population's livelihoods, 43 percent of gross domestic product (GDP), and over 80 percent of export value. (AEMFI, 2010). The current Ethiopian economic development strategy, Agriculture Development Led Industrialization (ADLI), brings the growth of agriculture at its heart to lead the development of the other sectors as well.

Financial services are critical enabler for sustainable economic growth and therefore poverty reduction and food security in Ethiopia in general and in the agricultural sector in particular. Credit is used for investments to increase the productivity of agricultural operations or to diversify the economic activities of rural households. (AEMFI, 2010) Recognizing the importance of agriculture sector in Ethiopia's development, the government of Ethiopia established policies that make credit available to commercial farmers and small farmers. Consequently, Banks in Ethiopia provide credit facilities to give momentum to the agriculture sector of the country. More specifically, Commercial Bank of Ethiopia (CBE) gives a due emphasis for promoting the agriculture sector by considering this sector as a priority area for loan advancement along with the manufacturing and export sector in its strategic goal.

Banks extend credit directly to commercial farmers and intermediaries such as cooperatives or associations sign a loan contract with the banks and channel the borrowed fund to small holder farmers. In the case of rural Ethiopia, regional governments and MFIs act as intermediaries between banks and farmers.

The commitment to prudent lending to agricultural sector is an important and crucial issue in the global banking sector today. Because, Agricultural credit is necessary to enable the farmers and agribusinesses take advantage of new technologies in the form of farm machinery, pay for such items as improved varieties of seeds and livestock,

fertilizers, pesticides, labour and other running costs. It is in the realization of the fact that credit is a critical factor in agricultural development that for most governments in the developing countries, the channeling of bank lending to agriculture has increasingly become an important policy instrument for increasing agricultural output (Egbe, 1990).

The amount of Agricultural Credit disbursed by all the banks at national level has increased from 583 million Birr in the production year of 2003/04 to Birr 14,175.4 million 2011/12 (National bank of Ethiopia report (NBE), 2013). The amount of agricultural credit disbursed by Commercial Bank of Ethiopia has been increased from 1,140.03 million Birr in the production year of 2004/05 to birr 12,812.27 million in 2011/12 and declined to birr 10,474.2 million 2014/15(CBE's MIS report, 2015). The agricultural loan portfolio at national level has been increased from 6.55% in the year 2003/04 to 15.57% 2011/12. The agricultural loan portfolio in commercial bank of Ethiopia has been increased from 10.70% in the year 2005 to 23.22% in the year 2012. This is a very significant increase seen in terms of absolute amount. Nevertheless, the figure showed a decline in the following years and again become 10.8% in 2015. Considering the agricultural loan portfolio ratio to total loan amount disbursed during the years, the importance of the sector as an engine for overall economic development and the strategies set by the government, one can concluded that the agricultural loan portfolio is low if the sector is expected to play its role in the country's development.

Agricultural businesses are characterized by cyclical performance, seasonal production patterns, high capital intensity, leasing of farmland, participation in government programs, and annual payments of real estate loans. Because of these characteristics, a loss in agricultural lending is frequent and large (Arindam B, 2007).

Moreover, several characteristics of the agricultural sector make it less attractive to serve for financial institutions than other sectors; these include low levels of profitability due to limited economies of scale as well as high transactions costs for financial institutions when serving the sector. The latter, in turn, are determined by small transaction sizes, "lumpy" repayments, illiquid and perishable collateral, risky cash flows with high covariance across borrowers, physically dispersed clients living in difficult to reach locations, and diverse sub-businesses with distinct dynamics (AEMFI, 2010).

Thus, the agricultural lending decision making process is becoming much more complex as a result of contractual and ownership arrangement issues, location issues, and management quality and risk management issues.

Credit risk is the most significant risk associated with agricultural lending. A farmer's and agribusiness's productions and ability to service debt can be affected seriously by weather conditions and other natural factors which are not directly under the farmer's control. Moreover, agricultural markets are sensitive to highly variable supply and demand conditions in world markets that may directly or indirectly affect both the borrower's repayment capacity and the value of the bank's collateral. Aside from weather conditions, the most significant variables affecting agricultural credit risk are market prices and government policies. Other important factors include concentrations and limited-purpose collateral (Comptroller's Handbook, 1998). And also, credit risk is generally considered to be higher for loans to agriculture because of the inherently high level of risk the sector itself faces.

Credit risk management is an essential component of a comprehensive and effective method to risk management and crucial to the long-term success of financial institutions (Ejike R.D. et al.,2013). Efforts are being made by management of the banking industry to reduce the risk exposure of banks in lending to borrowers generally, but especially to the agricultural sector which is traditionally prone to credit risks. Studies have shown that the main cause of the banking crisis in the recent times was poor credit risk management practices typified by high levels of insider loans, speculative lending, poor financial analysis, lack of internal and external experts, lack of adequate credit risk control techniques, lack of proper follow up and high concentration of credit in certain sectors among other issues.

Thus, managing credit risk particular to agricultural lending is the corner stone of lending organization in general and Commercial Bank of Ethiopia in particular. Moreover, as agricultural credit is expected to get increased since the country's strategic goal is Agriculture Development Led Industrialization (ADLI), which brings the growth of agriculture at its heart to lead the development of the other sectors as well, it would be

imperative to assess the reasons that contributed for higher proportion of default and propose remedial measures.

1.2 Statement of the Problem

One of the major problems which banks are facing is the non performing loans that arise from inherent credit risks. The reasons behind this may vary for different financial institutions as it depends upon the respective nature of the loans.

Financing agriculture is the challenging and risky activity for lending institution like commercial banks. Undeveloped risk management techniques for the agricultural sector, the rarely available information on borrowers' credit histories, information asymmetries, agricultural borrower's major assets are production and land, high transaction and supervisory costs, Insufficient cash flow planning; farms are not obliged to keep accounts or financial statements; cash flows are hard to assess when clients sell directly to consumers, poor credit culture of the customers, lack of legal education at the farmers' level and lack of technical knowledge at the bank level to evaluate and analyze the creditworthiness of agribusinesses are challenges for agricultural lending(Ajai Nair, 2013). In order to deal with the credit risk, Pandey [2011], described that there are two-pronged approaches for safety of loans these are Pre-Sanction appraisal (To determine the 'bankability' of each loan proposal) and Post-Sanction control (To ensure proper documentation, follow-up and supervision). In the preliminary mini assessment conducted by the writer of this paper, it was understood that currently the proportion of non-performing agricultural loans is somewhat increasing and is becoming a threat for the bank's asset quality and as to the researcher's knowledge, there is no study conducted on challenges of agricultural financing. These gaps lead the researcher to conduct the study.

Accordingly, this study examines the issues through the following research question:

1. What is the trend of non performing agricultural loans over the last ten years?

2. How does the bank's pre sanction appraisal and post sanction control level looks like with regard to agriculture loan?
3. What factors account for non-performing agriculture loans?
4. What are the different credit risks inherent to agricultural loans?
5. What are the challenges in agricultural credit risk management of the bank?
6. How the bank minimizes or reduces agricultural credit risks?

1.3 Objective of the Study

The general objective of this study is to assess agricultural financing of CBE. More specifically, the aim of this study is to:

- ✚ Establish the trend of non-performing agriculture loans of the bank during the past ten years;
- ✚ Assess the pre sanction appraisal and post sanction control level of the agricultural loan practice of the bank;
- ✚ To identify the factors that account for non performing agriculture loans;
- ✚ To identify the different credit risks inherent to agricultural loans;
- ✚ To identify the challenges in agricultural credit risk management of the bank and
- ✚ To identify agricultural credit risk minimization techniques of the bank

1.4 Significance of the Study

The amount of agricultural credit disbursed by commercial of Ethiopia has been increased from 1,140.03 million birr in the production year of 2004/05 to birr 12,812.27 million 2011/12 though declined to birr 10,474.29 million in year 2014/15. This is very significant increase seen in terms of absolute amount. However, considering the total loan amount disbursed during the years, the importance of the sector as an engine for overall economic development and the strategies set by the government, one can concluded that the proportion of the sector is not enough if the sector is expected to play its role in development. The percentage share of agricultural non-performing loans to total non-performing loans shows an increment in commercial bank of Ethiopia.

This study provides an insight as to how to alleviate the challenges in the agricultural financing of CBE and is believed to contribute to its competitive capability in the

industry. The findings from the study will be of immense benefit to management of the CBE, the central bank (National Bank of Ethiopia) and the economy at large. Furthermore, the study will also serve as a basis for future studies in this area.

1.5 Scope and Limitations of the Study

The study will address the challenges of agricultural financing with the particular reference to commercial bank of Ethiopia. But the study will be limited to only the commercial and corporate credit process (i.e. credit performers of the head office CPC of the bank) and will not incorporate the outlying area central processing centers (the eleven districts found outside of Addis Ababa). This is due to the fact that, the head office CPC is the main one where a lot of credit transactions are being handled and because of the time given will not be sufficient to complete the study including the outlying central processing centers. Thus, the conclusions and recommendations of this study may not be exhaustively relevant for outlying area central processing centers.

The study is limited to agricultural loan and therefore, it is difficult to generalize the findings of the study to the other credit products of the bank.

This study is limited to commercial bank of Ethiopia agricultural financing challenges therefore the finding, analysis and recommendations will not represent entire commercial banking industry in Ethiopia.

1.6 Organization of the paper

The paper is organized in five chapters. The first chapter deals with background of the study, statement of the problem, objective of the study, significance, scope and limitation of the study. Chapter two deals with the review of related literature. The methodology of the study is presented in Chapter three. Chapter Four presents analysis and interpretation of the collected data and finally chapter five poses the conclusions and recommendations of the study.

Chapter Two

Literature review

This chapter covers the review of literature on definitions and concepts of credit, types of credit, on overview of agricultural credit and related risk management issues, pre sanction appraisal, post sanction control, performing and non performing loans and the factors accounting for non performing loans.

2.1. Definitions, Types and Functions of Credit

The word credit comes from the Latin word “Credo” meaning “I believe”. It is a lender’s trust in a person’s/ firm’s/ or company’s ability or potential ability and intention to repay. In other words, credit is the ability to command goods or services of another in return for promise to pay such goods or services at some specified time in the future. For a bank, it is the main source of profit and on the other hand, the wrong use of credit would bring disaster not only for the bank but also for the economy as a whole. In addition, the ability to allocate credit efficiently of a banking sector is expected to have positive implications for economic growth (Galbis, 1977). The banks take the funds from the depositors and use them in lending activities (Michael, et,al 2000). Credit is the extension of money from the lender to the borrower. Spencer (1977) noted that credit implies a promise by one party to pay another for money borrowed or goods and services received. Credit cannot be divorced from the banking sector as banks serve as a conduit for funds to be received in form of deposits from the surplus units of the economy and passed on to the deficit units who need funds for productive purposes. Banks are therefore debtors to the depositors of funds and creditors to the borrowers of funds. Bank credit is the borrowing capacity provided to an individual, government, firm or organization by the banking system in the form of loans. Bank credit is often accompanied with some collateral that helps to ensure the repayment of the loan in the event of default. Credit channels savings into productive investment thereby encouraging economic growth. Thus, the availability of credit allows the role of intermediation to be carried out, which is important for the

growth of the economy. The total domestic bank credit can be divided in to two: credit to the private sector and credit to the public sector.

