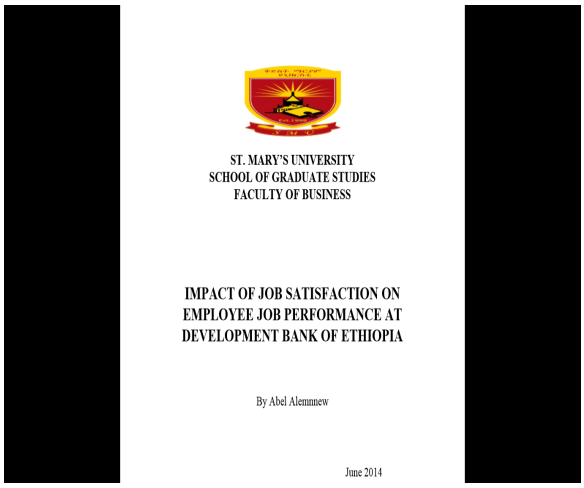

ST. MARY'S UNIVERSITY
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ANALYSIS OF DETERMINANTS OF NON-PERFORMING LOANS (NPLs)

(A CASE STUDY IN DEVELOPMENT BANK OF ETHIOPIA)

BY: ASHENAFI T/MICHAEL

May, 2015

Addis Ababa Ethiopia

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THESIS SUBMITTED TO ST.MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION IN ACCOUNTING AND FINANCE

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APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies	**Signature**
Advisor	**Signature**
External Examiner	**Signature**
Internal Examiner	**Signature**

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Ass. Professor Dejene Mamo, All sources of material used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institutions for the purpose of earning any degree.

_____ _____

Name Signature

St. Mary's University Addis Ababa **April, 2015**

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Assistant Professor, Dejene Mamo _____
Advisor Signature

St. Mary's University Addis Ababa **April, 2015**

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Finally, I pass my hurtful thanks for Gossaye our group member/leader who had coordinated, encouraged and helped us all time throughout our courses but passed-away peacefully; I wish God put his soul in heaven.

ABSTRACT

This research empirically examines determinants of NPLs in DBE and identified the major bank specific and non-bank specific factors/causes of NPLs in DBE. The data for the study was collected form primary and secondary sources. Primary data was collected using both structured and open ended subjective questionnaires from the sample population of 22 credit units staffs of the Bank, a stratified sampling techniques was used to select the sample and secondary data was collected from the Bank's annual reports, annual loan portfolio, loan recovery and credit operations reports.

Descriptive statistics and regression analysis were used to analyze and examine the data. Mainly the bank specific, non-bank specific (borrowers related and other external) factors/causes of NPLs in DBE and major determinants of NPLs in DBE were considered. The study found out that poor project follow-up, shallow know your customer (KYC) assessment, low capacity of credit performers, poor loan underwriting, fund dive-ration by borrowers, poor project management capacity of borrowers and intervention of external bodies on credit decision making are among the major bank specific and non-bank specific (borrowers related and other external) factors for occurrence of NPLs in DBE; moreover, the study find out that loan outstanding and loan in arrear are considered as variables that positively and significantly determine/affect NPLs in DBE. But loan collection is the variable among the tested variables that negatively significantly affects NPLs in DBE.

Generally the study found out major bank specific and non-bank specific factors for occurrence of NPLs in DBE and determinants of NPLs in the Bank.

The inference and suggestion of the study for the Bank and its credit units, credit policy reviewers, credit decision makers, credit performers and risk assessors have been discussed.

Table of Contents

ACRONYMS

AADFIs	Association of African Development Finance Institutions
CAR	Capital Adequacy Ratio
DBE	Development Bank of Ethiopia
FSIs	Financial Soundness Indicators
GDP	Growth Domestic Production
IMF	International Monetary Fund
KYC	Know Your Customers
MBA	Masters in Business Administration
MoFED	Ministry of Finance and Economic Development
NBE	National Bank of Ethiopia
NPLs	Non-performing Loans
ROA	Return on Asset
ROE	Return on Equity
SBB	Supervision of Banking Business

CHAPTER ONE
INTRODUCTION

1.1 BACKGROUND

No one can deny the importance of financial institutions in any developed or developing economy these financial institutions not only ease the credit flow in the economy but also enhance the productivity by revitalizing the investment (Richard, 2011). Economic growth in any country is not possible without a sound financial sector (Rajaraman and Visishtha, 2002). Good performance of these financial institutions is the symbol of prosperity and economic growth in any country or region and poor performance of these institutions not only hamper the economic growth and structure of the particular region but also affects the whole world (Khan and Senhadji, 2001).

In the last few decades we can see many banking failures in all over the world (Brownbridge and Harvey, 1998), and due to these banking failures many banks have been closed by regulatory authorities (Brownbridge, 1998). These banking failures negatively affect the economy in many ways, firstly these banking failures causes banking crisis by harming the banking sector, secondly it also reduces the credit flow in the country which ultimately affects the efficiency and productivity of the business units (Chijoriga, 1997; Brownbridge and Harvey, 1998). According to Brownbridge, (1998) many empirical researches have shown that most of the time banking failures or banking crisis are caused by non-performing loans.

Non-performing Loans (NPLs) have gained world's intention in the last three to four decades as these increasing non-performing loans are causing banking crisis which are turning into banking failures (Barr and Siems, 1994). Non-performing loans are one of the main reasons that cause insolvency of the financial institutions and ultimately hurt the whole economy (Hou, 2007). By considering these facts it is necessary to control non-performing loans for sound operation of Banks, financial stability and economic growth in the country, otherwise the resources can be jammed in unprofitable projects and sectors which not only damages the financial stability but also the economic growth. In order to control the non-performing loans it is necessary to understand the root causes of these non-performing loans in the particular financial sector.

It is important to understand the phenomena and nature of non-performing loans; it has many implications, as fewer loan losses is indicator of comparatively more firm financial system, on the other hand high level of non-performing loans is an indicator of unsecure financial system and a worrying signal for bank management and regulatory authorities, if we look into the causes of great recession 2007-2009 which damaged not only economy of USA but also economies of many countries of the world we find that non-performing loans were one of the main causes of great recession (Adebola, et al, 2011). As High risk loans were granted to the unqualified borrowers and these loans were secured against overestimated resources or against nothing, and when this economic boom "went bust" those high risk loans turned into non-performing loans and as loans were given to unqualified borrowers those turned into non-performing loans, as a whole this collection of non-performing loans irrespective of its causes was one of the main factor of great recession which not only hampered the American financial sector but also economy of the whole world (Clugston, 2009).

Hennie and Sonja (2009) define NPLs as assets not generating income. This is when principal or interest is due and left unpaid for 90 days or more. Loan defaults are inevitable in any lending. What banks do is to minimize the risk of defaults. NPL are loans that have defaulted or in danger of defaulting, when payment are no longer able to be made. Typically, loans that have not received payments for three months are considered to be non-performing though specific contract terms may differ occasionally (Mikiko, 2003).

NPL can be treated as undesirable outputs or costs to a loaning bank, which decrease the bank's performance (Chang, 1999). Controlling NPL is very important for both the performance of an individual bank (McNulty, et al, 2001) and the economy's financial environment. (Krueger and Tornell 1999) attribute the credit crunch in Mexico after the 1995 crisis partially to the bad loans. They point out that financial institutions were burdened with credits of negative real value, thereby reducing their capacity of providing fresh fund for new projects.

The level of nonperforming loan in a Bank's loan portfolio should be well managed in order to keep the quality of Bank asset, to maintain or improve the efficiency and effectives of a bank. In general, to undertake sustainable and sound credit operation good non-performing loans management is among the crucial issues. An optimal non-performing loans management mainly requires standardized and sustainable credit risk management and prudent pre and post credit administration practices which includes the following: undertaking due diligent assessment or know your customers (KYC) principles, standardized project appraisal, loan approval and continuous credit monitoring and evaluation, loan workout, taking timely and appropriate action before and after loan default.

Ethiopia's GDP grown by 10.3% in 2006 E.C (MoFED, 2006), both private and public investment contributed for the double digit GDP growth achievement of the country. Usually most of the private investments are partially financed by both public and private Banks in the country. Development Bank of Ethiopia is one of public banks in Ethiopia that provide mainly medium (3-5 years) and long term (5-20 years) investment credit to borrowers in different sectors. Financing long term credit has high credit risk which in turn expose for high NPLs. According to loan portfolio report of the Bank as at Sept 30, 2014, the Bank's NPLs was Birr 2.55 billion; this accounted for 10.59% of the total loan portfolio. Currently this large and growing NPLs amount makes the issue of NPLs questionable and crucial in DBE.

This study attempts to explore some of the Bank specific and borrowers' related factors for occurrence of non-performing loans in the case of Development Bank of Ethiopia (DBE) which are causing bad loans by considering the opinion/perception of credit operators in DBE. Survey methodology is used to get the data from those bankers, who are involved in the lending decisions, credit monitoring, project rehabilitation and loan recovery and managing credit risk; regression analysis is applied to access the empirical results.

1.2 STATEMENT OF THE PROBLEM

Good performance of financial institutions is the symbol of prosperity and economic growth in any country or region and poor performance of these institutions not only hamper the economic growth and structure of the particular region but also affects the whole world (Khan and Senhadji, 2001).

Development Bank of Ethiopia (DBE) is one of the public Banks in Ethiopia, which has been providing medium and long term credits for development projects in various sectors of the country's economy since its establishment; thereby it has played a significant role in the development process of the country. However; currently the Bank's loan portfolios consists of significant amount of accumulated non-performing loans in different sectors financed by the Bank (DBE's Loan Portfolio Report, Sept., 2014). Therefore the Bank is facing challenge in: maintaining quality of its loan asset which accounts for more than fifty percent of the bank's total assets value, its resource mobilization, meeting its annual loan recovery demand and its relation with Banks and other financial as well as non financial institution. Besides, the presence of NPLs amount of Birr 2.55 billion, in its loan portfolio as at September 30, 2014, as per the Loan Portfolio Report of the Bank as of Sept., 2014; which could have been used for new debt servicing or meet its obligations if this asset part were recovered as scheduled, these NPLs also causes the Bank to hold large amount of reserve for loan and interest provision that tie its fund and to incur provision expenses which has adverse effects on its net income.

In order to reduce and optimally manage non-performing loans and to contribute for achievement of the Bank's vision (100% successes in financed projects by 2010), it is necessary to find out the root causes and determinants of NPLs in DBE. Therefore, this study attempted to analyze the major specific determinants of NPLs in DBE.

1.3 RESEARCH QUESTIONS

As the researcher tries to achieve the general as well as specific objectives of this study the following questions would have been very important:

- What are the determinants of non-performing loans in DBE?
- What are the bank specific factors of non-performing loans in DBE
- What are the non bank specific factors of NPLs in DBE?

1.4 OBJECTIVE OF THE STUDY

The general objective of this study is examining determinants of NPLs in DBE.

