

Credit Risk Management System of Ethiopian Commercial Banks

(Case of some public and private banks)

For The Partial Fulfillment Of MSC.
In Accounting and Finance

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Declaration

I, Sahlemichael Mekonnen declare that, this paper prepared for the partial fulfillment of the requirements for MSC. Degree in Accounting and Finance entitled “Credit Risk management system of Ethiopian Commercial Banks taking some public and private banks as case study” is prepared with my own effort. I have made it independently with the close advice and guidance of my advisor.

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Date _____

Certification

This is to certify that Ato Sahlemichael Mekonnen has carried out this research work on the topic entitled “Credit Risk Management System of Ethiopian Commercial Banks taking some public and private banks as case study” under my supervision. This work is original in nature and it is sufficient for submission for the partial fulfillment for the award of MSc. In Accounting and Finance.

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Acronyms:

AW - Awash International Bank S.C.

BODs - Board of Directors

BIS - Bank for International Settlements

CBB - Construction and Business Bank

CBE - Commercial Bank of Ethiopia

DB - Dashen Bank S.C.

FIs - Financial Institution

II – Interest Income

NBE- National Bank of Ethiopia

NIB-Nib International Bank S.C.

NPL- Nonperforming Loan

ROA- Return on Asset

ROE- Return on Equity

UB- United Bank S.C.

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ABSTRACT

Banking is a business practice, or profession almost as old as the very existence of man. It has sprouted from the very primitive stone age banking, through the Victorian age to the technology driven Google- age banking, encompassing automotive teller machines (ATMs), credit and debit card, correspondent and internet banking (Wikipedia, 2008).

While financial institutions have found difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers and counterparts, poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to deterioration in the credit standing of bank's counter parties. Now a days credit risk is becoming a vicinity of concern not only to bank's but to all in the business world because the risk of a trading partner not fulfilling his obligations in full on due date can seriously Jeopardize the affairs of the other partner. The goal of Credit Risk Management is to maximize banks risk- adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or

transactions. Banks should also consider the relationships between credit risk and other risks. Effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization (Basle committee on banking supervision, 2004)

The axle of this study is to have a clearer picture of how Commercial Bank of Ethiopia, Construction & Business Bank, Dashen Bank S.C., Awash International Bank S.C., United Bank S.C. and NIB International Bank S.C manage their credit risks. In this light the study in its first chapter gives background to the study and the second part is a detailed literature review on the origin of banking, credit risk management principles, tools, techniques and assessment models. Data analysis and interpretation of results are dealt in chapter three. Finally based on these, conclusions and recommendations were drawn on the last chapter of the paper.

CHAPTER I: INTRODUCTION

1.1-Background to the study:

Adequately managing credit risk in financial institutions (FIs) is critical for the survival and growth of the FIs. In the case of banks, the issue of credit risk is of even grater concern because of the higher levels of perceived risks resulting from some of the characteristics of clients and business conditions that they find themselves in. Banks are in the business of safeguarding money and other valuables for their clients. They also provide loans, credit and payment services such as checking accounts, money orders and cashier's checks. Banks also may offer investment and insurance products and a wide whole range of other financial services.

The past decade has seen evolutionary revival of the banking industry in Ethiopia following re-establishment of private banks. It is a normal phenomenon that as the number of banks (and other institutions providing banking services) increases, so does the competition, which in turn increases scope and complexity of banks' business to beat the competition and steer a consistently profitable course. Generally, changes in the general business environment alters the degree of risks banks, as any business, are subject to and the concern they should give

to manage these risks (Ethiopian Academy of financial studies Training materials, Bank Risk Management).

Lessons from the traditional banking crises show that banks that had been performing well suddenly announced large losses due to either credit exposures that turned bad, liquidity problems, unmanaged interest rate and exchange rate positions taken, derivative exposures that may or may not have been assumed to hedge balances sheet risk or significant operational risks. In response to such lessons, banks almost universally have embarked up on an upgrading of their risk management systems. Thus, in this increasingly dynamic area of financial services, a distinctive position of any bank-be it private or public, large or small- lies in the way it manages its risks (Ibid).

Risk is a fact of life in every business and if not managed properly, would adversely affect the very existence of any businesses. However, the damage could be more severe in the case of banks as banking business is not only a stake of the owners but also that of depositors (public), other banks and hence, the economy as a whole. The main risks facing banks are credit risk, market risk, liquidity risk and operational risk (Basle committee on banking supervision)

While banks engage in a large number of other financial activities and render a wide range of services to customers, direct lending is one of the

primary function performed by them, the one in which they have a natural advantage over almost all financial institutions. This characteristic of banks can be rationalized by the fact that loans and advances are the most significant components of banks' assets. Loan and advances usually represent about 50-70% of their income. In 2006 for example, Commercial banks in Ethiopia generated 66% of their income from interest on loans and advances (National Bank of Ethiopia).

Among the risk that face banks, credit risk is one of great concern to most bank authorities and banking regulators. This is because credit risk is that risk that can easily and most likely prompts bank failure (Basle committee on banking supervision, 2004).

Therefore, sound credit risk management structure is crucial for effective credit risk management process. While banks may choose different structures, it is important to ensure that the structure is commensurate with their size, complexity and diversification of their activities (Ibid).

1.2. Statement of the problem

The very nature of the banking business is so sensitive because more than 85% of their liability is deposits from depositors (sounders, cornett, 2005). Banks use these deposits to generate credit for their borrowers, which in fact is a revenue generating activity for most banks. This credit

creation process exposes the Banks to high default risk, which might lead to financial distress including bankruptcy.

In today's changing financial landscape-environment of intense competitive pressure, volatile economic conditions, rising bankruptcies, and increasing levels of consumer and commercial debt; an organization's ability to effectively monitor and manage its credit risk can mean the difference between success and failure. Effective credit risk management attracts today more attention than before.

Interest income and interest expense are the main determining factors for the profitability of private banks in Ethiopia (Yigremachew, 2008). The negative relationship of credit risk to corporate profitability may be evident that the more commercial banks expose themselves to credit risk, the more accumulation of unpaid loans, implying that these loan losses have produced lower returns to the banks. The accumulation of non-performing loans caused by lack of proper credit risk management would have substantial adverse impact on the performance of the banks in particular and the overall economy in general. In turn this affects the government by reducing its tax income and banks by imposing downward pressure on their respective profits and per share value of their stock price.

Apart from the above, significant amounts of non-performing loans emanating from lack or poor credit risk management system could hinder development and expansion of the Banks. It also leads clients to have lack of confidence and the Banks to lose their loyal and prominent customers. Moreover, investors may not be willing to invest their funds on the banks stock at the desirable price or may avoid completely purchasing the stock. This in turn affects the capital structure of the Banks. Therefore, unless the problems are managed properly, it would definitely result in financial crises as in case of United States of America, East Asia and Japan.

Following the free market economy of the country, loans are becoming large and at the same time bad loans have increased substantially during the past few years. This appears as a problem and should be of interest to every commercial banker. There should therefore be prior concern on the side of the commercial banks to give due diligence in maintaining sound asset quality management, sound portfolio and risk management, prudent loan processing and selection strategies.

Therefore, the principal concern of this paper is to ascertain to what extent banks (i.e. CBE, CBB, AW, DB,UB and NIB) can manage their credit risks, what tools or techniques are at their disposal and to what

extent their current performance is supported by proper credit risk management policies and strategies.

1.3. Objective of Study

The main objective of the study is to assess how banks manage their credit risk. To this effect the writer tried to cover the following specific objects

- Assessing whether the Banks are operating under appropriate credit risk environment
- Identifying those methods that are used by the banks to mitigate their credit risk exposure
- Assessing the Banks credit administration, measurement and monitoring process
- Seeing interest income of the banks how significant it is as compared with the other types of income.
- Examining the existence of adequate control over credit risk.
- Creating awareness and give high lights (if necessary) to the banks managers if there are any deficiencies in this regard.
- To make the study as stepping stone for further study.

1.4. Significance of the Study

This paper examines the application of credit risk management and determines shortcomings. Thus, the subject matter of this research and the resulting lessons drawn from the analysis are likely to benefit different classes of people. This study is significant for its contribution to enhancing knowledge, managerial decision making, reference material and serves as policy frame work. Each are described below.

Knowledge

The intended contribution of this paper is to increase the knowledge in the area. The analysis is assumed to serve as a modest start and contributes to the existing knowledge.

Managerial Decision Making

The study findings and recommendations are important to management of the banks under study because it draws their attention to some of the points where corrective actions are necessary and enable them to make such corrections.

