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# Factors Affecting Non-Performing Loans: Case Study on Development Bank of Ethiopia Central Region

**Arega Seyoum Asfaw*, Hanna Nigussie Bogale**, Tadele Tesfay Teame***

*College of Business and Economics, Jimma University, Jimma Ethiopia*
*Development Bank of Ethiopia, Central Region, Addis Ababa, Ethiopia*

***Abstract***- The study aims at identifying the major factors affecting Non-performing loans of Development Bank of Ethiopia, Central Region. To achieve this objective descriptive research design was used and data has been collected mainly through primary source using questionnaire from both borrowers and region's staffs. Secondary data were also used by reviewing the annual reports, bulletins, manuals, directives and procedures issued by the bank. 43 borrowers and 24 staffs were taken as samples from 77 default loans (Nonperforming loans) and 31 region's staffs respectively based on stratified random sampling method of sample selection by using mathematical formula. For data analysis, descriptive statistics including mean, frequency and percentages were used and processed through computer loaded SPSS software. The result of the study shows that poor credit assessment and credit monitoring are the major causes for the occurrence of NPL in DBE. Credit size (includes aggressive lending, compromised integrity in approval, rapid credit growth and bank's great risk appetite); high interest rate, poorly negotiated credit terms and lenient/lax credit terms, and elongated process of loan approval were bank specific causes for the occurrence of nonperforming loans. On the other hand, poor credit culture of customers, lack of knowledge of borrower for the business they engaged in, willful default, loan diversion, and project management problems were identified as the major customer specific causes of NPLs. Hence, to reduce the occurrence of loan default it is suggests that the Bank should strengthen its applicant screening criteria and due diligence assessment to select potential risk taking applicants and adopt appropriate pre and post credit risk assessments. Besides, the bank needs to make sure that borrowed funds are being used for the intended purpose through enhanced credit monitoring.

***Index Terms***- Bank Specific Factors, Customer Specific Factors, Nonperforming Loan.

## I. Introduction

Lending is one of the main activities of a bank and interest income makes up the lion share of profit. In the case of the DBE, lending to manufacturing, agro-processing industries, mining or extractive industries and commercial agricultural projects constitute the major sources of its income. As a strategic government owned institution, DBE is uniquely positioned in the financial industry as it is empowered to extend both development finance and short-term working capital loans as a package (DBE's Loan Manual, 2014).

The Development bank of Ethiopia (DBE) is one of government owned financial institutions engaged in providing short, medium and long term development credits by financing viable projects from the priority areas of the government. DBE's distinguished feature is its "project" based lending tradition. Project financed by the Bank are carefully selected and prepared through appraisal, closely supervised and systematically evaluated. It mobilizes funds from domestic and foreign sources.

To achieve the objectives of circulating more and more financial resources to meet the increasing demand for credit and to keep the Bank in sound financial position, the loans extended to various sectors of the economy must be recovered in full. Both the principal which is used for re-lending as well as the interest to meet the operating costs must be recovered. However, for the last many years the Bank's loan repayment performance has been very low due to various factors. These factors may explain among others the loan repayment behavior of borrowers and lending behavior of the Bank. This has an impact on the sustainable provision of credit to the potential investors and existence of the bank as a financial institution (DBE Annual Report, 2014). Knowing these factors will assist the Bank in its continuous efforts to recover its existing loans and to set ideals for forthcoming ones. Therefore, loan recovery is considered as a crucial factor affecting the liquidity and profitability of the bank. Thus, the present study attempts to identify the determinants of loan repayment performance of projects financed by Development Bank of Ethiopia Central region. The researchers strongly believe that identifying the factors affecting loan repayment performance of projects would enable the bank's management to tackle and minimize the problems and consequently will enhance its loan recovery performance.

### 1.1. Statement of the Problem

Credit has long been recognized as one of the important tool that supports the success of development project which contributes towards economic development. Similarly DBE provides sustainable credit facility for those engaged in agriculture, industrial and other service sectors which can result in development of the country. So, in order to maintain this objective the bank needs to strengthen its liquidity position by enhancing its loan recovery. However, provision of credit alone does not support the economic development of the country unless it is accompanied by the existence of factors necessary for efficient utilization of the fund in order to repay the loan in accordance with the agreement. Based on strategic objective of the government, term loan projects financed by the bank has long loan repayment period which extends up to twenty years including maximum five years of grace period. Moreover, low interest rate than commercial banks, which is 8.5% for priority area projects and 9.5% is for non-priority area projects, and suitable rehabilitation mechanism makes the bank different from other lending institutions (DBE Loan Manual, 2014).

The sustainability of the bank depends not only on domestic and foreign source of fund but also on its loan recovery rate too. The loan repayment performance of its clients should be effective so that the bank will be sustainable as a bank and will have a bankable asset quality. One of the measurements by which bank's asset quality can be measured is the nonperforming loan ratio (NPLs ratio). Hence, in order to get soft loan from its lenders, DBE's asset quality has to be regularly monitored and assessed whether it is within the acceptable standard or not that is 15% of the total outstanding loan which is set by Association of African Development Finance Institutions.

Accordingly, when looking at the asset quality of DBE Central region, the average NPLs ratio for the last five years covering from 2009/2010 up to 2013/2014 was 45%. This clearly indicates that there is a problem in loan repayment as it is highly deviated from the accepted standard 15% of the total outstanding loan (DBE Annual Report, 2009/10 to 2013/14).

The increasing level of Non-performing loans may lead to very serious implications. For instance, it discourages the financial institution to refinance the defaulting client, which put the defaulters once again into vicious circle of low productivity. Therefore, a rough investigation of the various aspects of loan defaults, source of credit, purpose of the loan, form of the loan, and condition of loan provision are of utmost importance both for policy makers and the lending institutions. Even if default is random and influenced by unpredictable behaviors or it is influenced by certain factors in a specific situation needs an empirical investigation so that the findings can be used by any financial institutions to manipulate their credit program for the better. Most of the default arose from poor management procedures, loan diversion and unwillingness to repay loans, etc. Because of this, the lenders must give various institutional methods that aimed to reduce the risk of loan default (Ahmmed *et al.*, 2012).

Consequently, to reduce the default rate and to enhance the sustainability of the bank, it is imperative that identifying the various factors which significantly affect the loan repayment performance from both borrowers and lender side. Hence, this study aimed at identifying the factors that affect non-performing loans of Development Bank of Ethiopia (DBE) central Region.

The rationale for undertaking this study is that, to the best of the researchers knowledge it appears that adequate researches have not been made that comprehensively assess the determinants of Non-performing Loan in banking industry in general and Development Bank of Ethiopia in particular with the exception of a single study made by Wondimagegnehu (2012) on the determinants of NPLs of banking industry in Ethiopia. Besides, most of the prior studies conducted in other countries focused on bank specific and macro-economic determinates of NPL. However, in the previous empirical analysis no study has been conducted on borrower-specific factors influencing non-performing loans. Moreover, in the recent past, there have been many changes in the country that hugely influenced the economic environment as well as the business climate. Apart from the economic growth and environmental changes registered by the country within the last few years, the Bank has also undergone changes in its lending procedures, lending limit, credit policies and organizational structure. Therefore, the current study tried to narrow the research gaps through focusing on factors affecting Non-performing loans financed by the DBE Central Region and attempts to provide answers for the following basic research questions:

1) What are the major bank-specific factors affecting Non-performing loans of DBE Central region?
2) What are the major borrower-specific factors that affect Non-performing loans of the DBE Central region?
3) What policy measures must be undertaken by the bank's management that would help improve the NPLs status of DBE Central region?

### 1.2. Objective of the Study

In general, the objective of the study is to identify the major factors that affect Non-performing loans financed by Development Bank of Ethiopia, Central Region. Specifically, the study attempted to achieve the following specific objectives:

i) To identify bank-specific factors affecting Non-performing loans of DBE
ii) To determine borrower-specific factors affecting Non-performing loans of DBE.

The study focused on projects financed by development bank of Ethiopia central region. The study did not incorporate borrowers of other regions in the bank and other banks. Development bank of Ethiopia is selected to other types of local banks for the reason that it is engaged in long term loans which by their nature are risky with regard to getting them paid back. Hence, factors affecting Non-performing loans in all regions of DBE are assumed to be similar. Furthermore, since the Bank under consideration has the same credit policy and loan procedures (from application for loan up to loan collection) throughout its all offices, a case study in DBE Central region is assumed to be representative. Since DBE central region was fully engaged to financing private sector in the area starting from 2009/10, this study covers clients of the region from 2009/10 onwards. Moreover, the data collection process was difficult as there was no organized database to collect the data. Thus, this study is limited to both bank and customer specific factors affecting NPLs of Development bank of Ethiopia Central region.