The specific objectives of the study are:

1. To empirically analyze determinants of non-performing loans in DBE.
2. To identify bank specific factors of NPLs in DBE.
3. To identify non bank specific (external and borrowers related) factors of NPLs in DBE.

1.5 SCOPE OF THE STUDY

The study covers assessment and identification of major bank specific and non-bank specific (Borrowers related and external) causes of NPLs in DBE as a whole.

1.6 SIGNIFICANCE OF THE STUDY

In this study the major causes and determinants of NPLs in DBE had been assessed and identified. The outcome of the study will provide useful input for both credit policy reviewers of the Bank (to articulate prudent NPLs management policy, procedures and practices in the Bank's credit policy) and for performers of the Bank in credit area (credit managers, loan officers, credit risk analysts and etc) for giving emphasis on major determinants of NPLs and undertaking proactive actions on causes of NPLs based on the recommendations of the study. In general the study findings are important for sustainable and optimal NPLs management of the Bank as it identify the major causes and determinants of NPLs in the Bank. By doing so the bank will improves its asset quality, resource mobilization, efficiency in areas of loan administration operations, loan recovery performance and the study is also significant for the bank as it helps the bank in achieving its vision.

In addition the research would try to shed light for farther studies in the area which other researchers can benefit from the direction.

1.7 ORGANIATION OF THE STUDY

This research study is organized into five chapters. The first chapter contains the background, statement of the problem, research questions, objective, scope and significance of the study; chapter two deals with overview DBE's NPLs, review of both theoretical and empirical literatures that are relevant to non-performing loan and its determinants; chapter three describes research design and method, sample and sampling techniques, source and tool of data collection and methods of data

analysis applied; chapter four deals with data analysis, presentation, interpretation and discussion of the result/findings of the study. And the last chapter (chapter five) includes summary of the research findings, conclusions and recommendations. In addition to the above chapters, list of reference materials and annexes would be added at the end of the paper.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 DEFINITIONS OF KEY TERMS

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, agricultural, construction, services, commercial or other economic sectors; (NBE, Directive No. SBB/52/2012, Article, 4.4)

Loans means any financial assets of a development finance institution arising from a direct or indirect advance of funds (i.e. unplanned over drawings, participation in loan syndication, the purchase of loans from another lender, etc.) or commitment to advance funds by a development finance institution to a person that are conditioned on the obligation of the person to repay the funds, either on a specified date or dates or on demand, usually with interest. The term includes a contractual obligation of a development finance institution to advance funds to or on behalf of a person, claim evidenced by a lease financing transaction in which the development finance institution is the lessor, and line of credit to be funded by the development finance institutions on behalf of a person. (NBE, Directive, No. SBB/52/2012, Article, 4.5)

Non-performing Loan: There is no common definition of nonperforming loans (NPLs) in the whole country since it is recognized that it is possible that what is appropriate in one country may not be so in another. The most widely known international definition of nonperforming loans was

developed by the IMF in the framework of the Financial Soundness Indicators (FSIs) endorsed by the IMF Executive Board.

The FSI Compilation Guide of March 2006 (IMF, 2006) recommends that

> "loans (and other assets) should be classified as NPL when (1) payments of principal and interest are past due by three months (90 days) or more, or (2) interest payments equal to three months (90 days) interest or more have been capitalized (re-invested into the principal amount), refinanced, or rolled over (i.e. payment has been delayed by arrangement). The 90-day criterion is the time period that is most widely used by countries to determine whether a loan is nonperforming. Indeed, the Guide regards the guideline of 90 days past due as an outer bound and does not intend to discourage stricter approaches."

Apparently in an attempt to further facilitate cross-country comparability of measurement, "the series 'nonperforming loans' are redefined" in the updated November 2007 version of the Compilation Guide (IMF, 2007) "on the basis of a uniform criterion of 'principal or interest payments 90 days overdue".

Non- performing loans are further defined as loans whose cash flows stream is so uncertain that the bank does not recognize income until cash is received, and loans those whose interest rate has been lowered on the maturity increase because of problem with the borrower (Machiraju, HR 2001). Accordingly the IMF's Compilation Guide on Financial Soundness Indicators, NPLs is defined as:

> '' A loan is non-performing when payments of interests and principal are past due by 90 days or more, or at least 90 days of interest payment have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue, but

there are other good reasons such as a debtor filing for bankruptcy to doubt that payment will be made in full'' (IMF, 2009).

Non-performing loans means loans 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 advance is in question. NBE Directives No (SBB/ 48/2010)

Credit Risk means the potential that a bank's borrower or counterparty will fail to meet its obligations in accordance with agreed terms. (DBE's Risk Management Policy, Jan., 2011)

Risk Appetite means the level of risk exposure that a bank is willing to accept in pursuit of achieving its mission and objectives. (DBE's Risk Management Policy, Jan., 2011)

2.2 THE EFFECTS OF NPLS

The issue of non-performing loans (NPLs) has gained increasing attentions in the last few decades. The immediate consequence of large amount of NPLs in the banking system is bank failure. Many researches on the cause of bank failures find that asset quality is a statistically significant predictor of insolvency (e.g. Dermirgue-Kunt, 1989; Barr and Siems, 1994), and that failing banking institutions always have high level of non-performing loans prior to failure.

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 episodes of systemic crises (WN Geletta, 2012). Deterioration in banks' loan quality is one of the major causes of financial fragility. Past experience shows that a rapid buildup of bad loans plays a crucial role in banking crises

(Demirgüç et al, 1998; González Hermosillo, 1999). The Tobit regression results clearly indicate that higher non-performing loan reduces cost efficiency. (Mohd Zaini Abd Karim, et al, 2010).

As the NPLs amount is becoming larger and larger, it deteriorates Banks' asset quality, reduces banks' efficiency and income (due to increasing provision expenses held on increasing nonperforming loans) these all adversely affects banks': image reputation, resource mobilization capacity, soundness, financial intermediation role; these in turn result in reduction in: investment and related economic growth of countries.

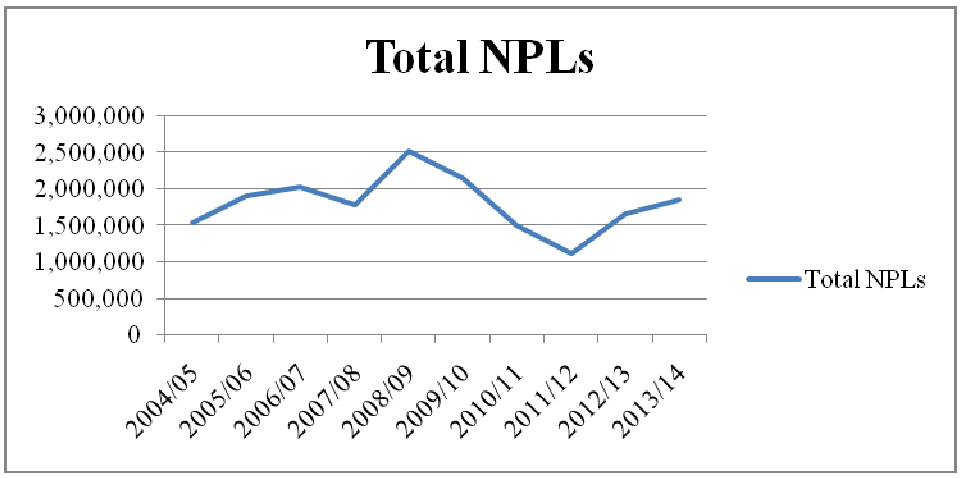
2.3 OVER VIEW OF DBE'S NPLS

2.3.1 TREND OF NPLS AS A WHOLE

In DBE loans are transferred to non-performing loans and categorized as substandard, doubtful and loss loans based on NBE Directive, No. SBB/52/2012 as discussed in theoretical literature part in this document. As it is depicted in graph one below, the trend of NPLs in DBE shows decline from 2008/09 to 2010/11 but starting from 2011/12 onward it depicts increasing trend and as at June 30, 2014 the Bank's NPLs reached about Birr 1.86 billion birr and this accounts 8.23% of the total loan portfolio of the Bank, that is Birr 22,518,274,605.

Graph 1: Trend of DBE's NPLs from 2004/05 to2013/14 G.C

(000Birr)



Source: DBE's Loan Portfolio Concentration Reports

2.3.2 NPLS AND NPLS RATIO BY OPERATING UNITS

Table 1 below depicts DBE's NPLs value by operational units of the Bank as at June 30, 2014 and NPLs ratio of the operational units and the bank as a whole for fiscal year ended 2012/13 and 2013/14; the optimum NPLs ratio level set by international regulators is reported to be 5-15% of the total loan portfolio (AADFIs) . Even though the bank's non-performing loan portfolio level as a whole 8.23% fall within the regulators requirement level, when we examine the NPLs ratio of operating units as at June 30, 2014, Central, South and North Regions' NPLs ratio exceeded the regulators standard and requires more attention so as to meet regulators standard more over other loaning units discussed on table 1 below also should work hard to attain the minimum possible level of NPLs ratio set by the regulators that is 5% of the total loan portfolio of the respective loaning units, in order to bring the banks NPLs' ratio to the required minimum level.

Table 1: DBE's NPLs and NPLs Ratio by Operating Units (June 30, 2014)

Sr. No	Operating/Loaning/ Units	NPLs, as at June 30, 2014 (000 Birr)	NPLs Ratio as at June 30, 2013 (%)	NPLs Ratio as at June 30, 2014 (%)
1	**Corporate Credit**	**1,263,719**	**6.59**	**6.35**

2	Central Region	215,934	33.36	34.43
3	South Region	157,785	27.36	42.13
4	North Region	51,575	7.78	15.47
5	North West Region	48,716	12.26	9.97
6	West Region	115,526	25.54	14.35
	Regional Total	**589,535**	**24.66**	**22.43**
	Grand Total	**1,853,254**	**8.66**	**8.23**