From the banker's point of view, credit is the confidence of the lender on the ability and willingness of the borrower to repay the debt as per schedule of the repayment. Before allowing credit facility a banker should be satisfied that the applicant qualifies the following five essentials which may be termed as 5 Cs, namely- Character: borrower's integrity, honesty and intention to repay the loan money, Capacity: borrower's business ability, particularly profit making report, Capital: financial strength to cover a business risk, Conditions: it is general business condition, Collateral: borrower's ability to produce additional Securities (Golin, 2005).

There are three major types of credit. These are commercial credit, consumer credit and investment credit.

Commercial credit can be bank credit such as overdraft, loans and advances such as merchandise loan, pre-shipment export credit facility etc; trade credit from suppliers; commercial papers (or note); invoice discounting; bill finance; hire purchase; factoring, etc.

Consumer credit is a kind of permission granted to an individual or a household to purchase goods like refrigerator, television, car, electronic sets, which could not be paid for immediately but for which installment payments are made over a period of time.

Investment credit allows a business concern such as corporate body, sole proprietorship or partnership to obtain credit for capital goods for expansion of factory or procurement of machinery.

The tenor of a loan varies from short to medium to long term depending on the institutions, nature and functions. The importance of credit (and consequently the role of banks) in the economic growth and development of a country cannot be over-emphasized.

The functions of credit are primarily two: it facilitates the transfer of capital or money to where it will be most effectively and efficiently used; and secondly, credit economizes the use of currency or coin money as granting of credit has a multiplier effect on the volume of currency or coin in circulation. Furthermore, the cost of credit (notably interest

and discount rates) is one of the essential tools used to control and regulate money by the Central Bank. (Ademu, 2011)

2.2 An Overview of Agricultural Lending

Sustainably increasing agricultural productivity and economic development requires better access to diversified financial services. Without access, productivity and market access (i.e., local, regional, international) suffer from constraints such as a) working-capital to finance production costs, including the purchase of improved seeds and insurance to protect investments from climatic fluctuations, b) investment capital for mechanization and other production, storage, and processing technology, and c) trade finance to help traders get a container to its destination. (Feed the Future, discussion paper, n.d)

A number of factors have constrained the development of vibrant financial markets that would normally provide these financial services to agricultural sector actors in developing countries: the higher transaction costs associated with dispersed populations and inadequate infrastructure; the length of the planting/maturation cycle and higher risks (e.g., weather) inherent in agriculture; and asymmetry of information and the lack of appropriate technology for rural populations to access information. (www.crackingthenutconference.com)

But, Bank credit has played an important role in farm activities throughout the world history. The financing supplied by banks over the years has been essential to many individual farm operators and to the development of new agricultural technologies and techniques. (Comptroller's Handbook, 1998)

Agricultural lending is a financial term that refers to loans and other types of credit extended for agricultural purpose. Many countries have agricultural credit systems that promote the expansion and continued survival of farm and livestock operations. Depending on the country, there are several different types of agricultural credit available. Some loans are geared specifically toward new farmers and ranchers that are opening a new farming business and need start-up capital for land, supplies and wages. Others are meant for establishing agricultural business that is looking expansion on the present level of operation. (m.wisegeek.com)

According to CBE's credit procedure agricultural credits grouped in to three : the first agricultural input loan, it is a loan granted for the purpose of purchasing and distribution of fertilizer, improved seeds and other agricultural farm inputs to be distributed to small holders, cooperatives, unions and other legal or natural persons. Second, commercial farming loan, is granted to associations, cooperatives, unions, private limited companies, share companies or individuals engaged in modern commercial farm or agro-processing industry for working capital, and/or acquiring/leasing/constructing fixed assets such as building, agro-processing machineries and equipments (such as water pumps, generator, combiner, harvester, tractor, vehicles, etc) for plantation, crop production and animal husbandry in medium/large-scale farming. And the third one, cotton farm loan against DBE's guarantee, is a loan granted against DBE's guarantee to cotton producers to finance their working capital requirements for a post-sowing cultivating activities, cotton harvesting and ginning purpose based on the production capacity, previous year sales performance and other related requirement .

Whereas, the agricultural lending decision making process is becoming much more complex as a result of contractual and ownership arrangement issues, locational issues, and management quality and risk management issues (Arindam B., 2007). And also, the payback period for agricultural loans is usually longer than lenders prefer since the borrower must wait until harvest to have the money to pay back the loan. And the second drawback is that farming is an enterprise with many risks, more risks than most enterprises lenders are accustomed to serving (Steve H.,2013). Moreover, Supply and demand pressures have had a significant effect on the volatility of agricultural commodity prices, farmland values, and farm production costs, increasing the risk to agricultural lenders. (FedLinks, 2012)

According to Rakesh M. (2004), Risks associated with agricultural credit are a universal problem, and not specific to any single country. Compared to industry and service sector activities, agriculture is usually a weaker sector, forcing most governments worldwide to be following a system of support for promotion of agriculture and protecting the interest of the farmers. The degree and the extent of credit risks in agriculture, however, vary accordingly as the level of economic development of nations and the state and structure of agrarian economy within the overall economy. Nature of commodities produced is yet

another differentiating factor. That is credit risk “the risk of loss caused by the failure of the agricultural borrowers to meet their obligations”. The exposure to credit risk is particularly large for financial institutions like banks which continually expose them to losses and bankruptcy unless they have excellent risk management practices and/or is financially supported by the government. (Ejike R.D.et al.,2013) Because, credit risk may be created as a result of inadequate fund allocation, weak labour regulations, mismanagement, an unsuitable operating environment, weak training programmes, bad credit transactions and price fluctuations.

2.2. 1. Basic Features of Agricultural Lending

Several studies, in agricultural finance, have documented the challenges of financing agriculture in developing and emerging economies. In many developing countries, risk management techniques are underdeveloped or insufficient for institutions to efficiently lend to activities in the agricultural sector. Information on borrowers’ credit histories is rarely available, resulting in information asymmetries that make accurate credit risk assessment difficult. In addition, while agricultural borrower’s major assets are production and land, it is often difficult for banks to use these as collateral and particularly difficult to foreclose on land in case of default (World Bank, 2005).

Compounding this lack of traditional collateral is the presence of a high degree of covariate risk, in particular market price risk and weather risk. Banks lending to agriculture know that agricultural revenues easily drop below break-even levels due to extreme weather events and price falls, which result in defaults and higher loan loss provisions, thereby making lending to agribusiness unprofitable (Langenbacher, 2005; World Bank, 2005a). The other major constraints in agricultural lending are high transaction and supervisory costs. (Langenbacher, 2005; World Bank, 2005a).

Moreover, Insufficient cash flow planning; farms are not obliged to keep accounts or financial statements; cash flows are hard to assess when clients sell directly to consumers, poor credit culture of the customers, lack of legal education at the farmers’ level and lack of technical knowledge at the bank level to evaluate and analyze the creditworthiness of agribusinesses are other challenges for agricultural lending (Mwala. L., 2010).

As agricultural lending offers specific challenges for lending institutions which need to be addressed by appropriate methods, procedures and policies throughout the loan cycle - from the first contact with a loan applicant to repayment procedures and follow up activities. Thorsten G (2004) addressed the areas that make agricultural lending tick, these are:

2.2.1.1. Knowledge about Agricultural Markets

In order to better understand agricultural markets, commercial banks are advised to establish a comprehensive database on key information as regards the agricultural sector. On the one side, this will facilitate designing appropriate conditions for financial products such as term structure, repayment schedules and risk based pricing. On the other side, sound knowledge about the agricultural sector will facilitate selecting “good borrowers”. During the appraisal process, it is of particular importance to contrast the information collected individually for each borrower with “industry average” in order to define whether the expected income from agricultural activities is realistic or not. As discussed above, information on the characteristics of the agricultural activities per region are of particular importance as the situation might vary from one location to the other. Data collection and analysis could comprise among others: Production activity calendars per agricultural activity, Prices for inputs and sales prices for crops, Level of efficiency in production, e.g. agricultural production per hectare and/or per region and Weather conditions (Thorsten G., 2002).

2.2.1.2. Loan Officer Profile

Most of the activities and techniques on evaluation of the bankability of agricultural loan requests are carried out by the loan officer. The knowledge, skills and experience as well as the personality of the loan officer is therefore key for success in agricultural lending. We therefore take a close look at the ideal profile of an agricultural loan officer. Good loan officers are the “engines” that drive agricultural lenders. Loan officers should be in charge of the full loan cycle, i.e. they should be responsible for a loan from the initial client visit until the complete recovery of the credit. This has several advantages: (Thorsten G., 2002)

The loan officer is accountable for his/her own loan portfolio. In the case of a loan becoming overdue, the loan officer who gave a positive vote for this loan is still responsible. He/she cannot blame others for being responsible for a bad loan and cannot delegate problem loans to other staff members.

Loan officers are the “human face” of the financial institution. They should establish a personal relationship with each borrower, which is particularly important for rural people. Confidence and mutual trust can only be established on a personal basis. The loan officer’s personal knowledge of clients is also important as credit decisions are not only taken on the basis of “hard facts”, but also include an evaluation of repayment willingness and management capacities.

Many agricultural lenders also do not have access to credit reference systems – or if they do, these systems give little or incomplete information about the farmer’s credit history. Therefore, the loan officer as the “institutional memory” is particularly important in rural contexts.

In addition, a track-record of information on the specific characteristics of farming activities in the branch region will be created with the support of the loan officers. Good agricultural loan officers have a number of skills, knowledge and personal qualities.

2.3. Credit Risks Associated with Agricultural Lending

A farmer’s production and ability to service debt can be affected seriously by weather conditions and other natural factors not directly under the farmer’s control. Moreover, agricultural markets are sensitive to highly variable supply and demand conditions in world markets that may directly or indirectly affect both the borrower’s repayment capacity and the value of the bank’s collateral (Comptroller’s Handbook,1998).

The most significant variables affecting agricultural credit risk are production risks, catastrophic risks, value-chain risks, market prices and government policies. Other important factors include concentrations and limited-purpose collateral.

Production and yield risk. Agricultural yields are generally uncertain, as natural hazards such as the weather, pests and diseases and other production calamities impact on farm output. Even slight changes in weather conditions - less rain than usual - can seriously

impact on farm production. Pests and diseases may spread quickly, leading to a loss of part or all of the crop's produce. The soil quality of the plots as well as their location also significantly influences productivity and yield risk (Thorsten G., 2002).

Catastrophic Risks This is mainly recognition that weather risks place a very large part of agricultural risks, especially with the increasing unpredictability of weather. These risks include: too little or too much rain or poorly timed rain, flood, wind, access to adequate and sufficient weather prediction information, access to on-farm extension assistance and access to crop insurance, including weather indexed insurance (Steve H, 2013).