Literature and Reference

The research can be used to establish a framework for subsequent studies that can work with more comprehensive data set. Furthermore, it can stimulate further research; thus keeping sustained interest in the area of credit risk management and their use in minimizing the banks credit risk.

Policy framing

Credit granting is one of the main activities of banks and hence it is beneficiary to make some reforms that leads to a better credit risk management. The findings and recommendations of the study are highly important to policy makers because it draws their attention to some of the points that need corrective measures on their side.

1.5. Research Design

Methodology

➤ Source and method of Data collection

The research qualitatively and quantitatively examined policies, strategies and associated practices regarding the banks credit risk management systems and practices with the help of the following methods.

1. Questionnaires- a questionnaire with a standard set of questions addressed to managers of credit and risk management, credit divisions, senior credit analyst, controller
2. Interview- both structured and unstructured interviews was conducted.
3. Annual report and documents of the banks and NBE's were revised.

The investigation focused generally on management level of the selected banks considering the fact that it is the manager that are responsible for developing and implementing the policies and procedures, and at the same time who are responsible for success or failure. Likewise, as the population is small, sampling was not used.

➤ **Data Analysis**

The research design used was a descriptive and didn't use a high standard statistical survey of the banks practice. Data collected from annual and quarterly reports and primary data and information provided by banks were analyzed via tables, graphs and pie charts to depict the reply of respondents and data gathered through secondary data. However, the hypotheses were tested using regression model.

In addition, NBE's related policy and directives, practices of some international peers and credit risk management guidelines of Bank for international settlements have been in use as a bench mark for analysis

➤ **Sample construction**

The researcher took two commercial banks (i.e. Commercial bank of Ethiopia and Construction and Business bank) from the government owned three banks. And with the same logic among the private commercial banks, which have been operational at least for the last ten years starting from 1999GC up to 2009GC, four banks (such as Awash

International bank, Dashen bank, United bank and NIB International Bank) were selected among the six banks that satisfy the criteria.

1.6. Hypothesis

Since exposure to credit risk continues to be the leading source of problems in banks world wide, banks and supervisors should be able to draw useful lessons from past experience. Banks should now have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they are adequately compensated for risks incurred (Basel committee, 2004). Having adequate credit risk management practices are essential in order to increase income and keep the level of non- performing loans to the desired minimum level if not eliminated at all. The hypotheses to be tested were:

1. Banks with higher profitability (ROA, ROE) have lower loan losses (Non performing Loans/Total Loans).
2. The preliminary study, observations made by the researcher, and different previous researchers show that interest income constitute the major portion of the banks' income. Credit risk unless properly addressed, has significant negative impact on the profitability of the banks'. Therefore, banks with higher interest income (Interest income/total income) also have lower bad loans (NPL).

1.7. Scope and Limitation of the Study

The researcher believes that the findings of this study would have been more productive if it has been conducted on all public and private Banks in Ethiopia. However, due to time and financial constraints, it is out of the reach of the researcher to incorporate all in this study. The study encompasses six selected Ethiopian Commercial Banks (i.e. CBE, CBB, AW, DB, UN, and NIB). Besides, due to the opaqueness of the sector and expected shortage of longitudinal data and other elusive structural difficulties the study is compelled to limit itself mainly on officially reported accounting data for a period of the last six subsequent years up to 2008.

The study also likely to face problem of accuracy for some data, which were considered confidential by some banks, resulting from limited observation or degree of freedom.

It is known that loan losses can also occur as a result of the borrowers' character not to repay the debt in line with the agreement, apart from the lenders lax credit risk management system. Therefore, the problem should have been seen from both sides. Nevertheless, due to time and financial constraint the researcher couldn't incorporate views of borrowers.

1.8. Organization of the Paper

The paper is organized into four chapters; the first chapter describes the introduction and cuts across, statement of the problem, objective of the study, significance of the study, limitation and scope of the study, research design and hypothesis. The second chapter concerned with the review of related literature. The third chapter deals with analysis of the data collected and the fourth chapter concludes the study with summery and recommendation.

CHAPTER II: LITRETURE REVIEW

In this chapter the researcher tries to discuses overview of the theoretical consideration to explain factors related to credit risk management from books, articles, research papers, internet publications and unpublished sources

2.1. The origin and Evolution of Bank and Credit Risk Management

It may be said that banking in its most simple form, is as old as authentic history. As early as 2000B.C Babylonians had developed a system of banks. In ancient Greece and Rome the practice of granting credit was widely prevalent. “Trace of granting credit by compensation and by transfer orders” is found in Assyria, Phoenicia and Egypt before the system attained full development in Greece and Rome (Shekhar, 1993).

According to Machiraju (2003) it is believed to be the cradle of banking in northern cities. As the center of commercial activity shifted from the Mediterranean to the Atlantic and Northern Western Europe, banking growth fell behind in Italy. However, banking reappeared in Italy during the catching up process of industrialization in the 19th century. The

banks then were functioning as main lenders to the government and were lending money on collateral basis.

In today's world banking is an important part of every body's life, and they are one of the most important financial institutions in the developed as well as developing economies. Among the most crucial functions of a commercial banking is providing credit to all participants of an economy. Commercial banks are the primary sources of credit for many businesses, households and government bodies. Banks are among the most important sources of short term working capital for business and have become increasingly active in recent years in making long term loans business organizations (Rose, 1993). In a nut shell, credit become "the business of banking and primary basis, on which banks quality and performances are judged' (McNaughton, 1992)

On the other hand, credit risk can be traced back thousands of years. But where exactly did it come from and what are its basic tenets? What events changed the course of credit risk history? And who were the true innovators of credit risk management? Aaron Brown takes us on an interesting journey¹. Accordingly, credit is much older than writing. Hammurabi's code, which codified legal thinking from 4,000 years ago in

¹ full text available at <http://www.bis.org/publ/bcbs54.htm>

A-Aaron Brown works as a vice president for Morgan Stanley converting credit risk models and systems to Basel II standards

Mesopotamia, didn't outline the basic rules of borrowing and didn't address concepts such as interest, collateral and default. These concepts appear to have been too well known to have required explanation. However, the code did emphasize that failure to pay a debt is a crime that should be treated identically to theft and fraud (Ibid).

The code also set some limits to penalties. For example, a defaulter could be seized by his creditors and sold into slavery, but his wife and children could only be sold for a three-year term. For most of history, credit default was a crime. At various places and times, it was punishable by death, mutilation, torture, imprisonment or enslavement punishments that could be visited upon debtors and their dependents (Ibid).

To answer the question about why people engaged in credit agreements, we must go even farther back in history and replace written sources with guesswork. Credit risk arose before financing of business ventures. There is credit risk, for example, when a farmer says to a stranger, "help me harvest my crop, and I will give you two baskets of grain." From these we can conclude that credit risk is a necessary consequence of a vibrant economy. Everyone involved in complex production processes must wait for payment until the goods or services are delivered to the final consumer or even later if credit is extended to the consumer as well. When there is a failure in the process, the loss must be allocated among

the producers. Intermediaries, like banks, can transfer the payment delays and the credit risk among producers, or between producers and outside investors. These intermediaries can also reduce the amount of delay through fractional reserves and the amount of risk through diversification. But payment delays and credit risk cannot be eliminated entirely without stifling the economy (Ibid).

2.2. The History of Banking in Ethiopia²

It is the agreement that was reached in 1905 between Emperor Menilik II and Mr. Ma Gillivary, representative of the British owned national Bank of Egypt marked the introduction of the then modern banking in Ethiopia. Accordingly, the first bank called Bank of Abyssinia was inaugurated in February 16, 1906 by the Emperor.

The society at that time being new for the banking service, Bank of Abyssinia had faced difficulty of familiarizing the public with it. Despite its monopolistic position, the bank earned no profit until 1941; profits were record in 1941, 1919, and 1920 and from 1924 onwards.

The bank had faced many pressures as a result of its inefficiency and purely profit oriented. Thus, an agreement was reached to abandon its operation and be liquidated so as to disengage banking from foreign

² Source;www.nbe.gov.et/History/history.htmwww.nbe.gov.et/History/history.htm

control and to make the institution responsible to Ethiopian's credit needs. By shortly after Haile Sellassie came to power, the Bank of Ethiopia was a purely Ethiopian institution and was the commercial activities of the Bank of Abyssinia and was authorized to issue notes and coins.

During the invasion (1935) the Italians established branches of their main banks namely Bankca d' Italia, Banco diRoma, Banko diNapoli, and Banca Nazionale del lavoro.

