FACTORS AFFECTING LOAN REPAYMENT PERFORMANCE IN COMMERCIAL BANK OF ETHIOPIA WOLKITE DISTRICT

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OFACCOUNTING

A RESEARCH SUBMITTED TO DEPARTMENT OF ACCOUNTING FOR PARTIAL FULFILLMENT OF BA DEGREE IN ACCOUNTING

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Abstract

This study was conducted in commercial Bank of Ethiopia wolkite District geographical area. This study was conducted on the factors affecting loan repayment; a Case study of commercial Bank of Ethiopia, wolkite District. The main objective of this study was to identify and analyze the major factors of loan repayment performances in CBE, Wolkite District; more specifically from four different perspectives, borrowers related factors, bank related factors, business/project related factors and factors related to external environments. Both primary and secondary data would be used in this study. The primary data was collected from selected borrowers through questionnaires and pre-tested structured interview with staffs and bank managers. To define and select the population of the study, stratified random sampling was used where borrowers would be stratified based on their loan status. Both descriptive statistics and econometric analyses particularly OLS was employed to present the results and findings of the research. Finally conclusion and recommendation were given.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

Over the past two decades, the Ethiopian economy has gone through numerous changes; it substantially outperformed the average of Sub-Saharan African countries. The Government of Ethiopia adopted market oriented economic policy, made agriculture its primary priority in 1991, and implemented Agricultural Development Led-Industrialization (ADLI) strategy. Following the change of the government by 1991 the country introduced major economic reforms by accepting capitalist ideology contrary to the previous communist set up in the economy of the country by 1992 minister of finance development (MoFD, 2015) .Since then, the Ethiopian economy has gone through remarkable economic growth in all agriculture, service and industrial sector according to the World Bank report of 2016(World Bank, 2016). Although initially led by *agriculture*, the growth base is broadening, with increasing contributions to growth domestic production (GDP) from services and industry year after years. In the same token the banking sector reveals dramatic progresses and expansions in the past twenty years. Banks play a very important role in the economic development of every nation. They have control over a large part of the supply of money circulation. Banks are the main stimulus of the economic progress of a country. The financial sectors contribution to growth lies in the central role it plays in mobilizing savings and allocating these resources efficiently to the most productive uses and investments in the sector Tihitina, 2009)

The Ethiopian financial institutions have a long time history. The use of money and coins in Ethiopia has a long history, and the introduction of modern banking is nearly a century old. The original bank of Abyssinia started operation in February 1905 and its activities included keeping government accounts and financing exports. Despite the long history, which precedes the advent of modern banking throughout most of Africa, the Ethiopian financial sector has not progressed as it beginning. In the period of a shift from a mixed to a state managed economy, the development of the financial sector was stunted. Although the financial sector of Ethiopia has grown in the 1990's, compared to its state during the preceding decades, it is still in its infancy.

Non-performing loans are closely associated with banking crises. Many authors argue that the magnitude of non-performing loans is a key element in the initiation and progression of financial and banking crises. Unless properly managed and kept at reasonable standard non-performing loans (NPLs) often associated with bank failures and financial crises in both developing and developed countries (Gebru Meshesha, 2015). The issue of non-performing loans (NPLs) has gained increasing attentions in the last few decades across the globe because the immediate consequence of large amount of NPLs in the banking system is bank failure. The issue of loan default is related with none recovery/repayment of loans. When a borrower cannot repay interest and/or installment of the loan after it has become due, then it is qualified as default loan or non-performing loan. It is known as non-performing, because the loan ceases to "perform" or generate income for the bank.

1.2 Statement of the problem

In this study, focus was given to loan repayment performances which include both performances and nonperformance of loans. The reasons and factors for performances of loans or increase in NPLs are related to the cumulative effects of different factors. This is what necessitated and motivated the researcher to focus in this area. The issue of Loan repayment performance and NPL has been a subject of major concern for researchers for many years across the world and in recent years in Ethiopia.

In Ethiopia, there were researches conducted on the related topics by different researchers. For instance, Mitiku (2014) "Determinants of Commercial Banks Lending" with the objective of assessing the relationship between commercial bank lending and its determinants variables (bank size, credit risk, GDP, investment, deposit, interest rate, liquidity ratio and cash required reserve) by taking financial statement of seven years. Firafis Haile(2015) conducted a study on related subject area under a title 'determinants of loan repayment performances; a case study of wolkite Microfinance institutions' mainly focusing on borrowers specific factors using OLS model. The result identified Educational qualification, credit experience and family size were significantly affected the repayment performances. In all the above studies what affects loan repayment performances are evaluated from bank specific and borrowers' specific factors. But in this current study loan repayment performances could not limited examine bank specific factors and borrower's specific factors but beyond these it was includes bank specific, borrower specific,

business specific and other factors (macroeconomic factors). There for the researcher was identify the major factors that contributed to loan repayment performances specifically in commercial bank of Ethiopia from four broad perspectives, borrowers related factors, bank specific factors, business characteristics and external factors.

1.3. Objectives of the Study

1.3.1. General Objective

- ✓ The objective of this study is to identify Factors affecting loan repayment performance in commercial bank of Ethiopia Wolkite district.

1.3.2. Specific Objective

To achieve the general objective, the following are more specific objectives

- ✓ To identify the major borrowers' specific factors on loan repayment performance of commercial Bank of Ethiopia Wolkite district.
- ✓ To identify the Bank specific factors on loan repayment performance of commercial Bank of Ethiopia Wolkite district.
- ✓ To Identify Business related factors on loan repayment performance of commercial Bank of Ethiopia Wolkite district.
- ✓ To identify other major factors (market and weather conditions) on loan repayment performance of commercial Bank of Ethiopia Wolkite district.

1.4 Research Hypothesis

To achieve the objective of this study the researcher was test the following hypotheses concerning the factor affecting loan repayment performance in commercial bank of Ethiopia.

- ➢ H1: There is positive relationship between Borrowers' specific factors) and loan repayment performance.
- ➢ H2: There is positive relationship between Bank specific factors and loan repayment performance.
- ➢ H3: There is negative relationship between Business specific/project related factors) &loan repayment performance.

- H4: There is positive relationship between macroeconomic factors) like market and weather conditions and loan repayment performance.

1.5 Significance of the Study

This study and its finding would have significant for many more reasons. So, the findings of this study was expected to contribute a lot for different stakeholders. The following are among the main significance of this study:

For the researcher; it benefits the researcher to obtain new knowledge about problems under the study and gives clear picture about the issue of loan repayment performance.

For other researcher; Use as starting point for other studies which may focus on similar topics and issues related to factor affecting loan repayment performance in general and factors that influence the level of nonperforming loan in baking industry in particular.

For lenders; and also study was enable to lenders of commercial bank of Ethiopia how to overcome potential factors that are highly affects the level of nonperforming loan in the bank at general.

1.6 Scope of the Study

This study was conducted on commercial bank of Ethiopia under a title factors affecting loan repayment performances. Hence the scope of the study was limited to the geographical limitation of wolkite District On the other hands, the subject matter of the study would be limited to identifying major factors affecting loan repayment performances in the wolkite District. This study mainly focused on the issues that extracted in the research objective and research hypothesis.

The other important issue is regarding kind and type of data that is used in the study. The study was used secondary data from different source. Such secondary data were used in this study could be limited to the past fiscal year, 2018/2019, which is one year only.

1.7 Organization of the research

This research proposal is organized in three chapters. Chapter one provides the back ground of the study, statement of the problems, objectives of the studies, hypotheses, and significance of

the study, scope and organization of the paper. Chapter two presents the review of related literatures. Chapter three provide detail description of the methodology that was employed by the researcher. Chapter four provide results and discussions and chapter five is conclusion and recommendation.

CHAPTER TWO:

REVIEW OF RELATED LITERATURE

2 Introduction

This chapter presents the theoretical foundation of the study critically with issues pertaining to factors affecting the repayment performances of loans. A critical review of the existing literatures concerning the repayment performances of borrowers and factors which influences the repayment capacity, and Various literatures focusing both on non-performing loans and successfully performing loans are thoroughly reviewed and presented in this part of the study. Accordingly, first there is the theoretical reviews on well performing and non-performing loans which include nature and definition of NPLs, Classifications of Loans and advances, theories on bank loan and cause for loan default and performing loans. The other important part is reviewing different empirical results regarding the impact of various banks specific, borrowers' specific and macro level factors on the growth of nonperforming loan.

2.1. Theoretical Review

2.1.1. Banks and Its Importance

The term bank refers to an institution that deals with money and provides other financial services. According to Heffernan (1996), banks are defined as intermediaries between depositors and borrowers in an economy that are distinguished from other types of financial firms by deposit collection and offering loan products. Banks role in the economy of any country is very significant. They play intermediation function in that they collect money from those who have excess and lend it to others who need it for their investment.

