ADDIS ABABA UNIVERSITY
FACULTY OF BUSINESS AND ECONOMICS
DEPARTMENT OF ACCOUNTING AND FINANCE

A PROJECT WORK ON CAUSES AND IMPACTS OF THE NON-PERFORMING LOANS ON PERFORMANCE OF STATE BANKS: A CASE STUDY OF DBE

By:

Yonas Admasu

Advisor:

Ato G/Medhin G/Hiwot

A PROJECT PAPER SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE AS PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTERS OF SCIENCE IN ACCOUNTING AND FINANCE

June, 2009

Acknowledgment

First of all I would like to acknowledge my Almighty God for giving me every good thing in this world. Without God my life is meaningless and full of empty.

It is my pleasure to express my deepest gratitude to Ato G/Medhin G/Hiwot my advisor for his valuable comment and advice in carrying out this project work.

I would also like to extend my heartfelt thanks to the staff member of the DBE Ato Yohannes Belachew, Ato Amare T/Mariam and other staffs of the Bank for their warm cooperation and assistance in providing the necessary data and resources.

I am grateful, also to my family and all colleagues who gave me courage and motivation from the beginning to the end of this project work.

Once again I gratefully acknowledge the assistance and support provided to me by Ato Anteneh Getachew.

Table of contents

Acknowledgment

Chapter one

1. Introduction.....1

1.1. Background statement 1

1.2. Statement of the Problem 5

1.3. Objectives of the Study 6

1.4. Significance of the Study 7

1.5. Methodology.....8

1.6. Hypothesis 9

1.7. Scope of the Study 9

1.8. Limitations of the Study 9

1.9. Organization of the paper 10

Chapter two

2. Review of Related Literature.....11

2.1. Definition Non-Performing Loans (NPLs).....11

2.2. Moral hazard, adverse selection and financial fragility 12

2.3. Deposit insurance system and moral hazard 16

2.4. Non-performing loan securitization 17

2.5. Controlling loan losses 18

2.6. Four Basic Credit Factors 20

2.7. Credit Investigation 22

2.8. Reasons of loans being non performing.....22

2.9. Capital formation-investment-recovery loop extended a direct consequence of non-performing loan 27

Chapter Three

3. Data Analysis and Interpretation……..30

3.1. Financial Sector and Development Bank of Ethiopia (DBE)

A profile……30
3.2. Summary of Credit Operation of the Bank……33
3.3. Loan portfolio position of the bank……37
3.4. Loan in arrears position of the Bank……..43
3.5. Non-Performing Loan Position of the Bank …….54
3.6. The Impacts of NPLs on Performance of the Bank ……..62

Chapter Four

4. Summary of Findings, Recommendations and Conclusions.....67
4.1. Summary of Findings.....67
4.2. Recommendations 71
4.3. Conclusion 74
Bibliography…….I
Appendix…….II

List of table **pages**

Table 1 The branch network of the banking system (in number)…….32

Table 2 Summary of credit operations (loan Approval) of the bank……33
Table 3 Summary of credit operations (loan Disbursement) of the bank…....34
Table 4 Summary of credit operations (loan collection) of the bank……36
Table 5 Summary of Agricultural loans portfolio……..37
Table 6 Summary of Industrial loans portfolio……..38
Table 7 Summary of other businesses loans portfolio…….....39
Table 8 Summary of total loans portfolio …….40
Table 9 Summary of loan portfolio as at June 30, 2006 (in %)…….41
Table 10 Computation of Test statistic …….41
Table 11 Computation of the value of X^2……..42
Table 12 Loan in arrears position of the bank……43
Table 13 Total agricultural loan in arrears…….....45
Table 14 Correlation Analysis……46
Table 15 Total industrial loan in arrears…….47
Table 16 Correlation Analysis ……48
Table 17 Total other business loan in arrears……..49
Table 18 Correlation Analysis…….51
Table 19 Total loan in arrears as at june 30, 2008…….....52
Table 20 Computation of test statistics……..53
Table 21 Computation of the value of X^2.....53
Table 22 Non-performing loans position of the bank……54
Table 23 Non-performing loans by type……...56
Table 24 Non-performing loans in economic sector…….58
Table 25 Correlation analysis…….....60
Table 26 Percentage of provision expense to total expense…….63
Table 27 Correlation analysis……...64
Table 28 Cash flow position of the bank……..65

CHAPTER ONE

1. INTRODUCTION

1.1. Background statement

Development Bank of Ethiopia is a specialized financial institution, which provides loans for financing the establishment and expansion of agricultural, agro-industrial, industrial, transport, communication, mining and energy, education, health, hotel, tourism and other sectors of the national economy. This loan is disbursed in the form of short, medium and long-term development credits. DBEs distinguishing feature its “project” based lending tradition. It was established in 1909 and has a network of 32 branches spread systematically over the country.

Banking service of the Development Bank of Ethiopia is essentially targeted at its clients and was initiated with the prime objective of facilitating the business activities of its customers and lending services. Accordingly, the Bank provides different allied services in both the local and foreign banking spheres. In the area of international banking operations, the services provided to its clients include import and export L/C, and settlement of invisible items, such as consultancy, installation, and commissioning services.

On the other hand, the domestic banking wing in addition to serving employees of the Bank provides current account and inter-bank check clearance in Addis Ababa city to its clients. Domestic banking service also facilitates and supports the disbursement and loan collection activities of the Bank in general but deposit mobilization is not eagerly pursued as the Bank is not in active retail Banking.

“Banks play a vital role in modern economy. Firstly, by accepting deposits the banks promote the habit of thrift and saving among the people. These savings later result in capital formation in the economy. Thus, by encouraging savings, banks promote capital formation, which is the basis

of economic progress in the country. Secondly, the banks also encourage industrial innovations and business expansion through funds provided by them to the entrepreneurs.

Thirdly, the banks exercise considerable influence on the level of economic activity through their ability to create or manufacture money in the economy. Fourthly, through their lending policy, the banks can influence the course and direction of economic activity with in the economy. Fifthly, the various utility function performed by the banks are of great economic significance for the economy. Such function as cheap remittance of funds, accepting and discounting bills of exchange; agency functions, such as collection of dividends and interests on behalf of customers are very important for the working of the modern economy". (Mr. Seid Ibrahim, 2005).

Besides their vital role in modern economy, every banks bears a degree of risk when it lend to private borrowers, such as business and consumers, and without exception every bank experiences some loan losses (non-performing loans) when certain borrowers fail to repay their loans as agreed. (George H. Hempel, 1994).

"Capital formation, from both domestic and foreign sources, the first step to get in the economic development process. Once targeted level of capital formation is achieved, the question of investment comes. With no investment situation due to lack of feasible areas to invest, capital formation can earn nothing. And lastly, the invested funds are required to be serviced at their maturity. This is the development loop, in a sense." (MPRA paper No 7708, 2005).

“In the future, bank lending may not be a perpetually growing business. There are several reasons for bank loans to grow more moderately. For example, under the newly established risk based capital rule, loans to consumers and businesses require the backing of more capital than other types of bank asset. This bias of higher capital standards put such loans at a cost disadvantage because of the high cost of capital.” (George H. Hempel, et al, 1994).

It is an issue of some contention among economists whether or not banks, faced with deterioration in their balance sheet condition, restrained their lending and so hampered investment. Theoretically, as pointed out by **Krugman** (1998), banks with damaged balance sheets, might have an incentive to favor risky projects. This is known as “gambling for resurrection”. In opposition to this, **Van Den Heuvel** (2001) shows how a bank with impaired balance sheet, might decrease its lending in order to satisfy the risk-based capital requirements of the ***Basel Accord***.

There are several theoretical models which try to reveal why or under what conditions banks have an incentive to engage in forbearance lending.

- **Kobayashi and Kato** (2001), along somewhat similar lines to Krugman (1998), argue that a change in banks’ risk preferences makes them softer about providing additional loans. Once a bank increases its exposure to afirm, the bank becomes risk-loving and begins to control that firm as if it were a dominant shareholder.

- **Kakuragawa** (2002), develops a model in which a bank without sufficient loan loss provisioning has an incentive to disguise its true balance sheet so as to satisfy the minimum capital requirement.

- **Berglof and Roland** (1997), applying a soft budget constraint model, consider a game between a bank and to the firm even after the latter's liquidation value plunges following a decrease in asset prices.

- **Baba** (2001), using real option theory, shows that uncertainties associated with the write-off of NPLs-such as the reinvestment return from freeing up funds by write-off, the liquidation loss, and the possible implementation of a government subsidy scheme, etc-including banks to delay writing- off NPLs.

1.2. Statement of the Problem

The operational performance of every bank is sound only if the loans disbursed to different sector of the economy are almost fully subject to collection as per the agreement. Unless the private borrowers such as business and consumers discharge their responsibility of repaying the loan on timely basis, *non performing loans* /loan losses/ increase which influence banks performance via malfunctioning the sector in particular and overall economy at large. The loan loss is the loss of time, money and effort. The weak credit worthiness of borrowers, poor ethical integrity of business and consumers, weak loan policy of lenders, macroeconomic instability, etc, results in increasing non-performing loans (NPLs). Non-performing loans affect the liquidity position of lender banks. Since "forbearance lending" (or what **peek and Rosengren** (2003) term "ever Greening policy" and **Caballero et al** (2003) term "Zombie lending" is supposed to suppress the profitability of once country economy by bailing out inefficient firms producing poor returns.

Reluctance of banks to extend credit to potentially profitable firms hinders the emergence of more efficient firms. As long as banks continue to provide forbearance loans and do not dispose of their NPLs, the quality of their loan-portfolio will decline and they themselves will remain vulnerable. Non-performing loan is the essence of weak efficiency. No banks in the world can perform soundly without reducing loan losses by taking pre-disbursement precautionary, post-disbursement follow-up and efficient resource allocation.

The problems under investigation are stated in the following research question.

1. What are the main causes of non-performing loans?
2. What are the impacts of NPLs on performance of the bank?
3. Which sectors of the economy are highly defaulters?

1.3. Objectives of the Study

General objective

The general objective of this paper is to analyze the loan approved and disbursed to different sectors of the economy and resulted non-performing loans (NPLs) and its impact on the performance of the bank (DBE).

Specific objectives

The specific objectives of this paper are finding out:

1. The loan in arrears of the bank.
2. The sick loan management system of the bank.
3. The liquidity position of the collateral and the bank.
4. The major reasons of non performing loan of the bank.
5. The loan performance in terms collection.

1.4. Significance of the Study

Financial institutions are the intermediary that channels the savings of individuals, businesses and government into loans. As far as the financial sector is concerned, Ethiopia's financial sector is fairly underdeveloped, although it has a long history with the establishment of the Abyssinia Bank in 1905. Since then several banks and financial institutions have been established with different proclamations and regulations. The three state owned enterprises, namely commercial bank of Ethiopia (CBE), Development Bank of Ethiopia (DBE), and Construction and Business Bank (CBB) dominate the financial sector. With the liberalization of the banking sector in 1994, eight private banks have been established. In addition, there are several insurance companies, contractual saving funds and microfinance institutions. DBE is a specialized financial institution, which provides finance for agricultural and industrial development projects. This study primarily helps DBE to identify the causes of NPLs and its impact on bank's performance. It also helps the bank to take necessary corrective action to reduce NPLs so as to enhance its operation effectively and efficiently.

Second, the study is undoubtedly significant to all commercial banks (including state and private banks) which provide loans to finance different sector of the economy so as to maximize their

contribution to the well being of the overall economy by establishing sound system of lending policy and enhancing their performance by minimizing non-performing loans.