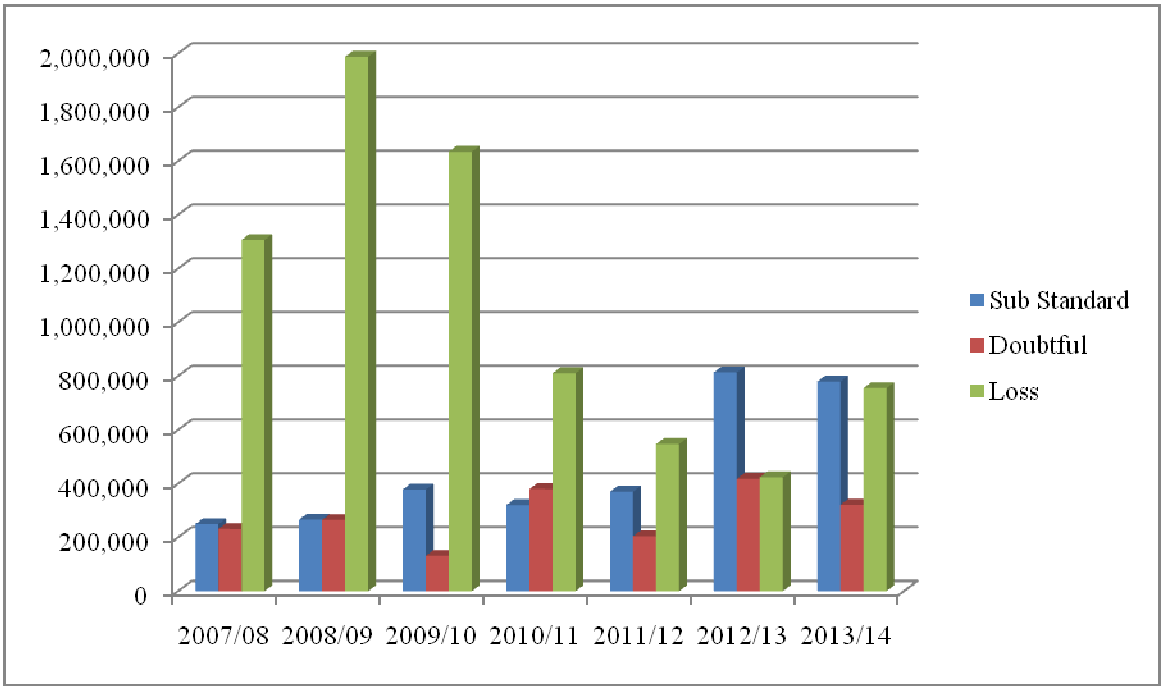
Source: DBE's Annual Report for 2013/14 F.Y (Unpublished)

2.3.3 NPLS BY LOAN CLASSIFICATION

In this category NPLs of DBE classified into three as substandard, doubtful and loss loans; substandard loans are medium and long term loans past due 180 (one-hundred-eighty) days or more, but less than 360 (three-hundred-sixty) days; doubtful loans are medium and long term loans past due 360 (three-hundred-sixty) days, but less than 3 (three) years; and loss loans are medium and long term loans past due 3 (three) years or more.

As shown on graph 2 below 2007/08 to 2009/10 loss loans accounts for lion's share of the total NPLs then after it has been managed; starting from2011/12 substandard loans has grown fast.

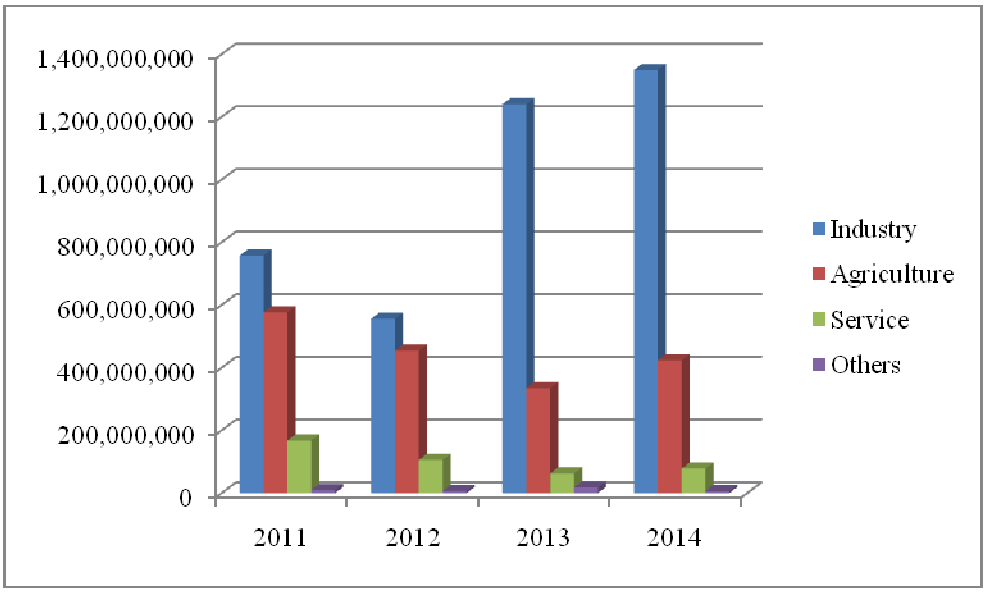
Graph 2: Trends of DBE's NPLs by loan classification from the year 2007/08 to 2013/14



Source: DBE's Loan Portfolio Concentrations Reports of the Respective Years

2.3.4 NPLS BY ECONOMIC SECTORS FINANCED BY THE BANK

Graph 3: NPLs by Economic Sectors Financed by the Bank



Source: DBE's Loan Portfolio Concentration Reports of the respective Years

Among the three economic sectors, industry has the highest NPLs by holding 5.83% of the total portfolio and it is followed by agriculture and service sectors having 1.83% and 0.34% respectively of the total loan portfolio as at June 30, 2014 (DBE's Loan Portfolio Concentration Report June 30, 2014).

2.4 THEORETICAL FRAMEWORK

Loans and advances constitute the primary source of income by banks. As any business establishment a bank also seeks to maximize its profit. Since loans and advances are more profitable than any other assets, a bank is willing to lend as much of its funds as possible. But banks have to be careful about the safety of such advances (Radha .M, et al, 1980).

Non-performing Loans as Per NBE

National Bank of Ethiopia (NBE) defined NPLs' of Development Financial Institutions' as loans whose credit quality has deteriorated such that full collection of principal and/or interest in accordance with the contractual repayment terms of the loan and advances are in question. (NBE, Directive, No. SBB/52/2012) Generally, NPLs are loans that are past due both in its principal and interest contrary to the terms and conditions under the loan contract, for about ninety days or more.

As per NBE Directive, No.SBB/52/2012 NPLs of development finance institutions are classifies into three categories as substandard, doubtful and loss loans based on the number of days a loan past due; substandard loans are medium and long term loans past due 180 (one-hundred-eighty) days or more, but less than 360 (three-hundred-sixty) days, doubtful loans are medium and long

term loans past due 360 (three-hundred-sixty) days, but less than 3 (three) years; Loss loans are medium and long term loans past due 3 (three) years or more;

Provision for Nonperforming Loans

Development finance institutions shall maintain the following minimum provision percentages against the outstanding principal amount of each NPLs or advance classified in accordance with the criteria for the classification of NPLs, above. (NBE's directive, No SBB/52/2012)

Table 2: Provision of Short, Medium and Long Term NPLs

Period loans have been in arrears (year)	Classification/ Category of NPLs	Minimum Provision for Short, Medium and Long Term Loans % of NPL amount
½ - 1	Substandard	20
1 - 3	Doubtful	65
More than 3	Loss	100

Source: NBE's Directive, No SBB/52/2012

The Association of African Development Finance Institutions' (AADFIs) Prudential Standards, Guidelines and Rating System for African Development Banks and Financial Institution's standard for NPLs are less than 15% of the gross loan Portfolio.

Five Cs of Non-performing/Bad Loans

As noted by MacDonald (2006), there are five Cs of bad credits that represent the issues used to guard against/prevent bad loans. These are:

Complacency: refers the tendency to assume that because of the things were good in the past, they will be good in the future. For instance, Assuming the past loan repayment success since things have always worked out in the past.

Carelessness: indicates the poor underwriting typically evidenced by inadequate loan documentation, lack of current financial information or other pertinent information in the credit files, and lack of protective covenants in the loan agreement. each of these makes it difficult to monitor a borrower`s progress and identify problems before they are unmanageable.

Communication ineffectiveness: inability to clearly communicate the bank`s objectives and policies. This is when loan problem can arise. Therefore, the bank management must clearly and effectively communicate and enforce the loan policies and loan officers should make the management aware of specific problems with existing loans as soon as they appear.

Contingencies: refers the lenders` tendency to play down/ignore circumstances in which a loan might in default. It focuses on trying to make a deal work rather than identifying down side risk.

Competition: involves following the competitors` action rather than monitoring the bank`s own credit standards. Banks, however, still have required expertise, experiences, and customer focus to make them the preferred lender for many types of loan. Lending is not just a matter of making loan and waiting for repayment. Loan must be monitored and closely supervised to prevent loan losses (MacDonald, 2006).

2.5 EMPRICAL REVIEW

Salas and Saurina (2002) reveal that rapid credit expansion, bank size, capital ratio and market power explain variation in NPLs. Meanwhile, Rajan and Dhal (2003) indicated that favorable macroeconomic conditions (measured by GDP growth) and financial factors such as maturity, cost and terms of credit, banks size, and credit orientation impact significantly on the NPLs of commercial banks in India

Kashuliza (1993) used a linear regression model to analyze determinant of agriculture loan repayment performance in case of southern highland of Tanzania. His study showed that level of education, attitude towards repayment, farm income and off-farm income positively affected loan repayment with farm income being significant, While age, house hold expenditure and house hold size have negative influence on loan repayment performance with house hold expenditure being significant.

Chirwa (1997) used a probit model to estimate the probability of agriculture credit repayment in Malawi. The result indicated that crop sales, income transfers, degree of diversification and quality of information are positively related while size of club negatively related to the probability of repayment. Other factors like amount of loan, sex, household size and club experience were found to be insignificant.

Boudriga *et al* .(2009) conducted a study on the title "bank specific determinants and the role of the business and the institutional environment on Problem loans in the MENA countries" for 2002-2006 periods. They employed 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. The finding revealed that credit growth rate is negatively related to problem loans. Capital adequacy ratio is positively significant justifying that highly capitalized

banks are not under regulatory pressures to reduce their credit risk and take more risks. Also ROA has negative and statistically significant effect on NPLs. This result supports as greater performance measured in terms of ROA reduces nonperforming loans since reduced risk taking in banks exhibiting high levels of performance.

The study of Saba *et al.*(2012) on the title of "Determinants of Nonperforming Loan on US banking sector" also investigate the bank specific and macroeconomic variables of nonperforming loans from 1985 to 2010 period using OLS regression model. They considered total loans, lending rate and Real GDP per capital as independent variables. The finding reveals as real total loans have positive significant effect whereas interest rate and GDP per capital has negative significant association with NPLs.

Louzis *et al.* (2010) conduct study to examine the determinants of NPLs in the Greek financial sector using fixed effect model from 2003-2009 periods. The variables included were ROA, ROE, solvency ratio, loan to deposit ratio, inefficiency, credit growth, lending rate and size, GDP growth rate, unemployment rate and lending rates. The finding reveals that loan to deposit ratio, solvency ratio and credit growth has no significant effect on NPLs. However, ROA and ROE has negative significant effect whereas inflation and lending rate has positive significant effect on NPLs. It justifies that performance and inefficiency measures may serve as proxies of management quality.