Market prices. Market prices pose the risk of loss to farmers from unforeseen input or output price changes. Examples include unexpected expenses for feed, fuel, and fertilizer (input), or depressed prices due to record crops (output). Farmers may mitigate the risk of losses from price fluctuations by numerous methods, including diversifying their crop and livestock activities, hedging commodities under production, and contracting (pre-selling) production (Comptroller's Handbook,1998).

Political Risk. According to Thorsten G.(2002 political interference in agricultural markets is a common feature to be found in many developing countries. For example, Price intervention in agricultural markets like stabilizing and fixed prices on some agricultural products and export bans on agricultural products. Policy changes and state interventions can also have a severe damaging impact on rural financial markets. Agricultural lending has a long-standing history of political intervention and distortion, which substantially contributed to the disinterest of commercial lenders in this business. Promising debt relief is a common feature of populist political campaigns.

Concentrations. Agricultural loan concentrations occur naturally when banks are located in communities with agriculture-dependent economies. For many individual agricultural banks, concentration risk is high. In addition to concentrations in crop and livestock loans, other farm-related assets can form concentrations. For instance, banks may also lend to companies that deal exclusively with agricultural enterprises, such as seed companies, grain elevators, and farm machinery dealers. Additionally, they may invest in securities from agencies participating in the government's agricultural lending programs (Comptroller's Handbook,1998).

Limited-purpose collateral. Agriculture-related collateral affects credit risk because it may have few or no alternative uses to support values when loan repayment problems arise. For example, a broiler house may have very little residual value when a borrower loses a contract with a poultry concern. Additionally, commodity prices and land values are sometimes highly correlated, especially in agricultural regions where farm land has no alternative productive use when commodity prices fall to a level that is inadequate to repay debt. In regions that contain substantial multi-use properties, however, there may be minimal correlation between land values and commodity prices (Comptroller's Handbook,1998). Appraisers commonly evaluate farm collateral based on market value, not liquidation value, and this too, can affect collateral values. This practice is normal; however, in distressed situations, liquidation values can deviate dramatically from market values, causing significant differences between collateral value and outstanding loan balances. Because of correlations among agricultural risk factors, stress testing can be an important part of a bank's risk management process.

Value-Chain Risks: Even if everything goes well on the farm, that is, on the primary production level, if there are problems anywhere else in the whole chain of relationships necessary to put food on the table for consumers, it can affect the farmer. These risks include weakness at any point along the value chain, including: input cost/availability, markets beyond the one the farmer sells to (downstream), transport constraints and costs, and other logistic risks including storage and lack of communication or coordination at any point along the value chain (Steve H.,2013).

2.4. Portfolio Credit Risk Management Techniques in Agricultural Lending

Regardless of the credit evaluation techniques used to screen and identify good individual credit risk, a panoply of other strategies exist that are used by lenders to reduce credit risk in the overall loan portfolio. In the following table, the different techniques for reducing and coping portfolio credit risks, their advantages, disadvantages and implications are summarized.

Table 2.1: Strategies for Reducing and Coping with Portfolio Credit Risk

Technique	Advantages	Disadvantages	Implication
<i>Geographic Diversification</i>	External shocks (climate, price, natural disasters, etc.) are not likely to affect the entire portfolio if there is spatial diversification.	If the country is small or the institution is capital constrained, it may not be able to apply this principle. It will become vulnerable to covariate risk, which is high in agriculture.	Small financial institutions should not be overly exposed to agriculture.
<i>Sectoral Diversification</i>	Diluting exposure to any one sector provides protection against external shocks that severely affect one sector. Institution lends for consumption, housing, production, etc.	Institutions tend to develop expertise in core sectors then expand. In early stages of institutional development, the typical institution will be more vulnerable.	Small and immature institutions cannot use this technique.
<i>Crop Diversification</i>	Lender finances a variety of different agricultural commodities to avoid downturns in prices and weather-related shocks.		Institution must invest in acquiring agronomic, marketing, and general economic acumen for a variety of crops and livestock.
<i>Loan Size Limits (Rationing)</i>	Prevents the institution from being vulnerable to nonperformance on a few large loans.	Can be carried to the extreme where loan size does not fit the business needs of the client and results in suboptimal use and lower positive impact by client. Client could become dissatisfied and prepay loan or desert after loan cycle ends.	Protects asset quality in the short-run but creates client retention problems in the long run. Inimical to relationship banking.
<i>Business/Farm Size Limits</i>	Lender may establish size thresholds, serves to protect lender from making loans to unviable clients.	Tends to perpetuate financial exclusion.	Government and policymakers need to make adjustment in policies to better help the excluded population and make them bankable.
<i>Over Collateralization</i>	Assures the institution that enough liquidation value will exist for foreclosed assets.	Excludes poor, low-income clients who are the vast majority of the market.	Not a recommended technique if goal is to better serve the low and moderate income clients.
<i>Activity/Product Exclusion Lists</i>	Lender refuses to lend to certain activities/crops that are deemed too risky and unprofitable.	The poor may be excluded because of average returns of activities (perceived or not) rather than calculation based on actual repayment capacity	May maintain high levels of financial exclusion depending on the region or country.

Technique	Advantages	Disadvantages	Implication
<i>Reliance on Guarantee Funds</i>	Reduces significantly default risk for loan originator	Guarantee funds tend to be plagued with limited additionality, high administrative costs and prevent the originating institution from learning how to evaluate risk in the target sector.	Need to be used with great caution and preferably in situations to facilitate innovation.
<i>Credit Insurance</i>	Bank makes clients purchase credit insurance. In event of default, bank collects from insurer.	Databases and credit bureaus may not exist to permit insurer to engage in this line of business in cost-effective manner.	
<i>Portfolio Securitization</i>	Lender bundles and sells loans to a third party. Transfers default risk and improves liquidity so that it can continue to lend. Allows lender to develop expertise in analyzing creditworthiness in one sector or niche.	Requires well documented loans and long time series of performance data to permit ratings and reliable construction of financial projections.	Requires a well developed secondary market, standardized underwriting practices, and existence of rating companies.
<i>Forward Contracting</i>	Producers often use contracts with packers or grain buyers to market their production.	These contracts vary widely and have to be analyzed carefully as they sometimes can actually increase risks rather than mitigate them.	

Source; Adopted from Mark W. etal.2007

2.5. Assessment of Borrowers Credit Worthiness/Pre Sanction Appraisal

The assessment of the credit worthiness involves the gathering, processing and analyzing of information on the loan applicant. There is risk in the provision of credit to borrowers. This risk exists because an expected payment may not occur. Credit risk is defined as potential losses arising from the inability of credit customers to pay what is owed in full and on time. Bank lending involves a bank, providing a loan in return for the promise of interest and principal repayment in the future (Aballey, 2009).

Available literature on lending indicates the lender's role in ensuring good decisions relating to provision of loans in order to minimize credit risk. Rouse (1989) explained that a lender 'lends' money and does not give it away. There is therefore a judgment that on a particular future date repayment will take place. The lender needs to look into the future and ask whether the customer will repay by the agreed date. He indicated that there will always be some risk that the customer will be unable to repay, and it is in assessing this risk that the lender needs to demonstrate both skill and judgment.

The lender should aim at assessing the extent of the risk and try to reduce the amount of uncertainty that will exist over the prospect of repayment. The lender must therefore gather all the relevant information and then apply his or her skills in making judgment. Though there might be pressures from customers and elsewhere which may sway away the lender's judgment, the lender must seek to arrive at an objective decision.

In view of these credit risks that might lead to bad loans, banks have some loan request procedures and requirements contained in their credit policy documents to guide loan officers in the processing of loans for customers. The following are some of the factors considered in granting loans:

Applicant's background, the purpose of the request, the amount of credit required, the amount and source of borrower's contribution, repayment terms of the borrower, security proposed by the borrower, location of the business or project, technical and financial soundness of the credit proposal (Francis B. Aballey, 2008)

According to Rose (1999) the question that must be dealt with before any other is whether or not the customer can service the loan – that is, pay out the credit when due, with a comfortable margin of interest. The factors underlying the assessment of pre-lending safeguards, in the opinion of Rose (1999) are; character, capacity, cash, collateral, conditions and control (i.e. the 6Cs). In another context, Rouse (1989) referred to mnemonics used as common checklist to review loan application as: CCCPPARTS (Character, Capital, Capability, Purpose, Person, Amount, Repayment, Terms and Security); PARSER (Person, Amount, Repayment, Security, Expediency, and Remuneration); CAMPARI (Character, Ability, Margin, Purpose, Amount, Repayment, Insurance/ Security).

The variation in the mnemonics relates to the basic principle of assessing the potential of having loans repaid. The dimension of each of the factors outlined by Rose (ibid) is as follows:

Character: Customer's past payment records; experience of other lenders with the customer; purpose of loan; customer's track record in forecasting business or personal income and credit rating.

Capacity: identity of customer and guarantors, description of history, legal structure owners, nature of operations, products and principal customers, suppliers for a business borrower and management quality.

Cash: take-home pay for an individual, the past earnings, dividends, and a less record for a business firm, adequacy of past and projected cash flow; availability of liquid reserves, turnover of payables, accounts receivable, and inventory; capital structure and leverage and expense controls.

Collateral: ownership of assets; vulnerability of assets to obsolescence and liquidation value of assets.

Conditions: Customer's current position in industry and expected market share; competitive climate for customer's products; sensitivity of customer and industry to business cycles and changes in technology.

Control: applicable banking laws and regulations regarding the character and quality of acceptable loans; adequate documentation for examiners who may review the loan.

Security: Securities for loans and overdrafts are to ensure recovery of the funds lent to the borrower in the event that the borrower becomes unwilling or incapable of meeting his commitments.

Dunkman (1996) outlined reasons for security as: safeguarding against some doubts about borrowers repayment ability, basis for increasing amount of loans over and above existing facilities, and as a last resort to recover loan in the face of default. Agyeman (1987) expressed the view that even though security is necessary, its requirement by bankers must be adopted cautiously otherwise it is capable of being counterproductive. According to him, this can come about when bankable projects are funded solely because of availability of security. Stiglitz (1996) supported Agyeman's (1987) view that security has the unintended tendency for causing skewness of loans in favor of property owners. This then serves as draw back in using financial intermediation as focus for meaningful economic development and growth. Banks are often confronted by instituting legal action against loan defaulters to take possession of assets pledged as collateral for foreclosure.

Akakpo (1994) suggested that the view that security should always be the last consideration in any loan proposition and one should not lend purely because security is offered. Any loan proposition should stand on its own with the security only providing a cushion should things go wrong.

Rouse (1989) however, held the view that no advances should be made until security procedures have been completed or at least at a stage where completion can take place without the need to involve the borrower any further. This suggests that the provision of adequate perfected security should be paramount in taking a credit decision. The rigidity in total secured collateral before disbursement of credit facilities needs to be relaxed in order not to delay the financing, which invariably impedes the success of projects.

It should be also noted that the provision of security just provides secondary source of repayment and therefore to ensure sustained relations with customers in their business endeavors, it is pertinent to consider the viability of the project being financed to generate sufficient cash flows to liquidate the credit facility. Furthermore the foreclosure of immovable property pledged as security goes through a long legal tussle, which could not easily bring prompt liquidity relief to a bank. It is therefore very essential for banks to lay much premium on the viability of a project as a paramount consideration for lending financial support.