In 1941, another foreign bank, Barclays Bank came to service in Addis Ababa till it withdraws in 1943, shortly before the commencement of the full operation of the state Bank of Ethiopia.

The state Bank of Ethiopia acted as the central Bank of Ethiopia and as the principal commercial bank in the country and engaged in all commercial banking activities until ceased to exist by bank proclamation issued on December 1963.

The Ethiopian Monetary and Banking proclamation that came in to force resulted in splitting the function of commercial and central Banking creating National bank of Ethiopia and Commercial bank of Ethiopia. National bank of Ethiopia performs central banking functions while commercial bank of Ethiopia took over commercial banking activities of

the former State bank of Ethiopia. As first private bank Addis Ababa Bank Share Company was also came to existence in 1964.

There were also other financial institutions in the country like the Imperial Savings and Home ownership public Associations (ISHOPA) and Saving and Mortgage Corporation of Ethiopia whose aim were to accept saving and trust, deposits accounts and provide loans for the construction, repair and improvement of residential houses.

In 1945 Agricultural Bank that provide loans for agriculture and other relevant project was establishing and replaced in 1951 by Investment Bank of Ethiopia. In 1965 its name once again changed to Ethiopia Investment Corporation Share Company. However proclamation No. 55 of 1970 established the Agriculture and Industrial Development Bank Share Company by taking over the assets and liability of the former Development Bank and Investment Corporation of Ethiopia.

Following the introduction of socialism economic system in 1974, the banking sector was changed to a monopolistic banking system. The Housing and saving Bank was established in 1975 by merging the former saving and Mortgage Corporation of Ethiopia S.C and the Imperial Saving and Home ownership public Association with the objective to provide loans for residential and commercial construction industries. Then Addis Ababa Bank and commercial Bank of Ethiopia S.C was merged by

proclamation number 184/1980 to form the sole commercial Bank in the country till 1994.

The pre 1994 Ethiopian banking industry was characterized by relatively less competition, low deposit mobilization relatively high government intervention in their management and more loan access to state owned sector.

Post 1994

Following the change in the economic policy, financial sector reform also took place. Monetary and Banking proclamation of 1994 established the National bank of Ethiopia as judicial entity, separated from the government.

In 1994, Construction and Business Bank was established under proclamation number 203/1994 by taking over the rights and obligations of Housing and saving Bank, which was previously established under proclamation number 60/1975. Development Bank of Ethiopia has also established under Regulation of 1974.

Monetary and Banking proclamation No. 83/1994 laid down the legal basis for investment in the banking sector; consequently shortly after the proclamation the first private bank, Awash International Bank S.C was established in 1994. Dashen Bank was established in 1995, and subsequently other private banks joined the industry which brought

number of banks in the industry to thirteen. Thus the banking sectors are becoming more competitive today than pre 1994.

2.3 operational definitions

Banks make money by providing different services to their customers and granting credits. However, there are some risks with these services and the most one are:

Financial risk³ in a banking organization is the possibility that outcome of an action or event could bring up an adverse impacts. Such outcomes could either result in direct loss of earnings/capital or management result in imposition of constraints on bank's ability to meet its business objectives. Such constraints pose a risk as these could hinder bank's ability to conduct its ongoing business or to take benefit of opportunities to enhance its business

Credit Risk⁴ is the potential that a bank's borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Thus credit risk arises from non performance by borrower or a counter party due to either inability or unwillingness to perform as per the contracted.

While the types & degree of risks an organization may be exposed to depend upon a number of factors such as its size, complexity of business

³ Risk management guidelines for commercial banks ,by state bank of Pakistan

activity, volume etc, it is believed that generally banks face credit, market, liquidity, operational, compliance/legal/regulatory & reputation risks. Across country experience evident that credit activities are the main determining factors for the well being of the financial sector's, especially in intermediation activities such as banking services (Yigremachew, 2008)

As discussed above, loans are the largest and most obvious source of credit risk and hence, ensuring prudent lending operation that reflects an acceptable risk reward ratio is, therefore, an area in which banks have to devote considerable skills and research.

Risk management⁵; - is a discipline at the core of every financial institution and encompasses all activities that affect its risk profile. It involves identification, measurement, monitoring & controlling risks to ensure that the individuals who take or manage risks clearly understand that the organization's risk exposure is within the limits established by board of directors. Risk taking decisions are in line with the business strategy and objectives set by board of directors

⁴ Bank risk management un published training manual , Ethiopian academy of financial studies

2.4. Importance of credit risk Management

The future of banking will undoubtedly rest on risk management dynamics. Only those banks that have efficient risk management system will survive in the market in the long run. The effective management of credit risk is a critical component of comprehensive risk management essential for long term success of a banking institution. Credit risk is the oldest and biggest risk that bank, by virtue of its very nature of business, inherits. This has however, acquired a greater significance in the recent past for various reasons. Foremost among them is the wind of economic liberalization that is blowing across the globe (Achou and Tenguh 2008). Moreover, it also classified credit risk management in to two distinct dimensions as preventive measures and curatives measures. Preventive measures include risk assessment, risk measurement and risk pricing, early warning system to pick early signals of future defaults and better credit portfolio diversification. The curative measures, on the other hand, aim at minimizing post sanction loan losses through such steps as securitization, risk sharing, legal enforcement etc. It is widely believed that an ounce of prevention is worth a pound of cure.

A report issued by a committee on banking supervision of Bank for international settlements (BIS, 2004) states that while financial institutions have faced difficulties over the years for a multitude of

⁵ Ibid

reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers and counterparties, poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties. This experience is common in both G-10 and non-G-10 countries.

According to (David Shimko, 2004), the goal of credit risk management to any bank is to maximize a risk adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credit or transactions. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long term success of any banking organization.

Peter S. Rose (1999) Pointed out that risk in banking tend to be concentrated in the loan portfolio. Thus, a bank's serious financial trouble usually emanates from loans that have become uncollectible.

Studies reveal that the Japanese bank crises of 1993 and American financial crises of 2007-2009, were the consequences of un-collectible (non – performing loans). Bank for International settlements (2003), Fukao (2003), International Monetary Fund (2003), Kashuap (2002), and

organization for economic cooperation and Development (2001) pointed out that credit misallocation is one factor for banking crises.

World over, credit risk has proved to be the most critical of all risks faced by a banking institution. A study of bank failures in New England found that, of the 62 banks in existence before 1984, which failed from 1989 to 1992, in 58 cases it was observed that loans and advances were not being repaid in time, (Achou and Tenguh 2008).

The effects of poor risk management can clearly be seen in the problems that have arisen from the unregulated sub-prime mortgage lending market in the USA where the loans had been securitized into ever more complex securities, which when the housing prices stabilized and stopped increasing led to a huge increase in defaults of the underlying sub-prime mortgages. This, in turn, led to massive losses in the securities which had been sold. The reasons mentioned above indicate an increased need to manage risk and in particular credit risk and default predictions (Wikipedia, March 2009)

According to Ethiopian academy of financial study's unpublished risk management materials, credit risk arises any time bank funds are extended, committed, invested, or otherwise exposed, whether reflected on or off the balance sheet as a result of lax exposure management, poor economic conditions, or a variety of other factors. However, generally the

risk is assumed to be a rise from transaction (default) risk and portfolio risk. These signify the role of credit risk management and therefore it forms the basis of present research analysis.

Some of the strategies used for reducing and coping with portfolio credit risk according to Achou and Tenguh, 2008, are geographic diversification, loan size limits (Rationing), over collateralization and credit insurance.

2.4.1. Credit Risk Management Models

It is hard to differentiate between the traditional approach and the new approaches since many of the ideas of traditional models are used in the new models. The traditional approach is comprised of four models⁶, as depicted herein under.

➤ Expert systems

In this system, the credit decision is left in the hands of the branch lending officer. His expertise, judgment, and weighting of certain factors are the most important determinants in the decision to grant loans. The loan officer can examine as many points as possible but must include the five “Cs” these are; character, credibility, capital, collateral and cycle (economic conditions).

➤ Artificial Neural Networks:

Due to the time consuming nature and error-prone nature of the computerized expertise system, many systems use induction to infer the human expert's decision process. The artificial neural networks have been proposed as solutions to the problems of the expert system. This system simulates the human learning process. It learns the nature of the relationship between inputs and outputs by repeatedly sampling input output information.

➤ Internal rating at banks:

Over the years, banks have subdivided the pass/performing rating category, for example at each time, there is always a probability that some pass or performing loans will go into default, and that reserves should be held against such loans.