1.5. Methodology

A. Source of data

The study is undertaken mainly by using secondary source of data and information. For secondary sources, more reliance is placed up on available literature, published official documents and reports, publication of National Bank of Ethiopia (NBE), Commercial Bank of Ethiopia (CBE), and Development Bank of Ethiopia (DBE). In addition to secondary source of data, for primary source of data an unstructured interview is conducted with concerned officials of the bank. Thus the secondary sources of data are given priority over the primary sources. In conducting on unstructured interview 20 employees are selected from credit appraisal department, project management department, credit and risk management department and research department. From each department five employees are selected based on their capability to answer the interview.

B. Tools used for analysis

In the study, simple statistics in the form of percent calculation is maintained. Apart from this, different tools like tabulation, graphs and ratios are used to analyze the data set. Quantitative data analysis is employed. In addition to these tools, chi-square Test is also employed to test the hypothesis about the significant relationship between sectors of the economy and borrowers. Correlation techniques have also been used to find the relationship between % of NPLs in agriculture and % of agricultural loan provided by DBE; and % of loan in arrears in all sectors

and % of loan disbursed by DBE to all sectors; and % of non-performing loan and % of provision expense for doubtful debt.

1.6. Hypothesis

Null Hypothesis (H0)

There is no significant relationship between borrowers and sectors of the economy.

Alternative Hypothesis (H1)

There is significant relationship between borrowers and sectors of the economy.

1.7. Scope of the Study

This study depends on one company case only. Accordingly the finding cannot be generalized to all financial institutions. But it helps other commercial banks to analyze the common causes of NPLs so as to take measure to reduce it and to make their operation effective and efficient.

1.8. Limitations of the Study

The limitations of the study are:-

1. The paper is mainly dependent up on secondary data rather than primary data.
2. Data have been used for the purpose of analysis and interpretation from 5 to 10 year data.
3. This study is confined to the credit operation by the bank and its non-performing loans causes and impacts on performance of the bank.
4. Reluctance of concerned officials to give current and necessary information.

1.9. Organization of the paper

This study consists of four chapters as follows:

Chapter one – Introduction

The first chapter consists the title, background of the study, statement of the problem objectives of the study, significance of the study, scope of the study, methodology, hypothesis and limitations.

Chapter two – Review of related literature

The second chapter addresses the definition of NPLs ; moral hazard ,adverse selection, and financial fragility ;deposit insurance system and moral hazard; non-performing loan securitization; managing credit risk, loan policy formulation, controlling loan losses,

four basic credit factors, credit investigation, reasons of loans being non performing, a direct consequence of non-performing loan.

Chapter Three – Data analysis and interpretation

In this section credit operation of the bank for various sector of the economy is analyzed by taking data of five years. Financial institutions and DBE profile also analyzed. Non-performing loans and loan in arrears resulted from the indicated sector is analyzed in the form of ratio and percentage, the impact of NPLs on performance of the bank is investigated in the analysis part. Finally the relationship of NPLs and sectors of the economy is interpreted based on the result and the given hypothesis.

Chapter Four- Summaries, Conclusions and Recommendation

In chapter four, a summary of the paper is give. Conclusion also made and recommendation is discussed based on the finding.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Definition Non-Performing Loans (NPLs)

Non performing Loan (NPLs) is a loan that is not earning income and full payment of principal and interest is no longer anticipated; principal or interest is 90 days or more delinquent; maturity date has passed and payment in full has not been made. (Basel II).

A non performing loan is a loan that is default or close to being in default. Many loans become nonperforming after being in default for three months, but this can depend on the contract terms. “A loan is nonperforming when payments of interest and principal are past due by 90 days or more, or at least 90 days of interest payments have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days over due, but there are other good reasons to doubt that payment will be made in full.” (IMF)

Loan becomes nonperforming when it cannot be recovered within certain stipulated time that is governed by some respective laws. So, non-performing loan is defined from the institutional point of view, generally from the lending institutions side. Loan may also be non-performing if it is used in a different way than that for which it has been taken. This is the users’ point of view. But here I will confine the definition to the institutional point of view. In this case, loan becomes

non-performing when it is classified as substandard, doubtful and loss for which commercial banks in Ethiopia requires 20%, 50% and 100% provisioning respectively.

According to the National Bank of Ethiopia directive no SBB/32/2002 non-performing loan is classified as follows: 1) Non-performing loans past due 90 days or more but less than 180 days shall be classified, at a minimum, as substandard 2) Non-performing loans past due 180 days or more but less than 360 days shall be classified, at a minimum, as doubtful. 3) Non-performing loans past due 360 days or more shall be classified as loss.

2.2.**Moral Hazard, Adverse Selection and Financial Fragility**

According to Martin Brownbridg (1998) substantial number of local banks in sub- Saharan African countries: Kenya, Nigeria, Uganda and Zambia have failed, mainly because of non-performing loans. Poor loan quality has its roots in the informational problems which afflict financial markets, and which are at their most acute in developing countries, in particular problems of moral hazard and adverse selection.

Moral hazard (or adverse incentives) is a concept with relevance to a variety of principal agent relationships characterized by asymmetric information. A number of factors can exacerbate moral hazard on bank owners. First, an increase in the interest rate may lead borrowers to choose investments with higher returns when successful but with lower probabilities of success (Stiglitz and Weiss, 1981): hence, a rise in deposit rates could induce banks to adopt more risky

investment strategies. A rise in bank lending rates can have similar incentive effects on the bank's borrowers.

Second, macroeconomic instability can also worsen adverse incentives, if it were to affect the variance of the profits of the bank's borrowers, especially when there is covariance between borrowers' profits (e.g. if a large share of borrowers are in the same industry) or if loan portfolios are not well diversified among individual borrowers (McKinnon, 1988).

Third, the expectation that the government will bail out a distressed bank may weaken incentives on bank owners to manage their asset portfolio prudently and incentives on depositors to monitor banks and choose only banks with a reputation for prudent management. Deposit insurance also reduces incentives for depositors to monitor banks.

Moral hazard becomes even more acute when the bank lends to projects connected to its own directors or managers (insider lending). In such cases the incentives for imprudent (and fraudulent) bank management are greatly increased in that all of the profits arising from the project are internalized (in the case of loans to unconnected borrowers the project returns are split between lender and borrower), whereas that part of the losses borne by depositors or taxpayers are externalized. Not surprisingly, insider lending is a major cause of bank failure around the world (Caprio, 1997, pp. 6-7).

Moral hazard can be constrained by strict regulation and prompt action to close banks as soon as they become insolvent, but regulatory authorities are often pressured to exercise

"forbearance": i.e. delay in enforcing regulations or closing insolvent banks (Garcia, 1996,pp. 25-29).

Informational asymmetries can also affect the financial soundness of a bank through the adverse selection of its borrowers. Higher lending rates and a greater volatility in expected rates of return to borrower's projects can lead to a decline in the average quality (i.e. creditworthiness) of the pool of loan applicants willing to borrow from the bank. The more creditworthy applicants are driven out of the market by higher lending rates. A prudently managed bank would therefore be wary of raising real lending rates too high because of the likely adverse impact on loan quality. Instead, it would ration credit (Stiglitz and Weiss, 1981). But if it has to pay above market interest rates to mobilize funds (because, for example, it is perceived as a poor credit risk), the bank's scope for not raising lending rates may be limited without cutting margins to levels insufficient to generate profits.

According to Harvey (1993), the public-sector banks have faced a different set of problems, mainly involving political interference in the allocation of credit and the pursuit of non-commercial objectives.

The banking sector in developing countries faced with the default risk because of inefficient portfolios, especially, in terms of international funds. Over-borrowing problem follows a cyclical pattern in the recovery phase of business cycle. Increased demand leads prices to rise and attracts new investment.

Minsky (1977) focused on over-investment and over-lending problems in order to explain financial crises and call this phenomenon “euphoria”. Following Minsky (1977) and

Kindleberger (1989), McKinnon and Phil (1996) modeled the over-borrowing problem. Corsetti, Pesenti and Roubini (1998) emphasized the role of implicit and explicit bail out guarantees on moral hazard problem. Under these guarantees, banks take excessive risk. Over-lending problem occurs through insufficient monetary capacity, asymmetric information and deposit insurance scheme. Current studies conclude that over-borrowing and bailout guarantees can cause severe currency and banking crises (twin crises).

Gokhan k and mehmet h (2007),in emerging markets, open economy conditions may cause banks to become vulnerable to exchange rate fluctuations under international over-borrowing. But there are also some other risks, which are stimulated by this problem, such as interest rate and credit risks. If banks switch these international funds in order to finance budget deficits by holding government bonds in their portfolios, interest rate risk would increase. But if moral hazard leads banks to take unhedged foreign exchange position in order to fulfill the domestic over-borrowing demands by the upswing of the business cycle, this would increase credit risk. Deposit insurance also has played a crucial role in this process, because the banks may implicitly transfer most of the risk to the government through the deposit insurance scheme.

From the emergence of NPLs in Japan, some argue that, it is the long lasting recession that has been responsible for the increase in NPL. Others appeal to the debt-deflation theory of Irving Fisher(1933) and insist on deflation as prime cause.

However, Saita (2003) proposes that the sharp fall in asset prices, especially land prices, is one of the dominant causes of NPLs.

Ogawa (2001) and Sekine (1999) suggests that NPL hampered firm investment via a deterioration in both firms` and banks` balance sheet condition. In a sense, the deterioration in banks balance sheet condition may be said to have had a propagation effect, because it distorts the investment of bank dependent firms, even when the balance sheet of the later were in good condition.

2.3. Deposit Insurance Systems and Moral Hazard

Every developed country has a deposit insurance system, but as Schuler (1989) mentions, in all except the United States, deposite insurance is a recent innovation dating from the 1960s and 1970s. After deposit insurance systems, financial distresses are no longer characterized by bank runs, but there is a trade off between preventing a crisis and creating moral hazard. With or without deposit insurance systems, bank owners and managers have incentives to take risks, but deposit insurance stimulates these risks because of the insufficient depositor monitoring. Insured depositors are indifferent the risks taken by their banks. These behaviors of depositors and bank owners weaken market discipline. Therefore, under deposit insurance systems regulators should fill this gap by effective regulation and supervision. Governments have to limit moral hazard without losing the benefits of deposit insurance. According to Lawrence, Goldberg and Harikumar (1991), perfect monitoring or risk based deposit premiums can eliminate moral hazard problem if information were symmetric between bank managers and the insurance company. Therefore, regulation plays a more important role under deposit insurance systems.

2.4. Non- **performing loan Securitization**

Greenbaum and Thakor (1987) demonstrated that the signaling of information regarding loan quality may be enhanced when loans are sold rather than funded by deposits. James (1987) demonstrates that loan sales can provide lower cost financing for bank equity-holders and enable the bank to avoid a possible underinvestment problem when it has risky debt outstanding.

(Duesenberry 1987). Pennacchi (1988) tackled the moral hazard problem by coming up with a model where banks may improve the returns on loans by monitoring borrowers, effectively allowing the banks to make loans less expensively through securitization by avoiding costs associated with required reserves and capital requirements. In addition, Flannery (1994) showed how current bank-examination procedures may induce banks to hold only certain risk classes of loans, while profitably selling the rest.

2.5. Controlling loan losses

It is said that banks never make bad loans; at least, they are not bad at that time they are made. However, banks find that invariably a small portion of their loans become delinquent and eventually must be written off.