2.6. Post-Sanction Appraisal

According to Rouse (1989) this is an area which many lenders pay little attention but, if it is properly carried out, the occurrence of bad debts can be reduced considerably. He identified internal records, visits and interviews, audited accounts and management accounts as some of the things that help in the follow-up and control process.

As indicated by Francis (2009), follow-up can minimize the occurrence of bad loans through the following major purposes that it serves:

- Ensure the utilization of the loan for the agreed purpose.

- Identify early warning signals of any problem relating the operations of the customer's business that are likely to affect the performance of the facility.
- Ensure compliance with the credit terms and conditions.
- It enables the lender discusses the prospects and problems of the borrower's business.

Banking institutions need to develop and implement comprehensive procedures and information systems to monitor the condition of individual credits and related single borrowers across the banking institutions' various portfolios. Credit officers can be responsible for ongoing credit analysis and the prompt identification of emerging problems. Their contact with borrowers will usually permit identification of potential problems before they become apparent to others. (Tuan, 2011)

After credit is granted, lenders need information to control the actions taken by the borrowers until the debt is completely repaid. The borrowers may relax their efforts which could lead to default or may hide the proceeds of their business to avoid repaying their debts or may go to other lenders for more credit without the knowledge of the first lender (Copeland et al, 1998).

2.6.1. The Need for Regular Loan Follow-up

Lending decisions are made on sound credit risk analysis/appraisal and assessment of credit worthiness of borrowers. But past records of satisfactory performance and integrity are no guarantee for future, though they serve as a useful guide to project the trend in performance. A loan granted on the basis of sound analysis/appraisal might go bad because the borrower may not meet his/her/its obligations per the terms and conditions of the loan contract. It is for this reason that proper follow-up and monitoring is essential (CBE, CPP, 2009 & 2013).

To safeguard financial institutions against potential losses, problem facilities need to be identified early. A proper credit monitoring/follow-up system will provide the basis for taking prompt corrective actions when warning signs point to deterioration in the financial health of the borrower. Examples of such warning signs include unauthorized

drawings, arrears in capital and interest and deterioration in the borrower's operating environment. Financial institutions must have a system in place to formally review the status of the credit and the financial health of the borrower at least once a year. More frequent reviews (e.g. at least quarterly) should be carried out of large credits, problem credits or when the operating environment of the customer is undergoing significant changes (Bank of Mauritius, 2004).

2.6.2. Activities/Functions of Regular Loan-Follow-Up

Bank of Mauritius (2004) and CBE, CPP (2009 & 2012) in broad terms, the monitoring activity of institutions/banks will ensure that: funds advanced are used only for the purpose stated in the customer's credit application; financial condition of a borrower is regularly tracked and management advised in a timely fashion; borrowers are complying with contractual covenants; collateral coverage is regularly assessed and related to the borrower's financial health; the institution's internal risk ratings reflect the current condition of the customer; contractual payment delinquencies are identified and emerging problem credits are classified on a timely basis; and problem credits are promptly directed to management for remedial actions, end use of funds, detect deviations from terms of decisions, Identify early warning signals, if any, and initiate remedial measures thereby averting loss from possible default. Moreover, the borrower should be asked to explain any major variances in projections provided in support of his credit application and the actual performance, in particular variances respecting projected cash flows and sales turnover.

2.6.3. Challenges on Regular Loan Follow-Up

Monitoring of loans entails keeping track of the loan customers' activities in relation to the loan on regular basis to ensure that the terms and conditions of the facility are complied with as contained in the loan agreement. This includes on-sight and off-sight monitoring. It came up that mostly credit officers ignore on-sight monitoring which has to do with field visits to determine how customers are faring in their activities and their ability to repay loans promptly. A study conducted by Francis (2009) in Ghana identified inadequate resources such as under-staffing and logistics that aid effective monitoring,

ineffective supervision by management and lack of access roads to customers' projects sites as the major challenges for most credit officer faces in their endeavor of making regular loan follow-up.

2.7. Performing and Non-Performing Loans

2.7.1. Performing Loans

Legally, a loan or credit facility refers to a contractual promise between two parties where one party, the creditor agrees to provide a sum of money to a debtor, who promises to return the said amount to the creditor either in one lump sum or in installments over a specified period of time. The agreement may include provision of additional payments of rental charges on the funds advanced to the borrower for the time the funds are in the hands of the debtor. (<http://en.wikipedia.org/wiki/loan>).

The additional payments that are in the form of interest charges, processing fees, commissions, monitoring fees among others, are usually paid in addition to the principal amount lent. Indeed these additional payments when made in accordance with the loan contract constitute income to the lender or the creditor. A loan may therefore be considered as performing if payments of both principal and interest charges are up to date as agreed between the creditor and debtor.

The foregoing reveals that loans that are up to date in terms of principal and interest payments are described as performing loans/advances. These types of loans constitute quality asset portfolio for banks in view of the interest income generated by such assets.

2.7.2. Non Performing Loans (NPL)

The term bad loans described by Basu (1998), is used interchangeably with non performing and impaired loans as identified in Fofack (2005). Berger and De Young, (1997) also considers these types of loans as “problem loans”. Thus these descriptions are used interchangeably throughout the study.

Generally, loans that are outstanding in both principal and interest for a long time contrary to the terms and conditions contained in the loan contract are considered as non-

performing loans. This is because going by the description of performing loans above, it follows that any loan facility that is not up to date in terms of payment of both principal and interest contrary to the terms of the loan agreement, is nonperforming.

Available literature gives different descriptions of bad loans. Some researchers noted that certain countries use quantitative criteria for example number of days overdue scheduled payments while other countries rely on qualitative norms like information about the customer's financial status and management judgment about future payments (Bloem and Gorter, 2001).

Alton and Hazen (2001) described non-performing loans as loans that are ninety days or more past due or no longer accruing interest. Caprio and Klingebiel (1990), cited in Fofack (2005), consider non-performing loans as loans which for a relatively long period of time do not generate income, that is the principal and or interest on these loans have been left unpaid for at least ninety days.

According to NBE directive no SBB/43/2007, non performing means loans or advances whose credit quality has deteriorated such that full collection of principal and/or interest in accordance with the contractual repayment terms of the loan or advances in question. Loans or advances with pre-established repayment programs are non performing when principal and/or interest is due and uncollected for 90 (ninety) consecutive days or more beyond the scheduled payment date or maturity, i.e. the debt remains outstanding for 90 (ninety) consecutive days or more beyond the scheduled payment date or maturity; interest is due and uncollected for 90 (ninety) consecutive days or more.

2.8. Factors Accounting for Bad Loans

Research findings and publications show that bad loans occur as a result of some factors. Berger and De Young (1997) identified poor management as one of the major causes of problem loans. They argue that managers in most banks with problem loans do not practice adequate loan underwriting, monitoring and control. Moreover, Bloem and Gorter (2001) indicated that non-performing loans may rise considerably due to less predictable incidents such as the cost of petroleum products, prices of key export

products, foreign exchange rates or interest rates change abruptly, delayed loan approval, poor weather conditions, diversion of loans etc. They also stated that deficient bank management, poor supervision, overoptimistic assessments of creditworthiness during economic booms, and moral hazard that result from generous government guarantees are some of the factors that lead to bad loans.

It is worth noting that though the literature obtained from foreign sources indicate some causes of bad loans, some of these may not apply to Commercial bank of Ethiopia (CBE). It is because of these reasons that it has become necessary to identify the causes bad loans associated with agricultural credit in the CBE.

CHAPTER THREE

Research Methodology

3.1. Data Type and Sources

Both primary and secondary data are used in the study. The primary data are collected from credit performers' particular to Credit relationship team, Credit Appraisal team and legal and loan recovery team. The secondary data were collected from the bank credit policy and procedure, credit portfolio management report of the bank, credit origination documents, and NBE directives, MIS report, NBE credit risk management supervision report.

3.2. Study Population and Sampling Techniques

Even if, all employees under credit process and legal & loan recovery process may help to get data concerning agricultural financing of the bank, as a population of the study, the researcher considered all employees under commercial, business and corporate division of credit process and legal & loan recovery process as a sampling unit. The researcher considered work experience as parameter of interest to define the study population, thus, only employees that are experienced for three and above years in the division are considered as part of the study population.

Table 3.1 Departments with their population and selected samples in the study area

Serial no	Department	Total number of credit performers	Number of credit performers with more than 3 years experience (Population)	Selected Sample Size
1	Credit Management (Business and Corporate and Commercial Customers Relationship Managers)	50	28	20
2	Credit Appraisal (Credit Analysts and Credit Appraisal Experts)	27	17	15
3	Loan Recovery (Loan Recovery Officers)	12	12	10
Total		89	57	45

The study population was stratified in to credit appraisal experts, credit analysts, customer relationship mangers, and loan recovery officers. Once the sampling unit

stratified which help the researcher to get variety of responses, the sample items were selected using judgmental sampling technique.

According to Kothari (2005), size of sample determined by considering the size of population variance, budgetary constraint and time given to conduct the study, considering the time given is short, no budget allotted for the study and homogenous characteristics of the population within the strata, the sample size of the study is 45 respondents. Of which fifteen are credit appraisal experts and analysts, twenty are customer relation managers, and ten are loan recovery officers.

3.3. Methods of Data Collection

In order to collect the primary data the researcher used questionnaire and structured interview. Structured interview was held with agricultural expertise, managers or directors working in credit process, and manager legal and loan recovery. With regard to using questionnaire as an instrument, the questionnaire was distributed among customer relationship managers, credit appraisal experts and analysts, and loan recovery officers. Both closed ended and open ended and as well as likert scale questions were presented to respondents.

The secondary data are obtained from National Bank of Ethiopia (NBE) statistical reports and publications, reports and publication of various association connected to banking industry and CBE's policy and procedure manuals, the bank's credit portfolio management and MIS reports.

3.4. Methods of Data Analysis and Presentation

The analysis undertook using descriptive method of data analysis such as frequency and, percentage value. After the necessary data have been collected, the data were processed that means edited, coded, classified and tabulated using STATA and simple excel. The presentation is made using tables, percentages, frequency and charts. The statistical tools used helped in conveying the meaning of the figures captured and as such made the analysis straight forward.

Chapter Four

Data Analysis and Interpretation

In this chapter, the primary data collected by questionnaire & interview, and the secondary data collected from the bank record documents are analyzed.

4.1. Analyses of Primary Data

The researcher distributed forty five questionnaires to employees working in the credit division of the bank: customer relationship managers, credit appraisals experts and analysts, and loan recovery officers. From the total questionnaires that were distributed, thirty seven questionnaires were collected. Therefore, the analysis was done based on the thirty seven observations.