Banks mobilize deposits and allocate the mobilized money efficiently to the most productive uses of investment in the real sector. Availing credit to borrowers is one means by which banks contribute to the growth of economies. The banking sector makes a meaningful contribution to

the economic growth of every country. Banks contribution to the growth lies in the role they play in mobilizing deposits and allocating the resources efficiently to the most productive uses investment in the real sector. So making credit available to borrowers is one means by which banks contribute to the growth of economies. Banks pool resources together for projects that are too large for individual shareholders to undertake (Bagehot, 1873). They are also considered the most important enabler of financial transactions in any country's economy and are the principal source of credit (Rose, 2002). Bank finance is the primary source of debt funding.

Commercial banks extend credit to different types of borrowers for many diverse purposes, either for personal, business or corporate clients (Saunders & Cornett, 2003). Besides, banks are also the custodians of nation's money, which are accepted in the form of deposits and paid out on the client's instructions (Sinkey, 2002; Harris, 2003). Banks accept deposits, make loans, and derive a profit from the difference in the interest rates paid and charged respectively. Some banks also have the power to create money (Fasil and Merhatbeb, 2009).

Notwithstanding all other activities, banking industry considers lending as their most important function for utilization of funds. Since the major portion of gross profit of the industry is earned from loans, the administration of loan portfolios seriously affects the profitability of banks. The most important financial institutions are commercial banks, mutual funds, security firms, insurance companies, and pension funds.

2.1.2 .Basic Requirements to Access Credit

In order to at least minimize the inevitable credit risks, according to (Ghatak and Guinnane, 1999) a thorough credit assessment should be conducted by the lenders especially concerning the borrowers` character, collateral, capacity, capital and condition (what is normally referred to in the banking circles as the 5C`s) should be conducted if they are to minimize credit risk. Such gathering of information is possible primarily from your credit application and a credit bureau report, to determine whether borrowers are able and willing to repay the debt. In the final analysis, every credit grantor attempts to answer the question: how risky is it to lend or extend credit to this applicant? This decision is relatively easy for most because the applicants will fall at one end of the continuum or the other of the six "C" s of credit.

Capacity: - is a factor in determining creditworthiness. It is assessed by weighing a borrower is earning ability and the likelihood of continuing income against the amount of debt the borrower carries at the time the application for credit is made.

Capital:-Factor in determining creditworthiness consisting of a borrower's tangible assets and resources. The presence of sufficient capital in a borrowers profile is an assurance that a debt could be paid from the borrowers assets if the need arose.

Character: - Character is determined by analyzing how a borrower has handled past obligations.

Collateral:-is a real or personal property that a borrower pledges for the term of loan. When the borrower fails to repay, the creditor may take ownership of the property by following legally mandated procedures.

Conditions:-A factor often considered with the factors of capacity, capital, and character when creditors are analyzing an applicant's creditworthiness. This factor consists of economic conditions that could affect a borrower's ability to repay, such as unemployment, seasonal work.

2.1.3. Performing Loans

The principal profit- making activities of banks are loans. In allocating funds, the primary objective of bank management is to earn income while serving the credit needs of its community. Therefore, Lending represents the heart of the industry. Loans are the dominant asset and represent 50-75 percent to total amount of assets at most banks, that generate the largest share of operating income and represent the banks greater risk exposure (Mac Donald and Koch, 2006).

Loans and advances are defined in the respective laws of different countries. In Ethiopia, under Article 13 (FDRE 592/2008) and (NBE/43/2008) Article (4.6) loans and advances are defined as:

"… Any financial assets of a bank arising from a direct or indirect advance (i.e. unplanned overdrafts, participation in a loan syndication, the purchase of loan from another lender etc.), or commitment to advance funds by a bank to a person that are conditioned on the obligation of the person to repay the funds, either on a specified date or on demand, usually with interest. The term includes a contractual obligation of a bank to advance by the bank on behalf of a person. The term does not include accrued but uncollected interest or discounted interest."

Loans and advances are the most profitable of all the assets of a bank. These assets constitute the primary source of income by banks. As a business institution, a bank aims at making a huge profit. Since loans and advances are more profitable than any other assets, it is willing to lend as much of its funds as possible. However, banks have to be careful about the safety of such advances.

Because of controllable and uncontrollable factors, it is unlikely to have 100% of collection of loan. Controllable factors are bank specific factors that are controlled by firm level and reflect overall bank credit policy as well as inadequate credit analysis, loan structuring, and loan documentation, etc. Uncontrollable factors are external factors or macro-economic factors that are not controlled by firm level. It reflect adverse economic conditions, adverse change in regulation, environmental change surrounding the borrower's operation, and catastrophic events. So, in reality some of the loan will be nonperforming (Daniel T, 2010).

So, loan may be considered as performing if payments of both principal and interest charges are up to date as agreed between the creditor and debtor. Therefore, managing loan in a proper way not only has positive effect on the banks performance but also on the borrower firms and a country as a whole. Failure to manage loans, which make up the largest share of banks assets, would likely lead to the episode of high level of non -performing loans.

2.1.4. Nonperforming Loans: Meaning and Nature

Providing loans to their customers are the principal functions of banks. In allocating funds, the primary objective of banks was to earn income while serving the credit needs of its community. Lending represents the heart in banking industry. According to (Mac Donald and Koch, 2006) Loans are the dominant asset and represent fifty percent to seventy five percent to the total amount of banks assets. In most banks loans generate the largest share of operating income and represent banks greater risk exposure.

The lending function is considered by the banking industry as one of the most important function for the utilization of funds. Loans and advances are the most profitable of all assets of banks and constitute the primary source of income by banks. Banks are business institution; hence, want to make as much profit as possible through extending loans and advances. But due concern has to

be given and banks have to be careful about the safety of such advances, according to (M. Radha, and SV. Vasudevan. 1980).

Banks provide loans and advances in the existences of asymmetric information, certain level of risks are inevitable. Accordingly, due to controllable and uncontrollable factors, it is unlikely to have 100% of collection of loan and advances in reality. Loan defaults are inevitable given the uncertainty of the future economic conditions and the existences of other controllable and uncontrollable factors. The main issue is how to minimize the rate of this risk? How to increase asset quality of financial institutions, or minimize the rate of non-performing loans by identifying factors that causes it?

Non-performing loans are closely associated with banking crises. Many authors argue that the magnitude of non-performing loans is a key element in the initiation and progression of financial and banking crises. Unless properly managed and kept at reasonable standard non-performing loans (NPLs) often associated with bank failures and financial crises in both developing and developed countries (GebruMeshesha, 2015). The issue of non-performing loans (NPLs) has gained increasing attentions in the last few decades across the globe because the immediate consequence of large amount of NPLs in the banking system is bank failure. The issue of loan default is related with none recovery/repayment of loans. When a borrower cannot repay interest and/or installment of the loan after it has become due, then it is qualified as default loan or non-performing loan. It is known as non-performing, because the loan ceases to "perform" or generate income for the bank.

Our world has experienced banking crises in different times. Banking crises in turn cause very bad economic conditions. Historically, the occurrence of banking crises has often been associated with a massive accumulation of non-performing loans which can account for a sizable share of total assets of insolvent banks and financial institutions, especially during a period of systemic crises. Nonperforming loans generally refers to loans, which for a relatively long period of time do not generate income; that is the principal and/or interest on these loans has been left unpaid for at least 90 days. The economic and financial costs of bad loan are significant. Potentially, these loans may negatively affect the level of private investment, increase deposit liabilities and constrain the scope of bank credit to the private sector through a reduction of banks' capital, following falling saving rates as a result of runs on banks, accumulation of losses

and correlative increased provisions to compensate for these losses. Impaired loans also have potential for reducing private consumption, and in the absence of deposit guarantee mechanisms to protect small depositors can be a source of economic contraction, especially when coupled with declining gross capital formation in the context of a credit crunch caused by erosion of banks' equity and asset (Fofack, 2005).

The definition of NLP varies across countries; there is no global standard to define nonperforming loans at practical level. The concept has been defined in different literatures and by different scholars using different parameters. Criterion for identifying non-performing loans varies throughout the world even between countries. Some countries use quantitative criteria to distinguish between "good" and "bad" loans like the number of days overdue, schedule payments while others rely on qualitative standards like the availability of information about the client's financial status, and management judgment about future payments as used by (Teshome, 2010).

According to the International Monetary Fund, a non- performing loan (NPL) is any loan in which interest and principal payments are overdue for 90 days or more. A number of other literatures have also tried to define NPLs in their own ways. Even though, attempts are made to define NPL by different institutions and scholars in different ways, still all of them indicate NPLs are Loans that are outstanding in both principal and interest for a long period of time contrary to the terms and conditions contained in the loan contract. Different endeavors are also made by a number of writers and authors to define what is meant by bad or Nonperforming loans as per their understanding of the subject matter. Machiraju (2001) for instance, expresses NPLs as a leading indicator of credit quality. NPLs or bad loans arise in respect of the loans and advances which are given by banks to the whole range of different projects including but not exclusively retail or wholesale, personal or corporate or short, medium or long term projects. NPLs are very sensitive elements of a bank's operations.