Ali and Iva (2013) who conducted study on "the impact of bank specific factors on NPLs in Albanian banking system" considered Interest rate in total loan, credit growth, inflation rate, real exchange rate and GDP growth rate as determinant factors. They utilized OLS regression model for panel data from 2002 to 2012 period. The finding reveals a positive association of loan growth and real exchange rate, and negative association of GDP growth rate with NPLs. However, the

association between interest rate and NPL is negative but week. And also inflation rate has insignificant effect on NPLs

Similarly, Shingjergji (2013) conducted study on the "impact of bank specific factors on NPLs in Albanian banking system". In the study, capital adequacy ratio, loan to asset ratio, net interest margin, and return on equity were considered as a determinant factors of NPLs. The study utilized simple regression model for the panel data from 2002 to 2012 period and found as capital adequacy ratio has negative but insignificant whereas ROE and loan to asset ratio has negative significant effect on NPLs. Besides, total loan and net interest margin has positive significant relation with NPLs. The study justifies that an increase of the CAR will cause a reduction of the NPLs ratio. Besides, an increase of ROE will determine a reduction of NPLs ratio. Besides, Mileris (2012) on the title of "macroeconomic determinants of loan portfolio credit risk in banks" was used multiple and polynomial regression model with cluster analysis, logistic regression, and factor analysis for the prediction. The finding indicates that NPLs are highly dependent of macroeconomic factors.

However, Swamy (2012) conduct study to examine the macroeconomic and indigenous determinants of NPLs in the Indian banking sector using panel data a period from 1997 to 2009. The variables included were GDP growth, inflation rate, per capital income, saving growth rate, bank size, loan to deposit ratio, bank lending rate, operating expense to total assets, ratio of priority sector`s loan to total loan and ROA. The study found that real GDP growth rate, inflation, capital

adequacy, bank lending rate and saving growth rate had insignificant effect; whereas loan to deposit ratio and ROA has strong positive effect but bank size has strong negative effect on the level of NPLs.

Okovie (1996) in his study on major determinants of agricultural small-holder loan repayment in Nigeria reported that four factors had a tremendous effect on loan repayment performance. These factors include time of loan disbursement, nature of loan disbursement (in cash or in kind), number of supervisory visits made by credit officers after disbursement and profitability of enterprises on which loan funds were invested.

WN Geletta (2012) in his study on determinants of non- performing loans the case of Ethiopian Banks, that focus on Bank specific NPLs determinant variables; indicated that Poor credit assessment ascribing to capacity limitation of credit operators, institutional capacity drawbacks and unavailability of national data for project financing that had also led to setting terms and conditions that were not practical and/or not properly discussed with borrowers had been the cause for occurrences of loan default.

WN Geleta (2012) also despite the fact that credit monitoring/ follow-up plays pivotal role to ensure loan collection failure to do this properly was also found to be causes for sick loans. The research also indicated that over financing due to poor credit assessment, compromised integrity of credit operators were cause for incidences of NPL. In fact cases of under financing loan requirement that meant shortage of working capital or not being able to meet planned targets were associated with defaults. In addition the study also found out that due to underdevelopment of credit orientation

/culture borrowers engaged in business that they had no depth knowledge, diverted loans advanced for unintended purpose and at times made a willful default.

Yetimgeta Abera (2011) in his study, the impact of non-performing loans on the performance of financial institutions a case study in Development Bank of Ethiopia, the researcher used econometric models to make inference about some variables that explains non-performing loans. It is found that the effect of the amount of loan in arrear is significant and positively related with NPL and in addition, the variables, net income and collection are negatively related with non-performing loans where as doubtful debt expenses and disbursements are positively related with non-performing loans.

Kassahun Fiseha (2013) in his study on factors causing non performing loan to Development Bank of Ethiopia Dilla Branch found out that non performing loans were caused by both internal and external factor in the context of development bank of Dilla Branch. Internal factors such as poor credit policy, Weak credit analysis, poor credit monitoring and inadequate risk management. The researcher finding highlighted; external factor namely natural disaster, market failure and integrity of the borrowers. Findings further indicated that non performing loans have negatively affected the performance of the bank interims of profitability and liquidity. In addition to the above factors most of the borrowers do not use the loan for the intended purpose. As a result, diversification of fund or debt occurs. This diversification of fund might be used for non productive purpose; the debtor will not be able to repay the loan.

The above literature review provides basic information for users of this study in areas of: meanings of nonperforming loan; effects of NPLs; provision for NPLs; five Cs of NPLs; the Bank and borrowers related and external causes of NPLs, Bank specific determinants of NPLs and etc. For the

researcher to have thought understanding of the research area that helps him in formulating his research design and method, selecting the study variables and expected causes of NPLs/instruments of the study.

As we seen from empirical literature there are a lot of studies conducted on non performing loan in other countries' financial institutions. However, in Ethiopia in general and in Development Bank of Ethiopia in particular there are very few studies conducted on NPLs and their analysis are mainly focuses on bank specific causes of NPLs and used descriptive analysis. As a result this study tried to examine the causes of NPLs in DBE from internal and external perspective using both descriptive statistics and empirical analysis. By doing so, it will fill the literature gap on the area and provides possible recommendations to reduce NPLs for DBE.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN AND METHOD

A research design is a master plan that specifies the methods and procedures for collecting and analyzing needed information (Zikmund et al, 2009 pp.66). A research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. The research designs employed in this study are same as research design in hypothesis testing type research study, as this research tests assumption of the research model and causal relationships between the study variables and also contains design same as research design in case of descriptive research study, as this research describes major bank specific and non bank specific (borrowers related and external) factors for NPLs in DBE.

Generally in this research the researcher used quantitative research approach to address the specific objectives of the study. Specifically, to examine empirically determinants of NPLs in DBE, the researcher used regression analysis. To assess and identify bank specific and non bank specific factors of NPLs in DBE, the researcher employed descriptive statistics analysis by using tools such as tables, frequency, percentage, and etc.

3.2 DETERMINATION OF POPULATION SIZE AND SAMPLEING TECHNIQUE OF THE STUDY

The target population for primary data collection of the study is determined using purposive (stratified) sampling technique because the issues of non- performing loans of the bank is mainly undertaken by the credit units and risk management unit of the bank.

The total population size of the study consists of staffs working in head office credit service (83), credit service staffs of regional offices of the Bank (104) and corporate project rehabilitation and loan recovery sub- process staffs (18); risk management unit staffs excluding secretaries (17) the total population is two hundred twenty two staffs from the bank's units mentioned above.

3.3 DETERMINATION OF SAMPLE SIZE

To determine sample size of the study, I used the work of Fowler (2009), which concludes that a sampling percent of 10% would represent a population size of 101 to 1000. In the above rule, there exist determined sampling percent for a specific range of population size.

Table 3 shows details of the percentage level of samples taken from the various sized populations.

Table 3: Category of Sample Size

Size of Population	Sampling Percent
0-100	100%
101-1000	10%
1001-5000	5%
5001-10000	3%

10000+	1%

Source: Internet

Based on the above table; the researcher had determined the sample size by taking ten percent of the total stratified population in each credit operation unit, the ten percent would be purposively selected base on number of credit operators in selected operational units, accordingly the total selected sample size had been twenty two respondents, that are selected purposively from the total population described above, to contained opinions of credit units staffs with different job position, this help to contained most of the factors of NPLs in DBE based on the respondents exposure for the factors.

3.4 METHOD AND SOURCE OF DATA COLLECTION

Both primary and secondary data had been used in this research study. Primary data had been collected from the selected sample population by using both structured and open ended subjective questioners, this data would be used to assess and identify major bank specific factors of non-performing loans in DBE which are related to the quality, efficiency, effectiveness, regularity and etc of loan administration operations of the Bank's loaning units and non-bank specific (borrowers related and external) factors of NPLs in DBE; while time serious secondary data on values of dependent and independent variables of the study for period 1988/89 to 2013/14 G.C (25 years time serious data) had been collected from the Bank's annual reports other reports of the bank like loan portfolio reports, loan recovery reports and etc to empirically examine how significantly the independent variables explain the dependent variable in DBE, using regression analysis. Besides Bank's: annual financial statements, credit policy, Magazine, Broachers, other reports and

publications; research studies in the area and internet had also been used as sources of secondary data.

Instruments used in collecting primary data are selected based on discussion made with some of experienced credit units staffs of the bank on expected major causes/factors of NPLs in DBE that are bank specific and non-bank specific (customers related and external factors). Moreover, knowledge gained from literature review in the area is used as input in selection of the instruments.

The researcher believes that the instruments used in primary data collections of this study are valid and reliable because the instruments were set in consultation with some experienced credit units staffs of the Bank who have direct and date to date exposure for causes of NPLs. In addition through review of literature in the area helped the researcher in formulating and designing valid and reliable data collecting tools and instruments.

3.5 DATA ANALYSIS AND PRESENTATION TECHQUNICES

Descriptive statistics had been used in order to process, analyze, summarize and present the primary data some statistical tools adopted are: tables, percentage, ratios, frequency and etc. Besides, the twenty five years time serious secondary data of selected study variables had been used in a regression model while testing the determinant variables of NPLs in DBE, so that by using test of significance the effect of independent variables on dependent variable (NPLs) and the relationship between them had been tested.

The following section explains variables of the study and bases of selection.

3.5.1 VARIABLES OF THE STUDY

The study variables had been selected based on review of the bank's loan portfolio reports, loan recovery reports, related empirical literature and discussion made with those staffs of DBE, who have rich experience in credit operations about the major determinants of NPLs in DBE. Based on these, this study had selected and employed four independent variables: includes loan collection, loan in arrears, total loan outstanding, provision expense; and the dependent variable that is non-performing loan.

3.6 RESEARCH MODEL

Research model of the study can be expressed mathematically as:

$NPLs = \beta 0 + \beta 1TLO + \beta 2LR + \beta 3COLL + \beta 4PROEX + €$

Where: NPLs = non-performing loans amount

TLO = total loan outstanding amount

LR = loans in arrears amount

COLL= loan collections amount

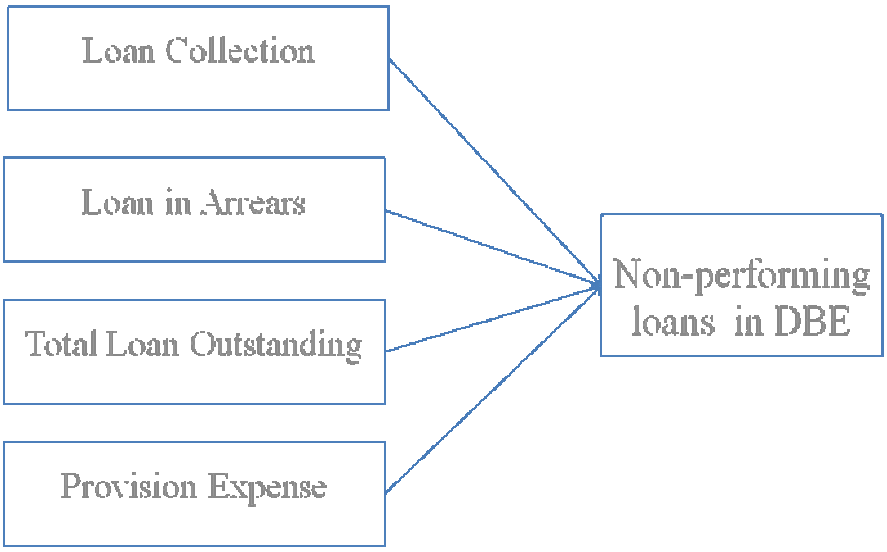
PROEX = provision Expenses

$\beta 0$ = the intercept of the regression line, which is constant

βi's = the coefficient of explanatory variables, i= 1, 2, 3, …n

€ = the error term or disturbance term

3.6.1 CONCEPTUAL FRAME WORK



This conceptual frame work is designed from the reviewed empirical literatures on determinants of NPLs, discussion made with some of the credit units' staff of the bank on major determinants of NPLs in DBE and is from the conceptualization of the research objective and questions of the study that will be addressed. The conceptual frame work states that loan collections, loan in arrears, total loan outstanding and provision expense are the major determinants of NPLs in DBE.