➤ Credit Scoring Systems:

A credit score is a number that is based on a statistical analysis of a borrower's credit report, and is used to represent the creditworthiness of the person. A credit score is primarily based on credit report information. Lenders, such as banks use credit scores to evaluate the potential risk posed by giving loans to consumers and to mitigate losses due to bad debt. Using credit scores, financial institutions determine who are the

⁶ Achou and Tenguh, 2008

most qualified for a loan, at what rate of interest, and to what credit limits (Wikipedia, 2008).

2.5. Credit Risk Measurement, Monitoring and control

Since exposure to credit risk continues to be the leading source of problems in banks world-wide, banks and their supervisors should be able to draw useful lessons from past experiences. Banks should have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they are adequately compensated for risks incurred as per the report issued by a committee on Banking supervision of Bank for international settlements (BIS,2004).

Measurement or assessment of credit risk is of vital importance in credit risk management to know how much credit risks a particular loan request or the overall credit portfolios carry. To be effective in credit risk management, banks need to devise mechanisms to measure the credit risk. Generally, credit risk measurement involves both subjective and objective criteria (Ethiopian Academy of Financial Studies unpublished, risk management materials).

Objective criteria may use benchmarks or pre-specified standards in terms of financial ratios to quantify the risk level. Subjective criteria

generally involve judgments based on standards that the bank has generated as a result of its experience and knowledge of the borrower and the type of credit requested. As with the decision to grant credit, it is not possible to avoid human judgments in credit risk measurement (Ibid).

Thus, both objective and subjective criteria are important and complement each other. A number of qualitative and quantitative techniques of credit risk measurement are evolving, including sophisticated quantitative models.

The four commonly used models according to Erisk⁷ are:

1. KMV's Portfolio Manager
2. JP Morgan's Credit Metrics
3. Credit Suisse Financial Products' Credit Risk+
4. McKinsey's Credit Portfolio View

The models use different methodologies to create a distribution of possible credit portfolio values at some future point in time. Therefore, choice of model is an important decision for any financial institution actively managing its portfolio credit risk. For example, actuarial models (like Credit Risk+) may be more accurate for small business portfolios or illiquid asset classes. Merton-based models (like Credit Metrics and

⁷ <http://www.erisk.com/Learning/JigSaw/CreditRisk.asp>

Portfolio Manager), on the other hand, may be better for publicly traded companies (Ibid)

Prominent amongst the credit scoring models is the Altman's Z-Score⁸. The Z-score formula for predicting Bankruptcy of Dr. Edward Altman (1968) is a multivariate formula for measurement of the financial health of a company and a powerful diagnostic tool that forecast the probability of a company entering bankruptcy within a two year period with a proven accuracy of 75-80%.

$$Z=1.2X_1+1.4X_2+3.3X_3 + 0.6X_4 + 1.0X_5$$

Where, X_1 = Working Capital/Total assets ratio

X_2 = Retained earnings/ Total assets ratio

X_3 = Earnings before interest and taxes/ Total Assets ratio

X_4 = Market value of equity/ Book value of long-term debt ratio

X_5 = Sales/Total assets ratio.

The higher the value of Z, the lower the borrower' default risk classification. According to Altman's credit scoring model, any firm with a Z-Score less than 1.81 should be considered a high default risk, between

⁸ Fundamental of corporate finance

1.81-2.99 an indeterminate default risk, and greater than 2.99 a low default risk.

Critics: Use of this model is criticized for discriminating only among three borrower behavior; high, indeterminate, and low default risk. Secondly, that there is no obvious economic reason to expect that the weights in the Z-Score model – or, more generally, the weights in any credit-scoring model-will be constant over any but very short period. Thirdly the problem is that these models ignore important, hard to quantify factors (such as macroeconomic factors) that may play a crucial role in the default or no-default decision.

Potential benefits of credit risk models⁹

- The use of credit risk models offers banks a framework for examining this risk in a timely manner, centralizing data on global exposures and analyzing marginal and absolute contributions to risk. These properties of models may contribute to an improvement in a bank's overall ability to identify measure and manage risk.
- Credit risk models may provide estimates of credit risks, which reflect individual portfolio composition; hence, they may provide a better reflection of concentration risk compared to non-portfolio approaches.

⁹ Credit risk modeling: current practices and applications Basle Committee on Banking Supervision April 1999

- By design, models may be both influenced by, and be responsive to, shifts in business lines, credit quality, market variables and the economic environment. Consequently, modeling methodology holds out the possibility of providing a more responsive and informative tool for risk management.

The other method used to measure credit risk is rating, which is summary indicator of a bank's individual credit exposure. An internal rating system categorizes all credits into various classes on the basis of underlying credit quality. A well-structured credit rating framework is an important tool for monitoring and controlling risk inherent in individual credits as well as in credit portfolios of a bank or a business line. An internal rating framework would help banks in many ways such as:

- Analysis of loan applications
- Determination of duration/tenure and price of loans,
- Frequency or intensity of loan monitoring
- More accurate computation of loan loss provision,
- Deciding the level of approving authority of loan and
- Determination of the overall portfolio risk.
- Determination of the overall portfolio risk

The extent to which authorities have been involved in developing criteria to distinguish between “ good “ and “ bad “ loans defers substantially

between countries. Some countries use quantitative criteria for example number of days of overdue from the scheduled payments, while other countries exclusively rely on qualitative norms (such as a variability of information about the clients financial status, management judgment about future payments).

In our country's case the National Bank of Ethiopia has issued directive number SBB/43/2008 pursuant to the authority vested in it by article 41 of the Monetary and Banking proclamation number 83 / 1994 and by article 15 (1) and 36 of the Licensing and Supervision of Banking Business proclamation number 54 / 1994.

According to this directive banks shall classify non – performing loans, whether such loans have pre – established repayment schedule or not, into five classifications (i.e. Pass, Special mention, Substandard, Doubtful and Loss).

Provisioning Requirement for Loans or Advances

According to National Bank of Ethiopia's Directive No.SBB/43/2008, all banks shall maintain provisions for Loan Losses Account which shall be created by charges to provision expense in the income statement and shall be maintained at level adequate to absorb potential losses in the loans or advances portfolio. In determining the adequacy of the

Provisions for Loan Losses Account, provisions may be attributed to individual loans or advances or groups of loans or advances.

2.6. Credit Risk Monitoring & Control

Credit risk monitoring¹⁰ refers to incessant monitoring of individual credits inclusive of off-balance sheet exposures to obligors as well as overall credit portfolio of the bank. Banks need to enunciate a system that enables them to monitor quality of the credit portfolio on day-to-day basis and take remedial measures as and when any deterioration occurs. Such a system would enable a bank to ascertain whether loans are being serviced as per facility terms, the adequacy of provisions, the overall risk profile is within limits established by management and compliance of regulatory limits. Establishing an efficient and effective credit monitoring system would help senior management to monitor the overall quality of the total credit portfolio and its trends. The bank's credit policy should explicitly provide procedural guideline relating to credit risk monitoring and at the minimum should lay down procedures relating to:

- The roles and responsibilities of individuals responsible for credit risk monitoring
- The assessment procedures and analysis techniques (for individual loans & overall portfolio)

¹⁰ Risk management guidelines for commercial banks, State Bank of Pakistan

- The frequency of monitoring
- The periodic examination of collaterals and loan covenants
- The frequency of site visits

2.6.1. Managing problem Loans

Though problem loans do not develop overnight, it is also not possible for banks to fully judge that a borrower will fail to repay the loan at the time of loan approval. A bank's credit risk policies should clearly set out how the bank will manage problem credits. Management of problem loans encompasses the following basic elements¹¹

- Negotiation and follow up: proactive effort should be taken in dealing with obligors to implement remedial plans, by maintaining frequent contact and internal records of follow up actions.
- Workout remedial strategies: sometimes appropriate remedial strategies such as providing additional finance against other assets of the company, restructuring of loan facilities, enhancement in credit limits, etc help improve borrower's repayment capacity. However, it depends upon business condition, the nature of problems being faced and most importantly borrower's commitment and willingness to repay the loan. After exhausting means of enabling the borrower pay the debt, banks should timely apply proper actions to recover the loan or to write-off it.

¹¹ Ibid

The loan policy and procedures should clearly state when and how to deal with each remedial actions.

➤ Status Report and Review: Problem credits should be subject to more frequent review and monitoring. The review should update the status of the loan and progress of the remedial plans. Progress made on problem loan should be reported to the senior management.

2.7. Principles for the Management of Credit Risk¹²

A. Establishing an Appropriate Credit Risk Environment

Principle 1: The board of directors should have responsibility for approving and periodically (at least annually) reviewing the credit risk strategy and significant credit risk policies of the bank.