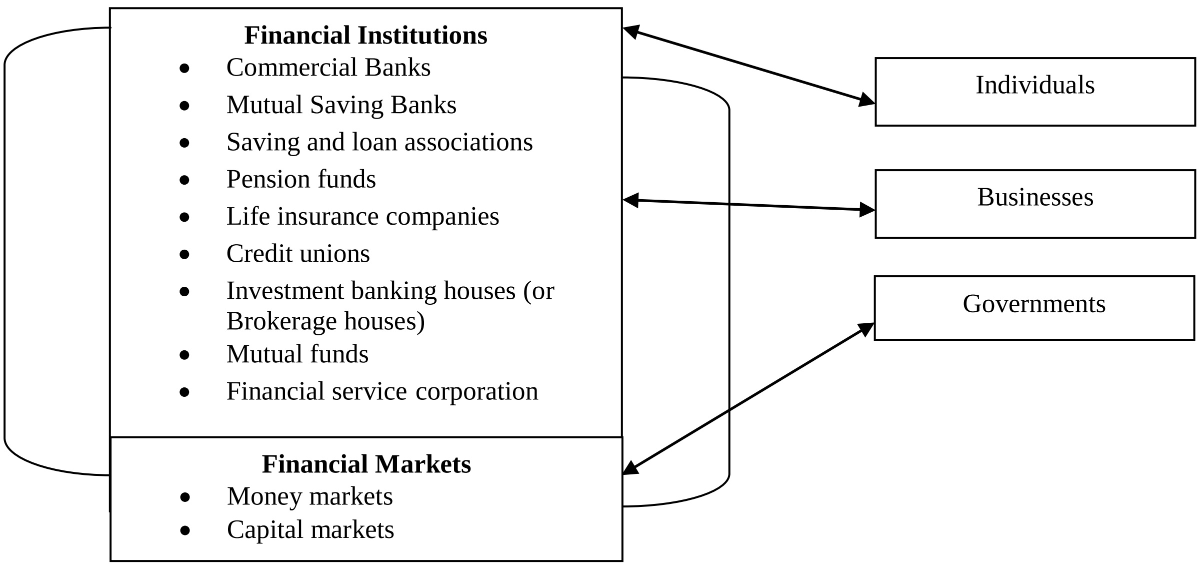
## II. THEORETICAL UNDERPININGS

### 2.1 The Role of Financial Institutions

A healthy economy depends heavily on efficient transfer of funds from savers to individuals, businesses, and governments who need capital. Most transfers occur through specialized financial institutions, which serve as intermediaries between suppliers and users of funds.

The financial system has diverse and important roles to play. Perhaps the most important is to transfer funds from surplus to deficit economic units in the most efficient way possible (Pilbeam, 2005). People who have the money but who do not have business skill need to save it in a bank rather than putting it at home under their mattresses so as to be safe and not to make their resource sterile as it will generate interest when it is deposited at banks. Inversely, those who have developed entrepreneurial skill but running with a short of finance are ready to take loan. Since it is very difficult for the surplus and deficit units to meet each other due to asymmetric information (more sever in developing countries), there is a need to have an intermediary institution or Bank (Pilbeam, 2005). Therefore, the existence of a development finance institution like Development Bank of Ethiopia (DBE) in the economy is undeniably important.

**Figure 1: Flow of funds in the economy (Suppliers and Users of Funds)**




**Source:** *Adapted from Shim & Siegel (2007).*

Development finance institution means an institution which is engaged mainly in medium and long term project finance business, with the purpose of promoting development in the industrial, agriculture, construction, services, commercial or other economic sectors (NBE Directive, 2012). Development Banks are state backed financial institutions that are engaged in the provision of long term loans to not only profitable projects but also to socially beneficial ones. The rapid industrialization in many countries in the 19th century was achieved by state provision of long term loans to risky projects via Development banks, (Diamond, 1957; Boskey, 1961). Accordingly, the credit policy of Development Bank of Ethiopia (2009) details the governing operational principles and guidelines of the Bank for achieving its dual objectives of (1) providing customer focused and efficient credit services and (2) maintaining its own financial health and sustainability (DBE Credit Policy, 2009).

## 2.2 Credit Management Policies

In the past decades there have been major advances in theoretical understanding of the workings of credit markets. These advances have evolved from a paradigm that emphasis the problems of imperfect information and imperfect enforcement. Borrowers and lenders may have differential access to information concerning a projects risk, they may form different appraisal of the risk. What is clearly observed in credit market is asymmetric information where the borrower knows the expected return and risk of his project, whereas the lender knows only the expected return and risk of the average project in the economy.

In the course of undertaking credit activity lending institutions are confronted with four major problems: (i) to determine what kind of risk the potential borrower is (adverse selection), (ii) to make sure the borrower will utilize the loan properly once made, so that s/he will be able to repay it (moral hazard), (iii) to determine or know how the project really did in case the borrower declares his inability to repay, and (iv) to find methods to force the borrower to repay the loan if the borrower is reluctant to do so (enforcement). These problems of imperfect information and enforcement lead to inefficiency of credit market which in turn leads to default. Deep credit assessment that consider the borrowers` character, collateral, capacity, capital and condition (what is normally referred to in the banking circles as the 5C`s) should be undertaken if they are to minimize credit risk (Kapoor *et al*., 2007).

The significance of credit management has been highlighted by Mensha (1999) as follows: "credit management process deserves special emphasis since appropriate credit management greatly influences the success or failure of financial institutions". Knowledge of a bank's credit risk management process offers a key indicator of the quality of a bank's loan portfolio. The crucial elements of successful credit management therefore are well developed credit policies and procedures; strong portfolio management; effective credit controls and the most central of all a well-qualified staff capable of implementing the system. In order to operate efficiently and make credit available to investors, financial institutions must maintain basic credit standards. These standards include a thorough understanding of the borrowers' business by the officer in charge; reasonable debt equity ratio; marketability and viability of the investment project and other technical capabilities. Credit analysis, in general, is essential for the officer to judge about the credit worthiness of the borrower as well as the project to which the loan is injected.

### 2.2.1 Non-Performing Loan

A non-performing loan is a loan that is in default or close to being in default. A loan is said to be in default when it fails to make the repayments of principal and /or interest specified in its loan contract and has no intention of repaying in the future (Pilbeam, 1998). Many loans become non-performing after being in default for 3 months, but this can depend on the contract terms. A loan is nonperforming when payments of interest and principal are past due by 90 days or more, or at least 90 days of interest payments have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt that payments will be made in full. According to Vigano (1993), Non-performing loans are loans, especially mortgages that organizations lend to borrowers but do not capitalize on. In other words the borrower cannot pay the loan back in full, or even enough for the bank to make a profit. When this happens, the bank can either workout a new payment option, or foreclose on what collateral the borrower has provided. Either option costs the bank money, so lenders try to avoid nonperforming loans whenever possible.

According to Timothy (1994), loans are regarded as default when they are placed on nonaccrual status or when the terms are significantly altered in a restructuring. Nonaccrual means that banks deduct all interest on the loans that was recorded but not actually collected. Banks have traditionally stopped accruing interest when debt payments were more than 90 days past due. However, the interpretation of when loans qualified as past due varied widely. Many banks did not place loans on nonaccrual if they were brought under 90 days past due by the end of the reporting period. Moreover, Non-performing loans include loans and advances (i) that is not earning income; (ii) on which full payment can no longer be expected and payments are more than 90 days delinquent; (iii) total credits to the accounts are insufficient to cover interest charges over a three-month period; or the maturity date has passed and payment has not been made (Eastern Caribbean Central Bank, 2009).

Similarly, Asari (2011) defined Non-performing loan as defaulted loan in which banks are unable to profit from them. Generally, loan falls due if no interest has been paid within 90 days, however, different countries may have different experience in this regard. The long run relationship clearly revealed that interest rate has a significant impact on non-performing loans. Inversely, there exist insignificant relationship between inflation rate and non-performing loans. However in short run, both interest & inflation rates will not impact the non-performing loans, as confirmed by Asari (2011).