3.7 ETHICAL ISSUES

Due to the consideration, it was given to obtain consent from each participant about their participation in the study. It was strictly conducted on voluntary basis. The researcher tried to

respect participants' right and privacy. The findings of the research were presented without any deviation from the outcome of the research. In addition, the researcher gave full acknowledgements to all the reference materials used in the study.

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND DISCUSSION

This chapter deals with data analysis, discussion of finding and results in order to accomplish the research objectives set in chapter two of this research study and to lay a ground for conclusion and recommendation of the research work.

In this chapter the following tasks had been performed: analysis of survey data, survey was conducted on the Bank's credit operation units' and risk management unit's credit operators/decision maker staffs in order to identify bank specific and non-bank specific factors of NPLs in DBE, using structured and unstructured/open ended/ self administered questionnaires. Finally using 25 year time serious data on the study variables, the regression analysis had been undertaken in testing conceptual framework of the research or examining determinants of NPLs in DBE.

4.1 ANALYSIS OF SURVEY DATA, FINDINGS AND DISCUSSIONS

As discussed earlier survey was conduct to identify major causes of NPLs in DBE and rank them according to their significance as cause of NPLs. The analysis and findings of survey data, the ranking of major causes of NPLs in DBE and discussion on findings of the survey data had been discussed in the following section.

4.1.1 RESPONDENTS PROFILE

4.1.1.1 JOB POSITIONS IN DBE

Table 4 shows position of the respondents in the bank. It reveals that out of the total 22 respondents, 7 (31.8%) of the employees were Process/Regional Managers, 6 (27.3%) of the employees were Principal officers, 4 (18.2%) of the employees were Senior Loan Officers, 2 (9.1%) of the employees were Loan Officers, and 3 (13.6%) of the employees were other employees. This implies that the primary data collected from the sample staff via questioner contained opinion of credit performers of the bank with different job position.

Table 4: Job Position in DBE

Position	Frequency	Percent	Cumulative Percent
LOAN OFFICER	2	9.1	9.1
SR. LOAN OFFICER	4	18.2	27.3
PRINCIPAL OFFICER	6	27.3	54.5
PROCESS/REGIONAL MANAGER	7	31.8	86.4
OTHERS	3	13.6	100.0
Total	22	100.0	

4.1.1.2 YEAR OF EXPERIENCE IN DBE'S CREDIT UNITS

Table 5 below shows the number of years of experience of the respondents in the bank's credit units. It reveals that 10 (45.5%) of the respondents had less than or equal to 5 years experience, 2 (9.1%) of the respondents had between 6 and 10 years experience, 2 (9.1%) of the respondents had between 11 and 15years experience, 3(13.6%) of the respondents had between16and 20 years experience and the rest 5 (22.7%) of the employees had more than twenty years experience in the bank's credit operation units. This shows that the respondents have different

years of experience in credit operation, this helps to identify all the required factors of NPLs in the Bank.

As shown on table 5 below majority of the respondents have experience between 1and 5 years in Development Bank of Ethiopia's credit operation units, credit performers under this category are those who undertake the day to day pre and post credit activities of the bank and who frequently communicate the bank's customers about projects financed by the bank; this implies that respondents under this category have more opportunity to identify the current major bank specific and non-bank specific (customers related and external) factors of NPLs in DBE. Moreover it implies the reliability of the data collected.

Table 5: Respondents Year of Experience in Credit Units

Year of Experience	Frequency	Percent	Cumulative Percent
1-5 Years	10	45.5	45.5
6-10 Years	2	9.1	54.5
11-15 Years	2	9.1	63.6
16-20 Years	3	13.6	77.3
20 Years and above	5	22.7	100.0
Total	22	100.0	

4.1.2 RESPONSES TO STRUCTURED QUESTIONS

4.1.2.1 BANK SPECIFIC FACTORS AND THEIR RANKING

Table 6: Bank Specific Factors of NPLs in DBE

Bank specific factor that causes occurrence of nonperforming loans in DBE	Strongly agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly disagree (1)	
	freq	%	freq	%	freq	%	freq	%	freq	%
Rapid Loan growth	1	4.5	5	22.7	8	36.4	6	27.3	2	9.1
Low capacity of credit performers	3	13.6	14	63.7	3	13.6	2	9.1		
Lenient credit terms	2	9.1	8	36.4	4	18.2	7	31.8	1	4.5
Poor credit monitoring/follow up	12	54.5	9	41.0	1	4.5				
Poor credit risk assessment	5	22.7	14	63.7	2	9.1	1	4.5		
Poor project appraisal	11	50	9	41.0	1	4.5	1	4.5		
Poor know your customer (KYC) assessment	11	50	9	41.0	1	4.5	1	4.5		
Prolonged period on processing credit	1	4.5	9	40.9	9	40.9	3	13.6		
Poor loan approval decision	4	18.2	6	27.3	9	40.9	3	13.6		
Non-Compliance with credit policy	2	9.1	8	36.4	7	31.8	4	18.2	1	4.5

Source: Survey outcome and own computation

Common bank specific factors for occurrences of NPLs in DBE are ranked based on the respondents' opinion that is percent of agreement and disagreement of the respondents on the factors as shown on the above table thus the factor poor credit monitoring/follow up ranked first by 95.5% agreement, 4.5% neutral and with no disagreement; the factors poor project appraisal and poor know your customer (KYC) assessment ranked second equally with 91% agreement, 4.5% neutral and with 4.5% disagreement for each factor; poor credit risk management ranked third with 86.4% agreement, 9.1% neutral and 4.5% disagreement; low capacity of credit performers ranked fourth by 77.3%, 13.6% neutral and 9.1% disagreement opinion of

respondents while the remaining factors each shared about 45.50% agreement opinion of the respondents.

The respondents view on the statements pertinent to, easily admitted borrowers, KYC assessment, credit assessment/loan underwriting/, risk assessment and the occurrence of NPLs summarized by the descriptive statistics on table 7.

Table 7: The Occurrence of NPL in Relation to Credit Assessment

Factors for occurrence of NPL in relation to credit assessment	Strongly agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly disagree (1)	
	freq	%	freq	%	freq	%	freq	%	freq	%
Easily admitted borrowers usually default	2	9.1	9	40.9	6	27.3	5	22.7		
Proper implementation of know your customer (KYC) lead to high loan quality	9	40.9	8	36.4	3	13.6	1	4.5	1	4.5
Good loan underwriting ensures loan performance	5	22.7	12	54.5	5	22.7				
Under/Over/ financing of projects would lead to loan default and NPL	9	40.9	12	54.5			1	4.5		
Poor credit risk assessment would lead to loan default and NPL	12	54.5	10	45.5						

Source: Survey outcome and own computation

As it is shown on table 7, 50% of the respondents agree with the statement, easily admitted borrowers usually default while 22.3% disagree with the statement and 27.7% of the respondents are neutral about the statement. Concerning the second factor, 77.3% of the respondents agreed with the statement, proper implementation of know your customer (KYC) leads to have high lone quality but only 9.1% disagree, and the rest 13.6% being neutral. Regarding the third factor, 77.3% of the respondents agreed on that good loan underwriting ensure loan performance and 22.7% being neutral. On the other hand 95.5% of the respondents agreed that under/over financing of projects leads to have NPLs but only 4.5% of the

respondents disagree. About poor credit risk assessment all (100 %) of the respondents agreed that it leads to have over NPLs.

Therefore it indicates that most of the respondents agreed that if DBE undertake a robust KYC assessment in recruiting customers applying for credit and also undertake good credit risk assessment the bank would reduce its NPLs and have a better quality loan portfolio. On the other hand when the loan underwriting is poor, the loans would be prone to default and becomes NPLs. Half of the respondents view was neutral to the statement "easily admitted customers usually default". In general the outcome indicates that poor credit risk assessment and under/over financing of projects are causes for occurrences of nonperforming loans in DBE. Besides proper implementation of KYC lead to high loan quality and good loon underwriting ensure loans performance.

Table 8 below gives us the descriptive statistics of the factors of the statements pertaining to credit monitoring and the occurrence of NPLs based on the respondent response.

Table 8: Occurrence of NPL in Relation to Credit Monitoring

Factors for occurrence of NPL in relation to credit monitoring	Strongly agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly disagree (1)	
	freq	%	freq	%	freq	%	freq	%	freq	%
Strict credit monitoring ensures loan performance	5	22.7	16	72.7	1	4.5				
Poorly assessed and advanced loans may perform well if properly monitored	1	4.5	7	31.8	7	31.8	7	31.8		
Loan follow up is directly related to occurrence of NPLs	4	18.2	9	40.9	1	4.5	7	31.8	1	4.5
Higher budget for loan monitoring result in lower NPLs	3	13.6	6	27.3	4	18.2	7	31.8	2	9.4
Low capacity of loan monitoring officers result in higher NPLs	7	31.8	13	59.1	1	4.5	1	4.5		

Source: Survey outcome and own computation

Table 8 shows 95.5 % of the respondents believed that strict loan monitoring ensures loan performance but only 4.5% of the respondents are neutral. On the other hand 36.3% of the respondent agreed on the idea that poorly assessed and advanced loans may perform well if properly monitored, while 31.8% disagree and 31.8% of the respondents are neutral. And 59.1% of the respondents agreed that the occurrence of nonperforming loan is directly related to loan follow up, while the rest of respondents 36.3% disagree and 4.5% are neutral. Based on most of the respondents view loans could not perform well if properly monitored despite poor assessment during sanctioning. This indicates that loan follow-up can never substitute proper credit assessment. And also only 40.9 percent of the respondents agree that higher budget for loan monitoring can lower non performing loans while 41.2 % of the respondents disagree and 18.2% being neutral. With regard to low capacity of loan monitoring officers 90.9% of the respondents agreed that it leads to have higher NPLs, and the rest 4.5% disagree and 4.5% being neutral.

From the foregoing discussion it can be concluded that loan follow up and the capacity of loan monitoring officers are directly related to occurrence of NPLs. Despite this most of the respondents didn't support the argument that loan would perform well only by proper monitoring if proper assessment is not carried out while advancing the credit. This indicates that follow up would never substitute credit analysis or assessment. On the other hand though loan monitoring requires budget, allocating higher budget does not ensure reduction of NPLs, as respondents whose opinion are neutral and disagree to the assertion account for about 59% of the total respondents.