This basic risk of the lending function is not entirely bad; banks would not escape from bearing such risk in the course of underwriting a variety of business enterprises and consumer needs. When a bank does not experience at least a few loan losses, this is likely to be a sign that the bank is passing up profitable opportunities. Nevertheless, well-managed banks should do all they can to minimize loan losses.

Most banks conduct loan reviews to reduce losses and monitor loan quality. Loan reviews consist of a periodic audit of the ongoing performance of some or all of the active loans in the bank's loan portfolio. Its essence is credit analysis, although, unlike the credit analysis conducted by the credit department as part of the loan approval process, credit analysis in loan review occurs after the loan is on the books. To fulfill its basic objectives of reducing loan losses, the following points should be emphasized in loan review:

1. To detect actual or potential problems loans as early as possible.
2. To provide an incentive for loan officers to monitor loans and to report deterioration in their own loans.
3. To enforce uniform documentation.
4. To ensure that loan policies, banking laws, and regulations are followed.
5. To inform management and the board about the overall condition of the loan portfolio.
6. To aid in establishing loan loss reserves.

The true purpose of loan review is actually a source of some confusion. Most bankers would cite an "early warning" purpose where in loan review provides the basic defense against deteriorating credit quality.

They would claim that loan review can detect, in timely fashion, the changes in credit quality that can occur quickly in loan agreements. **Gregory Udell** (1987) argues, however, that the infrequency of review and, for some loans, the absence of review inherent in formal loan review systems makes it impossible always to catch early deterioration in loans. Udell argues persuasively that the fundamental purpose of loan review is to reinforce a "credit culture" within the lending organization. The credit culture relies on loan officers, not on loan review

department, as the basic defense against deteriorating credit quality. Indeed, banking regulators refer to loan officers as the “first line defense” against credit problems.

The loan policy should require diligence on the part of all loan personnel to detect and attempt to correct problem loans. Although loan review personnel are important in the early detection of problems loans, individual loan officers frequently have special on going knowledge to contribute. Loan officers attempt to maintain good rapport with their borrowers. If the borrower’s business deteriorates, the loan officer frequently will find that this rapport deteriorates as well. Any unexplained change in the borrower’s attitude toward the loan officer or the bank may be a clue to the borrower’s financial difficulties. Unexpected declines in deposit balances and the occurrence of overdrafts are signs of such difficulties.

Other clues include late payments of principal and interest and abnormal delays by the borrower in submitting periodic financial statements are required in the loan agreement. Delays might indicate a reluctance to submit unfavorable financial results to the bank.

In the event of such delays, the loan officer should immediately inquire about the reasons. Payment delinquencies also must be followed up quickly because they frequently indicate that the borrower is undergoing a financial crisis.

Other indicators of trouble include the following:

- Disturbing trends in financial statements.
- Management turnover.
- Cancellation of insurance.
- Security interest filed against the borrower by other creditors.

- Notice of a lawsuit, tax liens, or other legal action against the borrowers.
- Deteriorating relations with trade suppliers.
- Death or illness of principals.
- Marital difficulties of principals.
- Loss of key source of revenue.
- Deterioration of labor relations.
- Natural disaster.

When a problem loan is detected, the responsible loan officer should take immediate corrective action to prevent further deterioration and to minimize potential loss. The preferred solution to a problem loan is to negotiate a plan of action with the borrower to try to protect both the bank and the borrower from possible loss.

2.6. Four Basic Credit Factors

The essence of all credit analysis can be captured in four basic credit factors or lines of inquiry:

1. The borrower's character and soundness

Most bankers agree that the paramount factor in a successful loan is the honesty and goodwill of the borrower. Dishonest borrowers do not feel morally committed to repay their debts. A determined, skilled, and dishonest borrower usually can get a loan through misrepresentation. Because loan officers must spread their time over many loan relationships, they do not have time to uncover elaborate schemes to defraud the bank.

2. The intended use of loan funds

At first glance, the borrower's need and proposed use for funds usually seem perfectly clear. In many commercial loans, this is frequently not the case. More often than not, determining the true need and use for funds requires good analytical skills in accounting and business finance. An understanding of the loan's intended use helps the analyst to understand whether the loan request is reasonable and acceptable.

3. The primary source of loan repayment

The analyst's accounting and finance skills are crucial in determining the ability of the borrower to repay a loan from cash flow. For seasonable working capital loans, cash flows are generated by means of the orderly liquidation of the seasonal build up in inventories and receivables. In term loans, cash flows are generated from earnings and non cash expenses (depreciation, depletion, etc) charged against earnings.

The analyst must ascertain the timing and sufficient of these cash flows and evaluate the risk of cash flows falling short.

4. Secondary sources of repayment

In general, cash flows from business operations is the most dependable source of loan repayment, however, if sufficient cash flows fail to materialize, the bank can prevent class if it has secured a secondary source of repayment.

Collateral should always be viewed as a secondary not a primary, source of repayment. Banks hope to avoid foreclosing on collateral because foreclosure entails much time and expense. Collateral value should cover, in addition to the loan amount and interest due, the legal costs of foreclosure and interest during foreclosure proceedings. Collateral is the preferred secondary source of repayment.

Other secondary sources are guarantors and co-makers. However, collection from guarantors and co-makers often requires expensive litigation and results in considerable ill will between the bank, borrower, and guarantor.

2.7. Credit Investigation

The purpose of credit investigation is to acquire enough information to determine the loan applicant's willingness and capacity to service the proposed loan. The investigation attempts to develop an understanding of the nature of the borrower in terms of the four basic credit factors just discussed; the borrower's character, the true purpose of the loan, the primary source of repayment, and the secondary source of repayment. There are three fundamental sources of information; customers, internal bank sources, and external sources available through institutions outside the bank.

2.8. Reasons of loans being non performing

Default culture is not a new dimension in the arena of investment. Rather in the present economic structure it is an established culture. The redundancy of the unusual happening becomes so frequent that it seems that people prefer to be declared as defaulted. In developing

and under-developed country, the reasons of being default have a multidimensional aspect. Various researches have concluded various reasons for a loan to be default. Some of them are discussed below that are very much pertinent to the study.

a) Reduced attention to borrowers

This is related to the *Hawthrone effect*. Researchers at Hawthrone Electric Company in the US in the 1920s wondered what effect changes in lighting; heating and similar variables would have on factory workers. To the researcher's amazement, productivity increased throughout the study, during which time lighting was varied greatly from normal to dim to brilliant and back, the heat was turned up and down, etc. the puzzled researchers eventually concluded that the workers were responding positively because they were the subject of interest, not because of changes in their working conditions. Workers perceptions that someone is paying attention to them get better results than perceptions in attention, of being ignored. Borrowers may also perform in this manner.

b) Moving along the risk curve

This might be called the *Petroski Effect*. In "To engineer is human": The role of failure in successful design, Henry Petroski, a forensic civil engineer fascinated with the failure of large structures notes that each new major bridge, for example, always has to be higher, longer, stronger or cheaper than the bridge of similar design. Something that works tends to be the subject of attempt at replication and improvement in new environments. This means that risk increase and are always to some degree unknown as the low risk situations become saturated.

c) Increasing loan size increases risk

This may be called the *Inverted Pyramid Effect*. In the 1980s the manager of a donor funded project to develop rural credit unions in Malawi were pleased to note a large increases in deposit mobilization in a small credit union in a remote location.

Project funds were used to enable borrowers to obtain loans equal three times their deposit or share balances. But one day; the expansion ended, as did the credit union. This may be easily explained with a numerical example: one farmer deposited 100 and borrowed 300. He kept 100 and gave a relative or friend 200, which that person deposited in the credit union. That person then borrowed 600, kept 200 and gave 400 to another relative or friend. After everyone in the village had participated and the 100 was shared, the exercise ended.

d) Lenders lack plan to deal with risk

Donor-funded credit programs are usually designed without a clear focus on risk. In micro-finance promotion there seems to be no clear vision of risk or no industry-wide concern about means of addressing it, other than running a tight ship. The literature is largely concerned with out reach, measured by number of borrowers, and covering administrative costs. The jury is still out of micro-lender performance, which is currently supported by a tidal wave of do not funds that lifts all but the most leaky of ships. This inattention to risk may be called *The Pollyanna Effect.*

e) Borrowers probe a credit operation's weaknesses

Credit programs have no special claim to infallibility. A borrower may be determined to repay on time but because of some unexpected events fail to do so. If the lender does not follow up promptly with a query, the borrower will take note. She/he may simply be grateful not to have been embarrassed. A second way in which borrowers are tempted to probe a blatantly refuse to pay on time or skillfully avoid payment. Borrower's probing of lender's weaknesses may be called the *Jurassic Park Effect*. The dinosaurs in this popular film tested the structures and devises used to contain them within certain areas of Jurassic Park and eventually gained control over the entire park to the dismay, discomfort and eventual departure or demise of their human captors. In addition, the park's dinosaurs become more aggressive after the developers lost control of dinosaur breeding as a result of unexpected risks.

f) Lenders and project designers have law expectation

In some cases credit is provided by donors because it is the easiest thing to offer, it makes many people happy and it corresponds to a certain view of development and the conditions required for it to occur.

In this case repayment is not terribly important to donors because the objective is almost overwhelmingly to get the money working in order to stimulate development. This cause of declining repayment performance may be called the *something-must-be-done effect*. Lacking more precise and effective tools, donors and government embrace credit to accomplish purposes that it cannot realize in a sustainable manner or that are highly unlikely to be achieved. Reasons

for this include fungiblity and the impact of other, non-financial constraints lowering retails to the activities for which credit is provided.

g) The lender is unwilling to collect

Another possibility is that the lender is unwilling to collect. Unwillingness may arise from a number of factors but almost always requires soft funds that the lenders can afford to lose. Unwillingness to collect may result from the realization that the credit program was poorly designed, destined to fail. It may also reflect a view that the beneficiaries are poor while the sponsors are not, and that a sense of fairness. Precludes any serious action against defaulters. This can be called the *Patronizing Effect.*

h) Lack of good models

Another possibility is that lenders are simply not familiar with successful examples of dealing with bad and doubtful debts. This is likely in transaction economics in North and Central Asia where commercial banking is still something of a novelty compared to banking in service to economic planning. Legal recourse of this situation is remote, costly, and uncertain. This lack of credible models can be called *High Default Culture Effect.*

i) Loan sanctioned by corruption

In under developed and developing countries, sometimes loan sanctioning authority sanctions loans for satisfying their self interested behavior. Thus, they engage themselves with the clients

and corrupt the total system by giving some benefits for taking something in return. This may be called as *Give and Take the Chance Effect*. This is the result of too much politicization and power-relatedness in the institutional system.

j) Weak follow up weaken the system

In developing society, people give more importance on current consumption. So they do not mind to spend the borrowed fund to spend for consumption if they are not strictly followed up. People hold a very short vision of thinking for today leading sufferings tomorrow. So, a significant portion of capital goes to unproductive sector that may be termed as *Die Another Day Effect*.