4.1.1. Result of General Information on Agricultural Credit of the Bank

4.1.1.1. Credit Performers Work Experience in the Credit Area

Table 4.1 service year of credit performers in credit area of CBE

Service year in credit area (response)	Freq.	Percent
2 year-5 year	9	24.32
6 year- 10 year	11	29.73
More than 10 year	17	45.95
Total	37	100

Source: own computation based on questionnaire responses, 2015

The table above shows the frequency and percentage of years of service the respondents had worked in the credit area. In the results, the researcher noticed that 45.95 % of the respondents have work experience in the credit area for more than 10 years. Whereas, the respondents who have service year in credit area for 6-10 years are 29.73%, while that of between 2-5 years are 24.32 %. From the above table one can infer that most of the

credit performers' service year in the credit area is above 10 years, indicating that the bank has more experienced workers in credit division. Accordingly, their opinion and view on the questions requested is based on their ample experience in the credit process

4.1.1.2. Capacity of the credit performers of the bank to analyze or appraise the agricultural loan requests.

Without having sufficient personnel in terms of number and skill, it is impossible to properly analyze or appraise the agricultural loan requests of customers. Based on this, the researcher is interested in assessing the availability of sufficient personnel who properly analyze and appraise agricultural loan requests and evaluate the capability of credit performers in analyzing and appraising agricultural loan requests. The details are presented in table 4.2 below.

Table 4.2; The capacity of credit performers

How do you evaluate the capacity of the credit performers of the bank to analyze or appraise the agricultural loan requests? (Response)	Freq.	Percent
Very strong	5	13.51
Strong	14	37.84
Weak	18	48.65
Very weak	-	-
Total	37	100

Source: own computation based on questionnaire responses, 2015

The above table shows the perception of the respondents on the capacity of credit performers of the bank to analyze and appraise agricultural loan requests in frequency and percentage. The researcher asked this in order to evaluate the capacity/ability of credit performers in evaluating the bankability of agricultural loan requests. The results show that most of the respondents (48.65%) said that the capacity of loan performers is weak to analysis and appraise agricultural loan requests. Whereas, 37.84% of the respondents replied that, the capacity of credit performers is strong and the remaining 13.51% of the respondents replied that the capacity of credit performers is very strong but respondents replied very weak is nil. It is found that the ability of credit performers to evaluate the bankability of agricultural loans requests is weak.

For the question on do you think that the bank has sufficient personnel who properly analyze or appraise agricultural loan requests, most of the respondents (67.57%) replied that the bank has no sufficient agricultural expertise who can properly evaluate the bankability of agricultural loan requests. According to the interview conducted with agricultural expertise of the bank and directors and managers working in credit division, the bank has only limited (not more than three) agricultural expertise and they said most agricultural loan request are handled by others who don't have know how about agriculture. And also, the credit performers have no sufficient knowledge about agricultural product market. This might negatively affect the bank's agricultural financing.

4.1.1.3. Duration of training given for credit performers

Table 4.3; Duration of training given for credit performers

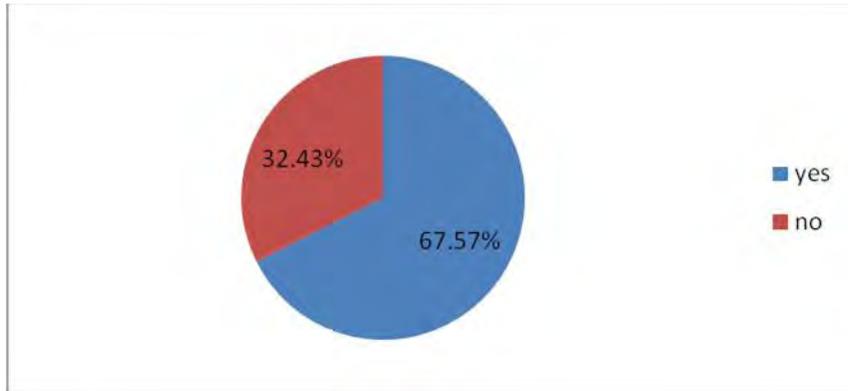
Duration of training	Freq.	Percent
Monthly	1	2.70
Quarterly	3	8.11
semi-annually	4	10.81
Annually	22	59.46
when the need arises	3	8.11
Not at all	4	10.81
Total	37	100.00

Source: own computation based on questionnaire responses, 2015

The above table shows the duration of training provided on agricultural credit analysis or appraisal for credit performers. The results show that 59.45% of the respondents said that the training is provided annually. Whereas, 10.81% of the respondents replied that no training is given at all, 10.81% replied that the training is provided semi-annually, 8.1% replied that the training is provided quarterly and when need arises each and 2.7% replied that the training is provided monthly. Some respondents replied that no training is provided. From this one can observe that less effort is exerted in providing training to credit performers on agricultural credit analysis and appraisal.

4.1.1.4. Relevance of the training course for agricultural credit

Figure 4.1 The relevance of the training courses for agricultural credit



Source: own computation based on questionnaire responses, 2015

The above figure shows the relevance of training courses given for evaluating the bankability of agricultural loan requests. The results show that 67.57% of the respondents responded that the training courses given are important for evaluating the bankability of agricultural loan requests. Whereas, 32.43% of the respondents said that the training courses given are not relevant. Since the purpose of training is to improve knowledge and skill on analyzing and appraising and according to the above figure, the training courses given are important for evaluating the bankability of agricultural loan requests, providing regular (frequent) training to credit performers enables them to have better understanding on the area and exert the most effort in reducing agricultural credit default rate.

4.1.1.5. Sufficiency of loan delivery time

Table 4.4: Sufficiency of loan delivery time

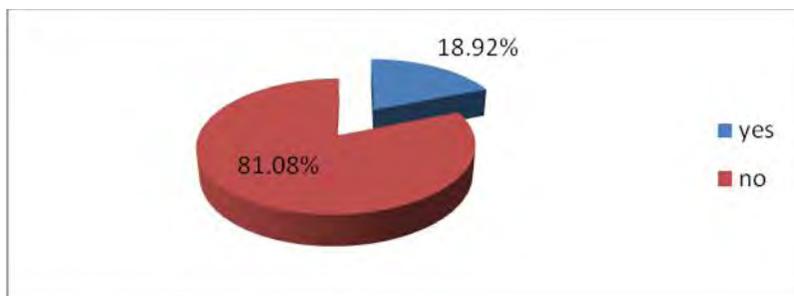
Do you think the LDT given is sufficient to evaluate the bankability of customers' agricultural loan requests? Response	Freq.	Percent
Yes	11	29.73
No	26	70.27
Total	37	100

Source: own computation based on questionnaire responses, 2015

The above table shows the adequacy of the loan delivery time to evaluate the bankability of customers' agricultural loan requests. The results show that 70.27% of the respondents said that the loan delivery time given is not sufficient to evaluate the bankability of customers' agricultural loan requests. Whereas, 29.73% of the respondents replied that the loan delivery time is sufficient to assess the bankability of agricultural credit requests. The study found that the credit performers cannot properly assess the creditworthiness of the agricultural borrowers with in the given time. This is due to most agricultural borrowers' businesses are located far from Addis Ababa, it takes relatively long time to visit the business and gather the required information.

4.1.1.6. Management information system

Figure 4.2; Management information system



Source: own computation based on questionnaire responses, 2015

The above figure shows the timeliness and usefulness of information provided by the bank management information system (MIS) to evaluate risk levels and trends in the agricultural portfolio. The results show that 81.08% of the respondents said that the management information system does not provide timely and useful information to evaluate risk levels and trends in the agricultural portfolio. While, 18.92% of the respondents replied that the management information system provide timely and useful information to evaluate the risk level and trends in the agricultural portfolio. And also, the management information system does not provide detail information to risk level and trends in the agricultural portfolio. Moreover, according to the interview response the marketing and research and development department is not assisting the credit department in providing up to date information in the agriculture sector.

4.1.1.7. The depth of financial analysis of loan underwriting

Table 4.5: The depth of financial analysis of loan underwriting

How do you evaluate the depth of financial analysis in agricultural loan underwriting?	Freq.	Percent
Very in Depth	4	10.81
in Depth	16	43.24
little in depth	12	32.43
Not as such	5	13.51
Total	37	100.00

Source: own computation based on questionnaire responses, 2015

The above table shows the depth of financial analysis in agricultural loan underwriting. The results illustrate that 43.24% of the respondents replied that the depth of financial analysis is in-depth. Whereas, 32.43% of the respondents responded that the depth of financial analysis is little in-depth and 13.51% of the respondents said the depth of financial analysis is not as such. The study found that the financial analysis in underwriting agricultural loans is somewhat moderate.

For the question raised on structuring of loans in accordance to the type of borrowing and the expected income stream for agricultural loans, most of the respondents (78.38%) responded that there is structuring of loans according to the type of borrowing and the expected income stream. And also for the question raised on thorough evaluation of the borrowers' character and history of managing repayment at the time of underwriting agricultural loans, most of the respondents (64.86%) said that there is thorough evaluation of borrowers' character and history of managing debt repayment at the time of underwriting loans.

4.1.1.8. Type of collateral most of the time the bank used for agricultural loans

Table 4.6: Type of collateral most of the time the bank used for agricultural loans

What type of collateral most of the time the bank uses for agricultural loans?	Freq.	Percent
Third party guarantee	1	2.70
cash Deposit	3	8.11
Agricultural Equipment	16	43.24
Land use right	11	29.73
Plantation of Temp. Crops & animals	3	8.11
Others	3	8.11
Total	37	100.00

Source: own computation based on questionnaire responses, 2015

The above table shows the type of collateral most of the time the bank uses for agricultural loans. The results confirmed that 43.24% and 29.73% of the respondents responded that most of the time the bank uses agricultural equipments and land use right as collateral for agricultural loans respectively, 8.11% of the respondents replied that plantation of temporary crops and animals are used as collateral. Moreover, 8.11% of the respondents responded others such as business mortgage, residential building, vehicles, building on farms and coffee trees, again 8.11% of the respondent said cash deposit and the remaining 2.7% of the respondents replied third party guarantee is the collateral type the bank mostly used for agricultural loans.

4.1.1.9. The bank security evaluation, possession, registration and filing practices particular to agricultural loans.

Table 4.7: security evaluation, possession, registration and filing practices

How do you rate the bank security evaluation, possession, registration and filing practices particular to agricultural loans? (Response)	Freq.	Percent
Excellent	2	5.41
good	32	86.49
Bad	3	8.11
Total	37	100

Source: own computation based on questionnaire responses, 2015

The above table shows the bank security evaluation, possession, registration and filing practices particular to agricultural loans. The results show that most of the respondents (86.49%) responded that the bank security evaluation, possession, registration and filing practices is good, whereas, 8.11% of the respondents replied that the bank security evaluation, possession, registration and filing practices is bad.