Table 9: Factors for the Occurrence of NPLs in Relation to Borrower's Orientation, Knowledge and Credit Terms

Factors for NPL occurrence in relation to borrower's orientation	Strongly agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly disagree (1)	
	freq	%	freq	%	freq	%	freq	%	freq	%
Borrower's orientation/culture is related to loan performance	6	27.3	15	68.2	1	4.5				
Society's cultural development leads to good loan performance	3	13.6	17	77.3	2	9.1				
Lenient /lax/ credit term cause loan default	5	22.7	13	59.1	2	9.1	2	9.1		
Borrowers default because they don't understand credit terms well	1	4.5	7	31.8	7	31.8	6	23.7	1	4.5
Poorly negotiated credit terms lead to loan non performance	3	13.6	11	50	6	27.3	2	9.1		

Source: Survey outcome and own computation

With regard to the relationship between borrowers' orientation/culture and loan performance, 95.5% of the respondents agreed with the assertion and only 4.5% of the respondents are neutral; regarding the factor society's cultural development leads to good loan performance, about 91% of the respondent agreed with this assertion and less than 10 percent of the respondents are neutral with this assertion. These indicate that loan performance is highly affected by borrowers' orientation/culture and Society's cultural development and it also indicate that there is a strong relation between borrowers' culture/orientation, society's development and occurrence of nonperforming loans.

Table 9 also describes that lenient/lax credit terms cause loan default, as 81.8 % of the respondent agree while the rest of respondents being disagree and neutral. In relation to borrowers understanding of credit terms, only 36.3 % of the respondents agreed, 28.2 disagree and 31.8% being neutral. The other factor is poorly negotiated credit terms which 63.6% of the respondents agree that it can lead to non performing lone while only 9.1% of the respondent disagree and 27.3% being neutral. Therefore, most of the respondents agreed with the fact that there is a relation between loan default and credit terms set by banks upon loan approval.

Table 10: Analysis of Statements Pertaining to Credit Size, Lending Behavior, Integrity in Lending and the Occurrence of NPLs

Factors for NPLs occurrence in relation to credit size, lending behavior and integrity	Strongly agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly disagree (1)	
	freq	%	freq	%	freq	%	freq	%	freq	%
Aggressive lending leads to large	3	13.6	11	50	6	27.3	2	9.1		

NPLs volume/ratio										
Rapid credit growth leads to huge NPLs level	1	4.5	7	31.8	8	36.4	6	27.3		
DBE's great risk appetite is cause for its NPLs	3	13.6	10	45.5	3	13.6	6	27.3		
Compromised integrity in lending leads to loan default and NPLs	4	18.2	10	45.5	4	18.2	4	18.2		
Having large number of borrowers causes loan default	1	4.5	5	22.7	6	27.3	10	45.5		
Loans default rate is directly related to the loan portfolio size	2	9.1	6	27.3	8	36.4	6	27.3		
With growth in loan portfolio size come growth on NPL	1	4.5	6	27.3	11	50	4	18.2		

Source: Survey outcome and own computation

When we see table 10, the respondents' response 63.6 percents of them agreed to assertion that aggressive lending leads to occurrence of large magnitude of NPLs but the rest 9.1% disagree and 27.3% being neutral. However, most of the respondents don't believe that rapid credit growth leads to hug NPLs level. Similarly 59.1% of the respondents believe that banks' greater risk appetite would be cause for the occurrence of nonperforming loans while 27.3% of the respondents disagree and 13.6 % being neutral. The response on the relation between compromised integrity and occurrences of NPLs reveals that 63.7 percent are in agreement. On the other hand, most of the respondents do not believe that having large number of borrowers can be the cause for loan default. Additionally, 27.3% of the respondent disagree and 36.4% are neutral on that loan default rate is directly related to the loan portfolio size and growth of loan portfolio size cannot be the direct impact for the growth of NPLs based on 50% of the respondents neutrality.

4.1.2.2 NON BANK SPECIFIC FACTORS:

Table 11: Analysis of Non Bank Specific Factors (Borrowers Related and External Factors) for Occurrence of NPLs in DBE.

Factors for NPLs occurrence in relation to diversion and borrows capacity	Strongly agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly disagree (1)	
	freq	%	freq	%	freq	%	freq	%	Freq	%
Diversion of loan fund and income by borrowers	10	45.5	12	54.5						
Poor credit mgt capacity of borrowers	10	45.5	11	50	1	4.5				
Willful default	7	31.8	10	45.5	3	13.6	2	9.1		
Intervention of external bodies in credit decision making	7	31.8	12	54.5	2	9.1	1	4.5		
Market condition	9	40.9	11	50	1	4.5	1	4.5		
Poor credit culture	8	36.4	8	63.6						
There is a relationship between loan default and borrower's culture	5	22.7	14	63.6	2	9.1	1	4.5		

Source: Survey outcome and own computation

Among the non-bank specific factors/external and borrowers related factors for occurrence of NPLs in DBE, diversion of loan fund and project income by borrowers, and poor credit culture are ranked first with 100% agreement of the respondents for both factors but as shown on the above table 11 the degree of agreement of respondents varies for the two factors; poor credit management capacity of borrowers ranked second by 95% agreement of respondents; market condition ranked third by 90.9% agreement of the respondents; factors intervention of external bodies in credit decision making and there is a relationship between loan default and borrower's culture both ranked fourth by 86.3% agreement of respondents, 9.1% neutral and 4.5% disagreement for both factors; finally concerning the factor willful default 77.3% of the respondents agreed with the assertion, 13.6% of the respondents were neutral and 9.1% of the

respondents disagreed that is they do not believe willful default as cause for occurrence of NPLs in DBE.

4.1.3 RESPONSES TO SUBJECTIVE OPEN ENDED QUESTIONS

To have deep understanding about the bank specific and borrowers related factors causing nonperforming loans in DBE, subjective/ open ended questions was provided for sample credit performers of the bank. Respondents indicated that several factors contribute to loan default and occurrence of NPLs in DBE; based on outcome of the analysis of the respondents, the factors have been classified in to three as: the bank specific, borrowers related and external factors. These factors are summarized and presented as follows:

4.1.3.1 BANK SPECIFIC FACTORS

These are factors relating to DBE's internal inefficiencies due to various reasons; the following issues are frequently raised by the respondents as Bank specific factors:

- Poor project follow up function/activities in the Bank
- Improper credit appraisal (analysis)
- Lack of in depth due diligence (KYC) assessment on potential borrowers/credit applicants
- Behavioral and technical competency problem of credit performers
- Inappropriate credit approval decision
- Lack of adequate technical support for borrowers by DBE
- Absence of motivation skim to follow up officers in order to enhance loan collection

4.1.3.2 CUSTOMER RELATED FACTORS

These are factors that emanate from borrowers and have strong bearing on occurrences of NPLs in DBE. The following were raised as customer related factors:

- Low project management capacity of borrowers but managing projects
- Diversion of project fund (loan and/or income of project) for other purpose by borrowers
- Delay in project implementation
- Willful default
- Lack of coordination and agreement among key shareholders of projects
- Death of borrowers (for sole proprietorships)
- Poor credit discipline of borrowers
- Low level of customers awareness about Bank's credit terms, policy and other credit related issues
- Poor record keeping by businesses

4.1.3.3 EXTERNAL FACTORS

These are factors that were beyond the influence of the bank and/or borrowers. They are presented as follows.

- Unnecessary intervention of external bodies during credit assessment and approval decision

- Poor credit culture of a society

- Unavailability of reliable data for conducting project analysis at country level

4.2 REGRESSION ANALYSIS OF LONG RUN RELATIONSHIP OF NPLS MODEL

4.2.1 TESTING FOR THE UNIT ROOTS

Before any meaningful regression analysis is performed with time series variables it is essential to test the existence of unit roots in the variables and thus establish the order of integration of the variables. Direct application of OLS to trended time series variables, be it stochastic or deterministic time trend, usually results in spurious correlation rather than actual. One of the earlier solutions suggested to the problem of the existence of stochastic trends in the data was to estimate the relationship in first differences rather than at levels (Enders, 2004). Inclusion of a linear time trend in the regression equation on the other hand may help to capture some of the deterministic components those having trending process.

The most commonly used test for the order of integration of time series variables is the Augmented Dickey-Fuller (1981), ADF, test for the existence of unit-roots. The values of the ADF test statistics for all the time-series variables included in the estimation process are presented in table 12 below.

With ADF tests the decision to reject or not to reject the null hypothesis is made by comparing the ADF test statistic with the given critical values. If the computed ADF test statistic is greater than the given critical value, the null hypothesis is rejected. The null hypothesis for the variables at levels or null order I(0) is that " the variable has a stochastic trend (unit root)" which is tested against the alternative hypothesis that the variable is stationary. Analogously, the null hypothesis for the first difference or order one I(1) is that "the first difference of the variable has

a unit root" to be tested against the alternative hypothesis that the first difference of the variable is stationary.

As it is presented in table 12 the null hypothesis order I(0) is not rejected for all the variables while I(1) is rejected the null hypothesis. Specifically, all the variables are not stationary at levels while their first differences are stationary. Hence we can take all the time-series variables including in the model as an I(1) processes.

Table 12: Augmented Duck Fouler (ADF) Unit Root Test Results of the Series

Series		Level	First Difference
COLL		-1.211699 (0.6400)	-3.154567*** (0.0516)
LR		-1.521835 (0. 4956)	-3.485309** (0.0253)
TLO		-0.410858 (0.8838)	-3.440231** (0.0275)
PROEX		-2.268011 (0.1933)	-5.118144* (0.00141)
NPLs		-1.100588 (0.7511)	-3.043456*** (0.0627)
Critical Values at	1%	-3.959148	-4.200056
	5%	-3.081002	-3.175352
	10%	-2.681330	-2.728985

(*), (**), (***) indicate stationary at the 1%, 5% and 10% levels respectively.
The values in parenthesis () indicates probability
COLL = Loan Collection

LA = Loan in Arrears

TLO = Total Loan Outstanding

PROEX = Provision Expense

NPLs = Non Performing Loans

Result of long rung relationship of NPL model using E-view software

Dependent Variable: NPLs

Method: Least Squares

Sample: 1989 2014

Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COLL	-0.241595	0.248523	-2.098126	**0.0421
LA	0.650332	0.326692	2.000657	*0.0597
TLO	0.989087	0.441593	2.239816	**0.0361
PROEX	0.177514	0.153213	1.158612	0.2596
C	8.971047	2.127369	4.216967	0.0004

R-squared	0.863037	Mean dependent var	0.070909
Adjusted R-squared	0.775044	S.D. dependent var	0.062134
S.E. of regression	0.055044	Akaike info criterion	-3.201397
Sum squared resid	0.045266	Schwarz criterion	-2.443339
Log likelihood	68.61816	F-statistic	19.457421
Durbin-Watson stat	2.185979	Prob(F-statistic)	0.000006

**, * - Indicates significance at 5% and 10% respectively

Thus the equation of the long run relationship of NPL model is

NPLs = 8.971 - 0.242COLL + 0.650LA + 0.989TLO + 0.178PROEX

The overall fit of the model is acceptable. The explanatory variables explain about 86 percent of the variation in the model. The F statistics rejects the null hypothesis that all the coefficients in the model are jointly insignificant. Moreover, the Durban Watson (DW) test result suggests that there is no autocorrelation problem. In addition, the various diagnostic tests undertaken like correlogram of residuals test, correlogram of residuals squared test, normality test, white heteroskedasticity test and ramsey reset and other tests (appendix1) perform well indicating no problem about the regression analysis. That is, the estimated coefficients are statistically valid since the residuals are suggested to have all the required basic properties. No evidence of auto-correlations found in the residuals up to the second lag. The normality of the errors as well is not rejected by the Jarque-Bera test. It points out that the error term is normally distributed. Similarly, the White's test for heteroscedasticity does not reject the null hypothesis that the error term is homoscedastic. In addition, the test for autoregressive conditional hetroscedasticity (ARCH) points that no ARCH structure in the error term is detected. Failure to reject the null of no ARCH indicates the existence of constant variance. Moreover, the Ramsey RESET test for functional form mis-specification accepts the regression specification of the dynamic model (APPENDIX 1).