Principle 2: Senior management should have responsibility for implementing the credit risk strategy approved by the board of directors and for developing policies and procedures for identifying, measuring, monitoring and controlling credit risk.

Principle 3: Banks should identify and manage credit risk inherent in all products and activities.

B. Operating under a Sound Credit Granting Process

Principle 4: Banks must operate within sound, well-defined credit-granting criteria.

Principle 5: Banks should establish overall credit limits at the level of counterparties that aggregate in comparable and meaningful manner different types of exposures, both in the banking and trading book and on and off the balance sheet.

Principle 6: Banks should have a clearly-established process in place for approving new credits as well as the amendment, renewal and re-financing of existing credits.

Principle 7: All extensions of credit must be made on an arm's-length basis. In particular, credits to related companies and individuals must be authorized on an exception basis, monitored with particular care and other appropriate steps taken to control or mitigate the risks of non-arm's length lending.

C. Maintaining an Appropriate Credit Administration, Measurement and Monitoring Process

Principle 8: Banks should have in place a system for the ongoing administration of their various credit risk-bearing portfolios.

Principle 9: Banks must have in place a system for monitoring the condition of individual credits, including determining the adequacy of provisions and reserves.

Principle 10: Banks are encouraged to develop and utilize an internal risk rating system in managing credit risk. The rating system should be consistent with the nature, size and complexity of a bank's activities.

¹² BIS,2004

Principle 11: Banks must have information systems and analytical techniques that enable management to measure the credit risk inherent in all on- and off-balance sheet activities.

Principle 12: Banks must have in place a system for monitoring the overall composition and quality of the credit portfolio.

Principle 13: Banks should take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios, and should assess their credit risk exposures under stressful conditions.

D. Ensuring Adequate Controls over Credit Risk

Principle 14: Banks must establish a system of independent, ongoing assessment of the bank's credit risk management processes and the results of such reviews should be communicated directly to the board of directors and senior management.

Principle 15: Banks must ensure that the credit-granting function is being properly managed and that credit exposures are within levels consistent with prudential standards and internal limits.

Principle 16: Banks must have a system in place for early remedial action on deteriorating credits, managing problem credits and similar workout situations.

E. The Role of Supervisors

Principle 17: Supervisors should require that banks have an effective system in place to identify measure, monitor and control credit risk as part of an overall approach to risk management. Supervisors should conduct an independent evaluation of a bank's strategies, policies, procedures and practices related to the granting of credit and the ongoing management of the portfolio.

CHAPTER III DISCUSSION AND ANALYSIS

3.1 Data Gathering

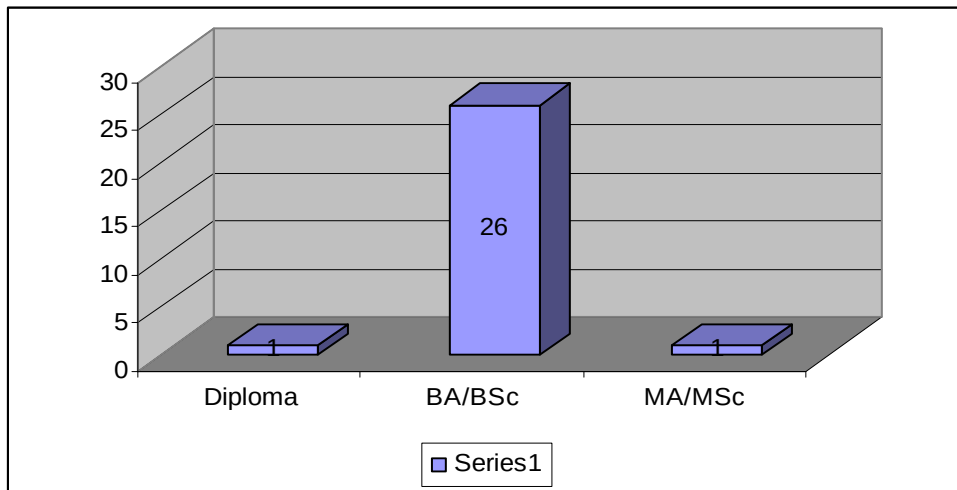
A survey has been carried out using the attached questionnaire (Annex I) with the goal of assessing the credit risk management system and practices of Ethiopian Commercial banks taking some public and private banks as a case study. Structured questionnaires were sent to the selected banks, which are listed in table 1. As shown below, 90% of them have responded.

Table 1: responding rate

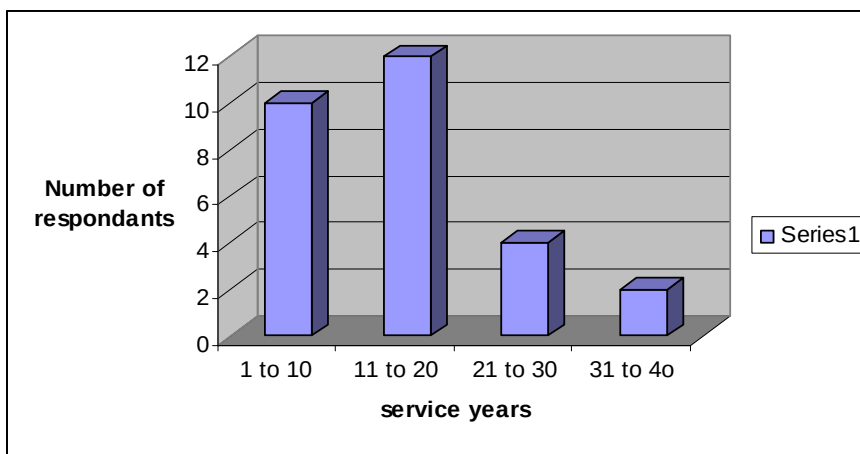
No.	Selected banks	Sample population	Response
1	Commercial Bank of Ethiopia	6	5
2	Construction and Business Bank	5	5
3	Dashen Bank S.C	5	4
4	Awash International Bank S.C	5	5
5	United Bank S.C	5	5
6	NIB International Bank S.C	5	4
	Total	31	28

Banks should ensure that the staff involved in credit and related activities are competent and fully understand its strategic direction, policies, tolerance of risk and limits. Besides, their staff should also have appropriate professional qualifications, technical and managerial skills, and experience to be able to efficiently execute their duties.

In this regard, the respondents were risk managers, controller, credit managers, credit division heads, and senior credit analysts, risk officers and follow up officers. Most of the respondents have an educational background of accounting, business administration, business management, banking and finance and economics with BA and above and have five to thirty eight years of work experience as seen in the following Graph 1 & 2



Graph 1: respondents educational back ground



Graph 2: Respondents work experience

3.2 Empirical Results and Discussion

3.2.1. Overview of Major Operational Performances of the Banks

As mentioned previously commercial bank of Ethiopia is also among the selected banks, considered in the case study. Nevertheless, this bank, i.e. Commercial Bank of Ethiopia, is the leader of the industry in the country and it alone constitutes 59% of the total loans and advances, 54% of the total deposit and 37% of the total income of the banks under discussion. Hence, the analysis could have been more meaningful had the analysis seen excluding the leader bank of the country.

3.2.1.1. Operational Performances

During the reported six fiscal years the banks have registered remarkable operational performances. Total deposits have risen by an average annual growth rate of 32%. However, as Table 2 shows, total deposits have been increasing with a nearly decreasing rate. This is attributed to the increase of competition in the sector coupled with the probable resource limitations due to the dichotomous nature of the economy. In addition, the annual average growth rate of time deposit has excelled from that of demand and saving deposits followed by demand deposits. However, the yearly average shares of demand and saving deposits are 40% and 39% of the total average yearly deposits of the banks,

respectively. Moreover, their respective share during the reported period had been more or less stable.