4.1.1.10. The risks inherent to the bank's agricultural lending

Agricultural business/activity is affected seriously by weather conditions and other natural factors not directly under the farmer's control. Moreover, agricultural markets are sensitive to highly variable supply and demand conditions in world markets that may directly or indirectly affect both the borrower's repayment capacity and the value of the bank's collateral. Based on this the researcher explored the major credit risks inherent in the bank's agricultural lending and the responses are found Table 4.8

Table 4.8: Risk inherent to the bank’s agricultural lending

What are the risks inherent to the bank’s agricultural lending? You can select more than one.	Freq.	Percent
Production risk associated with weather and disease	12	32.43
Price risk due to market volatility and weak markets	8	21.62
Lack of regular monthly income for borrowers	3	8.11
Side selling” by producers to cover short-term cash needs	4	10.81
Over-indebtedness of borrowers, who turn to money lenders to meet short term cash needs	6	16.22
Political risk (Export bans, price caps, debt write offs, etc)	4	10.81
Others		
Total	37	100.00

Source: own computation based on questionnaire responses, 2015

Majority of the respondents (32.43%) indicated that the main credit risk inherent to the bank’s agricultural lending is production or yield risk associated with weather, pest, disease and drought. This uncontrolled environment can cause total losses on agricultural productions or reduction on agricultural yield.

Another major risk identified by 21.62% of the respondents is price risk due to market volatility and weak market, and demand fall followed by over indebtedness, political risk like export bans, price caps, debt write off, e.t.c., and side selling to cover short-term cash need. A small percentage (8.11%) of the respondents said that, the main risk inherent to bank’s agricultural lending is lack of regular income for borrowers. The study found that, the major risks the bank faced in agricultural lending are production risk, price risk and over indebtedness. This is due to our country’s agricultural system is somewhat rainfall dependent (exposed to natural disaster), poor marketing system (marketing value chain)

for agricultural products, poor weather forecasting system and poor analysis of the credit history of borrowers.

The researcher explored how the staffs’ rate the effectiveness of agricultural credit risk management practice of the bank is and the responses are found in the table below

Table 4.9: The effectiveness of agricultural credit risk management practice of the bank

How would you rate the effectiveness of agricultural credit risk management practice of the bank? (Response)	Freq.	Percent
Excellent	-	-
Good	24	64.86
bad	13	35.14
Total	37	100

Source: own computation based on questionnaire responses, 2015

The results show that 64.86% of the respondents responded that the effectiveness of the agricultural credit risk management practice of the bank is good. Whereas, 35.14% of the respondents said it is bad and no respondents replied excellent. The study found that the overall effectiveness of the agricultural credit risk management practice of the bank is somewhat moderate.

4.1.2. Challenges for agricultural credit risk management in CBE

In the second part of the questionnaire respondents are requested to give responses regarding the challenges that are affecting the proper management of agricultural credit risk to the bank. The challenges might be internal or external; the respondents were requested to provide their agreement level as “strongly agree”, “agree”, “neutral”, “disagree” and “strongly disagree”. The researcher ranked these challenges from the most challenging to least challenging based on the mean value of respondents’ responses and the responses are found in table 4.10. This is because; prioritizing challenges in this way helps the bank to identify easily the most challenging issues and take immediate action on them.

The challenges are lack of technical expertise in agriculture, less capability of credit performers on agricultural lending, no or little training, less capability of credit

performers, lack of proper credit administration, vagaries of weather, lack of weather index insurance, poor record keeping, less availability of data, and lack of properly trained consultant.

Table 4.10 Challenges for agricultural credit risk management

Challenges for agricultural credit risk management in the bank	Mean	Rank
Lack of technical experts providing their independent valuation of the agricultural feasibility study.	4.16	1 st
Less capability of credit performers of the bank to evaluate the technical and financial projections of agricultural projects.	3.72	4 th
No or little trainings given for credit performers on how to evaluate the bankability of agricultural project.	3.70	5 th
The credit performers unlikely to apply the KYC principle	2.91	12 th
Lack of proper credit administration	2.97	11 th
Vagaries of weather, poor weather forecasting	3.29	8 th
Lack weather-index insurance measures.	3.54	7 th
Lack of insurance of cover for crops and animals.	3.67	6 th
Poor record-keeping and MIS reports	3.24	9 th
Lack of agricultural accounting system	3.18	10 th
Less availability of data and up to date information	3.83	3 rd
Lack of properly trained consultant to prepare agricultural project feasibility study	3.86	2 nd

Source: own computation based on questionnaire responses, 2015

From the above table one can observe that, lack of technical experts who can provide their independent appraisal of the agricultural feasibility study is the most challenging factor (ranked 1st) to proper management of agricultural credit risk in the bank, followed by lack of properly trained consultant to prepare agricultural project feasibility study as ranked 2nd and less availability of data and up to date information ranked 3rd. The study found that Lack of technical experts providing their independent appraisal of the agricultural feasibility study, Lack of properly trained consultant to prepare agricultural project feasibility study, Less availability of data and up to date information, Less

capability of credit performers of the bank to evaluate the technical and financial projections of agricultural projects, No or little trainings given for credit performers on how to evaluate the bankability of agricultural project, Lack of insurance cover for crops and animals, Lack of weather-index insurance measures, Vagaries of weather, poor weather forecasting and Poor record-keeping and MIS reports are the major challenges to proper management of agricultural credit risk of the bank as they scored a mean value greater than 3.00 (the average mean value).

Based on the responses obtained from the open ended question of the questionnaire, incompleteness of information from customers, integrity problem of the customers (like low commitment for repayment of loan as per schedule and fulfillment of conditions of loan contract), lack of proper management of the farm (most of the investors lack know how on farm management), lack of clear property estimation, and poor follow up culture (habit) of the credit performers are identified as the major challenges to proper management of agricultural credit risk in the bank.

Moreover, according to the responses obtained from the interview questions, lack of audited financial statement, lack of agricultural macro level data, difficulty in knowing customers behavior since they come from the remotest areas of the country, customers businesses are found at long distance so it is difficult to undertake regular follow up and difficult to transfer the land lease use right and other agricultural machineries and equipments are identified as other major challenges in proper management of agricultural credit risk in the bank.

4.1.3. Causes for Agricultural Non-Performing Loans

In the third part of the questionnaire respondents were requested to give response concerning the causes of agricultural non-performing loans in the bank. The causes might be internal or external; the respondents were requested to provide their agreement level as “strongly agree”, “agree”, “neutral”, “disagree” and “strongly disagree”. To identify which causes are significantly responsible for agricultural non-performing loans of the bank, the researcher ranked causes of agricultural non-performing loans based on the mean value of respondents’ responses and the respondents’ responses are found in table

4.11. This is because; prioritizing causes in this way helps the management easily identify the most frequent causes and take actions.

The causes for agricultural non-performing loans might be lower price of agricultural products, agricultural product damages, inadequate supervision or follow up, lack of aggressive credit collection methods, delay in obtaining loans, diversion of borrowed funds, insufficient credit, and willful default, lack of proper investigation before lending and lack of good communication facilities.

Table 4.11 Causes for agricultural non-performing loans

Causes for agricultural non-performing loans in the bank	Mean	Rank
Lower price of agricultural products	3.00	6 th
Crop damages	3.59	1 st
Inadequate supervision or follow up	3.59	1 st
Lack of aggressive credit collection method	2.86	9 th
Delay in obtaining loan	2.91	7 th
Diversion of borrowed fund	3.56	2 nd
Insufficient credit	2.89	8 th
Willful default	3.48	3 rd
Lack of proper investigation before lending	3.43	4 th
Lack of good communication facilities	3.24	5 th

Source: Author's computation based on questionnaire responses, 2015

From the above table, it is found that the main causes (rank 1st) for agricultural non-performing loans in the bank are crop damages and inadequate supervision or follow up. This is due to most agricultural products produced in Ethiopia are highly exposed to weather catastrophe, rainfall dependent and the production system is traditional and unable to conduct regular follow up due to long distance of the customers' businesses and poor follow up culture in the bank.

Other major causes for agricultural non-performing loans in the bank are diversion of borrowed funds (ranked 2nd) and willful default (ranked 3rd); this might be poor credit culture of the customers. Lack of proper investigation before lending is ranked 4th as causing the agricultural non-performing loans. This indicates that the bank agricultural loan underwriting is poor.

The study found that crop damages, inadequate supervision or follow up, diversion of borrowed funds, willful default, lack of proper investigation before lending and lack of good communication facilities are the major causes for agricultural non-performing loan in the bank as they scored a mean value greater than 3.00 (the average mean value).

In addition, based on the responses obtained from the open ended question of the questionnaire, perennial rain dependency, management problem, and obsolete farming system and lack of mechanization are identified as the major causes for agricultural non-performing loans.

According to the interview conducted with bank's credit performers, poor analysis and appraisal, poor follow up and customers' inability to fulfill the terms and conditions are the major reasons for high default rate. They said that, even if the procedure requires follow up should be undertaken at each stage, they don't make customer's business visit at each stage. They justified that, they are handling too many cases and most of the agricultural businesses are found at a long distance from the center. As a result it is difficult to make regular follow up on the customer. Moreover, poor knowledge of the customer relation manager about agricultural business, poor agricultural risk assessment, poor credit advice, lack of commitment of the customers and short repayment period are also identified as other major causes for agricultural non-performing loans in the bank from the interview conducted.

4.1.4. Strategies Used By the Bank for Reducing and Coping Agricultural Credit Risk

Without developing appropriate risk reduction or minimization techniques, it is impossible to properly control and manage credit risk. Based on this, the researcher is interested in assessing the frequently used risk reduction or minimization techniques in order to properly manage agricultural credit risk. The respondents were requested to rate the applicability of these techniques in the bank as "always", "often", "occasionally", "rarely" and "never". The details are presented in table 4.12 below.

The techniques might be geographic diversification, sectoral diversification, loan size limits (rationing), farm size limits, overcollateralization, activity/crop/exclusion lists, reliance on guarantee funds, credit (crop & livestock) insurance, credit scoring, loan pricing, forward contracting (future market) and proper monitoring (follow up) of loans.

Table 4.12: Techniques used to reducing and coping agricultural credit risk

Techniques used to reducing and coping agricultural credit risk	Respondents' scale rating						Mean Value
	Always	often	Occasionally	Rarely	Never	Total	
Geographic Diversification	2 (5.41%)	8 (21.62%)	15 (40.54%)	8 (21.62%)	4 (10.81%)	37 (100%)	2.89
Loan Size Limits (Rationing)	5 (13.51%)	10 (27.03%)	15 (40.54%)	6 (16.22%)	1 (2.70%)	37 (100%)	3.32
Business/Farm Size Limits	3 (8.11%)	6 (16.22%)	18 (48.65%)	8 (21.62%)	2 (5.41%)	37 (100%)	3.00
Over Collateralization	2 (5.41%)	7 (18.92%)	10 (27.03%)	7 (18.92%)	11 (29.73%)	37 (100%)	2.51
Activity/Product /crop/ Exclusion Lists	1 (2.70%)	6 (16.22)	17 (45.95%)	5 (13.51%)	8 (21.62%)	37 (100%)	2.64
Reliance on Guarantee Funds	2 (5.41%)	6 (16.22%)	13 (35.14%)	8 (21.62%)	8 (21.62%)	37 (100%)	2.62
Credit (crop or livestock) Insurance	3 (8.11%)	8 (21.62%)	11 (29.73%)	7 (18.92%)	8 (21.62%)	37 (100%)	2.75
Credit scoring	2 (5.41%)	8 (21.62%)	16 (43.24%)	9 (24.32%)	2 (5.41%)	37 (100%)	2.97
Loan pricing	4 (10.81%)	5 (13.51%)	13 (35.14%)	9 (24.32%)	6 (16.22%)	37 (100%)	2.78
Forward contracting (Future market)	1 (2.70%)	4 (10.81%)	8 (21.62%)	8 (21.62%)	8 (21.62%)	37 (100%)	2.29
Proper monitoring (follow up) of loans	5 (13.51%)	11 (29.73%)	14 (37.84%)	6 (16.22%)	1 (2.70%)	37 (100%)	3.35

Source: Author's computation based on questionnaire responses, 2015

As the first row of the above table shows, geographic diversification is not the mostly used techniques of reducing agricultural credit risk in the bank since 40.54% and 21.62% of the respondents replied occasionally and rarely respectively to the statement as applicability of the techniques and it scored a mean value less than the average mean value (3.00). Since majority of the respondents indicated that the main credit risk inherent to the bank's agricultural lending is production or yield risk associated with weather, pest, disease and drought in the previous section (see table 4.8), it was expected that this

technique should be the most frequently used to reduce the agricultural credit risk in the bank.