2.9. Capital formation-investment-recovery loop extended a direct consequence of non-performing loan

Economic development will always be in its infancy if sufficient capital cannot be formed. Capital formation has at least two dimensions i.e. domestic and international. Domestic capital formation is basically the function of thrift organizations, like banks and other financial institutions, to motivate the households to save from their small earnings. The attraction should be institutionalized so that the savings can be utilized in economic process. Households should be motivated to save and to deposit the same so that the idle savings can be used economically. Sometimes, they are self-motivated. Economists have identified at least three broad reasons for saving (**Frank, Bernance,** 2001); *life cycle saving*; saving to meet long-term objectives, much as retirement, college attendance, or for the purpose of a home; *precautionary savings*; saving for protection against unexpected setbacks, such as the loss of a job or a medical emergency; *bequest*

saving; savings done for the purpose of leaving an inheritance. But, sometimes they require external inducement that is basically done by the financial institutions or government. Along with household savings, there is another form of investment that basically comes from corporation. Corporate profits were actively encouraged by the state and this corporate savings were one of the main contributors to the sustained high investment rate.

Savings can be held in different forms, as financial assets, as stores value, as well as informal financial assets such as savings in informal financial institutions. The financial liberalization paradigm maintains that savings in the informal sector are as a result of inefficient and repressed financial markets.

The lack of access to financial saving instruments and the market fragmentation means that people have to resort to non-financial savings (**Gupta**, 1985). **S. Nissanke** (1991, Mimeo) points out the prevalence of non financial savings in rural households of East African countries, where financial savings at times constitutes only 5-6% of total household savings. Household savings in India are remarkably high (**Singh,** 1995), as well as Italy (**Jappelli** and **Pigano,** 1994). Getting the small savings from the households, financial institutions form large capital so that it can be invested in the development of various sectors like industry, business, development and others. When savings get investing status, it works for the economic development, provided that the investment is rightly done. In an article entitled "The vice of Thrifts", The Economist (1998,P.85) states, "It has become clear that the surge in investment in East Asia in the 1990s was a sign of weakness, not strength." Much of the money was wasted on speculative property deals or unprofitable industrial projects. The very logic of investment function should be to ensure sustainable development. Because, sustainable development paves the way of further

development. The consequences have both positive and negative dimensions to the investing authority though in the economy it always should have a positive result up to a limit. If the invested funds can e captured timely, it can again form new capital creating a good option of reinvestment or consumption. Both of these reinvestment and consumption functions create a positive impact on the economy. Because, economy gets some value added jobs to do. But, in case of non-recovery, the investing party should have to go along way that is not expected and sometimes this unexpected happenings cause a great harm to the economic framework and structure.

Apparently, it may seem that it's good so far as economic development is concerned, as the money remains invested in the economic process.

But the reality is that the funds may fail to achieve its ultimate target, it may be unutilized or under utilized or even in extreme case, the funds may flow out of the economy. Then the loss will be a total loss both to the investing authority and to the society as well. Thus, it will lead the economy to be stagnant for the time being, and if not checked, forever, it will also accelerate the path of being and remaining poor for the time being.

Assurance of a timely recover of the invested funds ensures societal economic development as these funds again flow into the economy in the form of either investment or consumption. The fast the loop moves, the fast the economy develops.

CHAPTER THREE

3. DATA ANALYSIS AND INTERPRETATION

3.1. Financial Sector and Development Bank of Ethiopia (DBE) A profile

During the command economic era, financial institutions in Ethiopia were under direct control of the monetary authorities. Ownership of the sector was limited to government. The establishment of financial institutions by private sectors had been outlawed. As a result, there were only three Government Banks (Commercial Bank of Ethiopia, Construction and Savings Bank, and Agricultural and Industrial Development Bank) and one Government Insurance Company (Ethiopian Insurance Corporation). There was direct interference of government organs in the day-to-day activities of financial institutions. Credit was at large directed to selected sectors. Following the change of government in Ethiopia in 1991, the new government introduced a number of reform programs including opening the financial sector for national investors. Consequently, private Banks, Insurance companies and Micro-Financing institutions started to sprout soon after the enactment of the Licensing and Supervision of Bank and Insurance

Companies Proclamations in 1994 and Licensing and Supervision of Micro-Financing Institutions proclamation in1996.

Based on these proclamations, private national investors were involved in the ownership of banks, insurance companies and micro-financing institutions. As a result, today there are eleven commercial banks, nine insurance companies and twenty-eight micro-financing institutions operating in the country. Private sectors are also the primary borrowers from government as well as privately owned financial institutions. In Ethiopian context, financial sector includes Central Bank of Ethiopia (NBE), Commercial Banks (owned by Public and private), Development Bank of Ethiopia (DBE), credit and savings cooperation (Government owned), pension Fund, Insurance companies (both public and private) and micro-finance institutions owned by regional governments, NGO's, associations and individuals).

Modern banking started during the region of emperor Menilik in 1905 with the establishment of the "Bank of Abyssinia". This bank was founded with an agreement with the Anglo-Egyptian National Bank to last for fifty years. The Ethiopian government later brought the Bank of Abyssinia and renamed it "Bank of Ethiopia" in 1931. This bank was closed down following the invasion of the Italian Fascist regime in 1936. Later in 1943, the government established the "state bank of Ethiopia". It was performing dual job of a commercial and central bank until it was dissolved and restructured to form today's National Bank of Ethiopia (NBE) and the Commercial Bank of Ethiopia (CBE) in 1976.

The branch network of the banking system in Ethiopia is depicted in table 1.

Branch network of the Banking system (in number)

Banks	**Years**				
	2004	**2005**	**2006**	**2007**	**2008**
Commercial Bank of Ethiopia	172	174	177	205	205
Construction and business bank	21	26	27	27	27
Development Bank of Ethiopia	32	32	32	32	32
Total public Banks	**225**	**232**	**236**	**255**	**264**
Awash International Bank	31	34	36	43	53
Dashen Bank	31	33	37	42	48
Bank of Abyssinia	19	22	26	28	42
Wegagen Bank	25	29	33	39	40
United Bank	14	17	22	27	30
Nib International Bank	13	17	20	25	42
Cooperative Bank of	-	6	11	16	20
Lion International Bank	-	-	-	12	17
Total Private Banks	**133**	**158**	**185**	**232**	**298**
Grand Total Banks	**358**	**390**	**421**	**487**	**562**

Table 1- Source: Annual Report of NBE

The development Bank of Ethiopia (DBE) is one of the financial institutions engaged in providing short, medium and long term development credits. DBE's distinguishing feature is its "project" based lending tradition. Since its establishment in 1909, the bank has been playing a significant role in promoting overall economic development of the country.

The bank's organizational set up comprises a supervisor Authority, a Management Board, General Manager and the necessary staff pursuant to the public Enterprise proclamation No.

25/1992. The bank has regional and branch offices, which are strategically distributed throughout the country. In order to facilitate the services rendered to its customers, the bank has recently given all branch office the authority to appraise, grant and disburse loans on their own up to a certain earmarked limit.

In its long years of existence DBE has established recognition at national and international levels. Nationally, it is the sole bank with reputable experience in long-term investment financing. Internationally, it is recognized as an important on-lending channel for development programs financed by bilateral and/or multilateral sources.

The recent focus of the Government in relation to DBE is to provide financial assistance to projects, which are fully engaged in producing exportable commodities. With regard to this, the economic sub-sectors for which loan-able financial resource will be availed are leather and leather products, textile and garment manufacturing industries cotton farming, live animal export and meat processing industries as well as production of horticultural crops including flowers and high value vegetable crops and other exclusively targeted for foreign market.

3.2 **Summary of credit operation of the bank**

Summary of credit operations (loan Approval) of the bank

In millions of Birr

Years/sectors	agriculture	percent	industry	percent	Other business	percent	total
2004	189.45	43.6	150.86	37.74	93.90	21.6	434.21
2005	335.80	43	347.10	44.64	94.61	12.16	777.51
2006	270.0	16.2	1278.2	76.66	118.1	7.08	1667.2
2007	2024.7	60.9	1059.9	31.87	240.34	7.23	3324.94
2008	356	19.2	1265.7	68	234.9	12.65	1856.6
total	3176.65	39.4	4101.7	50.88	781.85	9.96	8060.4

Table 2 sources: Annual Reports of DBE

From the above table, it is clear that the total loan approval has been constantly increased from birr 434.21 million from 2004 to birr 3324.94 million in 2007. The loan approval in the year 2008 declined by 44 percent when compared with the preceding year.

The reasons for decline were attributed to many reasons which are obtained from ten employees by conducting an unstructured interview from credit appraisal department and credit and risk management department. Five employees from each department were interviewed. According to the respondents eight employees forwarded the reasons as rejection of loan application due to technical and market assessment, and the other two employees responds the reason as indebtedness of loan applications.

For the increasing trends of loan approval from 2004 to 2007 the factor forwarded as a reasons by all respondents are the increased inflow of loan application from all three sectors particularly from export- oriented projects and huge loan amount approval to government priority area projects involved in sugar, textile, and tannery line of production.

Summary of credit operations (loan Disbursement) of the bank

In millions of Birr

Years/sectors	agriculture	percent	industry	percent	Other business	percent	total
2004	110.9	37.6	110.7	37.52	73.4	24.88	295
2005	302	52.4	208.5	36.2	65.2	11.33	575.7
2006	301.09	46.36	212.57	32.7	135.68	20.89	649.3
2007	492.6	62	82.2	10.36	217.9	27.48	792.7
2008	473.14	53.3	238.38	26.35	192.95	21.33	904.5
total	1679.73	52.2	852.35	26.49	685.13	21.3	3217.2

Table 3 sources: Annual Reports of DBE

The above table indicates that the total disbursement has been constantly increased from birr 295 million from 2004 to birr 904.5 million in 2008. The bank registers low achievement in year 2004.

From the total loan disbursement or the aggregate five years agricultural sector holds the first position i.e. 1679.73 million (52.2 percent) followed by industrial sector birr 852.35 million (26.5 percent) and other business sector project accounted for the remaining birr 685.13 million (21.3 percent).

Interview has been conducted with fifteen employees from project management department; credit and risk management department, and credit appraisal department. Five employees were taken from each department to know the factor for low loan disbursement achievement in 2004 and increasing trend of loan disbursement. According to ten respondents the reason for low achievement in 2004 are failure of clients to meet preconditions set for the fund release and equity contribution problem.

The responses of the remaining five employees are: implementation delay of huge projects mainly due to market price escalation in major material input for project involving building construction and problem related to equity utilization in scheduled time period.

All fifteen employees respond that the main factor for increasing trend in loan disbursement performance from the year 2004 to 2008 are: huge loan disbursement to export- oriented

projects, loan disbursement to government priority area like textile, horticulture, pulses; ability of borrowers in meeting equity requirement of the bank.

Summary of credit operations (loan Collection) of the bank

In millions of Birr

Years/sectors	agriculture	percent	industry	Percent	Other business	percent	total
2004	81.7	39.6	91.2	39.6	57.4	24.9	230.3
2005	130.5	40.4	146.6	45.3	46.2	14.3	323.3
2006	163.8	28.1	337	57.8	82	14	582.8
2007	244.1	31.9	429.6	56.1	91.5	11.9	765.2
2008	300.6	49.5	185.9	30.6	120.3	19.8	606.8
total	920.7	36.7	1190.3	47.5	397.4	15.8	2508.4

Table 4 sources: Annual Reports of DBE

Table 4 indicates that the total loan collection of the bank has been increased constantly from birr 230.30 million from 2004 to birr 765.2 million in 2007. The loan collection in the year 2008 declined by 20.7 percent when compared with the preceding year. The bank also registered the lowest collection performance in 2004.

According to the secondary source maintained by research department of the bank the main reasons for low achievement in collection performance in 2004 and the decrease in collection in 2008 are: delay of monthly loan out put report; human resource related problem like professionals and semi-professionals; problem related with collateral and foreclosure such as inefficient and defective collateral; poor demand for collateral taken over by the bank; diversion of project proceeds by some clients for unintended purposes; managerial problem in some projects; working capital shortage and willful defaulters.