### 2.2.2 Credit Risk Management

According to Eastern Caribbean Central Bank (2009), credit risk management is the process of controlling the impact of credit risk-related events on the financial institution and involves the identification, understanding, and quantification of the degree of potential loss and the consequential implementation of appropriate measures to minimize the risk of loss to the financial institution. In order to maintain successful credit risk management, the lending institution should develop and implement all-inclusive credit risk management in line with its credit risk strategy. The credit risk strategy should reflect the institution's tolerance for risk and the desired level of profitability for incurring various credit risks. A successful credit risk management encompasses the implementation of clearly defined credit policy and processes to facilitate the identification and quantification of risks inherent in an institution's lending and investment activities. The firm's credit policy should be officially established in writing and approved by the board of directors, and should clearly set out the parameters under which credit risk is to be controlled.

The aim of credit risk management is to capitalize on a bank's risk-adjusted rate of return by retaining credit risk exposure within acceptable limits. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should also consider the relationships between credit risk and other risks. The successful management of credit risk is a crucial element of a holistic approach to risk management and essential to the long-term success of any bank. In general, loans represent the largest and most apparent source of credit risk for most of the banks (Basel Committee, 1999).

For Vigano (1993), credit risk appraisal is a complex process, which requires a careful examination of information regarding the borrower in order to estimate the probability that the loan will be regularly repaid. The probability of regular repayment depends on certain objective factors related to the borrower's operating environment, the borrower's personal attitude towards loan obligation, and the bank's ability to appraise these two issues through the information it has and to control credit risk specific contractual conditions. Accordingly, the key factors that influence credit risk are summarized by Vigano (1993) as follows: the borrower's ability and willingness to pay, existence of positive external conditions, quality of information and the lender's capacity to ensure the borrowers willingness to pay.

## 2.3 Empirical Evidence

This section presents evidence which identify the major factors of nonperforming loans. Many researchers have conducted a lot of study on determinants of nonperforming loans (NPLs), due to its significance for the bank's failure. Accordingly, the first subsection, presents factors affecting nonperforming loans in other countries. The second subsection discusses review of prior studies on factors of non-performing loans in Ethiopia and highlights the knowledge gap emerged from survey of empirical literature.

Credit approving that has not properly considered the credit terms would potentially lead to occurrence of loan default. As per the study by Jimenez & Saurina (2005) on the Spanish banking sector from 1984 to 2003 NPLs are determined by lenient credit terms. The authors indicated that the causes for the leniency were attributed to disaster myopia, herd behavior, moral hazard and agency problems that may entice bank managers to take risk and lend excessively during boom periods. This has been supported by Rajiv & Dhal (2003) who found that terms of credit determines occurrence of non-performing loans.

On the other hand, banks that charge high interest rate would relatively incur a higher default rate or non-performing loans. In this regard, a study by Sinkey & Greenwalt (1991) on large commercial Banks in US revealed that a high interest rate charged by banks is associated with loan defaults. Rajiv & Dhal (2003) who used a panel regression analysis indicated that financial factors like cost of credit have got significant impact on NPLs. Bloem and Gorter (2001) also indicated that "bad loans" may substantially rise due to abrupt changes in interest rates. The authors discussed various international standards and practices on recognizing, valuing and subsequent treatment of non-performing loans to address the issue from view point of controlling, management and reduction measures. Similarly, a study by Espinoza and Prasad (2010) focused on macroeconomic and bank specific factors influencing NPLs and their effects in GCC Banking System found that higher interest rates increase non-performing loans but the relationship was not statistically significant.

Other studies such as Sinkey & Greenwalt (1991) indicated that loan delinquencies are associated with rapid credit growth. The authors found that excessive lending explain loan loss rate. This was confirmed later by Keeton (1999) who used data from commercial banks in the United States (from 1982 to 1996) using a vector auto regression model showed that there was association between default and rapid credit growth. Likewise, Salas and Saurina (2002) in their study on Spanish banks also revealed that credit growth is associated with non-performing loans. Also, study by Bercoff *et al*. (2002) confirmed that asset growth explains NPLs.

Skarica (2013) also conducted a study on the determinants of NPLs in Central and Eastern European countries. By employing the Fixed Effect Model and seven Central and Eastern European countries for 2007-2012 periods, the study revealed that loan growth, real GDP growth rate, market interest rate, unemployment and inflation rate as determinants of NPLs. The results show that GDP growth rate and unemployment rate have statistically significant negative association with NPLs with justification of rising recession and falling during expansions and growth has impact on the levels of NPLs. This implies that economic developments have a strong impact on the financial stability. The result also discovered that inflation has positive impact on NPLs with a justification that inflation might affect borrowers' debt servicing capacities. Similarly, Jimenez and Saurina (2005) provide evidence that non-performing loans are determined by GDP growth, high real interest rates and lenient credit terms. Meanwhile, Rajiv & Dhal (2003) utilize panel regression analysis and reported that favorable macroeconomic conditions and financial factors such as maturity, cost and terms of credit, banks size, and credit orientation impact significantly on the non-performing loans of commercial banks in India. Likewise, Keeton (1999) revealed evidence of a strong relationship between credit growth and impaired loans. Specifically, Keeton (1999) showed that rapid credit growth, which was associated with lower credit standards, contributed to higher loan losses in certain states in the US.

Boudriga *et al.* (2009) studied on the lender specific factors and the role of the business and the institutional environment on loan default in the MENA countries for 2002-2006 periods using random-effects panel regression model for 46 countries. The variables included were credit growth rate, capital adequacy ratio, real GDP growth rate, ROA, the loan loss reserve to total loan ratio, diversification, private monitoring and independence of supervision authority on nonperforming loans. They reported that credit growth rate was negatively related to nonperforming loans. Capital adequacy ratio was positively and significantly affecting loan default implying that highly capitalized banks are not under regulatory pressures to reduce their credit risk and take more risks. In the contrary, their findings reported that ROA has negative and statistically significant influence on NPLs.

### 2.3.1 Empirical Studies in Ethiopia

Wondimagegnehu (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.

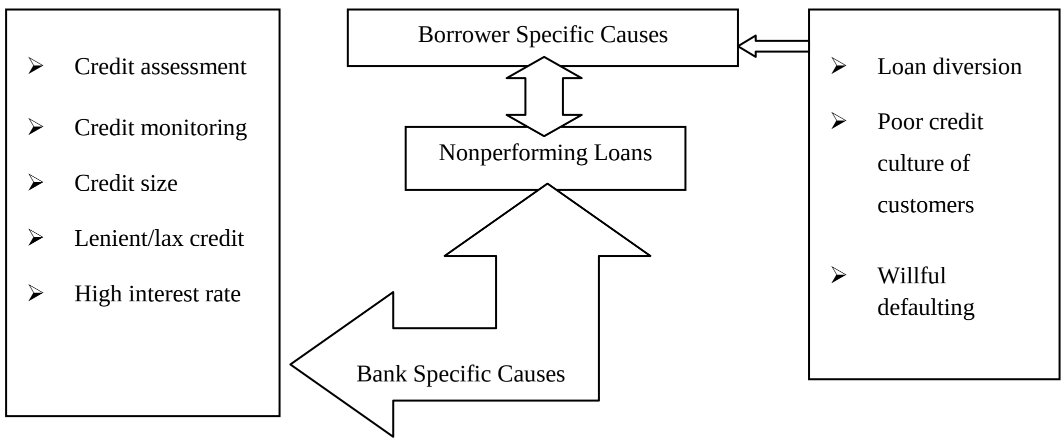
Similarly, Mitiku (2014) studied the "Determinants of Commercial Banks Lending: Evidence from Ethiopian Commercial Banks using panel data of eight commercial banks in the period from 2005 to 2011 with the objective of assessing the relationship between commercial bank lending and its determinants (bank size, credit risk, GDP, investment, deposit, interest rate, liquidity ratio and cash required reserve). Based on seven years financial statement data of eight purposively selected commercial banks and using Ordinary Least Square (OLS) technique, the study found that there was significant relationship between commercial bank lending and its size, credit risk, gross domestic product and liquidity ratio. While interest rate, deposit, investment, and cash reserve required do not affect Ethiopian commercial bank lending.