Another writer that attempted to define nonperforming loans are Caprio and Klingebiel (1996), cited in Fofack (2005). They defined non-performing loans as those 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. The authors further supported that non-performing loans are the loans which are not generating income. According to (Guy, 2011), Nonperforming loans are also commonly described as loans in arrears for at least ninety days and nonperforming

loans have been widely used as a measure of asset quality among lending institutions and often associated with failures and financial crises in both developed and developing world.

Non -performing loans can also be defined as defaulted loans, which banks are unable to profit from it (Tihitina, 2009). Usually loans fall due if no interest has been paid in 90 days, but this may vary between different countries and actors. Defaulted loans force banks to take certain measures in order to recover and securitize them in the best way.

From all these definition, it's very clear that nonperforming loans occurs when a debtor has not met his or her legal obligations according to the debt contract like where debtor has not made a scheduled payment, or has violated a loan covenant of the debt contract. Likewise, Ethiopia has also defined what is meant by nonperforming loans under National Bank of Ethiopia's (NBE's) Directive no, SSB/43/2008.It defines nonperforming loans as; "loans or advances whose credit quality has deteriorated such that full collection of principal and/or interest in accordance with the contractual repayment terms of the loan or advances in question" It further provides that: loans or advances with pre-established repayment programs are nonperforming when principal and/ or interest is due and uncollected for 90 (ninety) consecutive days or more beyond the scheduled payment date or maturity".

In our country, therefore, loans become nonperforming when it cannot be recovered within certain stipulated period of time that is governed by some respective laws. Accordingly, the following conditions must be met to categorize some loans under nonperforming one:

a. A loan that is not earning income;

b. Full payment of principal and interest is no longer anticipated;

c. Principal or interest is 90 days or more delinquent or;

d. The maturity date has passed and payment in full has not been made. Hence, in Ethiopia, if a loan is past due 90 consecutive days, it will be regarded as non- performing. The criteria used in Ethiopian banking business to identify non-performing loan is a quantitative criteria based on the number of days passed from loan being due.

2.1.5 Loan classifications in Ethiopia

The classification of loans into performing and nonperforming loan is not appropriate in reality. Loans may take different other status than these two extreme classifications. As per directive number SBB/43/2007 loans are classified into five classes.

1. Pass loans: these are the loans that have not become any problem, present no special risk than the normal risk inherent to any loan. Short term loans past due for less than 30 (thirty) days and medium and long-term loans past due for less than 90 (ninety) days.

2. Special mention loans: these are the loans that have shown some early signs of trouble, such as missing one payment, missing a few financial statements, deterioration of the collateral, etc. Some other events not under the borrowers control may also trigger some alarm, such as deterioration of the labor or political or security situation in the area where the business is located. Short term loans past due for 30 (thirty) days or more, but less than 90 (ninety) days and medium and long-term loans past due 90 days or more, but less than 180 days.

3. Substandard loans: - these are the loans that have become real problems, missing payments for two consecutive payments. They also present real weaknesses that jeopardize the orderly liquidation of the loan. The following non-performing loans at a minimum shall be classified substandard: Short term loans past due 90 days or more, but less than 180 (one-hundred-eighty) days, Medium and long term loans past due 180 days or more, but less than 360 days

4. Doubtful loans: There are very serious questions about the borrowers capacity to repay, leaving the bank with a strong possibility of loss, at least partial loss. The following non-performing loans at a minimum shall be classified doubtful: Short term loans past due 180 (one-hundred-eighty) days or more, but less than 360 days, Medium and long term loans past due 360 (three-hundred-sixty) days, but less than 3 years.

5. Loss Loans: these are loans that are beyond hope after all means of recovery have been exhausted, or loans that have not been performing for over 1 year. The only course of possible action is to take legal actions to foreclose and write the loans off the book as a loss. Short term loans past due 360 (three-hundred-sixty) days or more, Medium and long term loans past due 3 (three) years or more; Based on the above classification the loan of the banks considered as

performing and nonperforming. If the loan fall under pass and special mention category they are classified as performing loan otherwise it is considered as non-performing loan (DBE, 2014).

2.2. Empirical Literature

In this part of the proposal different related literatures and studies will be critically analyzed and presented. Accordingly, the first section emphasizes on any literatures and studies on factors affecting loan repayment performances anywhere in the globe followed by related literature reviews conducted in Ethiopian context and finally attempts will be made to reveal the reason why this study is found essential. Different studies have been conducted regarding the determinant of loan repayment delinquency and default especially on commercial banks, microfinance and agricultural credit borrowers by using different technique of analysis.

To begin with, Munene, et al.(2013), in his study of Factors Influencing Loan Repayment Default in Micro-Finance Institutions: The Experience of Imenti North District, revealed that there was significant relationship between the type of business, age of the business, number of employees, business profits and loan repayment default. There is strong link between technical training for loan beneficiaries and the performance of entrepreneurial businesses among the remote communities.

The study was conducted on Microfinance institutions in Kenya to establish the causes of repayment defaults in Imenti North District, Kenya using a descriptive survey design by incorporating 400 respondents of individual microfinance loan beneficiaries and microfinance institution officials using census and cluster sampling procedures for micro finance institutions officers and loan beneficiaries respectively. The data collected using both structured and unstructured questionnaires and analyzed using descriptive and inferential statistics.

A study made on loan repayment determinants under the Social Emergency Loan Scheme (SEALS) in Nigeria by Njoku and Odii (1991) employing multiple regression model based on 300 sample beneficiaries (9.3% of the total population) indicated that poor loan repayment performance was due to late release of loan funds, cumbersome loan application and disbursement procedures and emphasis on political considerations in loan approvals. In addition, loan diversion to non-agricultural enterprises as well as low enterprise returns resulting from low adoption rate of improved agricultural technologies contributed to poor loan repayment

performance of small holders. Loan volume, years of farming experience, farming as major occupation, years of formal education, family size, credit experience, value of assets and interest paid on loan were all highly significant determinants of loan default. The coefficients of credit experience ,education qualification, family size and are positive while the coefficients for years of gender, lending interest rate, value of assets are negative.

Michael (2006) has analyzed the impact of factors on loan repayment performance in informal sector of financial institutions in Addis Ababa by grouping the independent variable (i) Borrower related causes; (ii) Causes related to business operation; (iii) Lender related causes and (iv) Extraneous causes, A positive coefficient shows that the variable is associated with a higher probability of being in the delinquent category than that of being in the good credit risk category. On the other hand, a negative coefficient indicates that the variable is associated with a lower probability of being in the delinquent category than that of the good credit risk category.

In another relevant study by Abreham (2002) an investigation of determinants of repayment status of borrowers and criteria of credit rationing were conducted with reference to private borrowers around wolkite area who are financed by the DBE. The estimation result employing OLS model revealed that having other source of income education, work experience in related economic activity before the loan and engaging on economic activities other than agriculture are enhancing while loan diversion, being male borrower and giving extended loan repayment period are undermining factors of loan recovery performance.

The estimation results of the descriptive statistics and the ols model show that education, income, loan supervision, suitability of repayment period, availability of other credit sources and livestock are important and significant factors that enhance the loan repayment performance, while loan diversion and loan size are found to significantly increase loan default. In addition, female borrowers were found better in terms of loan repayment.

WondimagegnehuNegera (2012) in his study “determinants of NPLs on commercial banks of Ethiopia” revealed that underdeveloped credit culture, poor credit assessment, aggressive lending, botched loan monitoring, lenient credit terms and conditions, compromised integrity, weak institutional capacity, unfair competition among banks, willful defaults by borrowers and their knowledge limitation, fund diversion for unexpected purposes and overdue financing has

significant effect on NPLs. Conversely, the study indicated that interest rate has no significant impact on the level of commercial banks loan delinquencies in Ethiopia.

In order to analyze such determinant factors for successful loan repayment performance at bank, researches has done at north District of development bank of Ethiopia (DBE). According to the study of Kibrom (2010), factors that determine loan repayment performance include; borrowers perceived need that is borrowers have to be given an opportunity to borrow for their perceived needs, competence that is the borrowers past personal and profit record, past prosperity etc. Borrowers personal character which were related with personal qualities of the borrower including age, gender, educational level, house hold size, management capacity, loan utilization, availability of other sources of income, bank experience etc. Factors which are related with the bank such as structure of the bank, change in the lending policy, way of appraising the project, responsibility and accountability of the staff members and external factors related with the macroeconomic condition of the country, government policy and natural factors had analyzed.

Million, et al. (2012) examined the determinants of loan repayment performance among smallholder farmers in East Hararghe Zone, Ethiopia specifically Kombolcha and Babile Districts. The study by Aregaseyoum(Dr) and TadeleTesfaye(2016) on factors affecting nonperforming loan in central District of Development Bank of Ethiopia, using descriptive statistics including mean, frequency and percentages and processed through computer loaded SPSS software and by collecting both primary and secondary data. The study mainly focuses on bank specific and borrowers' specific factors to establish the relation between different variables and the nonperforming loans.