3.3 **Loan portfolio of the development bank of Ethiopia**

The business mission of the DBE is to accelerate the economic development through the provision of medium, long term as well as short term development credits to the agricultural, industrial and other business sector of the economy. The agricultural, industrial and other business enterprise loans portfolio for different borrowers are shown in table 5, 6, 7 and 8.

Summary of Agricultural loans portfolio

In millions of Birr

Years	State enterprise	Private enterprise	Co-operatives	Micro enterprise	total	Percent share
2004	-	696.04	199.04	-	895.08	20.70
2005	-	959.56	210.36	-	1169.92	23.80
2006	-	1209.5	223.21	-	1432.7	26.65
2007	270.99	1276	234.29	-	1781.3	30.40
2008	513.19	1364.45	271.41	-	2149.05	33.80

Table 5 sources: Annual Reports of DBE

The above table indicates that total agricultural loan portfolio of the bank has been increased constantly from birr 895.08 millions from 2004 to birr 2149.05 millions in 2008. Over the year the increase was 2.4 times. Out of the total agricultural loan portfolio private enterprises registered 74 percent.

According to the interview conducted with ten employees from research department and credit appraisal department all employees respond that due to government policy of encouragement of private investment the private enterprises hold the lion share from the total agricultural loan portfolio of the bank.

Again according to nine respondents from the total of ten being interviewed from the same department the main reason for the increase of agricultural loan portfolio trend was due to the

disbursement of large amount of loan to export-oriented projects and government policy agricultural oriented development program.

Summary of Industrial loans portfolio

In millions of Birr

Years	State enterprise	Private enterprise	Co-operatives	Micro enterprise	total	Percent share
2004	254.60	2525.03	-	-	2788.74	64.3
2005	288.18	2739.51	-	8.80	3016.49	61.4
2006	281.29	2881	-	8.64	3170.93	59
2007	250.08	2852.42	-	8.50	3111	53
2008	64.20	3010.54	-	9.14	3083.88	48.5

Table 6 sources: Annual Reports of DBE

It is seen from the above table that percentage share of industrial loans portfolio has been decreased from 64.3 percent in 2004 to 48.5 percent in 2008. Out of the 100 percent of loan portfolio private enterprises hold 92 percent.

Interview was conducted with ten employees from credit appraisal department and credit and risk management department. According to all respondents government policy of privatization of state owned enterprises and encouragement of private investment becomes the main reason that private enterprises hold the lion share from the total portfolio.

From the total of ten respondents being interviewed from the same department the response of seven employees for the reason of the decrease in trend of industrial loan portfolio is the inability of the bank to satisfy the increased inflow of loan application due to its liquidity problems. The responses of the other three respondents are: rejection of loan application of some projects to give priority to export-oriented projects.

Summary of Other businesses loans portfolio

In millions of Birr

Years	State enterprise	Private enterprise	Co-operatives	Micro enterprise	total	Percent share
2004	63.35	522.04	-	61.87	647.26	15
2005	65.81	545.26	-	114.34	725.41	14.8
2006	68.44	511.01	-	193.34	772.8	14.35
2007	70.94	549.76	-	352.43	973.13	16.6
2008	19.97	677.62	-	427.42	1125.01	17.7

Table 7 sources: Annual Reports of DBE

The above table indicates that the total other business enterprises loan portfolio has been increased from birr 647.26 millions (15 percent) from 2004 to birr 1125 millions (17.7) in 2008. The increase over the period was 1.7 times. Out of the total other business enterprises loan portfolio private enterprises hold 66 percent.

The responses of ten employees for the interview conducted from credit appraisal department and research department indicates that the main reasons for the large amount of private enterprises loan outstanding in other business sector are: the government policy of privatization of state owned enterprises and encouragement of private investment.

According to the responses obtained from ten employees of credit and risk management and credit appraisal department the primary factors for the increasing trend of other enterprises loan portfolio are the increased inflow of loan application from the sector and the ability of the sector to satisfy equity contribution and precondition set by the bank.

Summary of total loans portfolio

In millions of Birr

Years	State enterprise	Private enterprise	Co-operatives	Micro enterprise	total	Percent share
2004	317.95	3743.11	199.04	61.87	4321.97	100.00
2005	353.99	4244.33	210.36	123.14	4931.82	100.00
2006	349.73	4601.51	223.21	201.98	5376.43	100.00
2007	592.02	4678.18	234.29	360.93	5865.41	100.00
2008	597.36	5052.61	271.41	436.56	6357.94	100.00

Table 8 sources: Annual Reports of DBE

The total portfolio of the bank as at June 2008 reached birr 6.36 billions. It has been increased by 47 percent over that of 2004. Out of the total loan portfolio industrial loan portfolio hold the first position in all years followed by agricultural and other business loan portfolio respectively. See table 5, 6, and 7.

The reasons for the increase in total loan portfolio trend has relationship with the increase in agricultural loan portfolio which is indicated in table 5 and the increase in other business sector loan portfolio which are indicated in table 7.

The table 9 portrays the summary of loan portfolio of the bank (in %) for the fiscal year ended June 30, 2006. in order to test the hypothesis of borrowers and the sector of the economy, the chi-square test is employed.

Summary of loan portfolio as at June 30, 2006 (in %)

Sectors/borrowers	State enterprise	Private enterprise	Cooperative	Micro enterprise	Total

Agriculture	-	22.5	4.15	-	26.65
Industry	5.23	53.6	-	0.16	58.99
Other business	1.27	9.5	-	3.6	14.36
Total	**6.5**	**85.6**	**4.15**	**3.76**	**100**

Table 9: Source: Annual report of DBE

Null hypothesis (Ho)

Borrowers and sectors of the economy are not related

Alternative Hypothesis (Hl)

Borrowers and sectors of the economy are related

Expected frequencies are presented in table 10

Computation of Test statistic

Sectors/borrowers	State enterprise	Private enterprise	Co-operatives	Micro enterprise	Total
Agriculture	$\frac{26.65 \times 6.5}{100}$ = 1.73	$\frac{26.65 \times 85.6}{100}$ =22.81	$\frac{26.65 \times 4.15}{100}$ =1.1	$\frac{26.65 \times 3.76}{100}$ =1	26.65
Industry	$\frac{58.99 \times 6.5}{100}$ =3.83	$\frac{58.99 \times 85.6}{100}$ =50.50	$\frac{58.99 \times 4.15}{100}$ =2.45	$\frac{58.99 \times 3.76}{100}$ =2.22	59
Other business	$\frac{14.36 \times 6.5}{100}$ =0.94	$\frac{14.36 \times 85.6}{100}$ =12.29	$\frac{14.36 \times 4.15}{100}$ =0.60	$\frac{14.36 \times 3.76}{100}$ =0.54	14.36
Total	6.5	85.6	4.15	3.76	100

Table 10: Source- Computation by an Author

The results of the computation of test statistics represent the expected frequencies which are obtained from the loan portfolio of each economic sectors and borrowers. The figures are an input for testing the relationship sectors of the economy and borrowers.

Computation of the value of X^2 is presented in Table 11

Observed Frequency (0)	**Expected Frequency (E)**	**(0-E)**	**$(O-E)^2$**	**$\frac{\Sigma(O-E)^2}{E}$**

00.00	01.73	-01.73	2.99	01.73
22.50	22.81	-00.31	00.09	00.39
04.15	01.10	03.05	09.30	08.45
00.00	01.00	-01.00	01.00	01.00
05.23	03.83	01.40	01.96	00.51
53.60	50.50	03.10	09.61	00.19
00.00	02.45	-02.45	06.00	02.45
00.16	02.22	-02.06	04.24	01.91
01.27	00.94	00.33	00.10	00.11
09.50	12.29	-02.79	07.78	00.63
00.00	00.60	-00.06	00.36	00.60
03.60	00.54	03.06	09.36	17.33
Σ0=100	ΣE= 100	-	-	X^2 = 35.30

Table 11 Source: Computation by an Author

The figures in the above table indicate the result obtained from the summary of loan portfolio indicated in table 9 and test statistics computed in table 10. The purpose of the figure is to show tabulated value of X^2 which is the basis for making decision and interpretation whether sectors of the economy and borrowers are related or not.

Degree of Freedom: d.f= (3-1) (4-1) = 6

Decision: Tabulated value of X^2 for 6 d.f. at 5% level of significance = 12.59

Interpretation: Since the computed value of X^2 = 35.30 > 12.59, reject the Ho (borrowers and sector of the economy are not related) and conclude the borrowers and sectors of the economy are related.

3.4 Loan in arrears position of the bank

In millions of birr

Description/years	2004	%	2005	%	2006	%	2007	%	2008	%
Total loans in arrears	1929.9	100	1651.8	100	1609.2	100	1892	100	1826.6	100
Agriculture	642.9	33	693.7	42	715.1	45	794.3	42	815.4	45
Industry	989.2	51	627.7	38	612.3	39	783.3	41	716.6	39
Other business	297.8	16	330.4	20	248.9	16	314.4	17	294.6	16
Total outstanding loans	4331	-	4911.8	-	5376.5	-	5865.5	-	6358	-
Ratio of loans in arrears to total outstanding	45	-	34	-	30	-	32	-	29	-

Table 12 sources: Annual Reports of DBE

It is observed from the above table that the ratio of loan in arrears to total outstanding loan has been decreased from 45 percent in 2004 to 29 percent in 2008. When viewed sect orally loan in arrears in industrial sector has been hold the first position only in the year 2004 followed by agriculture and other business sector respectively.

For the remaining consecutive years the loan in arrears in agricultural sector has been higher than loan in arrears in industrial and other business sectors. The large amount of loan in arrears implies low collection performance of the bank.

The secondary sources maintained by research department of the bank indicates that the loan in arrears registered are the causes of: poor follow-up of projects, implementation delay of projects,

working capital shortage, diversion of project proceeds for unintended purpose by some clients, willful defaulters and inability to sale mortgaged property due to low market price.

Total agricultural loan in arrears

In millions of birr

borrowers	2004	2005	2006	2007	2008	%of 2004	%of 2005	%of 2006	%of 2007	%of 2008
State enterprise	-	-	-	-	-	-	-	-	-	-
Private enterprise	519.27	563.5	605.2	642.27	665.25	80.76	81.2	84.6	80.8	81.6
Co-operatives	123.71	130.2	109.9	152.01	150.2	19.24	18.8	15.4	19.2	18.4
Micro enterprise	-	-	-	-	-	-	-	-	-	-

Table 13 sources: Annual Reports of DBE

It is observed from the above table that out of the total agricultural loan in arrears, loan in arrears in private enterprises has been increased from birr 519.27 millions in 2004 to 665.25 millions in 2008. The co-operatives loan in arrears stood at birr 150.2 millions in 2008.

According to the response obtained from eight employees from the total of ten being interviewed from project management department and credit and risk management department the main factors for increasing loan in arrears of private enterprises in agricultural sector are the fall in price of some agricultural products in international market; lack of attention of management; low capacity utilization and project implementation delay. Concerning the co-operatives lack of working capital is the main reason as the response forwarded by the other two respondents.

To test the relationship between the % of the loan in arrears in agriculture and the % of the agricultural loan that are disbursed by the DBE, the correlation technique is here employed.