In view of the above discussions, numerous studies were conducted on the determinants of Non-performing loans. Most of these studies focused on Bank specific and Macro-economic determinates of NPL. However, in the previous empirical analysis no study has been conducted on customer-specific factors influencing non-performing loans. Besides, most of the empirical studies reviewed and discussed in the above paragraphs were made in other countries; and studies in Ethiopian commercial banking sector are scant. Moreover, despite a single study by Wondimagegnehu (2012) on the determinants of NPLs of commercial banks in Ethiopia, no further research has been conducted in the banking sector in general and on Development Bank of Ethiopia (DBE) in particular. Therefore, this study is expected to fill the gap by assessing the association between bank-and customer-specific factors and level of nonperforming loans (NPLs).

### 2.2.3 Conceptual Framework

The aim of this study is to identify the major bank-and borrower-specific causes for the occurrence of NPLs of DBE central region. Accordingly, based on the objective of the study, the following conceptual model has been framed. Nonperforming loans are affected by bank specific, customer specific and macroeconomic factors as discussed in the literature review part. Bank specific factors include poor credit assessment and credit monitoring, credit size, aggressive lending, compromised integrity in approving and bank's great risk appetite, high interest rate, lenient/lax credit terms whereas customer/borrower specific causes are loan diversion, poor credit culture of customers, willful defaulting (Joseph *et al*., 2012; Wondimagegnehu, 2012; Keeton and Morris, 1987; Rajiv & Dhal, 2003; Pasha, S. & Khamraj, T., 2005; Jimenez and Saurina, 2005). Therefore, the following conceptual model summarizes the main focus of this study.

**Figure 2: Conceptual Framework**




**Source:** *Formed by the researchers.*

## III. Research Design and Methodology

### 3.1 Research Design

To achieve the objective of the study, the research used descriptive research design to identify the major factors that affect Non-performing loans of Development Bank of Ethiopia Central Region.

### 3.2 Research Strategy

The strategy adopted in the study contains diverse methods and tools that are relevant to achieve the desired research outcome. Accordingly, the research strategy employed in this study was both quantitative and qualitative (mixed methods) approach. The use of quantitative strategy of inquiry is necessary when the researcher want to deeply investigate and analyze an event, program and problem very well (Creswell, 2003). The purpose of the quantitative aspect of this study is to seek information that can be generalized about the association between bank-and borrower-specific factors and NPLs at DBE central region. The study was based on survey design with a semi-structured self-administered questionnaire and document analysis. On the other hand, the purpose of the qualitative strategy is to search for data that can supplement the gap that might not be captured by the quantitative survey and to obtain deeper understanding of the borrower-and bank-specific factors that would cause occurrence of NPLs.

### 3.3 Nature of Data and Instruments of Data Collection

The data employed in this study were both primary and secondary. In the context of DBE, a loan is said to be NPL when it fails to meet its debt obligations and past due over 365 days. Based on NBE directive, the status of arrears loan can be classified into five ageing categories. Namely, *Pass*, *Special mention*, *Substandard*, *Doubtful* and *Loss*. The first two are categorized under *performing loan* and the rest three are categorized under *non-performing loan*. Accordingly, the data for the study were collected only from projects that are under the categories of non-performing that includes *substandard*, *doubtful* and *loss* ageing categories.

In order to collect primary data, the researchers used questionnaire. Questionnaire was dispatched both to the borrowers and the staffs of the region to identify the major factors that affect non-performing loans. As far as the secondary data is concerned, DBE working documents and individual files of different projects of the region were reviewed and the annual reports of the bank, bulletins, manuals, directives and procedures were employed in the study.

### 3.4 Population and Sample Selection

The participants (subjects) of the study were DBE Central region and its nonperforming loans. In sample size determination, projects which are under implementation were not part of the study. Based on NBE's directive, the repayment performance of the project can only be evaluated after six months and above (NBE Directive, 2012). Moreover, project which are under ageing categories of *pass* and *special mention* (since they are considered as performing loans) are not part of the study.

The loan portfolio report of DBE central region indicated that there were 77 numbers of non-performing loans managed in the region. Sample selection was based on stratified random sampling. Considering the total population of the study, the sample size of the study was determined using mathematical

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formula. Borrowers sample size was taken only from default loans (Non-performing loans) which are under loan classification of *substandard*, *doubtful* and *loss*. Based on NBE directive of loan classification, non-default loans are under *pass* and *special mention* loan classification while default projects are under *substandard*, *doubtful* and *loss* loan classification. Thus the sample size was taken only from default loans which are under loan classification of *substandard*, *doubtful* and *loss*. However, the sample for staff respondents was taken from the region's credit process and project rehabilitation and loan recovery teams.

The mathematical formula used in sample size determination is given below at 10% precision level (Israel, 2009).

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

Where, $N$ = Total Population
$e$ = Precision level
$n$ = sample size

**Table 1: Loan Classification Category**

| S.N | Description | Population Size | Sample Size |
|---|---|---|---|
| **Borrowers/Owners** | | | |
| *1.1.* | *Sub- Standard* | *21* | *12* |
| *1.2.* | *Doubtful* | *21* | *12* |
| *1.3.* | *Loss* | *35* | *20* |
| **Sub-total** | | **77** | **43** |
| **Staff** | | | |
| *2.1* | *Credit Process* | ***21*** | ***16*** |
| *2.2* | *Project Rehabilitation & Recovery Team* | ***10*** | ***8*** |
| **Sub-total** | | **31** | **24** |

### 3.5 Method of Data Analysis

Descriptive analysis was used to investigate and describe the factors affecting non-performing loan. The analysis was performed with IBM SPSS Statistics Version 20.0. Besides, measures of central tendency (mean, standard deviation), frequency and percentage were used to analyze the data gathered through the questionnaire. Finally, the results were presented using tables and figures.

## IV. RESULTS AND DISCUSSIONS

### 4.1 Demographic Characteristics of Borrowers

According to the result obtained from the data, out of the total borrower respondents 26 (61.9 %) of them were private limited companies and 16 (38.1%) were sole proprietorship. The response shows that from sample borrowers' who failed to pay their loans majority of them were Private Limited Companies (Plc.). Out of the 16 sole proprietorship borrowers 7 of them were between the age range of 35 to 44 years, 2 were between 25 to 34 years, 4 were between 45 to 54 years and the remaining 3 were above 55 years. Regarding their sex, 12 (75 %) were male and 3 (18.8%) were female and the sex of one respondent (6.3%) was not indicated. Regarding marital status 2 (12.5%), 11 (68.8%), and 2 (12.5%), of the respondents were single, married and divorced respectively. With respect to borrowers educational background, 1 (6.3%) and 4 (25%) of them were primary & secondary school completers. Whereas, 5 (31.3%) and 6 (37.5) of them were diploma and first degree holders & above respectively. In terms of the type of projects borrowers are engaged, 19 (45.2%) were agricultural projects while 18 (42.9%) were industrial projects. The remaining 5 (11.9%) respondents were engaged in service sector. Hence from the results of the survey regarding demographic characteristics of borrowers, the majority of default borrowers of the region were Plc.'s. From those who are under sole proprietorship most defaulters were *Male, Married* and found in the age range of 35- 44 years.

Regarding the current position of staff respondents, 1 (4.2%), 4 (16.7%), 5 (20.8%), 9 (37.5%), 2 (8.3%), 1 (4.2%), and 2 (8.3%), of them were Trainee Junior Loan Officers, Junior Loan Officers, Loan Officers, Senior Loan Officers, PRLR Officers, Branch Managers and Principal Officers respectively. Hence, the survey result clearly indicates that most of the staff members included in the study was Senior Loan Officers capable of providing reliable data necessary for the study.

In terms of staff respondents' experience, 41.7% of them were having 1 – 5 years of banking experience. 20.8% had banking experience of above 15 years; and 5 (20.8%) of the staff respondents were having 6 – 10 years of banking experience. 3 (12.5%) of the respondents were having 11 – 15 years of experience in the banking industry. Only 1 (4.2%) of the respondents had banking experience of less than 1 year. This clearly shows that the majority of DBE staff respondents were having ample experience in providing the desired response that naturally contributed to the data quality of this survey.

### 4.2 Bank Specific Factors

The study tries to examine the factors that affect NPLs in DBE Central region. The study asked respondents to show their level of agreement or disagreement to certain statements dealing with bank specific factors affecting occurrences of nonperforming loans. Hence, the responses given by the respondents are presented as follows.