The result of the long run relationships in general show that the non performing loan is determined in the long run by loan collection, loan in arrears, total loan outstanding and provision expense. The signs of the coefficients are consistent with theoretical expectations.

Loan collection is significant and negative coefficients as expected.

The estimated long run coefficient of loan collection is -0.24 and loan collection brought significant negative effect on NPLs. Thus, we can interpret the long run results as, on average, an increase in loan collection by 1 percent will decrease non performing loan by 0.24 percent. This is consistent with finding of Yetmgeta Abera (2011) on his study titled, "The Impact of Non-performing Loans on the Performance of Financial Institutions" a case study in Development Bank of Ethiopia, that concluded loan collection negatively and insignificantly affects NPLs in DBE, the researcher used econometric model to make inference about some variables that explain non-performing loans. Loan collection is the only independent variable among the tested independent variables in the study that has significant inverse relation with NPLs having probability of t- stat. 0.0421. This implies that loan collection is one of the determinants of NPLs in DBE.

Loan in arrears brought significant positive effect on NPLs as expected and its long run coefficient is 0.65. This implies a one percent increase in loan arrears will increase NPLs by 0.65 percent. This also implies the bank/credit units should give due attention in efficiently and effectively managing their loan in arrears. This is also consistent with finding of Yetmgeta Abera (2011). But its relationship was ambiguous at the theoretical level, for example if the bank had undertaken prudent pre and post credit operation and had well managed its loan in arrears by taking timely and appropriate actions as the case may be on overdue loans, the effect of loan in arrears on NPLs would be minimal.

Total Loan Outstanding has significant and positive effect on NPLs. A one percent increase in total loan outstanding will increase NPL by 0.98 percent. This implies that for the period under consideration total loan outstanding had been the most significant variable in increasing NPLs in Development Bank of Ethiopia's case since its positive high coefficient magnitude. This is consistent with the finding of Saba et al. (2012) on their study titled, "Determinants of Non-performing Loan on US Banking Sector" which revealed that total loans outstanding have positive significant effect on NPLs. But its relationship was also ambiguous at the theoretical level, for example if the bank had well managed its loan portfolio by diversifying its loans by economic sector, geographic location and other variables and has strengthen its pre and post credit operations, the effect of loan outstanding would be minimal on NPLs. Also, the result shows that, provision expense has positive but insignificant effect on NPLs but to a lesser extent, that is the value is small (0.177%). This implies that, an increase in provision expense by 1% will increases NPL by just 0.177% in the long run or provision expense increase as NPLs increase.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF THE FINDINGS

The purpose of this study was to empirically examine determinants of non-performing loans in DBE and identify major bank specific and non-bank specific factors of non-performing loan in DBE.

The data for the study was collected from secondary and primary sources. Primary data was collected using structured and open ended questionnaires from the sample. A stratified sampling technique was used to select the sample. Regression analysis and descriptive statistics were used to analyze the data.

5.1.1 FINDINGS OF REGRESSION ANALYSIS

The results of the regression analysis indicate that there is a strong negative relationship between loan collection and NPLs that means when loan collection increase NPLs decrease this is consistent with finding's of Yetmgeta Abera (2011); on his study titled, "The Impact of Non-performing Loans on the Performance of Financial Institutions" a case study in Development Bank of Ethiopia, the researcher used econometric model to make inference about some variables that explain non-performing loans; there is a strong positive relationship between total loan outstanding and NPLs in DBE, this is consistent with the finding of Saba et al. (2012) on their study titled, "Determinants of Non-performing Loan on US Banking Sector" which revealed that total loans outstanding have positive significant effect on NPL; loan in arrear also has positive significant effect on NPLs, this finding is consistent with finding's of Yetimgeta Abera (2011), This study found that the effect of the amount of loan in arrear is significant and

positively related with NPLs; and also insignificant but positive relation exists between provision expense and NPLs.

5.1.2 FINDING OF SURVEY

5.1.2.1 FINDINGS OF STRUCTURED QUESTIONER:

- Regarding ranking major bank specific factors for occurrences of NPLs in DBE based on respondents view:

  The factors poor credit monitoring/follow up, both poor project appraisal and Poor KYC assessment, poor credit risk management and low capacity of credit performers ranked first, second, third and fourth respectively.

- Respondents view regarding the statements pertinent to, easily admitted borrowers, KYC assessment, credit assessment/loan underwriting, risk assessment and occurrence of NPLs.

  Easily admitted borrowers usually default (50%), Proper implementation of know your customer (KYC) lead to high loan quality (77.3%), Good loan underwriting ensures loan performance (77.3%), Under/Over/ financing of projects would lead to loan default and NPL (95%), Poor credit risk assessment would lead to loan default and NPL (100%); the indicated percentage of respondents agreed to the statements.

- The descriptive statistics of the statements pertaining to credit monitoring and the occurrence of NPLs, based on the respondents' response show the following finding:

Strict credit monitoring ensures loan performance (95.5%), poorly assessed and advanced loans may perform well if properly monitored (36%), Loan follow up is directly related to occurrence of NPLs (59%), Higher budget for loan monitoring result in lower NPLs (41%), low capacity of loan monitoring officers (91%); the indicated percent of respondents agreed to the statements.

- Concerning factors for occurrence of NPLs in relation to borrower's orientation:

  Borrower's orientation/culture is related to loan performance (96%) , Society's cultural development leads to good loan performance (91%), Lenient / lax credit term cause loan default (82%), Borrowers default because they don't understand credit terms well (36%), Poorly negotiated credit terms lead to NPLs (64%); the indicated percent of respondents agreed to the statements.

- Concerning ranking of non-bank specific (borrowers related and external) factors for occurrence of NPLs in DBE based on indicated percent of agreement of the respondents:

  Diversion of loan fund and project income by borrowers and Poor credit culture (100%), poor credit management capacity of borrowers (95%), unfavorable market condition (91%), intervention of external bodies in credit decision making and there is a relationship between loan default and borrowers culture (86%) , willful default (77%); ranked first, second, third, fourth and fifth respectively.

5.1.2.2 FINDINGS OF OPEN ENDED SUBJECTIVE QUESTIONS ON FACTORS FOR OCCURRENCE OF NPLS IN DBE

Based on the responses of the respondents, frequently raised factors for non-performing loans in DBE are summarized under the following two main categories:

A. Bank Specific Factors:

Poor project follow up function/activities in the Bank, improper credit appraisal (analysis)/loan underwriting, lack of depth in due diligence or know your customer (KYC) assessment on credit applicants, behavioral and technical competency problem of credit performers, inappropriate credit approval decision, lack of adequate technical support for borrowers by DBE, absence of motivation skim to follow up officers in order to enhance loan collection/ repayment.

B. Non-Bank Specific Factors

Borrowers Related Factors

Diversion of project fund (loan and/or income of project) by borrowers for other non-productive purpose, low project management capacity of borrowers, delay in project implementation by borrowers, willful default, lack of coordination and agreement among key shareholders of projects, death of borrowers (for sole proprietorships), poor credit discipline of borrowers, and poor record keeping by businesses.

External Factors

Unnecessary intervention of external bodies during credit assessment and approval decision, poor credit culture of a society and unavailability of reliable data for conducting reliable project appraisal at country level is among the external factors for occurrences of NPLs in DBE.

5.2 CONCLUSION

Based on the study findings discussed above; the regression analysis find out that the result of the long run relationships in general shows that in DBE the non performing loan is significantly determined in the long run by total loan outstanding, loan in arrears and loan collection in order of significance. Loan outstanding with long run coefficient of 0.98 have significant positive effect on NPLs in DBE, this finding is consistent with finding of the study of Saba *et al* .(2012) on the title "Determinants of Nonperforming Loan on US banking sector" which reveals that total loans have positive significant effect on NPLs; the estimated long run coefficient of loan in arrears is 0.64 and loan in arrears also brought significant positive effect on NPLs, this is consistent with findings of Yetimgeta Abera (2011) on his study titled, the impact of non-performing loans on the performance of financial institutions; the estimated long run coefficient of loan collection is -0.24, therefore loan collection brought negative effect on NPLs, this finding is consistent with finding's of Yetmgeta Abera (2011), mentioned above, except for degree of significance.

The results of survey: analysis of structured question on ranking bank specific factors for occurrence of NPLs in DBE ranked out the factors poor credit monitoring/follow up, poor project appraisal, poor know your customer (KYC) assessment, poor credit risk management and low capacity of credit performers as first, second, third, fourth and fifth respectively.

Compromised integrity of credit performers in lending was also among the major bank specific factors for occurrence of NPLs in DBE.

It is also concluded that the following are among the major non-bank specific factors for occurrence of NPLs in DBE: loan fund and project income diversion by borrowers, poor project management capacity of borrower, intervention of external bodies in credit decision making, unavailability of reliable data for conducting reliable project analysis at country level.

Analysis of open ended subjective question also concluded that the following factors as major bank specific factors for occurrence of NPLs in DBE: Poor project follow up function/activities in the bank, poor credit appraisal (analysis), lack of depth in due diligence or know your customer (KYC) assessment on credit applicants, behavioral and technical competency problem of credit performers, lack of adequate technical support for borrowers by DBE, absence of motivation skim to follow up officers in order to enhance loan repayment/collection. While the major non-bank specific factors of NPLs especially borrowers related factors identified by responses of open ended question are similar with findings of structured questioners.

5.3 RECOMMENDATION

Based on the research findings and conclusions above, the following recommendations are forwarded:

- DBE should endeavor on improving its loan collection by strengthening its loan follow up units and their activities, undertaking regular and continuous project follow up on active projects in order to identify/detect early warnings/signs of loan default and to take timely action based on the follow up report. The bank should undertake even more frequent project follow up on those projects indicating sign of sickness and also should strength its project rehabilitation and loan recovery units' works, these in turn contribute to increase loan collection of the bank, besides by establishing different motivation skims to project follow up officers the bank can improve its loan collection.