Variable X- (% of loan in arrears in agriculture)

Variable Y – (% of agricultural loan disbursed by the DBE from the year 2004 to 2008).

Correlation Analysis

X	x(X-A)	x^2	Y	y (Y-A)	y^2	xy
33	-8	64	38	-12	144	96
42	1	1	52	2	4	2
45	4	16	46	-4	16	16
42	1	1	62	12	144	12
45	4	16	52	2	4	8
$\Sigma X = 207$	-	$\Sigma X^2 = 98$	$\Sigma y = 250$	-	$\Sigma y^2 = 312$	$\Sigma xy = 134$

Table 14- Source: Computation by an Author

$$r = \frac{\Sigma xy}{\sqrt{(\Sigma x^2)(\Sigma y^2)}}$$

$$r = \frac{134}{\sqrt{(98)(312)}}$$

$$r = \frac{134}{\sqrt{30576}}$$

$$r = \frac{134}{174.85}$$

$$\underline{0.766}$$

Interpretation

Hence, the percentage of loan in arrears in agriculture and the percentage of agricultural loan provided by Development Bank of Ethiopia (DBE) are positively related.

Total industrial loan in arrears

In millions of birr

borrowers	2004	2005	2006	2007	2008	%of 2004	%of 2005	%of 2006	%of 2007	%of 2008

State enterprise	245.43	106.4	102.5	236.76	46.16	24.8	16.95	16.74	30.2	6.44
Private enterprise	737.27	512.2	505.3	538.19	662.03	74.5	81.6	82.52	68.7	92.38
Co-operatives	-	-	-	-	-	-	-	-	-	-
Micro enterprise	6.45	9.1	4.5	8.36	8.4	0.7	1.45	0.73	1.06	1.17

Table 15 sources: Annual Reports of DBE

It is observed from the above table that out of the total industrial loan in arrears, the loan in arrears in private enterprises in terms of percentage has been increased from 74.5 percent in 2004 to 92.38 percent in 2008. Concerning state enterprises its loan in arrears decreased from birr 245.43 millions in 2004 to birr 46.16 millions in 2008 i.e, from 24.8 percent to 6.44 percent.

The response obtained from twelve employees from the total of fifteen being interviewed from project management department, credit and risk management department and research department the primary reasons for the increase of loan in arrears of private enterprises are: inflationary pressure increases the price of raw materials like building materials and moral hazards of some private borrowers. The other three employees responds weak follow-up of projects and out of market lending as main causes.

According to five respondents of credit and risk management department the factors for decreasing of loan in arrears in state enterprises has implications of low loan disbursement to state enterprises and the integrity of state enterprises in repaying loan at maturity.

To test the relationship between the % of the loan in arrears in industry and the % of the industrial loan that are disbursed by the DBE, the correlation technique is here employed.

Variable X- (% of loan in arrears in industry)

Variable Y – (% of industrial loan disbursed by the DBE from the year 2004 to 2008).

Correlation Analysis

X	x(X-A)	x^2	Y	y (Y-A)	y^2	xy
51	9.4	88.36	37	9	81	84.6
38	-3.6	12.96	36	8	64	28.8
39	-2.6	6.76	33	5	25	13
41	-0.6	0.36	10	-18	324	10.8
39	-2.6	6.76	26	-2	4	5.2
$\Sigma X=208$	-	$\Sigma X^2= 115.2$	$\Sigma y=142$		$\Sigma y^2= 498$	$\Sigma xy=142.4$

Table 16- Source: Computation by an Author

$$r= \frac{\Sigma xy}{\sqrt{(\Sigma x^2)(\Sigma y^2)}}$$

$$r= \frac{142.4}{\sqrt{115.2\ (498)}}$$

$$r= \frac{142.4}{\sqrt{57369.6}}$$

$$r= \frac{142.4}{239.5}$$

$$0.594$$

Interpretation

Hence, the percentage of loan in arrears in industry and the percentage of industrial loan provided by Development Bank of Ethiopia (DBE) are positively related.

Other business sector loan in arrears

In millions of birr

borrowers	2004	2005	2006	2007	2008	%of 2004	%of 2005	%of 2006	%of 2007	%of 2008
State enterprise	63.35	98.62	62.6	72.14	19.97	21	29.84	25.1	22.94	6.77
Private enterprise	234.29	226.4	182.3	235.3	270.29	78.6	68.52	73.24	74.84	91.74
Co-operatives	-	-	-	-	-	-	-	-	-	-
Micro enterprise	0.15	5.38	4.0	6.96	4.36	0.04	1.62	1.6	2.2	1.47

Table 17 sources: Annual Reports of DBE

It is evident from the above table that out of the total other business sector loan in arrears the state enterprises loan in arrears has been decreased from 21 percent in 2004 to 6.77 percent in 2008.The private enterprises loan in arrears in terms of percentage has been increased from 78.6 percent in 2004to 91.74 percent in 2008.

According to the response obtained from ten employees from credit and risk management department and credit appraisal department the main causes for increasing loan in arrears in private enterprises are : lack of good management on the side of borrowers; low capacity utilization and poor credit administration in terms of project appraisal.

The response of all ten employees indicates that the main reason for decreasing of loan in arrears in state enterprises are the commitment of the management in repaying the loan as agreed with the bank.

To test the relationship between the % of the loan in arrears in other business and the % of the other business loan that are disbursed by the DBE, the correlation technique is here employed.

Variable X- (% of loan in arrears in other business)

Variable Y – (% of other business loan disbursed by the DBE from the year 2004 to 2008).

Correlation Analysis

X	x(X-A)	x^2	Y	y (Y-A)	y^2	xy
16	-1	1	25	4	16	4
20	3	9	11	-10	100	30
16	-1	1	21	0	0	0
17	0	0	27	6	36	0
16	-1	1	21	0	0	0
$\Sigma X=85$	-	$\Sigma X^2= 12$	$\Sigma y=105$	-	$\Sigma y^2= 152$	$\Sigma xy=34$

Table 18- Source: Computation by an Author

$$r = \frac{\Sigma xy}{\sqrt{(\Sigma x^2)(\Sigma y^2)}}$$

$$r = \frac{34}{\sqrt{(12)(152)}}$$

$$r = \frac{34}{\sqrt{1824}}$$

$$r = \frac{34}{42.7}$$

$$= \underline{0.796}$$

Interpretation

Hence, the percentage of loan in arrears in other business and the percentage of other business loan provided by Development Bank of Ethiopia (DBE) are positively related.

The table 19 portrays the summary of loan in arrears of the bank (in %) for the fiscal year ended June 30, 2008. in order to test the hypothesis of borrowers and the sector of the economy, the chi-square test is employed.

Summary of loan portfolio as at June 30, 2008 (in %)

Sectors/borrowers	State enterprise	Private enterprise	Cooperative	Micro enterprise	Total
Agriculture	-	36.4	8.60	-	45
Industry	2.30	36.24	-	0.46	39
Other business	1.09	14.67	-	0.24	16
Total	**3.39**	**87.31**	**8.60**	**0.7**	**100**

Table 19: Source: Annual report of DBE

Null hypothesis (Ho)

In terms of loan in arrears borrowers and sectors of the economy are not related.

Alternative Hypothesis (Hl)

In terms loan in arrears borrowers and sectors of the economy are related.

Expected frequencies are presented in table 20

Computation of Test statistic

Sectors/borrowers	State enterprise	Private enterprise	Co-operatives	Micro enterprise	Total
Agriculture	$\frac{45x3.39}{100}$ = 1.53	$\frac{45x87.31}{100}$ =39.29	$\frac{45x8.60}{100}$ =3.87	$\frac{45x0.7}{100}$ =0.32	45
Industry	$\frac{39x3.39}{100}$ =1.32	$\frac{39x87.31}{100}$ =34.05	$\frac{39x8.60}{100}$ =3.36	$\frac{39x0.7}{100}$ =0.27	39

Other business	$\frac{16x3.39}{100}$ =0.54	$\frac{16x87.31}{100}$ =13.96	$\frac{16x8.60}{100}$ =1.37	$\frac{16x0.7}{100}$ =0.11	16
Total	3.39	87.31	8.60	0.7	100

Table 20: Source- Computation by an Author

The results of the computation of test statistics represent the expected frequencies which are obtained from the loan in arrears of each economic sectors and borrowers. The figures are an input for testing the relationship sectors of the economy and borrowers.

Computation of the value of X^2 is presented in Table 21

Observed Frequency (0)	**Expected Frequency (E)**	**(0-E)**	**$(O-E)^2$**	**$\frac{\Sigma(O-E)^2}{E}$**
00.00	01.53	-01.53	2.34	01.53
36.40	39.29	-02.89	8.35	00.21
08.60	03.87	04.73	22.37	05.78
00.00	00.32	-00.32	00.10	01.32
02.30	01.32	00.98	00.96	00.72
36.24	34.05	02.19	04.79	00.14
00.00	03.36	-03.36	11.29	03.36
00.46	00.27	00.19	00.04	00.15
01.19	00.54	00.55	00.30	00.55
14.67	13.96	00.71	00.50	00.03
00.00	01.37	-01.37	01.87	01.36

00.24	00.11	00.13	00.16	01.45
Σ0=100	ΣE= 100	-	-	X^2 = 15.60

Table 21 Source: Computation by an Author

The figures in the above table indicate the result obtained from the total loan in arrears indicated in table 12, 13, 15, 17 and test statistics computed in table 21. The purpose of the figure is to show tabulated value of X^2 which is the basis for making decision and interpretation whether sectors of the economy and borrowers are related or not.

Degree of Freedom: d.f= (3-1) (4-1) = 6

Decision: Tabulated value of X^2 for 6 d.f. at 5% level of significance = 12.59

Interpretation: Since the computed value of X^2 = 15.60 > 12.59, reject the Ho (borrowers and sector of the economy are not related) and conclude the borrowers and sectors of the economy are related.

3.5 Non-Performing Loan Position of the Bank

As per the NBE directive SSB/32/2002 the share of NPLs to total loan portfolio of the Bank is shown here under.

In millions of Birr

Description	**Amount**				
	2004	**2005**	**2006**	**2007**	**2008**
Total non-performing loans	**1,525.8**	**1,542.3**	**1,908.5**	**2,023**	**1,787.5**
Substandard	118.2	95.8	367.5	112.6	249.6
Doubtful	11.1	15.3	80.4	154.1	231.3
Loss	1,396.4	1,431	1,460.4	1,756.2	1,306.4

Total outstanding loans Ratio of NPL to total loan portfolio	**4,331** **35%**	**4,911.8** **31%**	**5,376.4** **35%**	**5,865.4** **34%**	**5,804** **30.8%**
Total collection made from NPLS	**-**	5.9	120.4	167.7	139.4

Table 22 source: Annual Report of DBE

As can be seen from the table 22 in the fiscal year 2004, about 35 percent of the Bank's portfolio was turned out to be non-performing. The increase in the denominator as a result of the transfer of syndicated loans from the CBE to the DBE as part of the DBE's loan portfolio per government decision, decrease the NPLs. As per the decision all syndicated loans are being transferred to the DBE as new performing loans, which have the impact of immediate increasing of the total loan portfolio, there by reducing the percentage figure for NPLs. If syndicated loans are excluded from the total portfolio, the percentage of NPL automatically increases to 50 percent.

It is evident from the above table the bank registered huge percentage of non-performing loans in every year. This implies that the bank's loan recovery and collection performance are poor. As it is obtained from the secondary sources maintained by research department of the bank the main external factors for the large amount of non performing loans are categorized as follows:

1.Diversion of project proceeds by some clients for unintended purpose.