The study by kibromTadesse (2010) conducted on successful loan repayments was on Development Bank of Ethiopia in North District. It mainly focuses on determinants of successful loan repayment performances in Northern part of the country where the loans are mainly allocated for industrial investments, and did not cover the other side of repayment performances (which is NPLS).

Another study conducted on factors affecting nonperforming loans by AregaSeyoum(Dr) and TadelleTesfaye(2016) was conducted on Development Bank of Ethiopia Central District where the economic sector the loan was utilized was mainly industry and commercial horticulture. The

study focuses basically on non-performing loans and limited to bank specific and borrowers' specific factors to establish relationship between variables and non-performing loans.

2.3 Research gap

All of the above empirical studies fail to address the fact that factors other than those bank specific and borrowers specific factors also affect a repayments of loans.. Furthermore, now a day there are many changes regarding the bank policy, interest rate, introduction of new products, organizational structure as well as the general macroeconomic condition of the country and the world.

Therefore, this research will contribute towards filling the gap by identifying and analyzing the factors affecting loan repayment performances in wolkite District, in which no research is conducted and most of the borrowers are engaged in the agricultural and service giving sectors.

CHAPTER THREE:

RESEARCH METHODOLOGIES

3. Introducti0on

This Chapter presents the methodology that provides a detailed direction about the methods that the researcher was used in conducting the research. Hence, the research design, description of the study area, data type and source, methods of data collection, sampling techniques, methods of data analysis and definition variable, measurement and description of variables were discussed.

3.1. Research Design

Research design is a comprehensive plan. It is a blueprint for empirical research aimed at answering specific research questions or testing specific hypotheses (AnolBhattacherjee, 2012). Research design is the program that guides the researchers in the process of collecting, analyzing and interpreting the data. Therefore, the nature of problem and objective of any study usually determine the type of research design adopted by researcher. A choice of research design reflects the priority of a researcher about the dimensions of the research process and methods. The objective of this research is to identify the factors affecting loan repayment performances in commercial Bank of Ethiopia, wolkite District. The data that will be collected mainly focus on description of borrower's characteristics, lending institution/bank related factors, business/project related factors and external factor that affects loan repayments and their relationship among the dependent and explanatory variables. Therefore, both qualitative and quantitative research method was used in this study.

3.2. Data Type and Source

The data that was employed in this study were both primary and secondary data. Accordingly, the primary source of data was collected through questionnaire and interviews from the sample population. A structured and semi structured questionnaire with open ended and closed ended type was distributed.

Primary data: The primary data was collected from original source (borrowers) through questionnaire. The primary data were collected through semi-structured questionnaire distributed to the borrowers; and interviews was conducted to the bank officials and staffs. The questionnaire was included both close and open-ended questions.

Secondary data: secondary data was used as a source of data in this work to determine the repayment performances of the bank in the previous consecutive years and to determine the sample size population of the study. Especially, annual reports, loan portfolio of the banks and others publications of the bank was used as a secondary data.

3.3. Method of Data Collection

In order to achieve the objectives stated in the preceding section and considering the nature of the problem and the research perspective, the researcher was used both quantitative and qualitative data. The Primary data was collected through primary data collection techniques mainly using structured and semi structured questionnaire and interviews with the officials and senior officers of the bank. Secondary Data was directly gathered from records and published documents of the bank.

3.4. Population and Sampling Method

Determining type and method of sampling mainly depends on the types of population that the study covers. According to (Kothari, 2004), if the population from which a sample is to be drawn does not constitute a homogeneous group, then stratified sampling technique is applied to obtain a representative sample. The usual method, for selection of items for the sample from each stratum, resorted to is that of simple random sampling.

Where, n=sample size, N=total size of the target population, e=level of precision (10%).Using this formula the statically acceptable sample size from the given population with maintaining a 90% confidence level is found to be (94) in the study area.

n = = 94

Hence, Sample selection was based on stratified sampling where borrowers was selected based on the diversified investment activities they are carrying on and in proportion to the population classification in terms of their loan status.

3.5. Method of Data Analysis

The data that were collected through the above stated techniques was thoroughly coded and checked for consistency and analyzing and interpreting using both descriptive statistics and econometric analysis. Accordingly, the researcher was analyze the data using descriptive statistics (frequencies, percentages, mean, and standard deviation) to obtain information on the factors affecting loan repayment performances and OLS was used to identify the factors of loan repayment ability in commercial Bank of Ethiopia wolkite District. Descriptive statistics would be employed to analyze the data and the results was tested with non-parametric tests of significance, whereas econometric analysis, specifically OLS regression was used to identify statistically significant variables in relation to the dependent variable.

A loan repayment performance refers to the ability/capability of borrowers to duly repay loans or fail to repay their loans. Hence, the dependent variable is dummy variable. If Borrowers experienced well repayment performances the dependent variable takes a value of 1, and if the borrowers fail to repay their loans as per the terms of agreements/contracts the dependent variable take the value of 0. So, the level of significance and influence of each independent variables where defined and identified using both descriptive and econometric analysis against the dependent variable. Finally the analyzed data was presented in the form of table and percentage in order to make the data understandable and attractive detailed statement.

3.6 Model Specification

The researcher may obtain numerical values of the estimate of parameters such as ordinary least square, maximum likelihood and method of moment and soon. Among these methods the study uses ordinary least square to estimate the model because of the nature of the variable. The

dependent variable of this model is continuous hence; if the dependent variable of this model is measurable use the ordinary least square model. When ordinary least square model is use to estimate the data with quantitative variable the resulting model is linear, that means the dependent variable and independent variable have linear relationship because of these the researcher applies ordinary least square model. The technique may be applied to single and multiple explanatory variable and also explanatory variable that have appropriate code.

Most of the model is loan performance activity study in both developed and developing countries is regression model they typically use the form of To analysis the standard multiple linear regression model is used and the model of ordinary least square method applies for estimating the parameter of multiple linear regression model are given by the form of; Yi=B0+B1X1+.....BkXki+Ui

Where, Yi=the dependent variable, Xi=refers the independent variable, Ui=error term, the B's are regression coefficients they are unknown and they are assumed to have a fixed value, B0=is the intercept coefficient. The equation of the study is generally build around two sets of variable namely dependent variable loan performance and independent variable education level, gender, experience, diligence, sex, age, family size,make,lend,weather condition.

LRP =β1 + β2(Gedr) + β3(Ag) + β4(Mar) + β5(Educ) + β6(Lnamt) + β7 (Int) + β8 (KYC)+ β9(Mrkt) + β10 (Wthr)) + β11 (dili)

Where LRP, Gender, Age, Marital status, Education level, Experience, Lending interest rate, diligence, Family size, Market condition, Weather condition denotes Loan Repayment performance.

β1, β2, β3, β4, β5, β6, β7, β8, β9, β10, β11 are the coefficients associated with each independent variable which measures the change in mean value Yi per unit change in their respective independent variable regress loan performance as a dependent variable on the selected linear combination of independent variables using multiple linear regression model.

3.7 Variables of the Study

In order to achieve the extracted objectives of this study, the researcher will selected different variables based on literatures that could affect the dependent variables either positively or

negatively. Hence, based on availability of data the variables selected in this research are to signify the loan repayment performance and the variables which are attributable and likely to influence the dependent variable will be listed down with their respective expected sign.

3.7.1. The Dependent Variable

The dependent variable of the study is loan repayment performances. Loan repayment performance (LRP) is the ability to repay the loan as per the loan agreement and/or inability to repay the loan by either failing to complete the loan as per the loan agreement or neglect to service the loan. Dependent variable defined Taking in to consideration the loan status classification by national bank of Ethiopia, according to the loan manual of Development bank the dependent variable of this study loan repayment performances is dummy variable and all other independent variable are encoded as dummy as well as categorical explanatory variables, which is appropriate to use STATA software.

3.7.2 Independent variables

Selection of variables is based on empirical literature on the factors affecting loan repayment performances. While guided by the literature review, the researcher also will considered other factors likely to influence loan repayment. To establish the factors affecting loan repayment, the researcher summarized variables in to four categories, factors related to characteristics of the borrowers, factors related to lending institution, factors related to the nature of the business/project and other external factors.

Whether conditions: this is dummy variable taking 0 if whether condition didn't affected repayment and1 if whether condition affected repayment of the borrower. Now days the global whether condition is threatening the life of human beings. El Niño for instance, caused some unpredictable and unbelievable disasters in the last year. So, shows negative sign towards repayments of loan.

Lending Interest rate: It is a dummy variable taking 1 if increase in interest rate negatively affected repayment performance and 0 if otherwise. Increase in lending interest rate, increases the amount coolant be repaid per installments. Hence, it is expected to have positive relation with the default.