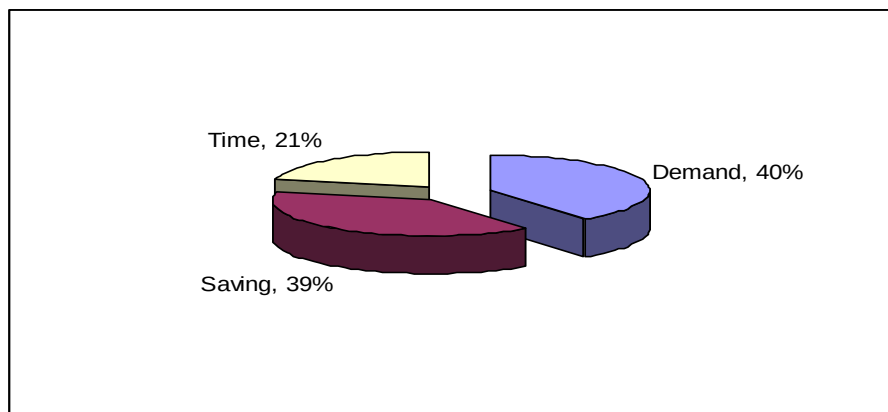


Chart 1: Average annual compositions of deposits

Table 2: Deposit Performance of the banks (in'000,000' of Birr)

End of Fiscal Year	Deposits										
	Demand			Saving			Time			Total	
	Amount	GR	Share	Amount	GR	Share	Amount	GR	Share	Amount	GR
2003	11,395		0.41	11,692		0.42	4,878		0.17	27,965	
2004	14,145	0.24	0.42	13,260	0.13	0.39	6,345	0.30	0.19	33,750	0.21
2005	16,434	0.16	0.40	15,782	0.19	0.39	8,599	0.36	0.21	40,815	0.21
2006	18,418	0.12	0.39	18,381	0.16	0.39	10,459	0.22	0.22	47,259	0.16
2007	22,714	0.23	0.40	20,771	0.13	0.37	13,277	0.27	0.23	56,762	0.20
2008	26,478	0.17	0.38	25,879	0.25	0.37	17,350	0.31	0.25	69,706	0.23
Average		0.18	0.40		0.17	0.39		0.29	0.21		0.20

Where: GR is growth rate

Source: Selected Banks annual report, internal source and own computations.

As can be seen from the table 3 below, there has been an increasing tendency of loans and advances extended by the banks. In 2003 fiscal year, total outstanding balance of the extended loans and advances was Birr 11,986,858,000 but in the last year of 2008 fiscal year, reached to Birr 29,544,510,000. There were relatively big leaps observed during 2008 fiscal year. Besides, the 2008's loan and advance growth of 45%

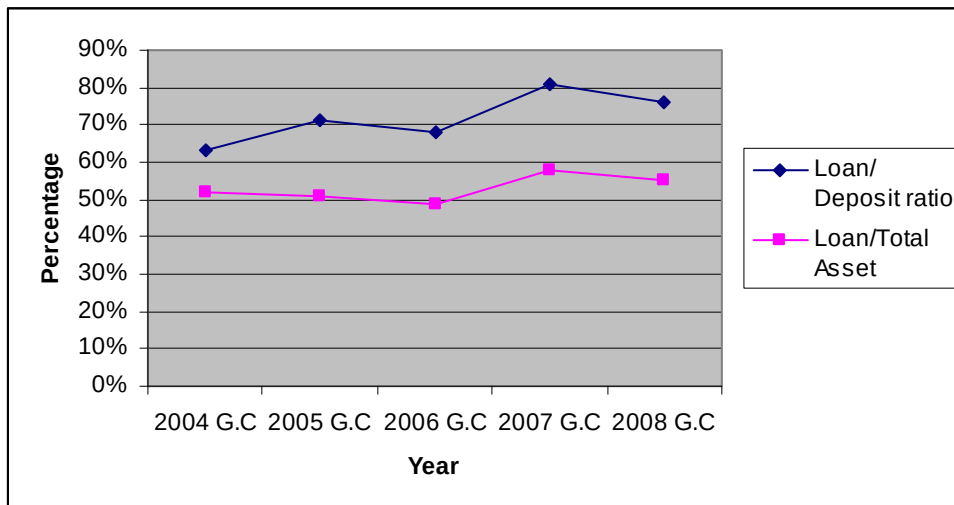
was higher than the respective year's growth in total deposit by 25%. This may further be substantiated by the persistent increase in the loan to deposit ratio amount during the entire period starting from 2003 fiscal year.

Table 3: Size and trends of loans of the Banks (in'000' of Birr)

End of Fiscal year	Loans & Advances		Loan/Deposit Ratio	Loan/Total Assets
	Amount	GR		
2003	11,986,858		0.63	0.52
2004	12,800,650	0.07	0.71	0.51
2005	15,771,671	0.23	0.68	0.49
2006	18,171,018	0.15	0.81	0.58
2007	20,316,299	0.12	0.76	0.55
2008	29,544,510	0.45	0.70	0.48
Average		0.20	0.72	0.52

Where: GR is growth rate

Source; Selected Banks annual report, internal source and own computations.



Graph 3: Trends of loans against total deposit and total asset

The above table 3 and Graph 3 indicate that there has been a growing demand for loans and advances, which sometimes goes beyond the available loanable fund in some banks.

3.2.1.2. Income and expense components

Table 4 shows that interest income has exhibited average growth rate of 0.28% per annum. Except in 2004 and 2006 fiscal years, the reported annual growth rates were all above 25%. Besides, as seen in the following graph and table, the average annual share of interest income is 71%. This implies that as expected the larger share of the banks' income has come from loans and related activities. Hence, we can conclude that lending is the major source of profit and credit risk for banks.

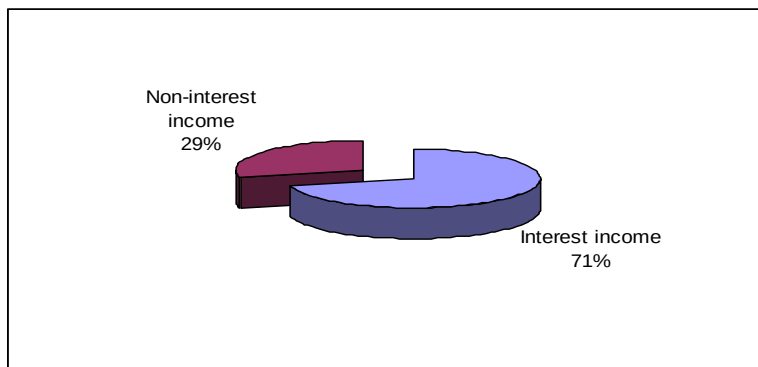


Chart 2: Composition of average interest and non interest income of the total banks annual income

Table 4: Amounts of Income & Expense Components (in'000,000'of Birr)

End of fiscal year	Income								Expense							
	Interest Income			Non- Interest Income			Total		Interest Expense			Non- Interest Expense			Total	
	Amount	GR	Share	Amount	GR	Share	Amount	GR	Amount	GR	Share	Amount	GR	Share	Amount	GR
2003	1,815		0.68	793		0.32	2,508		422		0.44	544		0.56	966	
2004	2,108	0.23	0.72	803	0.01	0.28	2,911	0.16	441	0.04	0.38	705	0.30	0.62	1,146	0.19
2005	2,750	0.30	0.73	1,032	0.29	0.27	3,782	0.30	515	0.17	0.46	598	(0.16)	0.54	1,110	(0.03)
2006	3,290	0.20	0.71	1,375	0.33	0.29	4,665	0.23	625	0.21	0.46	726	0.22	0.54	1,351	0.22
2007	4,096	0.25	0.70	1,761	0.28	0.30	5,858	0.26	711	0.14	0.37	1,219	0.68	0.63	1,930	0.43
2008	5,852	0.43	0.73	2,151	0.22	0.27	8,003	0.37	947	0.33	0.47	1,051	(0.14)	0.53	1,998	0.03
Average		0.28	0.71		0.23	0.29		0.26		0.18	0.43		0.18	0.57		0.17

Where: GR is growth rate

Source: Annual report of the Selected Banks

Unlike interest income, interest expense has taken lower share of total expense including provision for doubtful accounts. During the reporting period, the average yearly expense share of interest expense is 43%. This therefore either partly attributes the relative lower cost of funding (as the major share of total deposit has been mobilized in the form of demand, which is non-interest bearing) and a seemingly fixed feature of interest rate on saving or increase in operational expenses created through investment expenditures or as a byproduct of operational inefficiencies.

Hypothesis Testing

Prior research findings show that banks manage credit risk for two main purposes: to enhance interest income (profitability) and to reduce loan losses (bad debts) which results from credit defaults. Likewise, I expect

that banks with better credit risk management practices have lower loan losses (non performing loans). I used profitability (ROA, ROE) as proxy for credit risk management indicators.

Hypothesis

1. Banks with higher profitability (ROA, ROE) have lower loan losses (Non performing Loans/Total Loans).
2. Banks with higher interest income (Interest income/total income) also have lower bad loans (NPL).

Thus I used the following regression model as test for the hypothesis.

$$P(\text{ROA, ROE}) = \alpha + \beta \text{NPL/TL} + \mu$$

$$\text{II}(\text{II/TI}) = \alpha + \beta \text{NPL/TL} + \mu$$

Where, NPL denotes non performing loans, TL denotes total loan, P denotes profitability (ROA, ROE), II denotes Interest Income and TI denotes total income. Also, α is the intercept and β is the parameter of explanatory variable TI, ROA and ROE, μ represent the disturbance terms.