***(1) Credit Assessment and NPLs***

The result indicates that slightly above average (54.2%) of the respondents agreed that know your customer (KYC) policy of bank lead to high loan quality (mean=1.62). The study also indicated that weak credit risk management is perceived to lead to loan default as evidenced by slightly above average number (58.3%) of respondents with mean score of 1.46. On the other hand, 41.7% of the respondents having mean value of 2.38 agreed that easily admitted borrowers usually get defaulted. Credit assessment deals with a thorough analysis of the five C's to help indicate whether to lend or not and how much, under what terms and conditions, at what price to lend, to mention a few. Thus, banks that employ a strong KYC policy in recruiting customers would have a better loan quality. On the other hand, when the bank has weak credit risk management, the loans would be exposed to default. Besides, easily admitted borrowers usually get defaulted. Generally, the result depicts that weak credit risk management and easily admitted borrowers cause occurrences of nonperforming loans (*See Table 2 below*).

**Table 2: Factors Indicating Relation between Credit Assessment and Loan Default**

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Know Your Customer (KYC) policy of bank lead to high loan quality | 10 | 41.7 | 13 | 54.2 | 1 | 4.2 | - | - | - | - | 24 | 100.0 |
| Weak credit risk management lead to loan default | 14 | 58.3 | 9 | 37.5 | 1 | 4.2 | - | - | - | - | 24 | 100.0 |
| Easily admitted borrowers usually get defaulted | 4 | 16.7 | 10 | 41.7 | 7 | 29.2 | 3 | 12.5 | - | - | 24 | 100.0 |
| | | | | | | | | Mean | | | Std. Deviation | |
| | | | Credit assessment | | | | | 4.1804 | | | .41640 | |

**Source**: *SPSS Output from Survey Data, 2015*

***(2) Credit Monitoring and NPLs***

The results revealed that strict monitoring and controlling of project performance is believed to lead to high loan quality as confirmed by a significant number (70.8%) of respondents (mean=1.29). On the other hand, 33.3% of the respondents with mean score of 2.96 agreed that loan might perform well if properly monitored despite poor assessment during loan approval. However, 45.8% of the respondents (mean=2.54) agreed that occurrence of nonperforming loan is directly related to loan follow up. Furthermore, half (50%) of the respondents with mean value of 2.63 agreed that banks with higher budget for loan monitoring have lower nonperforming loans (*See table 3 below*). Naturally, the objective of monitoring a loan is to verify whether the basis on which the lending decision was taken continuously to hold good and to ascertain the loan funds are being properly utilized for the purpose they were granted. There is also a tendency by borrowers to give more attention to repaying loans if they are properly given attention by banks. Thus, credit monitoring is directly related to loan performance. Strict monitoring and controlling of projects is the base to have good loan quality. Moreover, even poorly assessed and advanced loan might perform well if properly monitored. This indicates that follow up would substitute poor credit analysis or assessment at the beginning. On the other hand, though loan monitoring requires budget, allocating higher budget might ensure loan performance.

**Table 3: Factors Indicating Credit Monitoring and Loan Default**

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Strict monitoring and Controlling of project performance lead to high loans quality | 17 | 70.8 | 7 | 29.2 | - | - | - | - | - | - | 24 | 100.0 |
| Poorly assessed and advanced loans may perform well if properly monitored | 2 | 8.3 | 8 | 33.3 | 6 | 25.0 | 5 | 20.8 | 3 | 12.5 | 24 | 100.0 |
| Loan follow up is directly related to occurrence of nonperforming loans | 4 | 16.7 | 11 | 45.8 | 4 | 16.7 | 2 | 8.3 | 3 | 12.5 | 24 | 100.0 |
| higher budget for loan monitoring will result in lower non-performing loans | 1 | 4.2 | 12 | 50.0 | 7 | 29.2 | 3 | 12.5 | 1 | 4.2 | 24 | 100.0 |
| | | | | | | | | Mean | | | Std. Deviation | |
| | | | Credit Monitoring | | | | | 3.6458 | | | .49408 | |

**Source**: *SPSS Output from Survey Data, 2015*

***(3) Borrower's Orientation and NPLs***

The results clearly show that a relationship exists between borrowers' orientation and occurrence of nonperforming loans. Accordingly, 75% of the respondents (mean=1.83) agreed that loan performance is affected by borrower's orientation/culture. On the other hand, 62.5% of respondents with mean value of 1.92 agreed that there is a relationship between loan default and borrower's culture. Besides, 75% of the respondents with mean value of 2.25 agreed that default in some area is ascribed to the culture of the borrowers. Furthermore, 50% of the respondents having mean value of 1.83 agreed that society's culture development leads to good loan performance. Thus, all of the factors relating to culture exhibited agreement as evidenced by a significant number of respondents (mean = 3.7742).

On the other hand, 45.8% of the respondents with mean value of 2.54 agreed that loans with high interest rate tend to turn to NPL. Though, about 54.2% of the respondents with mean value of 2.42 agreed that charging high interest rate leads to loan default. In addition, a significant portion (75%) of the respondents with mean score of 2.13 agreed that loan default can be caused by lenient /lax credit terms. However, 74% of respondents reported that borrowers default because they don't understand credit terms well (mean=2.92). Finally, 79.2% of the respondents agreed that poorly negotiated credit terms significantly lead to NPLs.

The result indicated that there is strong relation between borrowers' culture/orientation and occurrence of nonperforming loans. Therefore, borrower's orientation/culture is one of the causes for loan default. Moreover, high interest rate also causes for the occurrence of nonperforming loans. Both lenient/lax credit terms & difficulty in understanding credit terms leads to loan default. Similarly, poorly negotiated credit terms lead to nonperforming loans as confirmed by the majority of respondents (*See table 4 below*).

**Table 4: Relation between Borrower's Orientation and Occurrence of NPL**

| | **Strongly Agree** | | **Agree** | | **Neutral** | | **Disagree** | | **Strongly Disagree** | | **Mean** | **Std. Deviation** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | | |
| Borrower's orientation/culture is related to loan performance | 5 | 20.8 | 18 | 75.0 | 1 | 4.2 | | | - | - | 1.83 | 0.482 |
| There is a relationship between loan default and borrower's culture | 6 | 25.0 | 15 | 62.5 | 2 | 8.3 | 1 | 4.2 | - | - | 1.92 | 0.717 |
| Default in some area is ascribed to the culture of the borrowers | | | 18 | 75.0 | 6 | 25.0 | | - | - | - | 2.25 | 0.42 |
| Society's cultural development leads to good loan performance | 8 | 33.3 | 12 | 50.0 | 4 | 16.7 | | - | - | - | 1.83 | 0.702 |
| Loans with high interest rate tend to turn to NPL | 2 | 8.3 | 11 | 45.8 | 7 | 29.2 | 4 | 16.7 | - | - | 2.54 | 0.884 |
| Charging high interest rate leads to loan default | 1 | 4.2 | 13 | 54.2 | 9 | 37.5 | 1 | 4.2 | - | - | 2.42 | 0.654 |
| Lenient / lax credit term cause loan default | 2 | 8.3 | 18 | 75.0 | 3 | 12.5 | 1 | 4.2 | - | - | 2.13 | 0.612 |
| Borrowers default because they don't understand credit terms well | 9 | 37.5 | 9 | 37.5 | 5 | 20.8 | 1 | 4.2 | - | - | 2.92 | 0.881 |
| Poorly negotiated credit terms lead to loan non perform (NPL) | 1 | 4.2 | 19 | 79.2 | 2 | 8.3 | 2 | 8.3 | - | - | 2.21 | 0.658 |

**Source**: *SPSS Output from Survey Data, 2015*

***(4) Credit Size and NPLs***

The findings revealed that slightly above average (54.2%) of the respondents with mean value of 2.12 agreed that aggressive lending leads to occurrence of large NPL ratio. However, 37.5% of the respondents with mean value of 2.96 agreed that rapid credit growth lead to huge nonperforming loans. Whereas, 45.8% of the respondents with a mean score of 2.46 thought that banks' greater risk appetite would be cause for occurrence of non-performing loans. On the other hand, 41.7% of respondents with mean score of 2.88 agreed that compromised integrity in lending leads to loan default. Finally, 41.7% percent of them with mean score of 3.71 disagreed that having large number of borrowers causes loan default.

Hence, aggressive lending, bank's great risk appetite and compromised integrity in approving credit cause large volume of nonperforming loans. Besides, rapid credit growth is also believed to cause for occurrence of loan default as confirmed by a significant number of respondents (mean=2.96). The response indicates that having large number of borrowers is not the cause for the occurrence loan default (*See table 5 below*) as evidenced by the majority of respondents.