Loan size limit or rationing prevents lending institution from being vulnerable to nonperformance on a few large loans. In this regard, loan size limit or rationing is the mostly used techniques for reducing agricultural credit in the bank since 40.54%, 27.03% and 13.51% of the respondents responded as occasionally, often and always respectively and it has scored mean value (3.32) above average (3.00).

As the fourth row of the above table shows, over collateralization is not the mostly used techniques of reducing agricultural credit risk in the bank since 29.73% and 18.92% of the respondents replied never and rarely respectively to the statement as applicability of the techniques and scored a mean value of less than the average mean value (3.00). The result of the study is in-line with the responses obtained from interview questions, which says it is difficult to transfer land use right and agricultural machineries and equipments when customers default. Thus, using this technique assures the bank that enough liquidation value will exist for foreclosed assets when customers default.

Lender institutions refuse to lend to certain activities/crops that are deemed too risky and unprofitable through activity/product exclusion lists to prevent them from being vulnerable to nonperformance and the technique is most widely used in agricultural lending because some agricultural activities and products are too risky. However, activity/product exclusion lists was not the mostly used techniques of reducing agricultural credit risk in the bank since 45.95%, 21.62% and 13.51% of the respondents replied occasionally, never and rarely respectively to the statement as applicability of the techniques and the scored mean value is less than the average mean value (3.00).

Since agricultural activities and products are highly vulnerable for weather catastrophe, credit (crop and livestock) insurance is the most commonly used technique for agricultural lenders to reduce agricultural credit risk. In this technique, bank makes clients purchase credit insurance and in event of default, bank collects from insurer. But, credit (crop and livestock) insurance was not the mostly used techniques of reducing agricultural credit risk in the bank since 21.62% and 18.92% of the respondents replied never and rarely respectively with the statement as applicability of the techniques and the scored mean value (2.75) is less than the averages mean value (3.00). This might be due

to limited availability of agricultural insurance products in the country and the existing agricultural insurance products are very expensive which cannot be afforded by the customers according to the responses obtained from the interview questions. And also, the result is in line with the previous section, lack of insurance cover for crops and animals is one of the major challenge to agricultural credit risk management of in the bank (see table 4.10).

Market prices pose the risk of loss to farmers from unforeseen input or output price changes which affect their repayment ability. Examples include unexpected expenses for feed, fuel, and fertilizer (input), or depressed prices due to record crops (output). Agricultural lenders may mitigate the risk of default from price fluctuations by numerous methods, including forward contracting (future markets), hedging commodities under production, and contracting (pre-selling) production. However, forward contracting (future market) was not the mostly used techniques of reducing agricultural credit risk in the bank since 21.62% and 21.62% of the respondents replied never and rarely respectively to the statement as applicability of the techniques and the scored mean value (2.29) which is less than the averages mean value (3.00). This might be due to infancy of the option markets practices in the country.

As depicted by the last raw of the table, proper monitoring (follow up) is the mostly used techniques of reducing agricultural credit risk in the bank since 37.84%, 29.73% and 13.51% of the respondents replied occasionally, often and always respectively to the statement as applicability of the techniques and the scored a mean value is (3.35) which is greater than the average mean value (3.00). Since majority of the respondents indicated that the main causes for agricultural non-performing loans in the bank is inadequate supervision or follow up (see table 4.11), and lack of regular (adequate) follow up are the major problems in agricultural credit risk management of the bank (responses from interview questions). This result contradicts with the previous section findings.

4.2. Secondary Data Analysis

4.2.1. Evaluation of Agricultural Credit Practice and Performance

However complete the bank's credit culture and policies can be the utmost standard for a successful credit risk management framework lies on the bank's actual practices and performance. The non-performing loan statistics are typical demonstration of good or improper credit risk management. The researcher calculated some ratios in order to assess the performance of the bank in agricultural credit.

Table 4.13. The ratio of agricultural NPL to outstanding balance of agricultural loans

(000)

Year	Outstanding Balance of agriculture Loans	Agricultural NPLs	Ratio of NPLs to outs. Balance (%)
2005	1,023,242	199,559	19.50
2006	1,586,404	141,480	8.92
2007	1,586,404	92,902	5.86
2008	2,737,526	65,659	2.40
2009	3,173,545	62,119	1.96
2010	4,354,094	18,458	0.42
2011	7,836,769	22,357	0.29
2012	13,552,073	42,559	0.31
2013	12,138,862	164,998	1.36
2014	12,268,849	142,510	1.16
2015	11,956,256	131,153	1.10

Source: Own computation based on the bank's Portfolio management and MIS report, 2015.

The above table depicts the ratio of agricultural NPL to outstanding balance of agricultural loans. The ratios of non-performing loans to total outstanding agricultural loan was 19.50%, 8.92%, 5.86%, 2.40%, 1.96%, 0.42%, 0.29%, 0.31% , 1.36%,1.16% and 1.10% and on an average it was 3.93% during the period from 2005 to 2015 respectively. The percentage of non-performing loan was highest in 2005 which was 19.50%% and lowest in 2011 which was 0.29%% of the total agricultural loan. The

percentage of nonperforming loans to total agricultural loans shown a decreasing trend from 2005 to 2011; this shows there was an improvement in managing agricultural credit risk in the bank during those periods. However, the ratio of non-performing loans to total agricultural loans shown an increasing trend for the years 2012 onwards with a slight decrease in the years 2014 and 2015. The causes for the increment of the ratio of NPL might be the disbursement of loans before the fulfillment of stated conditions, bad credit history of companies, securities are not properly registered by the appropriate organ, loans are disbursed before security contract and security registration, and others which arise from lack of detail analysis before lending and poor follow up.

4.2.1.1 Share of agricultural non-performing loans to total non-performing loans

The researcher assessed the percentage share of agricultural NPLs to total NPLs. Table 4.14 below shows the percentage share of agricultural non-performing loans to total nonperforming loans. The percentage share of agricultural non-performing loans to total nonperforming loans was 6.75%, 6.77%, 6.55%, 7.09%, 8.76%, 4.64%, 7.62%, 9.88% 10.53%, 11.00% and 2.10% and on average it was 7.43% during periods covering from 2005 to 2015 respectively. The percentage share of non-performing agricultural loan to total non-performing loans was highest in 2014 which was 11% and lowest in 2015 which was 2.1% of the total agricultural loan. The percentage of nonperforming loans to total loans has shown a decreasing trend from 2006 to 2011, even though the percentage share of agricultural NPLs to total NPLs shown an increasing trend during those periods except in the years 2007 and 2010. It has shown further increment from year 2011 onwards and its highest (11%) in the year 2014. The study found that the agricultural credit default show an increment for the last four years preceding the year 2015.

Table 4.14: the share of agricultural NPLs to total NPLs

(000)

Year	Total nonperforming loans	Agriculture nonperforming loans	Percentage share agriculture NPLs to total NPLs
2005	2,953,687	199,559	6.75
2006	2,087,304	141,480	6.77
2007	1,418,331	92,902	6.55
2008	924,788	65,659	7.09
2009	708,569	62,119	8.77
2010	397,603	18,458	4.64
2011	293,370	22,357	7.62
2012	430,351	42,559	9.88
2013	1,567,143	164,998	10.53
2014	1,295,470	142,510	11.00
2015	6,249,985	131,153	2.10

Source: own computation based on the bank's Portfolio management and MIS report, 2015.

Chapter Five

Summary of Findings and Recommendations

5.1 Summary of Findings

Because of the high uncertainty of the agricultural activity/business, agricultural lenders are challenged by a large number of risks. Therefore, the researcher assessed the agricultural financing of commercial bank of Ethiopia by addressing six research questions using descriptive research methods.

The according to the questionnaire result 45.95% of the respondents have working experience in the credit area for more than 10 year. This indicates that, the bank has more experienced workers in the credit area. However, most of the respondents replied that the bank has no sufficient agricultural expertise who properly evaluate the bankability of agricultural loan requests (the bank has only limited agricultural expertise: not more than three) and Due to this most agricultural loan request handled by others who don't have know how on agriculture and most of the respondents (48.65%) said that the capacity of loan performers is weak to analyze and appraise agricultural loan requests. And also, the study found that the credit performers have no sufficient knowledge about agricultural product market.

On the topic of how often training on agricultural credit analysis and appraisal is provided, 59.45% of the respondents said that the training provided annually. This indicates the less effort exerted in providing training to credit performers on agricultural credit risk analysis, appraisal and management by the bank. Even though most of the respondents (67.57%) responded that the training course given are important for evaluating the bankability of agricultural loan requests, the training provided on agricultural credit analysis, appraisal and management is little. This indicates that providing frequent (regular) training can improve the agricultural credit risk management of the bank.

As revealed in table 4.4 about 70.27% of the respondents said that the loan delivery time given is not sufficient to evaluate the bankability of customers' agricultural loan requests.

It means, the credit performers cannot properly assess the creditworthiness of the agricultural borrowers with in the given time.

The study also found that the management information system does not provide timely and useful information to evaluate risk levels and trends in the agricultural portfolio. The credit performers evaluate the bankability of agricultural credit request without having sufficient information. And also, the management information system does not provide detail information to risk level and trends in the agricultural loan portfolio. Moreover, the study found that the marketing, research and development department is not assisting the credit department in bridging the information gap the credit performers are facing.

On topic of financial analysis in underwriting agricultural loans, about 43.24% of the respondents replied that the depth of financial analysis is in-depth and about 32.43% of the respondents responded that the depth of financial analysis is little in-depth. This indicates, the financial analysis in underwriting agricultural loans is somewhat moderate which may have a negative impact on agricultural credit risk management in the bank.

Regarding the type of security, most of the time the bank use agricultural equipments and land use right as collateral. Moreover, the study found that the bank security evaluation, possession, registration and filing practice is somewhat good.