Credit Experience: it is a continuous variable but rearranged as dummy taking 0) where borrower have no any credit experience and 1) if borrower have credit experience. Borrowers who have been in business longer are expected to be more successful with their enterprise. They have more stablesale and cash flows than those who have just started. Thus, those who are more experienced will have high repayment rates. Hence, it is expected that experience will positively affect loan repayment performance of borrowers.

Family size: this variable is all about the number of dependents on the borrower. Hence, using this variable comparison is made between borrowers having small family size with those having medium or large family numbers against their loan repayment performances. It is a continuous variable (measured in number of members of farm family but arranged as 1 for small family size(1-3)2formediumfamilysize(4-5)and3for large family size(above 6); it is assumed that the larger the family size the negative influence on loan repayment performance which is attributed to higher house hold expenses. There is a possibility of loans diverted to unintended purposes because of many responsibilities resulting from meeting the needs of many members of the family. Hence borrowers with large family sizes may have lower repayment performances.

Education: generally education is among the primary tool that has transformed the world order as it stands today. Education improves once performance quality. Higher educational levels enable borrowers to comprehend more complex information, keep business records, conduct basic cash flow analysis and generally speaking, make the right business decisions. So, it is important to test whether education level difference between and among borrowers have brought any change in the loan repayment performances. This is a continuous variable but arranged as categorical variable, taking 1 if the borrowers have no formal education, 2 where the borrowers attended primary educational, 3 if borrowers attended secondary educational and 4 if the borrowers attended college/university education. This factor is expected to have a positive impact in loan repayment performance, because higher educational levels enable borrowers to comprehend more complex information, keep business records, conduct basic cash flow analysis, and Make the right business decision. Hence borrowers with higher levels of education may have higher pentane performances.

Gender: determines whether male or female borrowers perform better than the other. It is a dummy variable taking, 0 for female and 1 for male. The female borrowers have a tendency for

better loan repayment. This means that lending to women can lead to their economic empowerment and inculcate them a culture of hard work and financial discipline, which can lead to high loan repayment rates, thus women borrowers may have high loan repayment performance. Thus being women expect eddo have appositive singular payment. Age: age of borrower in years. It is a continuous variable but rearranged as 1) young age (15-30) 2) mature age (31-50) and 3 old age (above 51). It is argued that older borrowers are wiser and more responsible than younger borrowers. On the other hand younger borrowers are argued to be more knowledgeable and more independent. That means on the other way round, the older person may have a lot of experience on business, which may lead to loan repayment, and the younger one may have limited experience attributed to his age and this may lead to loan repayment. Hence, age contribution to loan repayment performance can not be pre determined. Marital status: this variable evaluates whether single, married or divorced borrowers showed an difference in repayment performances. It's generally believed that marriage brings stability to once life and 43 equips how to act towards something responsibly. It is a continuous variable but re arranged as a dummy variable; taking 1 if the borrowers are single, 2 if married and 3 if the borrowers are divorced /widowed. The borrowers who engaged in marriage can have financial management experience in their home. Thus ,having such managing experience can be reflected in their loan utilization. The expected is negative to being default loan.

Sex of the respondents:-It is the maleness or femaleness of household head that operates micro and small scale enterprise. It is the dummy variable that can be considers in the model being categorized as 1, males and 0, otherwise. It is expected that male operator micro and small scale enterprise are more than female operator. Its expected sign is positive.

Know Your Customer/Due diligence (KYC): It is a screening stage evaluation of the borrower and the business whether it is creditworthy or not. It is an entry point assessment. Conducting proper due diligence 45 is require in every applications to access credit from Development bank of Ethiopia. In this stage the borrowers all round aspects are assessed in relation to its personal characteristics from past to present, fulfillment legal documents to be a creditor, project management, capital adequacy, credit relation and experience, availability of inputs and identification of risk .Know Your Customer/Due diligence (KYC) is a dummy variable that well

done due diligence taking as 1 and other wise 0. Therefore, adequate due diligence, the expected sign for being default is negative.

3.7 Diagnostic test

Multi-collinearity Test

Normally multi-co linearity problem is one of the violations of the CLRM assumptions OLS that suggests the explanatory variables are highly correlated due to this the OLS estimation is no longer BLUE and affects the estimation of the coefficient, so that they are no longer stable in the degree of the statically significance magnitude and sign (Gujarati, 2009). The adjusted R2 become too high and not statically significant parameters and high R2 are some of the indicator of multi-co linearity. Detection of testing can be taken through an examination of R2; if this is high but the researcher has few significant t-values then the researcher may have this problem in the model. So, to test this problem we apply variance inflation factor (VIF). The decision rule is if VIF is greater than 10 there is a problem of multi-co linearity, while if VIF is less than 10 there is no problem of multi -collinearity.

Heteroscedasticity Test

This problem refers to the distribution of the error term where the variance of the error term Differs across observation, but an important assumption of the classical linear regression model is that the disturbance term appearing in the population regression function is homoscedastic i.e. they all have the same variance. But when there exists an outlaying observation in relation to the observation in the sample the assumption of constant variance is violated and this violation called Heteroscedasticity. So, we can say that a critical assumption of the classical linear regression model is that the disturbance term ui have all the same variance. If this assumption is not satisfied we say that there is a problem of Heteroscedasticity. It may be the case, however, that all of the disturbance term does not have the same variance. This condition of non-constant variance or non-homogeneity of the variance is known as Heteroscedasticity. In classical linear regression model, one of the basic assumptions is that the probability distribution of the disturbance term remains the same over all observation of xi i.e. the variance of each ui is the same. The detecting mechanism of heteroscadascity might be formal and informal method, but informal method is does not undertake the formal testing procedure such as t-test and f-test. It is

based on graphical illustration, while formal testing methods includes white test. GoldfieldQuandt. test and brush-pagan test.

Normality Test

The test of normality of the residual is one of the important post estimation diagnostic tests in empirical studies. This study uses the multivariate extension of the Jarque-Bera (JB) test for residual normality. Marquee–Bera is test statics for testing whether the series is normally distributed. The test static measures the difference of the skiwness and kurtosis of the series with those from the normal distribution. Normality test is used to determine if the data is well modified by a normal distribution and to compute how likely it is random variable is underling the data is set to be normally distributed in descriptive statics term, one measure of goodness of fit normal model of the data.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter reports the results of the study conducted to identify the factors affecting loan repayment performances. The data collected from survey questionnaire were carefully coded and checked for consistency and prepared for analysis and interpretations. The analysis was performed using descriptive statistics and with the help of stata. Therefore, this chapter presents analysis of the result and discussion to achieve research objectives based on data obtained from the questionnaire respondents and interview made with senior staffs and managers.

The first section of this chapter discusses the back ground of respondents followed by the result of descriptive statistics of explanatory variables. In this part of analysis, factors of loan repayment performances included under four categories (borrower related, business related, lender related and external related) and other challenges of borrowers which affects repayment performance were analyzed by using descriptive statics like percentiles, means, standard deviation and frequency. Besides, the second section discusses the econometrics result of OLS & the analysis of significant variables.

4.2. Background Information of Respondents:

Questionnaire response rate and interview success rate: The questionnaire was distributed to a population selected using stratified random sampling. Accordingly, there are two groups of population, performing loans (borrowers) and nonperforming loans (borrowers), 60 and 34 respectively. Out of the ninety-four questionnaires physically distributed to the target population, ninety-four usable responses were collected. This represented a response rate of 100 percent and implies there is no unreturned questionnaire.

Out of the ten projected interviews, nine of them were successfully conducted, giving a success rate of 90 percent. The left interviews were unsuccessful due to the targeted interviewees were time constrained. Despite this, the target population was fairly represented considering that managers who are relevant to the study were interviewed.

Table 4.1 questionnaire and interview success rate

	Target respond ate	*Actual respond ate*	*Success rate*
questionnaire	*94*	*94*	*100%*
Interview	10	9	90%

Source: Own computation from primary data 2018

4.3. Descriptive Analysis

The descriptive statistics for dependent and independent variables are presented below. The dependent variable of the study is loan repayment performances and measured by performances of loans and/or nonperformance of loans/impaired loans. Scholarly literatures presented under chapter two of this work, classified the factors affecting loan repayment performances in to four broad categories. Customer/borrower related factors (include age, gender, experience, family size and education level of the borrower), lender institution related factors, business related factors (such as having other business, business form, business sector, business income,) and finally eternal factors (like market problem, weather condition and others). The detail descriptive and discussions were presented for every individual factors under all these groups.

4.3.1. Borrowers Related Factors

To begin with, borrower's specific factors are the first most important factor related with personal characteristics of the borrower and it's important in determining performing and nonperforming loans based on the personal behavior of the borrower. Under this research, gender, age, marital status, education level, credit experience and family size were identified to evaluate their contribution in loan repayment performances of the borrower. From among these variables, gender and credit experience were encoded as dummy explanatory variables whereas age, marital status, education level and family size were

encoded and treated as categorical explanatory variables. So, now let us see all discrete and categorical variables from loan repayment performances perspectives.