**Table 2: Factors Indicating Credit Size and Loan Default**

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Aggressive lending leads to large NPL volume/ratio | 5 | 20.8 | 13 | 54.2 | 4 | 16.7 | 2 | 8.3 | - | - | 24 | 100.0 |
| Rapid credit growth leads huge NPL level | 1 | 4.2 | 8 | 33.3 | 6 | 25.0 | 9 | 37.5 | - | - | 24 | 100.0 |
| The Bank's great risk appetite is cause for NPL | 4 | 16.7 | 11 | 45.8 | 4 | 16.7 | 4 | 16.7 | 1 | 4.2 | 24 | 100.0 |
| Compromised integrity in lending leads to loan default | 2 | 8.3 | 10 | 41.7 | 3 | 12.5 | 7 | 29.2 | 2 | 8.3 | 24 | 100.0 |
| Having large number of borrowers causes loan default | - | - | 5 | 20.8 | 3 | 12.5 | 10 | 41.7 | 6 | 25.0 | 24 | 100.0 |
| | | | Credit Size | | | | | Mean | | | Std. Deviation | |
| | | | | | | | | 3.1750 | | | .63331 | |

**Source**: *SPSS Output from Survey Data, 2015*

***(5) Credit Performers Capability, Power and Bank's Policy***

Regarding credit performers' capability, power and bank policy and its impact on the occurrence of NPL in the region, 62.5% of the respondents with mean of 2.46 agreed that project appraising and selection officers and managers are qualified and skilled enough. Furthermore, 45.8% of the respondents with mean value of 2.46 agreed that credit performers in the bank have autonomous power in appraising and selecting projects. On the other hand, slightly above average (58.3%) of the respondents with a mean score of 1.96 confirmed that the bank's lending policy always influences the region's lending decisions. Finally, 37.5% of the respondents with mean of 2.71 agreed that measures taken to resolve non-performing loans in the bank are too lenient (*See table 6 below*).

**Table 6: Credit Performers Capability, Power and Bank's Policy**

| | Strongly Agree | | Agree | | Neutral | | Disagree | | Strongly Disagree | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % |
| Project appraising and selection officers and managers are qualified and skilled enough | - | - | 15 | 62.5 | 7 | 29.2 | 2 | 8.3 | - | - | 24 | 100.0 |
| Credit performers in the bank have autonomous power in appraising and selecting projects | 1 | 4.2 | 11 | 45.8 | 7 | 29.2 | 5 | 20.8 | - | - | 24 | 100.0 |
| The bank's lending policy always influences the region's lending decisions | 6 | 25.0 | 14 | 58.3 | 3 | 12.5 | 1 | 4.2 | - | - | 24 | 100.0 |
| Measures taken to resolve non-performing loans in the bank are too lenient | 3 | 12.5 | 9 | 37.5 | 5 | 20.8 | 6 | 25.0 | 1 | 4.2 | 24 | 100.0 |
| | | | Credit Performance Capability, Power and Bank's Policy | | | | | Mean | | | Std. Deviation | |
| | | | | | | | | 3.5521 | | | .51594 | |

**Source**: *SPSS Output from Survey Data, 2015*

Besides, the respondents were asked to rank the factors affecting NPLs in the region. Accordingly, poor monitoring/follow-up was considered by the majority as the primary factor causing occurrences of nonperforming loans while poor credit assessment was ranked second. Credit culture/orientation was ranked as the third influential factor. On the other hand, a lenient credit term was ranked as the fourth important factor to cause occurrence of nonperforming loans. Whereas, other factors not mentioned in the table was ranked as the fifth relevant factors causing for NPL. Finally, high interest rate has been ranked as the sixth influential factor to cause for loan default (*See table 7 below*).

**Table 7: Ranking of Factors Affecting Occurrence of Nonperforming Loans**

| | Minimum | Maximum | Mean | Std. Deviation | Rank |
|---|---|---|---|---|---|
| High interest rate | 1 | 6 | 5.00 | 1.180 | 6 |
| Lenient credit terms | 1 | 6 | 3.04 | 1.601 | 4 |
| Credit culture / Orientation | 1 | 6 | 2.75 | 1.539 | 3 |
| Poor monitoring/follow | 1 | 6 | 2.21 | 1.641 | 1 |
| Poor risk assessment | 1 | 6 | 2.57 | 1.701 | 2 |
| Others, Please specify | 1 | 6 | 4.67 | 2.160 | 5 |
| Valid N (list wise) | | | | | |

**Source:** *SPSS Output from Survey Data, 2015*

Furthermore, using open-ended questions regarding causes for occurrence of nonperforming loan the following factors were identified as common causes for incidence of nonperforming loans: *weak risk assessment*, *implementation delay*, *poor follow-up* and *lack of proper assessment of KYC* or *due diligence*.

### 4.3 Customers Specific Factors

***(1) Project Accessibility***

The respondents' were asked about the accessibility of their project to basic infrastructure and utilities. Accordingly, 59.5% of the respondents agreed that their project is accessible. Thus, the result shows that infrastructure and utilities were not the cause of the projects to become defaulter.

***(2) Loan History***

Borrowers were also asked to give their degree of agreement or disagreement whether or not the process of approving loans in the bank is transparent. However, only 42.9% of the respondents agreed that the process is transparent. Though, 31% of them are neutral to provide their view on the matter, around 23.8% of them claimed that the process of approving loans in the region is not transparent.

More than average of the respondents has reservation on the transparency of loan approving process of the bank. Besides, loan approval process of the bank has risen as the cause for nonperforming loans in another subjective question. The reason might relate to the transparency of loan approving. If the loan approving process is not transparent it highly deteriorates the quality of loan approved. This leads to occurrence of NPL.

Respondents were asked about the sufficiency of the loan approved for the requirement of their project. Accordingly, the majority 69% of them indicated that the loan approved by the bank was insufficient for the requirement of the project (*See table 8 below*).

**Table 8: Sufficiency of the Approved Loans for the Requirement of their Projects**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly agree | 1 | 2.4 | 2.4 | 2.4 |
| | Agree | 8 | 19.0 | 19.0 | 21.4 |
| | Neutral | 4 | 9.5 | 9.5 | 31.0 |
| | Disagree | 25 | 59.5 | 59.5 | 90.5 |
| | strongly disagree | 4 | 9.5 | 9.5 | 100.0 |
| | Total | 42 | 100.0 | 100.0 | |

**Source**: *SPSS Output from Survey Data, 2015*

In addition to the above issues, 69% of the respondents thought that the loan approved by the bank is not sufficient for the requirement of the project. Besides, 88.1% of the respondents indicated that the approved loan is not provided by the bank in the soonest possible time. The majority of respondents (83.8%) assumed that the reason for the delay was the lengthy procedure the bank adopted in processing the loan. Ultimately, this might cause the project to be defaulted.

***(3) Project Implementation***

With respect to the adequacy of the "grace period" and "implantation of the project within the intended period of time", 52.4% of the borrowers claimed that the grace period was not enough; and also 61.9% of the respondents indicated that the project was not fully implemented within the intended period of time. Besides, they have indicted the constraints behind on time project implantation (*See tables 9 & 10 below*).

**Table 9:** Borrowers Level of Agreement with Regard to Adequacy of grace period

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly agree | 2 | 4.8 | 4.8 | 4.8 |
| | Agree | 10 | 23.8 | 23.8 | 28.6 |
| | Neutral | 8 | 19.0 | 19.0 | 47.6 |
| | Disagree | 16 | 38.1 | 38.1 | 85.7 |
| | strongly disagree | 6 | 14.3 | 14.3 | 100.0 |
| | Total | 42 | 100.0 | 100.0 | |

**Source**: *SPSS Output from Survey Data, 2015*

**Table 10: Borrowers Response on the Major Obstacles behind on Time Project Implementation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Financial constraint | 22 | 67.65 | 67.65 | 67.65 |
| | Technical constraint | 2 | 5.88 | 5.88 | 73.53 |
| | Shortage of materials | 5 | 14.71 | 14.71 | 88.24 |
| | Others | 4 | 11.76 | 11.76 | 100.0 |
| | Total | 33 | 100.0 | 100.0 | |

**Source**: *SPSS Output from Survey Data, 2015*

As it is stipulated in the above tables (11 & 12), the major constraint for project implementation problem/delay was financial constrain, which is, mainly caused by underestimation of the initial investment cost as confirmed by 39.1% of the respondents. The same respondents who were facing implementation delay were asked about what type of mechanisms they used to overcome the problem they encountered. Accordingly, the respondents indicated that they used the following mechanisms to solve problems associated with implementation delays:-

- Asking the bank to reschedule the loan repayment period
- Working in close collaboration with the bank
- Reducing production
- Asking the bank for additional loan

Most commonly the bank provides additional loan and loan repayment period rescheduling for the borrowers who have encountered implementation with strong justification for the problem.