The study also found that, the major risks the bank faced in agricultural lending are production risk, price risk and over indebtedness. This is due to our country's agricultural system is rainfall dependent (exposed to natural disaster), poor marketing system (marketing value chain) for agricultural products, poor weather forecasting system and poor analysis of the credit history of borrowers.

Regarding the overall effectiveness of the bank's agricultural credit risk management, about 64.86% of the respondents responded that the effectiveness of the agricultural credit risk management practice of the bank is good, whereas, 35.14% of the respondents said it is bad. Thus, the overall effectiveness of the agricultural credit risks management practice of the bank somewhat moderate. Moreover, the study found that poor analysis and appraisal, poor follow up and customers' inability to fulfill the terms and conditions set during the approval of the loan are the major problems.

concerning the challenges for agricultural credit risk management, the study found that lack of technical experts providing their independent evaluation of the agricultural

feasibility study, lack of properly trained consultant to prepare agricultural project feasibility study, less availability of data and up to date information, less capability of credit performers of the bank to evaluate the technical and financial projections of agricultural projects, no or little trainings given for credit performers on how to evaluate the bankability of agricultural project, lack of insurance of cover for crops and animals, lack weather-index insurance measures, vagaries of weather, poor weather forecasting and poor record-keeping and insufficient MIS reports are the major challenges to proper management of agricultural credit risk in the bank. In addition, incompleteness of information from customers, integrity problem of the customers (like low commitment for repayment of loan as per schedule and fulfillment of conditions of loan contract), lack of proper management of the farm (most of the investors lack know how on farm management and do not recruit agricultural professional), lack of clear property estimation, as the loan is granted against collateral (land and land development cost and machineries and equipments), poor follow up culture (habit) of the credit performers, lack of agricultural macro data, and difficulty in transferring the land lease right, agricultural machineries and equipments were found the major challenges to proper management of agricultural credit risk in the bank.

Regarding the causes for agricultural loan default, crop damages, inadequate supervision or follow up, diversion of borrowed funds, willful default, lack of proper investigation before lending and lack of good communication facilities are the major causes for agricultural non-performing loan in the bank as they scored a mean value greater than 3.00 (the average mean value). In addition, perennial rain dependency, management problem, and obsolete farming system and lack of mechanization are the major causes for agricultural non-performing loans. Moreover, poor knowledge of the customer relationship managers about agricultural business, poor agricultural risk assessment, poor credit advice, lack of commitment of the customers, short repayment modality (working capital only for one year), and lump sum payment schedule and treating perennial crops like as annual crops are other major causes for agricultural non-performing loans in the bank.

The study also found that, loan size limit (rationing), proper monitoring (follow up) of loans, and business/farm size limits were the most widely used methods of agricultural credit risk reducing and coping techniques in CBE.

The secondary data analysis show that, the ratio of agricultural non-performing loans to total agricultural loans outstanding has shown decreasing trend from the year 2005 to 2011. But it has showing increment in 2012 and 2013 again it decreased in year 2014 and 2015, and the percentage share of agricultural non-performing loans to total non-performing loans showed a rapid increment from 2011 onwards except in the year 2015. This indicates that, the bank has been showing a poor performance in managing its agricultural credit risk.

5.2 Recommendations

Based on the findings the researcher would recommend the following actions on the banks agricultural credit risk management that will help the bank in minimizing agricultural credit risk;

- ❖ The study found that the lack of agricultural expertise is one of the main problems. Since the agriculture sector as one of the priority sector in the lending strategy of the bank, there is a need to increase the capacity of the existing credit performers and employee additional agricultural professionals so as to manage well the identified major agricultural risks. Therefore, the bank should hire more agricultural expertise and special facilities like equipments and transport should be arranged.
- ❖ The study found that the MIS was not providing available and timely information and the bank marketing and research and development department are not assisting the credit department by providing macro and micro data. Thus, the bank should strengthen its MIS and the marketing, research and development departments in a way that they should have a system that help them to gather micro and macro data and there should be a strong link with credit division/department.

- ❖ The study found that little trainings are provided to the credit performers. Thus, the bank should provide regular training for all credit performers to enhance their capacity.
- ❖ Since most of the respondents replied that the loan delivery time given is not sufficient, thus, the bank should review the sufficiency of loan delivery time to evaluate the bankability of agricultural loan requests and make a revision on it.
- ❖ The study found that there was poor agricultural risk assessment. Therefore, the bank should undertake agricultural risk assessment in collaboration with other concerned bodies such as ministry of agriculture, regional agricultural bureaus and zonal agricultural bureaus. And also the bank should strengthen its communication with them.
- ❖ The study found that it is difficult to transfer/sale the securities when the borrowers default. So it would be better if the bank doesn't consider land use right as collateral.
- ❖ The bank should intensify its follow-up on borrowers to improve recovery of outstanding loan balances accruing to slow re-payers and defaulters.
- ❖ The businesses of agricultural borrowers are found at long distance from the credit processing center which makes the regular follow up difficult. Hence it would be better to hire agricultural expertise at district levels.

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APPENDIX

Appendix I
Questionnaire

This questionnaire is meant to collect data for academic study entitled “Challenges of Agricultural Credit financing in Commercial Bank of Ethiopia” for partial fulfillment of the requirement of the Executive Masters of Business Administration. As credit performers of CBE, you are kindly requested to respond to the following questions in order to bring a valuable study results.

I thank you in advance for your time devotion and genuine response.

Part I: General information on agricultural credit risk management

Please put a tick mark (x) on the space provided at the end of your choice for each of the questions stated.

1. Year of service in credit area:

≤ 1 year 2-5 years 6-10 years > 10 years

2. How do you evaluate the capacity of the credit performers of the bank to analyze or appraise the agricultural loan requests?

Very strong strong weak very weak

3. How often training on credit analysis and appraisal is provided for credit performers and credit risk management staffs.

Monthly quarterly semi-annually annually when the need arises

Not at all

4. Do you think that the training courses are relevant for evaluating the bankability of agricultural loan requests?

Yes No

5. Do you think the LDT given is sufficient to evaluate the bankability of customers' agricultural loan requests?

Yes No

6. Do you think the management information systems provide timely and useful information to evaluate risk levels and trends in the agricultural portfolio?

Yes No

7. How do you evaluate the depth of financial analysis in agricultural loan underwriting?

Very in-depth in-depth little in-depth not as such

8. Is there Structuring of loans in accordance with the type of borrowing and the expected income stream for agricultural loans?

Yes No

9. Is there a thorough evaluation of the borrower's character and history of managing debt repayment at the time underwriting agricultural loans?

Yes No

10. What type of collateral most of the time the bank used for agricultural loans? You can select more than one.

Third party guarantee Agricultural equipment
Cash deposit Land use right
Plantation of temporary crop and animals
Others (specify) _____

11. How do you rate the bank security evaluation, possession, registration and filing practices particular to agricultural loans?

Bad Good Excellent

12. Do you think that the bank has sufficient personnel who properly analyze or appraise agricultural loan requests?

Yes No

13. What are the risks inherent to the bank's agricultural lending? You can select more than one.

- Production risk associated with weather and disease
- Price risk due to market volatility and weak markets
- Lack of regular monthly income for borrowers
- Side selling” by producers to cover short-term cash needs
- Over-indebtedness of borrowers, who turn to money lenders to meet short term cash needs
- Political risk (Export bans, price caps, debt write offs, etc)
- Other (specify).....

14. How would you rate the effectiveness of agricultural credit risk management practice of the bank?

Bad Good Excellent

Part II: challenges of agricultural credit risk management in CBE

In the following table you find some factors that may affect proper management of agricultural credit risk in the bank. Response for the factors by putting a tick mark in the corresponding spaces under each number based on your agreement level.

5=strongly agree 4= agree 3= neutral 2= disagree 1= strongly disagree

	Agreement level				
	1	2	3	4	5
1. Lack of technical experts providing their independent valuation of the agricultural feasibility study.					
2. Less capability of credit performers of the bank to evaluate the technical and financial projections of agricultural projects.					
3. No or little trainings given for credit performers on how to evaluate the bankability of agricultural project.					
4. The credit performers unlikely to apply the KYC principle					
5. Lack of proper credit administration					
6. Vagaries of weather, poor weather forecasting					
7. Lack weather-index insurance measures.					
8. Lack of insurance of cover for crops and animals.					
9. Poor record-keeping and MIS reports					
10. Lack of agricultural accounting system					
11. Less availability of data and up to date information					
12. Lack of properly trained consultant to prepare agricultural project feasibility study					

13. What more factors that may affect proper management of agricultural credit risk in the bank you can mention other than those stated above? -----

Part III: the causes for agricultural non-performing loans in CBE

In the following table you find some causes for agricultural non-performing loans in the bank. Response for the causes by putting a tick mark in the corresponding spaces under each number based on your agreement level.

5=strongly agree 4= agree 3= neutral 2= disagree 1= strongly disagree

	1	2	3	4	5
1. Lower price of agricultural products					
2. Crop damages					
3. Inadequate supervision or follow up due to shortage of field officer					
4. Lack of aggressive credit collection method					
5. Delay in obtaining loan					
6. Diversion of borrowed fund					
7. Insufficient credit					
8. Willful default					
9. Lack of proper investigation before lending					
10. Lack of good communication facilities					

11. What more causes for poor agricultural loan recovery in the bank you can mention other than those stated above? -----

Part IV; strategies used by the bank for reducing and coping with agricultural credit risk

In the following table you find some strategies employed for reducing and coping with agricultural credit risk. Rate for the applicability of these strategies in Commercial bank of Ethiopia by putting a tick mark in the corresponding spaces under each number:

5=Always 4= Often 3= Occasionally 2= Rarely 1= Never

1.	Rate level				
	1	2	3	4	5
2. Geographic Diversification					
3. Sectoral Diversification					
4. Loan Size Limits (Rationing)					
5. Business/Farm Size Limits					
6. Over Collateralization					
7. Joint Liability Loan Contracts					
8. Activity/Product /crop/ Exclusion Lists					
9. Reliance on Guarantee Funds					
10. Credit (crop or livestock) Insurance					
11. Credit scoring					
12. Loan pricing					
13. Forward contracting (Future market)					
14. Proper monitoring (follow up) of loans					

15. What more strategies are used by the bank for reducing and coping with agricultural credit risk you can mention other than those stated above?

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Appendix II

Interview questions

1. Do think that the credit performers of the bank have sufficient Knowledge about agricultural markets?
2. Specifically in agricultural lending, the necessity of long distance traveling and seasonality, how do you evaluate the loan Follow-up/monitoring and what are the Credit Risk Monitoring and Supervision techniques?
3. Do you consider that the bank loan officer has enough information to project a realistic income from agricultural production for evaluating the bankability of agricultural loan requests?
4. What Strategies most of the time the bank employed to reduce and manage late Payment and default.
5. What common credit performers' errors cause for problem loans?
6. What are the challenges in evaluating the bankability of agricultural loans requests?
7. What are the risks inherent to the bank's agricultural lending?
8. What are the strategies used by the bank for reducing/mitigating/ agricultural credit risk?
9. How are NPL and loan losses in the bank's agricultural loans?
10. What are the causes for poor agricultural loan recovery (NPL) in the bank?