Gender of Borrower: There is a belief among many credit analyses/specialists that female are better payers than male borrowers, taking into consideration of their being more entrepreneurial that results from assuming more responsibilities in the internal affairs of a household. (Vigano, 1993) Also Khanker et al. (1995) explains that loan recovery rates have been higher for women than for men.

the relationship between genders of borrowers with their repayment performances. In terms of gender composition, from the total 94 survey population of the study the super majority of them 72 were male borrowers. The detail information is presented in the table below.

Table 4.2 gender in repayment performance

Gender	Frequency	Percentage
Male	72	76.6%
Female	22	23.4%
Total	94	100%

Age: is one of the independent variables related with borrowers' characteristics and determined loan repayment performance of the borrowers. The survey results revealed that from total respondents 34 (36.17%) were at their young age/less than the age of 30 years, 40(42.55%) respondents were at their maturity age/ranging 31-50 years and the reaming 20 (21.27%)respondents were old/above 60 years old.

Marital status of borrowers: Regarding the marital status of the borrower's, out of the 94 sample borrowers, as depicted on table 4.2, 40.67%, 54%, and 5.3% respondents were single, married, and divorced respectively. The single respondents were accounts for non-default and default 70.5% and 29.5%. Married respondents were 75.3% and 24.7% non-defaulter and defaulter respectively. Among of Divorced respondents, 75% non-defaulters and 25 defaulters. This indicated that compared to single borrowers married and or divorced borrowers were better in paying their credit. The reason may relate to the social responsibility level of married and divorced borrowers.

This result is same with the result of Joseph at, et al. (2013), Wongnaa1, et al, (2013)

Table 4.3 age and marital status

Marital status	Frequency	Percentage

Married	48	51.1%
Unmarried	18	19.1%
Widowed	8	8.5%
Divorced	20	21%
Total	94	100%

Education: The survey on the educational characteristics of the borrowers shows that 32 (34%)of the borrowers didn't attended any formal education, some 16 (17% borrower attended lower level/primary education, the rest 22(23.4%) and 24(25.5%) of the borrowers attended secondary school or tertiary level and joined college or university respectively as shown in

Table 4, 4 educational qualifications

Educational status	Frequency	Percentage
Illiterate	32	34
Primary(1 up to 4)	16	17
Primary(5 up to 8)	22	23.4
Secondary(9 up to 12)	24	25.5
Total	94	100

Family size: In this study family size is used to express the number of dependents on the borrower. Accordingly, the influence of family size on repayment performances of borrowers is assessed as follows; out of the total sample borrowers, 30 of them have small family size and the repayment performances of small size household is 31.9% defaulted . The other 45 borrowers were having medium size family, out of which 47.9% of them were defaulted and the remaining 20.2% non-defaulted. Lastly, 19 borrowers were responded having large family from which 20.2% defaulted and . The statistical survey from the above table showed as family size increases the likelihood of being default increase and vice versa.

Table 4.5 family size

Family size	Frequency	Percentage
0-4	30	31.9
5-6	45	47.9

>6	19	20.2
Total	94	100

Credit Experience: Another borrower related factor is credit experiences of respondents. The credit experience of respondents shall be expressed in terms of years or months, hence it is a continuous variable, but rearranged and encoded as dummy variable taking 1 if credit experience exists and o otherwise. Credit experience helps borrowers in utilizing the loan for intended purpose and on how to prepare payments as per the schedules.

Diligence,Another related factor is kyc.due diligence of respondents. The diligence of respondents shall be expressed in terms of years or months, hence it is a continuous variable, but rearranged and encoded as dummy variable taking 1 if diligence exists and o otherwise. diligence helps in utilizing the loan for intended purpose.

Table 4.6 diligence

Diligence	frequency	percentage
Yes	56	59.6%
No	38	40.4%
Total	94	100%

Weather condition, as regards to not bad conditions, 64 (68%) of sample respondents answered that there were not a problem of condition especially selling at higher price than expected one and the main reason of weather condition were due to international price fluctuation and less demander for the product. 30(32%) were nonperforming. And out of 75 respondents that were affected by market situations, recognize the existence of significant relationship between weather conditions and the dependent variable.

Table 4.7 weather condition

	frequency	percentage
Bad weather	30	32%
Not bad weather	64	68%
Total	94	100%

Landing interest rate: this is arranged as dummy variable taking 0 if it is not lending is not sufficient in cases of failure and 1 if it is lending is sufficient. Lending institutions needs grantee for the money they provide for their customers. The value of such lendig is believed to be more or equal to the amount of money permitted for the borrower.

Table 4.8 landing interest rate

	frequency	percentage
lending	58	62%
Not lending	36	38%
Total	94	100%

4.4. Econometric Analysis

In contrast to descriptive analysis, an econometric analysis or statistical analysis is the method of data analysis where mainly focus on coefficients, R-square, chi-square, standard error, tests, log likelihood ratio etc., which can be done using different software's such as STATA, SPSS and others. In this study STATA version 12 was adopted for the analysis of OLS regression coefficients and different tests. So, before running the binary logistic regression, the explanatory variables were checked using the following tests.

4.4.1. Model Tests

According to (Gujarati, 1995), for the econometric estimation to bring about best, unbiased/reliable and consistent result, it has to fulfill the basic linear classical assumptions. The basic assumptions include: linearity in parameters of the regression model, for given explanatory variables the mean value and the variance of the disturbance term (Ui) is zero and constant

(homoscedastic) respectively, there is no correlation in the disturbances, no correlation between the regressors and the disturbance term, no exact linear relationship (multicollinearity) in the regressors and the stochastic (disturbance) term Ui is normally distributed. Naturally, therefore, if these assumptions do not hold well on what so ever account, the estimators derived may not be efficient. Based on the type of data (cross sectional type) used in this study, the most important tests such as heteroscedasticity, multicollinearity are conducted and the appropriate remedies were taken.

4.4.1.1. Test for Multicollinearity Assumption

The presence of multicollinearity affects the OLS estimators and makes them inefficient and inconsistence. Therefore, the problem of multicollinearity must be tested. In this study variance inflating factor (VIF) was employed to test multicollinearity of independent variables.VIF shows how the variance of estimator is influenced by the presence of multicollinearity.

From the regression result VIF (8.47) is less than 10 for all independent variables that include in the model. From this, the researcher concludes that there is no multicollinearity problem between explanatory variables. It is possible to estimate the individual effect of each variable on dependent variable.

Figure 4.1 multicollinearity

```
. vif
```

Variable	VIF	1/VIF
Age	26.44	0.037817
Fams	24.34	0.041086
expr	12.39	0.080711
lendin	6.93	0.144320
weathc	5.15	0.194066
Edu	3.23	0.309385
Martstut	3.05	0.327880
marketc	1.08	0.923948
dilig	1.06	0.942887
gender	1.04	0.963272
Mean VIF	8.47	

4.4.1.3. Test for Normality assumption

The model assumes that the random variable u has a normally distributed. Symbolically: $u \sim N(0, \delta^2 U)$, which reads as: u is normally distributed around zero mean and constant variance $\delta^2 u$. This means that small values of u's have a higher probability to observed than large values. This assumption is necessary for constructing confidence intervals. If the assumption of normality is violated, the estimates of parameters are still unbiased but the statistical reliability by the classical tests of significance of the parameters cannot be assessed because these tests are based on the assumption of normal distribution of the u. The normality test adopted sk test for

Not normal distribution. This test computes the skewness, heteroscedasticity and kurtosis measures of the OLS residuals and it follows the chi square distribution (Gujarati, 2004). From the result p-value< 5% then it is normally distributed.

Figure 4.2 normality

```
. sktest loan Age gender gender expr expr Martstut Martstut dilig dilig Fams Edu
>  marketc weathc lendin lendin

                    Skewness/Kurtosis tests for Normality
                                                              ------- joint -------
    Variable |        Obs  Pr(Skewness)  Pr(Kurtosis) adj chi2(2)    Prob>chi2
-------------+-------------------------------------------------------------------
        loan |         94     0.0076        0.6246        6.80         0.0334
```

4.5 Heteroscedasticity

In general, heteroscedasticity is one of the problems of cross sectional data where it has assumed that homoscedasticity or constant variance in basic classical linear regression assumptions. Due to the indication for presence of such defects in the data were collected according to White's test, Breusch-

Pagan test and residual plot test, the study was applied robust technique of estimation in the STATA set up which can easily detect the problem. The result is annexed at the annexation part of this paper.