**Tables 11: Why Financial Constraints faced in Implementing Projects?**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Inflation | 5 | 21.7 | 25.0 | 25.0 |
| | Inabilities to raise own contribution | 2 | 8.7 | 10.0 | 35.0 |
| | Inadequate loan released | 3 | 13.0 | 15.0 | 50.0 |
| | Underestimation of the initial investment cost | 9 | 39.1 | 45.0 | 95.0 |
| | Dalliance in Disbursement | 1 | 4.3 | 5.0 | 100.0 |
| | Total | 20 | 87.0 | 100.0 | |
| Missing | System | 3 | 13.0 | | |
| Total | | 23 | 100.0 | | |

**Source**: *SPSS Output from Survey Data, 2015*

***(4) Market Situation***

When we look at the market situation of the borrowers about 47.6% of the respondents evaluated their market demand was good. Besides, 33.3% of the respondents agreed that their market situation was as expected or projected by the feasibility study. However, 33.4% of the respondents revealed that their market situation was not as per the expectation or projection made by the feasibility study. The reason for the market situation not at the level of their expectation or projection was that because they were producing below their capacity as indicated by 50% of the respondents. The other reasons mentioned were establishment of similar projects and excess supply in the market. However, 21.4% of the respondents were not willing to give their response on the market situation. In addition, the respondents listed the following reasons for the market situation not as per expected or projected on the feasibility study:-

- Implementation of inappropriate marketing strategy
- Lack of market for products
- Overestimation problem while developing the feasibility study
- Unavailability of raw materials in the local market and insufficiency of fund allocated for working capital and inaccessibility of foreign currency.

***(5) Loan Repayment***

Under this section borrowers were asked how they evaluated the mode of disbursement of the bank and what motivated them to repay the loan and why they fail in repaying the loan according to the loan repayment schedule stipulated in the loan contract. In addition, they were asked whether or not the loan repayment period given by the bank is enough or not. Hence, 66.7% of the respondents evaluated that the mode of disbursement focused on controlling rather than the current need of the project. On the other hand, 64.3% of the respondents were motivated to repay their loan because paying bank loan is part of their obligation.

**Table 4.12: Borrowers Evaluation of the Mode of Loan Disbursement**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | In line to the need of the project | 4 | 9.5 | 9.5 | 9.5 |
| | Focused on controlling rather than the current need of the project | 28 | 66.7 | 66.7 | 76.2 |
| | Both | 9 | 21.4 | 21.4 | 97.6 |
| | Others | 1 | 2.4 | 2.4 | 100.0 |
| | Total | 42 | 100.0 | 100.0 | |

**Source**: *SPSS Output from Survey Data, 2015*

Regarding failure in repaying loan according to the loan repayment schedule, 57.1% of respondents (*See table 13*) indicated that it is due to shortage of working capital; however, 38.1 % of the respondents believed that failure in repayment of loans arise due to market problem and finally, 4.8% of them were willful defaulters. Besides, the majority, 59.5% of the respondents believed that the loan repayment period given by the bank is not enough. Hence, from this one can infer that shortage of working capital, market problem & the short loan repayment period given by the bank can be cited as the factors that led to loan default.

In order to settle the overdue loan balance, respondents were asked the mechanisms they designed to pay the overdue (arrears) loan balance. Therefore, the following mechanisms were forwarded by the respondents:-

- Selling of products aggressively
- Collecting additional cash from partners
- Borrowing from somewhere else
- Asking the bank for loan repayment period rescheduling
- Management restructuring the
- Increasing product quality to sell more
- Negotiating with the bank

**Table 13: Reasons for failure in Repaying Loan as per Loan repayment schedule**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Market problem | 16 | 38.1 | 38.1 | 38.1 |
| | Working capital shortage | 24 | 57.1 | 57.1 | 95.2 |
| | Willful defaulting | 2 | 4.8 | 4.8 | 100.0 |
| | Total | 42 | 100.0 | 100.0 | |

**Source**: *SPSS Output from Survey Data, 2015*

## V. Conclusions and Policy Implications

### 5.1 Conclusions

The average ratio of non-performing loans in the region for the last five years was 45% which is very high compared to the acceptable standard of 15% of the total loan outstanding set by Association of African Development Finance Institutions. Empirical evidence shows that NPL is found to be one of the major critical factors that adversely affect the overall performance of the financial institutions. It results in poor asset quality, undermines the net income, endangers sustainability, tarnish image and reputation, etc. Consequently, it affects banks and the financial system in the economy and the country's economy at large. Understanding the causes of NPLs is crucial for designing appropriate regulatory measures to strengthen asset quality of the bank. Thus, the aim of this study was to identify the causes for the occurrence of Nonperforming loans of Development bank of Ethiopia Central region. The study tried to find out both bank and customer specific determinates of nonperforming loans.

Among the bank specific factors, the study found that the credit assessment of the region is the major cause. The result depicts that weak credit risk management and easily admitted borrowers cause occurrences of NPL under credit assessment. This implies that the region has been poorly assessing borrower's creditworthiness, ability to repay a loan and the risk associated with the loan. Therefore, this result is found to be parallel with the conclusion made by Joseph et al. (2012), which says factors such as poor credit policy; weak credit analysis and inadequate risk management have influence towards non-performing loans.

The result also shows that credit monitoring is the cause for the occurrence of nonperforming loan. Strict monitoring and controlling of projects is the base to have good loan quality. Furthermore, even poorly assessed and advanced loan might perform well if properly monitored. When the bank fails to give due attention to the borrowers and what it is doing with the money the bank may not see the risk associated with it. The objective of loan follow up or monitoring is to make sure that the end use of fund is in line with the purpose and approval terms and conditions. In agreement with empirical studies, the result of the study support the conclusion made by Wondimagegnehu (2012) that credit monitoring/ follow-up plays pivotal role to ensure loan collection.

Meanwhile, aggressive lending, bank's excessive risk appetite and compromised integrity in approving credit and rapid credit growth were believed to cause for occurrence of loan default. This finding is in line with and supports the empirical study of Keeton and Morris (1987) that reported banks with greater risk appetite tend to record higher losses. Besides, according to Rajiv & Dhal (2003) excessive financing is regarded main reason for high rate of NPLs. There is also evidence that rapid credit growth as a measure of excessive risk taking in lending serves as a sign to worsening loan portfolio quality. However, this study didn't support Keeton and Morris (1987) that argued banks that tend to take more risks, including in the form of excess lending eventually incur higher losses. Moreover, the study's result shows that high interest rate, poorly negotiated credit terms and lenient/lax credit terms are also the cause for the occurrence of nonperforming loans. In addition, the loan approving process and the amount of loan approved by the bank were the causes for the occurrence of NPLs in the region. The result of the study supports the finding by (Pasha, n/d) that found banks which charge relatively higher interest rates and lend excessively are likely to incur higher levels of non-performing loans, Rajiv and Dhal (2003) financial factors such as terms of credit and credit orientation impact significantly on the non-performing loans and Jimenez and Saurina (2005) provided evidence that NPLs are determined by lenient credit terms.

Concerning customer's specific causes, the result shows credit culture of customers, lack of knowledge and related experience of borrower for the proposed business, willful default, loan diversion, lack of commitment on the side of the promoter and project management problem were the factors. The result confirmed empirical literature of Wondimagegnehu (2012) that concluded willful defaults by borrower and their knowledge limitation, fund diversion for unexpected purposes and overdue financing has significant effect on NPLs. This implies that customers' specific factors have impact on the prevalence of NPLs unless thoroughly addressed through comprehensive credit worthiness assessment supported by KYC during loan application and properly monitored after being implemented.