This is along outstanding problem as some clients choose to use the earnings from projects financed by the Bank for purposes other than loan repayment.

2. Managerial problems in some projects

Projects established by the Bank often face serious management problems. This is often because the promoters fail to employee a professional manager as agreed initially with the Bank.

3. Working capital shortage

Some projects are seriously constrained by working capital shortage. The reason for the shortage is at times losses incurred, while others have chosen to divert the fund for other purposes outside the project.

4. Willful defaulters

Some borrowers chose to default willingly although their projects are running smoothly.

5. Inability to market or sale mortgaged property due to low value of assets in the market.

The Bank faced a problem in selling the assets it has taken over as a result of the foreclosure law. The main reason for this is that the mortgaged property often does not fetch the expected price, and is usually valued by the market well below the price tag given by the bank.

Non-performing loans by type

In millions of birr

Years	Substandard		Doubtful		Loss		total
	amount	percent	amount	percent	amount	percent	
2004	118.2	7.7	11.1	0.73	1396.4	91.5	1525.8
2005	95.8	6.0	15.2	1	1431.0	93	1542.3
2006	367.5	19	80.4	4	1460.4	77	1908.5
2007	112.6	5	154.1	8	1756.2	87	2023
2008	249.6	14	231.3	13	1306.5	73	1785.5

Table 23 sources: Annual Reports of DBE

According to the National Bank of Ethiopia directive no SBB/32/2002 non-performing loan is classified as follows: 1) Non-performing loans past due 90 days or more but less than 180 days shall be classified, at a minimum, as substandard 2) Non-performing loans past due 180 days or more but less than 360 days shall be classified, at a minimum, as doubtful. 3) Non-performing loans past due 360 days or more shall be classified as loss.

As it is observed in the above table from the total non-performing loans registered in every year loss loans holds the lion share followed by substandard and doubtful loans. This implies that majority part of the banks non-performing loans are accumulated from loans past due 360 days or more.

To manage the sick loan the Bank implements collection through the task force and collection through the disposal committee. The task force was established by management to improve the loan collection, reduce arrears and foreclose defaulting project after the necessary effort as per proclamation 90/97. The Disposal Committee was also established by management with the ultimate objective of disposing the assets taken over by the Bank from defaulters and there by enhance the loan recovery position of the Bank. However, these two committees were not much fruitful in their activity due to various reasons which are indicated below:

These causes are obtained from the secondary sources maintained by legal department of the bank.

- The inability of the Bank to dispose the asset taken over mainly vehicles at the Bank's originally estimated value of the property.
- Some of the properties taken over by the Bank have no demand in the market.

- The general weakening of the economic environment in the country as well as the prevalence some bureaucratic hurdles in transfer procedure of title deeds has become a problem in property.

Non-performing loans in economic sector

millions of birr

Years	Agriculture		Industry		Other business		total
	amount	percent	amount	percent	amount	percent	
2004	549.28	36	839.19	55	137.32	9	1525.8
2005	647.76	42	586.07	38	308.46	20	1542.3
2006	916.08	48	725.23	38	267.19	14	1908.5
2007	869.89	43	809.20	40	343.91	17	2023
2008	840.12	47	643.50	36	303.87	17	1787.5

Table 24 sources: Annual Reports of DBE

It is observed from the above table that the non-performing loan has been constantly increasing except in the year 2008. The non-performing loans in agricultural sector and other business sectors also increase from the year 2004 to 2008.

The huge amount of non-performing loans is the implication of low collection performance. According to the responses obtained from the interview conducted with twenty employees from research department, credit appraisal department, credit and risk management department and project management department the major factors for huge non-performing loans are problems related with: inadequate repayment as expected from huge projects; inadequate follow-up and

technical advice on the part of the bank; weak credit risk management; protracted delay in project implementation; inability to sale mortgaged property due to low value of asset in the market; unfavorable international coffee market situation; diversion of project proceeds to other venture; willful defaulters and lack of working capital.

According to the secondary sources obtained from research department of the bank the primary factor for increasing non-performing loans in agricultural sector and other business sector are: unfavorable international market condition for some agricultural products like coffee and grains, inability of the sector to compete with input products, international financial crisis reduce demand for horticulture products, escalated price of raw material, inability of agricultural products like livestock, cheakens, pulses to compete in international market.

As it is observed in table 21 the non-performing loans in industrial sector has been decreased from birr 839.19 millions (55 percent) in 2004 to birr 643.5 millions (36 percent) in 2008.

The response obtained from the interview conducted with fifteen employees from project management department, credit appraisal department and credit and risk management department ten employees responded the causes for decreasing non-performing loans in industrial sector are: the favorable condition created by the government enables export-oriented products to generate attractive revenue, thus this condition initiate some exporters to repay the loan at maturity. The other five respondents forwarded that the cause is the result of positive demand for industrial products in local market which enable some enterprises to repay the loan at maturity.

The correlation technique is here used to test the relationship between the % of non-performing loan in agriculture and the % of agricultural loan disbursed by the DBE from the year 2004 to 2008.

Variable X- (% of NPL in agriculture)

Variable Y- (% of agricultural loan disbursed by the DBE).

Correlation Analysis

X	**x(X-A)**	**x^2**	**Y**	**y (Y-A)**	**y^2**	**xy**
36	-7	49	38	-12	144	84
42	-1	1	52	2	4	2
48	5	25	46	-4	16	20
43	0	0	62	12	144	0
47	4	16	52	2	4	8
$\Sigma X=216$	-	$\Sigma X^2= 91$	$\Sigma y=250$	-	$\Sigma y^2= 312$	$\Sigma xy=114$

Table 25: Source- Computation by an Author

$$r= \frac{\Sigma xy}{\sqrt{(\Sigma x^2)\,(\Sigma y^2)}}$$

$$r= \frac{114}{\sqrt{(91)\,(312)}}$$

$$r= \frac{114}{\sqrt{28392}}$$

$$r= \frac{114}{28392}$$

$$r= 0.676$$

Interpretation

Hence, the percentage of non performing loan in agriculture and the percentage of agricultural loan disbursed by Development Bank of Ethiopia (DBE) are positively related.

3.6 The Impacts of NPLs on Performance of the Bank

The overall impact of non-performing loan on the performance of the Bank is increasing the liquidity problem of the Bank. The poor asset quality of the Bank resulted in from the non-performing loans in addition to the inability of the Bank to mobilize financial resource; inadequate capital; low market value of disposable assets taken over by the bank and maturity mismatch between resource mobilization and loan extension have further exacerbated the liquidity problem of the Bank.

The liquidity problem of the Bank resulted due to non-performing loans can hinder the Bank from investing in other profitable venture or portfolio investment. Further more; there is low pace of capital formation in which funds can go out of the economic system with the passage of time. Currently the Bank exposed highly to a shortage of revolving fund to meet the credit demand.

According the interview conducted with ten employees from credit appraisal department and credit and risk management department the Bank partly finance itself by borrowing from international Development Association, International Fund, African Development Fund, European Union and European Investment bank in the form of long-term debts. Hence, the non-performing loans of the Bank are huge due to failures in various economic sectors. The Bank is

highly exposed to insolvency, which has a consequence of inability to mobilize financial resource from international lending agencies.

Although the Bank provides investment Credits, including short term loans, to viable projects that will contribute to the country's economic development, sometimes the performance of the borrowers may not proceed as planned giving raise to inability to repay the loans, hence, non-performing loans increases. In such circumstances, the non-performing loans increase the provision expenses which reduce the performance of the bank.

Percentage of Provision expense to total expense

In millions of Birr

Description/YEAR	2004	2005	2006	2007	2008
Provision expense	96.12	115.09	160.35	165.73	159.24
Total expense	134.80	148.38	201.66	218.60	215.70
Ratio of provision expense to total expense	71	77	79	76	74

Table 26 sources Annual report of DBE

Specifically, from the total expense figure of the Bank, the provision for doubtful debts took a lion's share amounted 71%, 77%, 79%, 76% and 74% for the five year under investigation respectively.

These sizable amount of provision expenses are mainly the result of non-performing loans of the Bank. This shows, the NPLs has impacted the profitability of the Bank by increasing expense and impacted the liquidity position of the Bank at large.

The correlation technique is here used to test the relationship between the % of non-performing loan and the % provision expense of the DBE from the year 2004 to 2008.

Variable X- (% of provision expense from total expense)

Variable Y- (% of NPLs from total outstanding loan of the DBE).

Correlation Analysis

X	**x(X-A)**	**x^2**	**Y**	**y (Y-A)**	**y^2**	**xy**
71	-4.4	19.36	35	1.8	3.24	7.92
77	1.6	2.56	31	-2.2	4.48	3.52
79	3.6	7.2	35	1.8	3.24	6.48
76	0.6	0.36	34	0.8	0.64	0.48
74	-1.4	1.96	31	-2.2	4.84	3.08
$\Sigma X=377$	-	$\Sigma x^2= 31.44$	$\Sigma y=166$	-	$\Sigma y^2= 164.4$	$\Sigma xy=$ 21.48

Table 27: Source- Computation by an Author

$$r= \frac{\Sigma xy}{\sqrt{(\Sigma x^2)\,(\Sigma y^2)}}$$

$$r= \frac{21.48}{\sqrt{(31.44)\,(164.4)}}$$

$$r= \frac{21.48}{\sqrt{5168.74}}$$

$$r= \frac{21.48}{71.89}$$

$$r= \underline{0.299}$$

Interpretation

Hence, the percentage of non performing loan and the percentage of provision expense of Development Bank of Ethiopia (DBE) are positively related.

The profitability position of the Bank can be affected significantly due to the NPLs. This means by reducing the revenue from interest and principal and by increasing the provision expense it can reduce the return expected by the bank from its investment. In addition to this, the cash flow position of the bank's also affected by the sizable amount of NPLs.

Cash flow position of the bank

Descriptions /year/	2004	2005	2006	2007	2008
Cash flow from operating activities	(-50.67)	(1512.87)	(177.30)	(170.06)	(168.32)
Cash flow from investing activities	(-68.36)	8.02	(13.66)	(15.5)	6.06

Table 28 Sources/ Annual Reports of DBE

It is evident from the above table the cash flow from operating activity of the Bank is negative for the years under investigation. Many financial institutions may have plenty of assets but if they have no enough cash, they can be exposed to financial distress. This financial distress is the result of default of customers which exacerbate the insolvency of the Bank and triggers investment weakness in profitable business opportunities.

According to the hypothesis which are tested in the analysis part in every sectors of the economy all types of borrowers are participated in loan portfolio of the bank. Thus it can be concluded that every borrowers has contributed its part in the bank's non-performing loans.

Again the correlation computed indicates that as loan disbursed to all economic sectors increases, the loan in arrears and non-performing loans of the bank increases. In addition to this the provision expenses of the bank increase as the non-performing loans of the bank increase. This impacted the performance of the bank by exacerbating the liquidity problems.

The analysis indicates that the bank registered huge amount of loan in arrears and non-performing loans.

This implies that the bank's loan collection performance was not as intended due to the problems which are internal and external for the bank. Thus the bank have to reduce its internal problem like poor-follow up of projects, poor collateral estimation and poor credit administration in terms of credit administration in terms of credit appraisal by improving its policies and procedures. External problems encountered by the bank due to borrowers lack of commitment should be minimized by taking measure that are recommended by the author.