- The bank/loaning units should take due care on its total loan outstanding as well as loan in arrears portfolios management as these variables significantly and positively affects non-performing loans in DBE, this can be done via well diversifying its loan portfolio by economic sector, sub sectors, financed by the bank, geographic location of borrowers and other variables; also by strictly adhering to its credit policy, e.g. adhering to single borrower lending limit, lending limit for related parties, sectors; in addition by undertaking regular and continuous loan portfolio review, credit risk assessment works, acting on the findings of these works; moreover by taking timely and appropriate action on loans in arrears as the case may be, by doing so the bank can well manage its total loan outstanding and loan in arrears.

- Loaning units should also undertake in-depth due-diligence /know your customers (KYC)/ assessment as per the bank's KYC assessment policy and procedures.

- The bank should improve the capacity of its credit performers: via providing continuous on job and off job trainings relevant to credit operations of the bank, by availing relevant educational opportunities for credit performers and experience sharing in credit management areas with similar banks, doing these will alleviate capacity related problems of credit performers which is identified and ranked as fifth major bank specific factor for occurrence of NPLs in DBE in this study.

- The bank should ensure good governance thought its loaning units by strictly implementing its values and Key Principles of Good Governance in the Public Sector described as per CIPFA & IFAC June, 2013; as it is vital to address the causes of NPLs identified in this study, as compromised integrity of credit performers and behavioral competency problem of the credit performers.

- The Bank as a whole and the credit units of the Bank especially, should work to reduce and minimize intervention of external bodies in credit decision making,

- The bank should provide adequate technical support for its borrowers by strengthening its technical unit's capacity and efforts to do so.

- Concerned organs should work to provide reliable project appraisal data at country level.

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APPENDICES

Appendix 1

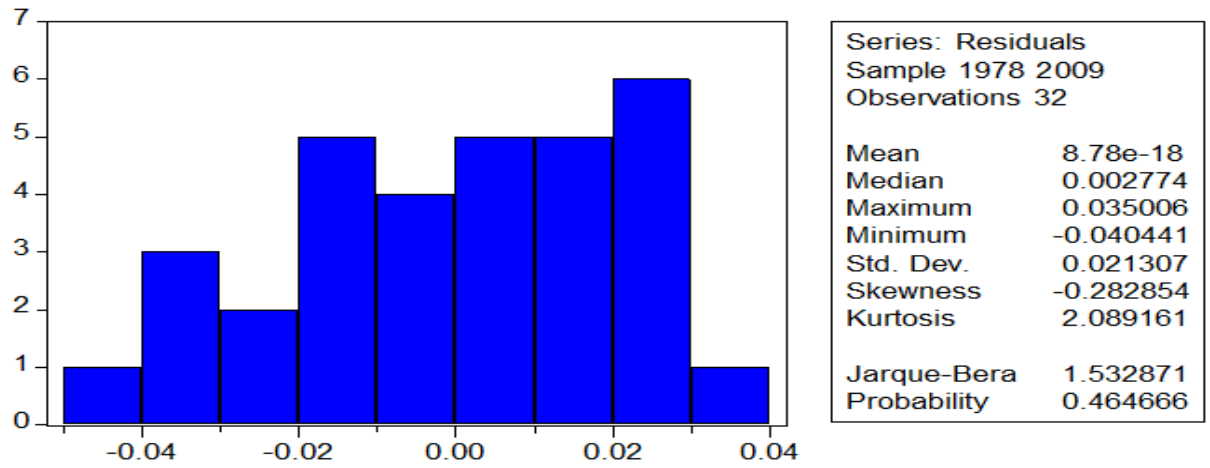
Correlogram of Residuals

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. *| . |	. *| . |	1	-0.060	-0.060	0.1249	0.724
.**| . |	.**| . |	2	-0.307	-0.312	3.5533	0.169

Correlogram of Residuals Squared

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
. |* . |	. |* . |	1	0.179	0.179	1.1196	0.290
.**| . |	.**| . |	2	-0.192	-0.231	2.4507	0.294

Normality Test



Appendix 1 cont…

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.407708	Probability	0.530038
Obs*R-squared	0.609438	Probability	0.435000

ARCH Test:

F-statistic	0.964385	Probability	0.334207
Obs*R-squared	0.997716	Probability	0.317864

White Heteroskedasticity Test:

F-statistic	0.504103	Probability	0.909712
Obs*R-squared	12.15042	Probability	0.790944

Ramsey RESET Test:

F-statistic	1.286522	Probability	0.269472
Log likelihood ratio	1.902709	Probability	0.167775

Appendix 2

Table 1:Time serious data of variables used in regression analysis of the study

Year (G.C)	* NPLs	Loan Collection/ Repayment	Loan Outstanding	Loan in Arrears	Provision Expense
1989	596,173	101,546	2,098,558	1,579,772	58,016
1990	603,281	126,286	2,298,912	1,767,827	137,145
1991	601,585	98,862	2,350,274	1,823,445	94,840
1992	593,823	58,168	2,456,827	1,896,465	151,045
1993	582,064	73,826	816,672	339,851	172,669
1994	600,113	81,014	921,204	418,185	18,258
1995	638,820	185,644	1,107,763	454,786	32,249
1996	593,107	255,321	1,407,398	480,771	34,754
1997	555,012	361,623	1,470,493	456,726	30,405
1998	523,267	497,807	2,761,735	810,669	28,822
1999	690,358	397,080	2,499,440	989,982	33,100
2000	832,353	411,100	2,783,500	1,211,675	34,163
2001	364,542	350,800	2,911,130	1,293,544	47,278
2002	364,542	242,472	2,976,787	1,682,390	34,754
2003	364,542	266,290	2,996,380	1,863,048	121,802
2004	1,525,810	230,309	4,331,088	1,512,664	96,123
2005	1,542,330	323,318	4,911,826	1,651,768	115,098
2006	1,908,517	582,883	5,376,466	1,609,230	160,355
2007	2,023,222	764,785	5,865,468	1,892,011	130,427
2008	1,787,545	606,848	6,357,967	1,826,614	150,359
2009	2,519,189	655,906	7,508,725	1,935,832	197,685
2010	2,144,285	755,655	12,407,618	2,143,479	250,183
2011	1,510,987	1,336,334	11,827,209	1,984,471	89,347
2012	1,122,378	2,155,193	14,882,739	2,091,012	296,042
2013	1,654,930	2,539,949	18,890,115	1,882,047	90,511
2014	1,856,730	3,053,552	23,165,175	2,899,132	268,457

Source: DBE's Annual Reports, * DBE's Loan Portfolio Concentration and Loan Recovery Performance Reports

Appendix 2

QUESTIONNAIRE

Please Tick in Appropriate Boxes

Part One – Background Information

1. Your current position in Development Bank of Ethiopia

a) Loan Officer ☐ c) Principal Officer ☐

b) Senior Loan Officer ☐ d) Process/Regional/ Manager ☐

e) Other, please specify _____

2. Indicate your experience in Development Bank of Ethiopia

a) 1 to 5 year ☐ c) 6 to 10 ☐

b) 11 to 15 ☐ d) 16 to 20 ☐

e) Above 20 ☐

3. Indicate your experience in the bank credit Unit(s)

a) 1 to 5 year ☐ c) 6 to 10 ☐

b) 11 to 15 ☐ d) 16 to 20 ☐

e) Above 20 ☐

PART TWO – QUESTIONS ON THE DETERMINANTS OF NON PERFORMING LOANS IN DBE

A. Bank Specific Factors

1. What Bank specific factors do you think are causing the occurrence of nonperforming loans in DBE?

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Please indicate your degree of agreement or disagreement to the following bank specific factors and the occurrence of NPL in DBE

No.	Bank specific factor that causes occurrence of nonperforming loans in DBE	Strongly agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly disagree (1)
2	Rapid Loan growth					
3	Low capacity of credit performers					
4	Lenient credit terms					
5	Poor credit monitoring/follow up					
6	Poor credit risk assessment					
7	Poor project appraisal					
8	Poor know your customer (KYC) assessment					
9	Prolonged period on processing credit					
10	Poor loan approval decision					
11	Non-Compliance with credit policy					

Please indicate your degree of agreement or disagreement to the statements pertaining to credit assessment, KYC and risk assessment and the occurrence of NPL

No.	Factors for occurrence of NPL in relation to credit assessment	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly Disagree (5)
12	Easily admitted borrowers usually default					
13	Proper implementation of know your customer (KYC) lead to high loan quality					
14	Good loan underwriting ensures loan performance					
15	Under/Over/ financing of projects would lead to loan default and NPL					
16	Poor credit risk assessment would lead to loan default and NPL					

Please indicate your degree of agreement or disagreement to the statements pertaining to credit monitoring and the occurrence of NPL

No.	Factors for occurrence of NPL in relation to credit monitoring	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly Disagree (5)
17	Strict credit monitoring ensures loan performance					
18	Poorly assessed and advanced loans may perform well if properly monitored					
19	Loan follow up is directly related to occurrence of NPLs					
20	Higher budget for loan monitoring result in lower NPLs					
21	Low capacity of loan monitoring officers result in higher NPLs					

Please indicate your degree of agreement or disagreement to the statements pertaining to borrower's orientation, credit term and the occurrence of NPL

No.	Factors for NPL occurrence in relation to borrower's orientation	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly Disagree (5)
22	Borrower's orientation/culture is related to loan performance					
23	Society's cultural development leads to good loan performance					
24	Lenient / lax credit term cause loan default					
25	Borrowers default because they don't understand credit terms well					
26	Poorly negotiated credit terms lead to loan non performance					

Please indicate your degree of agreement or disagreement to the statements pertaining to Credit size, lending behavior, integrity in lending and the occurrence of NPL

No.	Factors for NPL occurrence in relation to credit size, lending behavior and integrity	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly Disagree (5)
27	Aggressive lending leads to large NPL volume/ratio/					
28	Rapid credit growth leads to huge NPL level					
29	DBE's great risk appetite is cause for its NPL					
30	Compromised integrity in lending leads to loan default					
31	Having large number of borrowers causes loan default					
32	Loans default rate is directly related to the loan portfolio size					
33	With growth in loan portfolio size come growth on NPL					

B. Non Bank specific Factors:

34. What non Bank specific factors do you think are causing the occurrence of nonperforming loans in DBE?

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Please indicate your degree of agreement or disagreement to the statements pertaining to non bank specific factors and the occurrence of NPLs

No.	Factors for NPL occurrence in relation to diversion and borrows capacity	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly Disagree (5)
35	Diversion of loan fund and income by borrowers					
36	Poor credit mgt capacity of borrowers					
37	Willful default					
38	Intervention of external bodies in credit decision making					
39	Market condition					
40	Poor credit culture					
41	There is a relationship between loan default and borrower's culture					

42. Please state what needs to be done for sustainable improvement on the level of NPL on DBE's loan portfolio.

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End of the questionnaire

Thank you