## 5.2 Recommendations

Based on the findings of the study the researchers forwarded the following recommendations:

- Loan granting is a very risky business unless the risk associated with it properly identified and mitigated. In order to protect the occurrence of loan default, the bank should adapt pre-and post-credit risk assessments.
- The bank should prepare awareness creation forums regarding credit service of the bank to improve credit culture of potential investors.
- The bank needs to make sure that borrowed funds are being used for the intended purpose through enhanced timely credit monitoring after the loan is being disbursed.
- Given the adverse effect of NPLs on the bank's sustainability and also in view of the significant contribution of bank-level factors to NPLs, the bank should prevent a sharp buildup of NPLs in the future by ensuring that avoiding excessive lending, maintaining high credit standards/terms and closely monitor the rate of credit growth to prevent aggressive lending.
- When a loan became non-performing and if there is no any option to recover the loan, the region has to make a write off. If non-performing loans remains on the balance sheet, it reduces the asset quality of the Bank and it will affect reputation and loose trust of stakeholders like depositors and investors. Therefore, timely decision should be given by the concerned body; NPL resolution mechanisms should be adopted so as to avoid the problems of non-performing loans.
- This study tries to identify both bank and customer specific factors affecting nonperforming loans of DBE central region using selected variables. However, there are so many variables that were not included in this study. Thus, future researchers may be interested in validating the consistency of the result and provide supplementary results for this by including macroeconomic factors affecting nonperforming loans.

## REFERENCES

[1] Agresti, A.M., Baudino, P., & Poloni, P. (2008). The ECB and IMF indicators for the Macro prudential analysis of the banking sector: A comparison of the two approaches.

[2] Ahmmed, M., Serajul,I., and Rahman, M.T. (2012). Analysis of Repayment Behavior In Banks Customer Perspective. Case of Bangladeshi Mercantile Limited Bank, World Review Of Business Research, Volume 2.

[3] Asari F. F. Muhamad, N. A., Ahmad, W., Latif, N. I. A., Abdullah, N. &Jusoff, K., (2011), 'An Analysis of Nonperforming Loan, Interest Rate & Inflation Rate Using STATA Software' World Applied Sciences Journal, Vol. 12, pp. 41-48.

[4] Basel Committee on Banking Supervision, (1999). 'Principles for the Management of Credit Risk'. Consultative Paper, the Basel Committee on Banking Supervision.

[5] Bercoff, J. J., Julian, D. G., & Grimard, F. (2002), "Argentinean Banks, Credit Growth and the Tequila Crisis: A Duration Analysis. Working Paper.

[6] Bloem, A. M., & Gorter, C. N. (2001). The Treatment of non-performing loans in macroeconomic statistics, IMF Working Paper. WP/01/209.

[7] Boskey, S. (1961). Problem and Practice of Development Banks: Baltimore: the John Hopkins.

[8] Boudriga, A. Boulila, T., Neila, & Jellouli, S. (2009). Bank Specific, Business and Institutional, Environment Determinants of Nonperforming

Loans: Evidence from MENA Countries, Journal of Financial Economic Policy, Vol. 1, pp. 286-318.
[9] Cresswell, JW, (2003). Research Design: Qualitative, Quantitative and Mixed Method Approaches. Sage Publications, Second Edition. Thousand Oaks, California.
[10] Brown, C., Mallt, D.J., & Taylor, M.G. (1993). Banks: an Industrial Accounting and Auditing
[11] Brownbrigde, M. (1998). The Causes of financial distress in local banks in Africa and implication for Prudential policy.
[12] DBE, (2014) Development Bank of Ethiopia, Annual Report, 2009/10 – 2013/14
[13] DBE, (2014). Development Bank of Ethiopia, Annual Report, June 2014
[14] DBE, (2009). Development Bank of Ethiopia, Credit Policy, September, 2009.
[15] DBE, (2014). Development Bank of Ethiopia, Loan Manual, June 2014
[16] Development bank of Ethiopia, risk management training manual
[17] Diamond, W. (1957). Development Banks, Economic Development Institute, International Bank for Reconstruction and Development.
[18] Eastern Caribbean Central Bank, (2009). Guidelines on Credit Risk Management for Institutions Licensed To Conduct Banking Business under the Banking Act.
[19] Espinoza, R. & Prasad, A. (2010). Non-performing loans in the GCC banking system and their macroeconomic effects, IMF Working Paper 10/224. Evaluation and Organizational Development: Florida: IFAS.
[20] Israel, G. D. (1992). Sampling the Evidence of Extension Program Impact.
[21] Jimenez, G., & Saurina, J. (2005). Credit Cycles, Credit risk, and prudential regulation. Vol. 2(2), pp. 65-98.
[22] Joseph, M.T., Edson.G, Manuere, F., Clifford, M., & Michael, K. (2012). Non-Performing Loans in Commercial Banks: A case of CBZ Bank Limited in Zimbabwe. Interdisciplinary Journal of Contemporary Research in Business, Volume 4.
[23] Kapoor, J.R., Dlabay, L.R., Hughes, R.J., & Hoyt, W.B. (2007). Business and personal finance: USA: McGraw-Hill Company.
[24] Keeton, W. R. (1999). Does Faster Loan Growth Lead to Higher Loan Losses? 'Federal Reserve Bank of KansasCity Economic Review. 84 (2), 57-75
[25] Keeton, W., & Morris, C. S. (1987). Why Do Banks' Loan Losses Differ? Federal Reserve Bank of Kansas City: Economic Review. May, pp. 3 – 21.
[26] Khemraj, T., Pasha, S. (2009), The determinants of non-performing loans: An econometric case study of Guyana'. The Caribbean Centre for Banking and Finance Bi-annual Conference on Banking andFinance, St. Augustine, Trinidad.
[27] Mensha, C. (1999). Bank Credit Provision and Performance Measurement: the experience of rural banking in Ghana.
[28] Mitku, M. (2014). Determinants of Commercial Banks Lending: Evidence from Ethiopian Commercial Banks. European Journal of Business and Management, Volume 6.
[29] NBE, (2012). National Bank of Ethiopia Directive No. SBB/52/2012, 2012
[30] Pasha, S., & Khemraj, T. (2005). The determinants of non-performing loans: an econometric case study of Guyana.
[31] Pilbeam, K. (1998). International Finance: Great Britain: Ebbw Val.
[32] Pilbeam, K. (2005). Finance and Financial Markets: Palgrave Macmillan.
[33] Rajiv, R., & Dhal, S.C. (2003). Non-performing Loans and Terms of Credit of Public. Reserve Bank of India Occasional Papers, 24(3), 81-121
[34] Rinaldi, L., Sanchis, A. (2006). Household Debt Sustainability: What Explains Household Non-performing Loans? An Empirical Analysis, ECB Working Paper, Volume 24:3.
[35] Shim, J. K., & Siegel, J. G. (2007). Financial Management: USA: McGraw-Hill Company.
[36] Sinkey, J. F., & Green Walt, M.B. (1991).Loan-Loss Experience and Risk-Taking Behavior at Large Commercial Banks, Journal of Financial Services Research, Volume 5, pp. 43 – 59
[37] Smith, G. (1991). Banking and Financial Intermediation: Toronto: D.C Health and Company Lexington.
[38] Skarica, B. (2013). Determinants of Non-Performing Loans in Central and Eastern European Countries: Financial Theory and Practice, Volume 38.
[39] Steinwand, D. (2000). A risk Management framework for micro finance Institutions: Chicago: Deutsche Gesellschaft fur.
[40] J. Taylor, New Laws, New Lawyers and The EBRD (1996). International Business Lawyer as cited by Sonali Abeyratne, Banking and Debt Recovery in Emerging Market: The Law reform Context 2001.
[41] Timothy, W. K. (1994). Bank Management: Harcourt Brace College.
[42] Vigano, L, (1993). A credit Scoring Model for Development Banks: An African Case Study. Saving and Development, Vol. 17(4), pp. 441-482
[43] V. Salas, J. Saurina (2002), 'Credit Risk in two Institutional Regimes: Spanish Commercial and Savings Banks' Journal of Financial Services Services Research December 2002, Vol. 22, Issue 3, pp. 203 – 224
[44] Wondimagegnehu, N. (2012). Determinants of Non-Performing Loans: The case of Ethiopian Banks, Unpublished Master's Thesis.

## AUTHORS

**First Author** – Arega Seyoum Asfaw, College of Business and Economics, Jimma University
**Second Author** – Hanna Nigussie Bogale, Development Bank of Ethiopia
**Third Author** – Tadele Tesfay Teame, College of Business & Economics, Jimma University