CHAPTER FOUR

4. SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

4.1. Summary of Findings

Total number of banks operating in the country has been increased from 358 in the year 2004 to 562 in 2008. of which the total number of bank branch offices of the DBE has remained the same in number i.e., 32.

The Bank's loan approval increase from Birr 432.21 million in the year 2004 to Birr 3.3 billion in 2007. The reason for high performance of loan approval was attributed to the increase inflow of application from export-oriented projects. The loan approval in the year 2008 declined by 44% when compared with the preceding year. According to the interview mentioned in table 2 the main reasons for the decrease are rejection of loan application due to technical and market assessment, and indebtedness of loan applications.

The total disbursement has been constantly increased from birr 295 million from 2004 to birr 904.5 million in 2008. The bank registers low achievement in year 2004. According the response of the interview which is indicated in table 3 the main factors for the low achievement of loan disbursement are failure of clients to meet preconditions set for the fund release and equity contribution.

The total loan collection of the bank has been increased constantly from birr 230.30 million from 2004 to birr 765.2 million in 2007. The loan collection in the year 2008 declined by 20.7 percent when compared with the preceding year. The loan collection from the three sectors of the economy indicates in table 4 the collection from Industrial sector was more than the agricultural sectors.

According to the response from the interview which is indicated in table 4 the reasons for the low collection performance in 2008 are: delay of monthly loan out put report; human resource related problem like professionals and semi-professionals; problem related with collateral and foreclosure such as inefficient and defective collateral; poor demand for collateral taken over by the bank; diversion of project proceeds by some clients for unintended purposes; managerial problem in some projects; working capital shortage and willful defaulters.

According to table 5, 6, and 7 the total outstanding loan distribution on the basis of borrowers indicate that the share of private enterprises rank first followed by state enterprise and co-operative. The private sector loan was increasing due to the government policy of privatization of state owned enterprises and encouragement of private investments.

Under investigation of the five years Bank's credit operation, the lion share from the total outstanding of loan is taken by industrial sector, followed by agriculture and other business sector. The loan is disbursed to various sectors of the economy in the form of short, medium and long term development credit. See table 5, 6, and 7.

The loan in arrears of the bank and non-performing loans are huge. When viewed sectoraly, agricultural sector show high level of defaulting followed by industrial and other business sectors. See table 12. According to table 13, 15, and 17 Private borrowers hold the larger portion of loan in arrears than cooperatives and public sectors.

The secondary sources maintained by research department of the bank indicates that the loan in arrears registered are the causes of: poor follow-up of projects, implementation delay of projects, working capital shortage, diversion of project proceeds for unintended purpose by some clients, willful defaulters and inability to sale mortgaged property due to low market price.

The non-performing loan has been constantly increasing except in the year 2008. The non-performing loans in agricultural sector and other business sectors also increase from the year 2004 to 2008.

This implies that the bank's loan recovery and collection performance are poor. As it is obtained from the secondary sources maintained by research department of the bank the main factors for the large amount of non-performing loans are categorized as follows: Diversion of project proceeds by some clients for unintended purpose;

Inability to market or sale mortgaged property due to low value of assets in the market; managerial problems in some projects; working capital shortage and willful defaulters.

In terms of type, table 20 indicates that from the total non-performing loans registered in every year loss loans holds the lion share followed by substandard and doubtful loans. This implies that majority part of the banks non-performing loans are accumulated from loans past due 360 days or more.

The huge amount of non-performing loans has influential consequence in reducing the performance of the bank in terms of revenue, cash flow and return on investment. The overall problems of the Bank as a result of these huge non-performing loans are poor asset quality, in ability to mobilize financial resource due to its insolvency, inability to invest in profitable venture due to liquidity problem, low pace of capital formation as well as increasing the provision expense which exacerbate the liquidity problems of the Bank.

4.2. Recommendations

- In order to solve the problem of poor asset quality resulting from inadequate loan collection and non-performing loans, the DBE must focus, not only on strengthening the

on-going loan collection and foreclosure activity but also on disposing the assets taken over from defaulters through foreclosure act to enhance its overall loan collection performance. Moreover, efforts must also be made to strictly control the quality of loan appraisal and follow-up in order to prevent new loans falling into default. Furthermore, the Bank should assign officers to particular projects in order to facilitate close follow-up and improve loan collection.

- The Bank should take special care on the estimation of collateral especially by taking into consideration the volatility of the market price and physical condition. Collateral should always have sufficient value to recover the debt.

- Closer follow-up on loans already advanced and strict screening for new loans must be undertaken to reduce the negative impact on the Bank from diversion of project fund. Additional measures should also include immediate legal action.

- In order to reduce the liquidity problem of the Bank that arise partly due to non-performing loans, the Bank should take the following measures:-

Reducing the arrears by recovering loans through foreclosure; Prioritize projects to be financed through strict project screening; enhance collection through negotiation from borrowers; introduce an incentive system to branches and other operating units with outstanding loan recovery performance and taking immediate legal action on defaulters.

- Long-term loans are very common to create problem at maturity. But, in case of short-term loans, most often it is serviced within the specified period. Again, after maturity, the fund can be reinvested in similar situations. In this way, the single amount can be invested for three to four times in a year and the actual return is higher than the nominal rate. Thus the bank should design credit policies that can encourage short term borrowers.

- In case of larger loan, loan syndication ensures both earnings and timely repayment on the part of the borrower. So DBE have to make negotiation with other state bank to extend credit in a syndicated form.

- Detailed risk analysis is needed before sanctioning the loan to the clients. Furthermore, a strong post-disbursement follow-up with pre-disbursement precautionary guarantees the timely recovery of fund to a greater extent.

- The bank should improve its current credit policy and procedure. Furthermore, collection through the task force and collection through the disposal committee should be strong enough so as to enhance the loan recovery position of the bank, as well as to improve the liquidity position of the bank. Further, it is also important to improve risk management system in the Bank so that new loans will not turn into NPLs in the future.

- Projects financed by the Bank should be carefully selected, thoroughly appraised, closely supervised and systematically evaluated.

4.3. Conclusion

The operational performance of every bank is sound only if the loans disbursed to different sector of the economy are almost fully subject to collection as per the agreement. Unless the private borrowers such as business and consumers discharge their responsibility of repaying the

loan on timely basis, non-performing loans/loan losses/ increase which influence banks performance via malfunctioning the sector in particular and overall economy at large.

The overall focus of the DBE in line with the government policies and strategies is to provide financial assistance to projects, which are fully engaged in producing export commodities. To operate in its full capacity and in effective and efficient way, the bank have to collect all the disbursed loan, both principal and interest at maturity from all sectors of the economy. The moral hazard of both borrowers and lenders should be minimum so as to enhance its function and to maximize its contribution to the overall economy at large. Unless and other wise the loan in arrears and non performing loan is at minimum level, the bank is unable to invest in profitable business opportunities by improving its liquidity position. To sum up, so as to improve the liquidity position, the bank have to reduce its non-performing loans by strengthening the loan collection and by strictly controlling the quality of loan appraisal and follow-up.

Declaration

I declare that this project work entitled **"Causes and Impacts of the Non-Performing Loans on Performance of State Bank: A Case Study of DBE**" is my original work and has not been presented for degree in any universities and all the sources of materials used for this paper are duly acknowledged**.**

Name of candidate Yonas Admasu

Signature _____

Date _____

This project paper has been submitted to the Department of Accounting and Finance with my approval.

Ato G/Medhin G/Hiwot

Signature _____

Date _____

Appendix

Discussion questions

1. What are the reasons for decreasing loan approval in 2008?
2. Why the trend of loan approval increased constantly from the year 2004 to 2008?
3. Why industrial sector loan approval out perform the other sector?
4. Why the credit operation of the Bank in terms of loan disbursement ions show an increasing trend?

5. Why the loan disbursement of the Bank in the year 2004 show the lowest achievement?
6. Why agricultural sector hold the first position from the total loan disbursement?
7. Why private enterprises hold the first position from the total loan outstanding of the Bank, in all sectors of the economy?
8. What are the main factor for increasing the trend of agricultural loan portfolio
9. Why industrial sectors hold the first position from the total loan portfolio?
10. Why the percentage figure of industrial loan portfolio show a decreasing result?
11. Why the percentage figure of other business loan portfolio show an increasing result?
12. What are the main factors for the huge amount of loan in arrears?
13. Why agricultural sectors loan in arrears out perform the industrial sector and other business sector.
14. Why loan is arrears of private enterprises in show an increasing trend in agricultural sectors?
15. What are the main causes for the low collection performance of the bank in year 2008?
16. Why the task force and disposal committee are unable to achieve their objectives?
17. Why non performing loans in agricultural and other business sectors show an increasing trend?
18. Why the non-performing loans in industrial sectors show a decreasing trend?

Bibliography

Mohammed Shofiqul Islam, Nikhil Chandra Shil, Md. Abdul Mannan (2005), "Non-performing loans – its causes, consequences and some learning." MPRA Paper. No 7708

Ishrat Husain (2005), "Dealing with non-performing loans of banks" State Bank of Pakistan.

Kiyohiko G. Nishimura (2001), "The Disposal of Non-performing loans and its potential influence".

Nabuo Inaba, Takashi Nagahata (2006), "Non-performing loans and the real economy", Japan's experience, BIS Papers No 22.

Ali Fatemi, Iraj Fooladi (2006), "Credit risk management, a survey of practices", Journal of Managerial Finance Vol. 32 Pp 277-233.

Johnny P. Chen. (2004), "Non-performing loan securitization in the people's Republic of China". Department of Economics, Stanford University.

George H. Hempel, Donald G. Simonson, Alan B. Coleman. (1994) Bank management, (4th ed). Canada.

Siwayne Linder (1993), Total quality loan management, Bank line publication.

K.B., Sundaram, Sultan Chand and Sons. Money, Banking, Trade and Finance, New Delhi, India.

K. K, Panaikkas, S. Chand & Company LTC, (1956). Money, Banking and National Income, New Delhi.

Frank H. Robert, Ben S. Bernanke (2001), Principles pf Economics, McGraw Hill-Irwin.

Francis, Jack Clark (1991), Investments: Analysis and Management McGraw Hill-Irwin, 7th ed.

Jones Charles P. (2002), Investments: Analysis and management, John Wiley and Sons (8th ed.).

Joseph F. Apadoford (1988), "Credit Quality: CEOs set the Tone," Magazine of Bank Administration pp. 20-22.

Birritu 83. National Bank of Ethiopia Directives.

Martin Brownbridge (1998), "The causes of financial distress in local Bank in Africa and Implications For Prudential Policy" No 132 (March)

Gokhan K and Mehmet H (2007), "Sources of Non-performing loans in Turkish Banking system" Journal of Business and Economic Research, Volume 5, No 10.

_____ (2003), "Selected Issues on the Treatment of Non-performing loans in macroeconomic statistics."

http://www.uneascal.org/stat/meet/sna_april2005/sna_NPL

Crosetti, G., P. Pesenti and N. Roubini (1998). "What Caused the Asian Currency and Financial Crisis". Part I, Mimeo, New York University.

Schuler, K. (1989). Deposit Insurance Dejavu, The Freeman, Vol 39, No 7 (July), pp. 265-269.

Flannery, Mark J. (1994). "Corporate Finances, Market Discipline and Bank Supervision" Proceedings, May issue, p. 313-330.

Pennacchi, George G., (1998), "Loan Sales and The cost of Bank Capital" The Journal of Finance, V 43, No 2.

Seid Ibrahim (2005), "The contribution of development bank of Ethiopia in fostering the Ethiopian economy".