Figure 4.3 heteroscedasticity

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of loan

         chi2(1)      =    16.76
         Prob > chi2  =   0.0000
```

```
. regress loan Age gender expr Martstut dilig Fams Edu marketc weathc lendin
```

Source	SS	df	MS	Number of obs	=	94
				F(10, 83)	=	99.64
Model	399.931162	10	39.9931162	Prob > F	=	0.0000
Residual	33.313519	83	.401367698	R-squared	=	0.9231
				Adj R-squared	=	0.9138
Total	433.244681	93	4.65854496	Root MSE	=	.63354

loan	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Age	.0243227	.0342153	0.71	0.479	-.0437301	.0923756
gender	-.0902561	.1692067	-0.53	0.595	-.4268015	.2462893
expr	.924942	.1448053	6.39	0.000	.6369302	1.212954
Martstut	.2117615	.2695256	0.79	0.434	-.3243142	.7478371
dilig	.0524277	.1353565	0.39	0.700	-.2167909	.3216462
Fams	.4786498	.16293	2.94	0.004	.1545885	.802711
Edu	.1534387	.0300943	5.10	0.000	.0935824	.2132951
marketc	.169952	.1605587	1.06	0.293	-.1493927	.4892968
weathc	.054138	.3130328	0.17	0.863	-.5684716	.6767476
lendin	-.6515383	.3892936	-1.67	0.098	-1.425828	.122751
_cons	-1.56315	.7827969	-2.00	0.049	-3.120102	-.0061986

```
. vif
```

Variable	VIF	1/VIF
Age	26.44	0.037817
Fams	24.34	0.041086
expr	12.39	0.080711
lendin	6.93	0.144320
weathc	5.15	0.194066
Edu	3.23	0.309385
Martstut	3.05	0.327880
marketc	1.08	0.923948
dilig	1.06	0.942887
gender	1.04	0.963272
Mean VIF	8.47	

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of loan

         chi2(1)      =    16.76
         Prob > chi2  =   0.0000

. imtest
```

```
      Source |       SS       df       MS              Number of obs =      94
-------------+------------------------------           F( 10,    83) =   99.64
       Model |  399.931162    10  39.9931162           Prob > F      =  0.0000
    Residual |   33.313519    83  .401367698           R-squared     =  0.9231
-------------+------------------------------           Adj R-squared =  0.9138
       Total |  433.244681    93  4.65854496           Root MSE      =  .63354

------------------------------------------------------------------------------
        loan |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
         Age |   .0243227   .0342153     0.71   0.479    -.0437301    .0923756
      gender |  -.0902561   .1692067    -0.53   0.595    -.4268015    .2462893
        expr |    .924942   .1448053     6.39   0.000     .6369302    1.212954
    Martstut |   .2117615   .2695256     0.79   0.434    -.3243142    .7478371
       dilig |   .0524277   .1353565     0.39   0.700    -.2167909    .3216462
        Fams |   .4786498     .16293     2.94   0.004     .1545885     .802711
         Edu |   .1534387   .0300943     5.10   0.000     .0935824    .2132951
     marketc |    .169952   .1605587     1.06   0.293    -.1493927    .4892968
      weathc |    .054138   .3130328     0.17   0.863    -.5684716    .6767476
      lendin |  -.6515383   .3892936    -1.67   0.098    -1.425828     .122751
       _cons |   -1.56315   .7827969    -2.00   0.049    -3.120102   -.0061986
```

4.6 Interpretation of the estimated econometrics result

LRP =β1-0.902561 (Gdr) +0.243227(Ag)+0.2117615(Mar)+0.1534387(Educ) + 0.924942(Exp)-0.6515383(Lnamt) + 0.524277 (dilig) + 0.4786498 (fam) + 0.169952 (Mrkt) + 0.54138 (Wthr)

Family size: As shown under the (OLS) regression table above, family sign showed significance to the dependent variable. It was hypothesized that a borrower having larger family number is likely to default than a borrower having small family number, and vice versa. The coefficient of family size is positive related to the dependent variable, loan repayment performances and is strongly significant at 5% level. Increasing borrower's family size by one person decreases the likelihood of being able to repay one's loan. This means that the smaller the size of the borrower family, the higher the probability that borrowers will be able to repay their loans and vice versa. This result and conclusion is similar with the results under descriptive analysis is part of the study and the reason of such may resulted from the fact that large household sizes increased the household head's domestic responsibilities and thereby constituted leakage to the household's income stream. As household income depleted, liability of the household increased and there would be greater tendency to divert loans meant for borrower production resulting in default in loan

Repayment. This result is similar with (Abbafita, 2005 and Berhanu, (2005).

The null hypothesis H1 is accepted. The null hypothesis stated that the increase in number of dependents/family increases the probability of defaulting and decreases the likely hood of performing the loan. The (OLS) regression result indicated this same result; hence accepted.

Educational qualification; educational level is significant at 5% and positively related to borrowers ability to repay their loans. An increasing the level of education has the effect of decreasing the likelihood of defaulting by 0.153% ceteris paribus. the borrowers whose educational is at tertiary level have the probability of decreasing default. This implies that borrowers that were more educated may have access to business information, use their personal knowledge, skill and experience to properly manage their loan and repay timely. This result was consistent with preceding descriptive analysis of this study and these results are resembled with the output of Michael (2006) and Olomola (2009) described that default rate decreased with education level of the borrower increased.

The null hypothesis H1 is fail to reject. The null hypothesis stated that there is positive relationship between education and loan repayment performances, which found true under the regression result. So, the null hypothesis is accepted.

Credit experience: The coefficient of this variable was expected to influence the repayment capacity positively and the result of (OLS) regression shows the same as expected. P-value of the credit factor is statistically significant at 5% (0.050) and has a positive influence on the dependent variable, which is in line with the research hypothesis (there is a positive relationship between credit experience and repayment performances). The coefficient value of the variable by 0.924 indicated a percentage rise/decline in years of experience resulted performing/ nonperforming of the loans. The coefficient value tells us there is a strong positive relationship between credit experience and repayment performances. The implication of this result is that those who had long credit experience have good knowledge of managing and handling the financial aspects of their business and at better position than those who never had such exposure. This result is the same with results presented under descriptive part of this research. This result agreed with (Firafis Haile, 2003).

The (OLS) regression and chi square of fail to reject hypothesis H1. The null hypothesis which stated having credit experience better for repayment and there is positive relationship with repayment performances. The regression result showed this assumption true and the hypothesis is accepted.

CHAPTER FIVE

5. CONCLUSION AND RECOMMENDATION

The preceding chapter presented results and discussion of the study, while this chapter deals with conclusion and recommendation of the study based on the findings. Accordingly this chapter is organized into two sub-sections. The first section of this chapter discusses the conclusions part briefly and the second section presents recommendation for the findings.

5.1. Conclusion

The objective of this research is to identify and determine factors affecting loan repayment performances at wolkite District. To achieve this broad objective, the study used both qualitative and quantitative data and the primary data was collected from 94 borrowers, nine senior expertise and three managers at different level of the bank using semi structured open ended and close ended questionnaire. For data analysis purpose both descriptive statistics and binary OLS model were employed.

Therefore, this study was intended to identify and discuss factors which affect borrowers' loan repayment performance and finally concludes that low repayment performance was one of the main problems of the District as compared to its plan and other performances such as loan appraisal, loan approval and disbursements. The descriptive statistics findings shows that there were significant association between dependent variable with respect to time horizon, level of education, family size and experience were significantly influenced the repayment performances of the loans. On the other hand, ten explanatory variables were entered in to OLS model and out of which three variables were found significant to determine loan repayment performance of borrowers.

The results of this study revealed that the time horizon negatively and significantly affected the loan repayment performance of borrowers. Time lag between loan application and disbursement should be reduced to increase repayment rate. The complicated loan processing procedures, which might lead to delay in disbursement, further, it will increase default rate. When the bank deliver its services timely, the probabilities of paying loan and in the reverse if the bank fail to provide services after a long time of waiting and after time of utilizing opportunity is lapsed, the

probabilities of defaulting is very high of loan disbursement was also another significant variable with default loan negatively. Thus, unless the bank faces strange problems, the risk of being default most probably decreases when disbursements performed on time. Therefore disbursing the loan on time, we can expect high loan repayment performance.

The education qualification level determines loan repayment positively and significantly. The borrowers who attained higher education level able to pay better than the borrowers who were in lower level schooling and/or illiterates. Therefore, institution should motivate educated people and also easy to provide training. The selection of educated borrowers decreases the probability of being default. This is the fact that the literates can easily grasp knowledge, information, capable to manage their business, adopt new technologies and workable strategy for their business than the illiterates.

Family size also influenced the repayment performances of loans significantly and shows positive sign. This indicates that increasing in the number of family size increases the probabilities of default and vice versa. Borrowers who have small number of or no dependents in the household perform better in loan repayment. The borrowers who support large number of dependents face difficulties of repayment. The OLS behind is that the borrower having larger family size as compared to those having smaller family size have tremendous challenges to administer the demands of his/her family and run the business simultaneously. The larger family sizes have different needs and high consumption, while the small size borrowers can focus on administering their business without much challenges and difficulties

Loan size; is the other variable showing positive relationship with loan repayment performances and statistically significant. Repayment capacity of borrowers depends on the capacity of investments and the profit they generate from the business itself. A project, In order to operate with full capacity and without any financial constraints needs to have full financial support, including investment cost and working capitals. So, when huge capacity is created, the probability of defaulting is low and vice versa.