A time series analysis of a five years financial data of the banks were used to examine the relationship between profitability (ROA and ROE, separately), which are performance indicators and loan losses (NPL/TL), which represent the credit risk management effectiveness. Moreover, the researcher also tried to identify the correlation between interest incomes and non-performing loans using same regression model.

Definitions:

1. Asset Quality Standards

Nonperforming Loans/Total Loans NPL/TL

2. Profitability Standards

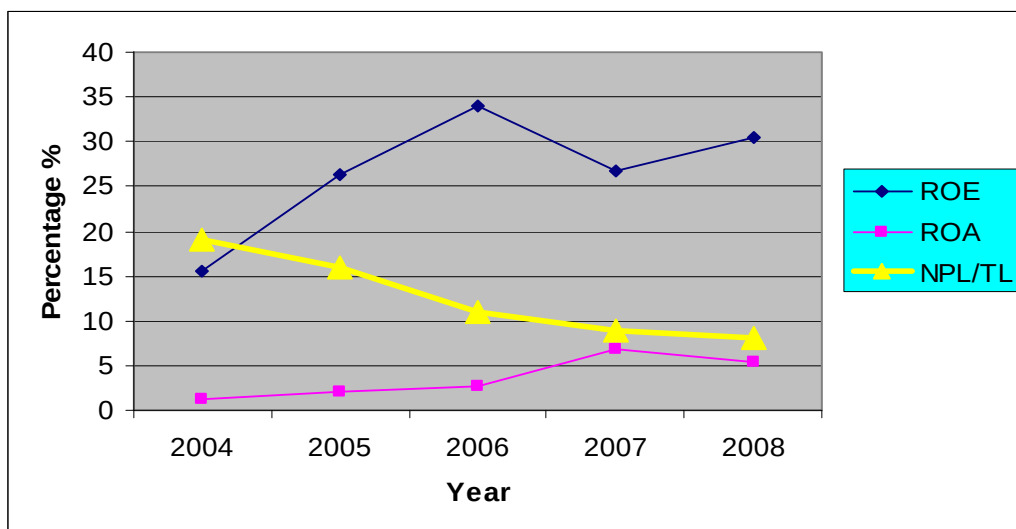
Net Profits/shareholders equity ROE

Net profits/Total assets ROA

Table 5: Summarization of Variables for 2004-2008(in percentages)

Year	ROE	ROA	NPL/TL
2004	15.6	1.2	19
2005	26.3	2	16
2006	34	2.7	11
2007	26.7	6.9	9
2008	30.5	5.3	8

Source: Annual reports, primary data and own computation



Graph 4: ROE, ROA vs. Percentage of NPL

Graph 4 shows a negative correlation between ROE and NPL as expected. Since non-performing loans are an indicator to poor credit risk management, it was expected that better credit risk management is related to lower non-performing loans.

Table 6: Regression result of ROE on NPL/TL

Coefficients		STD	t Stat	P-value	R square	Adjusted-R2
α	40.9659*	7.0557	5.8061	0.0102	0.6052	0.4736
NPL/TL	-1.1386	0.5309	-2.1444	0.1213		

* Significant at 5% level

Table 7: Regression result of ROA on NPL/TL

Coefficients		STD	t Stat	P-value	R square	Adjusted-R2
α	9.1374**	1.9571	4.6689	0.0186	0.7466	0.6622
NPL/TL	-0.4379*	0.1473	-2.9734	0.0589		

* Significant at 10% level. ** Significant at 5% level

The results of ROE on NPL/TL show that non-performing loan of the banks is negatively related to profitability (table 7). That is 1percent increase in non-performing loans decreases profitability (ROE) by 1.1386 percent. But the correlation is insignificant. Had the analysis been done

excluding Commercial bank of Ethiopia the correlation could have been significant as seen in Table 8. As the researcher tried to identify the reason, it was attributable to the owner's decision to increase the bank's paid up capital, from Br.619.7million previously, to Br.4billion in 2006/2007. The results of ROA on NPL/TL show that non-performing loan of the Banks is significantly negatively related to profitability (table 8). The parameter value shows that 1 percent increase in non-performing loans decreases profitability (ROA) by 0.4379 Percent.

The results verify the researcher's hypothesis that better credit risk management results in better bank performance.

Table 8: Regression result of ROE on NPL/TL (Excluding CBE)

Coefficients		STD	t Stat	P-value	R square	Adjusted-R2
α	46.0252* *	4.142 1	11.111 5	0.001 6	0.9026	0.8701
NPL/TL	-1.9394*	0.367 8	-5.2722	0.013 3		

* Significant at 5% level. ** Significant at 1% level

Table 9: Regression result of Interest Income/ Total Income on NPL/TL

Coefficients		STD	t Stat	P-value	R square	Adjusted-R2
α	70.7265	2.015 0	35.099 8	5.0849	0.0952	-0.2064
NPL/TL	0.0852*	0.151 6	0.5619	0.6134		

Though theoretically Interest income/Total Income and NPL has negative correlation, however as seen in Table 9, statistically they have positive correlation but at insignificant level. This could be attributed to the insignificant annual percentage growth shown in the Banks interest income as compared to the percentage decline of average NPLs.

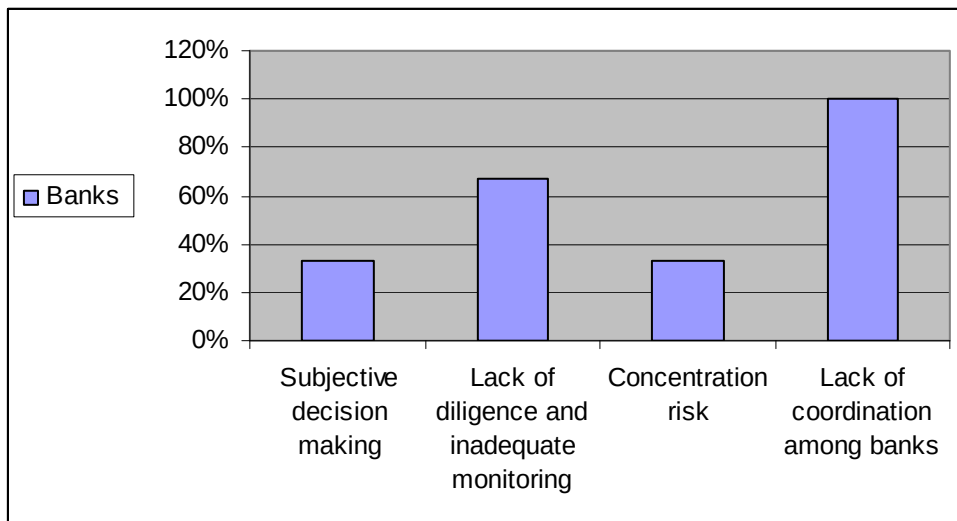
3.2.2 General issues in Credit risk management

The past decade has seen revival of the banking industry in Ethiopia following re-establishment of private banks. It is a normal phenomenon that as the number of banks and other institutions providing banking services increases, so does the competition and steer a consistently profitable course. Besides, legal, regulatory and compliance requirements also change as the industry develops. Generally, change in the general business environment alters the degree of risks that banks are subject to and the concern they should give to managing these risks.

During the last ten years period, in reply for the questionnaire, the banks acknowledged that they had faced risks. Two third of the banks (i.e.66.67%) said that they had encountered all risks like credit, liquidity, operational and interest risks during the period while, the remaining 33.33% of the banks had faced only credit risk. This indicates that the most common risk that frequently occurs in the banks is credit risk.

Moreover, Ethiopian Academy of Financial Studies in its bank risk management training material noted that the most obvious and frequently occurring risks in the current banking situation in Ethiopia are credit and operational risks.

As seen in graph 5, lack of coordination among lending banks and failure of due diligence and inadequate monitoring are the major reasons given by the banks for the frequency of the credit risk occurrence in their banks. Moreover, subjective decision making by senior management of the banks and credit concentration risk in a particular business and individual are also other reasons.



Graph 5: Common reasons for the cause of credit risk by the banks.