Loan diversion was also found as essential and significant factors of loan repayment rate negatively. Loan diversion is negatively affecting the loan repayment capacity. It is clear that diverted loans miss their target and cannot repay the loan according to the duty. This means, diverting loan into non-income generating activities increases default rate. Therefore, it is

recommended that the institution should give attention to continuous follow-up on proper loan utilization

Credit experience is also another significant variable. A borrower having credit experience is at better position to repay its loan than those new comers. The reason is that while experienced borrowers use their skill, knowledge and familiarity in carrying out their duty, new borrowers faces new environment to begin from the scratch. Having another business is another significant variable influencing the dependent variable positively. The help of having addition business is to use the experience such other business in running the current one and financial support in case of default. But this should be handled very carefully because the existence of another business may also be the cause of failure if diversion of money to such other business occurred. The positive sign and the significance is from the support and help it gives to the current business while the other side should be considered with caution.

The other significant variable was follow-up. This variable influence borrower's loan repayment performance positively and significantly. Giving Projects proper follow up, the probability of default decrease since problems will be tackled immediately and utilize their loan effectively, generate revenue, and then make loan repayment. The follow-up and supervision made by the loan officers and concerned bankers should be increased and it leads to increase repayment performances.

Generally, the finding of the study failed to reject two research hypotheses that indicate the relationship between loan repayment performances and borrower related factors, specifically education level, family size of borrowers and experience and bank related factors like having other business, diligence, loan size, time horizon and weather condition the remaining were insignificant.

5.2. Recommendation

It is apparent that DBE has to work to avert the loan repayment problems. The source of loan repayment performances as indicated under this research is from four different areas and the bank is required to work on the solution to bring about better performances. Financial performances and wellness is one criteria of measuring financial institution healthiness, which in cases of DBE is possible through loan approval collection and disbursement.

Now, Based on the analysis and findings of this study, the researcher therefore recommends that:

The study revealed that among personal or borrower characters, educational level, credit experience and family size were the main and significant factors of loan collection performance which was unattractive in the past consecutive years. From bank specific factors, time horizon, follow up, loan diversion and loan size were found significant variables and from business specific factors having another business is found significant variable. Therefore, the bank is recommended to select and screened out those customers who are more educated and have credit experience in running related business. Proper due diligence should be conducted in screening customers with better educational level and credit experience. The major activities of screening know the personal traits and history of the borrower and the feasibility and viability of the business. Hence, customer with better educational qualification and experience should be selected.

The researcher also recommends timely disbursement of loan. Since projects are sensitive to season (production, market, and implementation) for these hold proper amount and disburse when the need arises. Disbursement dalliance was the problem, where the main challenge of the bank in the last four consecutive years. The main justification behind such dalliance was less number of contact officers and engineers as compared with financed projects which could unable to make necessary follow up and progress report. Follow-up being one significant variable by itself, when properly implemented solve other related problems too. The bank has to increase the number of officers and engineers who has responsibility of taking full-fledged follow up and revision as well as progress report, respectively. Thus, follow up also as being one of significant factor, increasing the number of contact officers and give more attention on follow up can increase good performance of projects hence loan collection performance of the bank.

The other important recommendation is regarding loan diversion. The bank is highly recommended to follow the money released for project development and avert the diversion of loan. The main cause of loan diversion is lack or loose of following the money and progress supervision.

The other important recommendation is regarding loan size. In order to implement the project with full potential and capacity necessary capital should be allocated. Such loan size shouldn’t be

more than what is needed or less than what is required. So, the bank is recommended to conduct critical feasibility

Finally, the researcher recommends other researchers to do by including the other Districts & head office, and the determinants of other variables like loan repayment performance, outreach, using innovative features of the bank and the other variable

Generally, internal factors can be easily controlled while external factors can be a threat to the viability of banks. Banks have to be vigilant in their lending decisions so as to avoid loan losses and the accumulation of non-performing loans. Banks need to concentrate on sectors that are performing well and avoid lending to those sectors which have already recorded a significant amount of non-performing loans. One thing to note is that, this result can be generalized to the whole banking sector in Ethiopia as almost all the banks have been affected by non-performing loans. Therefore, the recommendations generated are a prescription for all banks engaged on similar investment activities in Ethiopia.

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appendix

multicolenarity

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. vif
```

Variable	VIF	1/VIF
Age	26.44	0.037817
Fams	24.34	0.041086
expr	12.39	0.080711
lendin	6.93	0.144320
weathc	5.15	0.194066
Edu	3.23	0.309385
Martstut	3.05	0.327880
marketc	1.08	0.923948
dilig	1.06	0.942887
gender	1.04	0.963272
Mean VIF	8.47	

hetroskedatity

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of loan

         chi2(1)      =    16.76
         Prob > chi2  =   0.0000
```

normality

```
. sktest loan Age gender gender expr expr Martstut Martstut dilig dilig Fams Edu
>  marketc weathc lendin lendin
```

Skewness/Kurtosis tests for Normality

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	joint adj chi2(2)	joint Prob>chi2
loan	94	0.0076	0.6246	6.80	0.0334

RESEARCH QUESTIONARY

Dear respondent, this questionnaire is prepared to collect data on loan repayment performances, for the purpose of research to be conducted under a title Factors affecting loan repayment performances in Development Bank of Ethiopia wolkite District. Get relaxed and feel free to respond the questions and focus on providing the required information to help the researcher do his/her job rightly. Hence, I kindly request you to fill the questionnaire very carefully and provide genuine information so as to help me find the actual reason for the identified problems. Advance thanks for your patience and time .

Factors of loan repayment performance

A. ***Borrower's related information***

B. Name of borrower(optional)_____

C. Gender 1) Male 0) Female

D. Age: 1. 15-30 2. 31-50 3. Above 51

E. Marital status 1. Single 2. Married 3. Divorced/widowed

F. What is your family size? ----------

1. Small (1-3) 2. Medium (4-5) 3. Large (above 6)

G. Educational Background: 1. No formal education 2. Primary school completed 3. High School completed 4. College/University graduate

H. Do you have any credit experience in running similar project? 1) Yes 0) No.

If yes, did it help you for current business? Explain how _____

I. Business related questions;

A. What is the current status of your business? 1. Performing good/successfully operating 2. Not good/defaulted(substandard, doubtful and loss)

B. What is your business form? 1. Sole proprietor 2. PLC 3. SHC and Others

C. What is your business sector? 1. Agriculture 2. Service 3. Industry

D. Have you gained sufficient income compared to your plan? 0) No 1. No

If no, why (list reasons) ……..…

……
……
……

E. Do you have other business? 1)yes 0) No

II. Institution related questions;

A. What is a Loan size permitted for the project? ---------- birr

B. Do you believe such amount is sufficient for your project as compared to feasibility study? 0) No 1) Yes

If no, explain how it affected your repayment performances----------
---

C. Have you used any amount of money from the loan to operate some other business or used for your personal consumption? 0) No 1) yes

If yes, explain the amount, ----------

D. Amount of equity contribution? ---------- birr

Is such amount 1) Exceed 30% of total investment 2. 30% only

E. Do sufficient grace period granted to begin repayments? 0) No 1) Yes

If No, explain how it affected your repayment capacity? ----------
---

F. Do you think the bank has made a proper follow up to the project? 0) No 1) Yes

G. Do you think the bank has secured its loan with enough/sufficient collateral in cases of default? 0) No 1) Yes

H. What is the collateral of the bank for the loan? Is there any property other than the project itself? 0) No 1) Yes

If yes, explain the amount----------

I. What is the ratio of debt to collateral value? ----------

94

J. How do you evaluate the change (increase) in interest rate, do you think it affected your repayment performances? 0) No 1) Yes

If yes, is that positively or negatively? Explain ----------

K. Do you believe the KYC (know your customer) assessment was performed duly according to policy and procedures of the bank? 0. Yes 1. No

L. How do you evaluate the service period (time to conduct KYC, appraisal and approval)? 1. Timely 2. Elongated 3. Too late

If such time has affected your repayment capacity, explain your reason. ----------

III. External factors

A. Do you think International/national market fluctuation affected your repayment performances?

0) Yes 1) No

If yes, what is the reason, how? ----------.

B. Were the project attacked by pest and weed problem?

0) Yes 1) No

If yes, what are the causes? ----------

C. Were the project faced bad weather condition problem like flood, too less or too much rainfall? 0) No 1) No

If yes, what are the causes, explain ----------

Other factors

Elaborate other major challenges and factors that challenged the repayment of bank credit and over all performances of your business. ----------

Thank you for your cooperation!