Apart from the above mentioned common reasons, the banks also said that they were facing different problems with regard to credit risk management. Among these that are worth mentioning are lack of relevant and reliable data to make prudent credit analysis, company, industry and economic analysis, collateral disposal problem of Addis Ababa, lack of clear credit history of borrowers due to absence of coordination among banks and centralized credit rating companies in the country. In addition, the uncontrollable natural and manmade dangers (like war, floods in the past and the current electric power disruption) have been challenges in the credit activities. The current worldwide financial crises, also stressed by the banks as challenge for their credit risk management as some of the customers who live abroad were not paying their debt in line with the loan agreement. Moreover, local customers whose businesses are related with international trade are also becoming among the irregular loan payers. Despite these, no action has been taken to place appropriate policy measures except the recent instruction of the NBE to suspend credit extension by commercial banks.

3.2.3. Assessing credit risk environment

There must be a risk management department in banks in order to achieve their objectives properly. It is also the requirement of NBE to establish this department. Therefore, the first question in the survey

asks banks whether they have a credit risk management department/unit. 67% of the banks said that there was a credit risk management department/unit and 16.5% of the banks said that there wasn't and the rest 16.5% confirmed that establishment was under process as seen in chart 3.

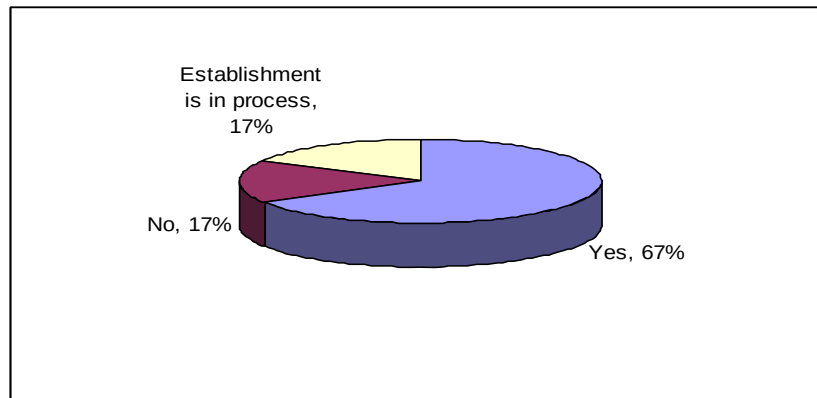


Chart 3: Existing of Credit Risk Management Department

In order to maintain credit discipline and to enunciate credit risk management and control process, there should be a separate department/unit independent of the loan origination function. Credit policy formulation, credit limit setting, monitoring of credit exceptions /exposures and review /monitoring of documentation are functions that should be performed independently from the loan origination function. If it is not feasible to establish such structural hierarchy, there should be at least adequate compensating measures to maintain credit discipline by introducing adequate checks and balances and standards to address potential conflicts of interest. Despite this, however, only 17% of the

banks had credit risk management department, which is independent from the loan origination function. And the remaining 83% said that they are performing both function at single department.

Although there is no hard and fast rule in the technique of lending, which is essentially an art; however, it is necessary to have defined procedures that address proper needs of their customers. Accordingly, banks should establish a written credit risk policy, which explains objectives and principles of credit risk management process. As seen in Chart 4, 83% of the banks said that there was a written credit risk policy, guidelines and procedures in their banks, and 17% of the banks said that they have no written credit risk policy and procedures but only credit risk guidelines. None of them selected establishment has been going on, option.

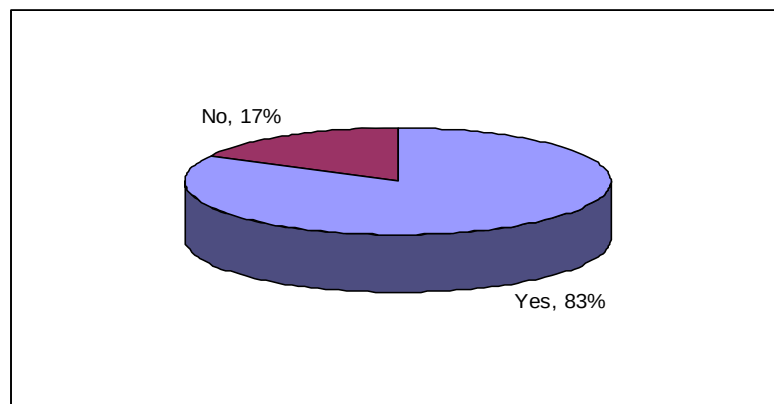


Chart 4: Establishment of a written credit risk policy.

The strategy should provide continuity in approach and take into account cyclic aspect of country's economy and the resulting shifts in composition and quality of overall credit portfolio. While the strategy would be reviewed periodically and amended, as deemed necessary, it should be viable in long term and through various economic cycles.

More than 70% of the respondents said that their current practice of credit policy was helping them to achieve their objectives. And had a periodic revision in their bank's credit risk policy and confirmed that the policy was helpful to process customers' credit request. Nevertheless, all stressed that current practices are required to be changed or at least modified and improved to make the strategy more inclusive and dependable.

It is the overall responsibility of Board of Directors (BODs) to approve bank's credit risk strategy and significant policies relating to credit risk and its management, which should be based on the bank's overall business strategy. Therefore, as seen in the following Chart 5, 83% of the banks said that their bank's credit policy and procedures are approved by their board of directors. The remaining 17% said no, simply as they didn't have the respective policy.

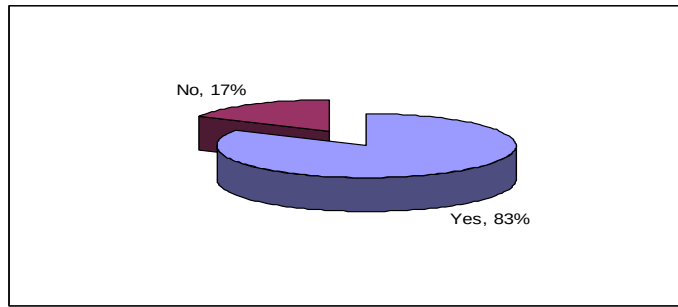


Chart 5: Credit policy and procedures approved by the BOD

As mentioned earlier in the literature part, effective credit risk management systems can exist only if there is proper oversight by the BOD. The primary role of the board is to adopt and, on a regular basis, review and supervise the implementation of the credit strategy and policy. Directors and senior management staffs have an active role in implementing the credit strategy and policy, and in developing systems that will enable the banks to identify, measure, monitor and control credit risk exposure.

The establishment of a sound credit strategy and policy by the banks provide a foundation for sound credit risk management. Besides, the BOD must ensure that credit exposures in their bank's portfolio were created following basic objectives on a sound and collectible basis. These all indicates that having a BOD with qualifications and experience coupled with well defined responsibility is indispensable for the existence of banks. 83% of the banks, which confirmed approval of their credit

risk policy and procedures by BOD, have stated that their bank's BOD have the following responsibilities:

- defining the bank's overall risk tolerance in relation to credit risk
- Ensuring that its overall credit risk exposure is maintained at prudent levels and consistent with the available capital
- Ensuring that management as well as individuals responsible for credit risk management possess sound expertise and knowledge to accomplish the risk management function
- Ensuring that the bank implements sound fundamental principles that facilitate the identification, measurement, monitoring and control of credit risk
- Ensuring the existence of appropriate plans and procedures for credit risk management

As per the risk management guidelines of the Pakistan bank and Basel committee for banks supervisions which are mentioned in the literature reviews, senior management of banks should develop and establish credit policies and credit administration procedures as part of the overall credit risk management framework and get approved from board. Besides, such policies and procedures should provide guidance to the staff and aim to obtain an in-depth understanding of the bank's clients, their credentials & their businesses in order to fully know their customers on various types of lending. The banks under study were also

well aware of these and 83% of them had responded that senior management of their banks are responsible for ensuring credit risk management policies are embedded in the culture of their banks, and to establish credit policies and credit administration procedures.

Moreover, they also acknowledged that it is the responsibility of senior management of the bank to ensure effective implementation of these policies.

Taking into account that credit risk management is not within the competency of only one organizational unit of the bank (e.g., Credit Department); the policy should be communicated to all organizational units, which are either directly or indirectly involved in credit risk management.

Therefore, the credit risk strategy and policy should be effectively communicated throughout a bank and all relevant personnel should clearly understand their bank's approach in taking credit risk and credit risk management. Nonetheless, only 33% of the banks said that they were effectively communicating the strategies and policies throughout their organization.

According to the Basel committee for banks supervision, in order to be effective, credit policies must also be periodically revised to take into account changing internal and external circumstances. In this regard all banks said that they are and were revising their credit policies and

objectives usually once in a year in line with changes both from internal and external forces. Among the internal factors mentioned are banks own performance and banks own position in terms of saving deposit, outstanding loan, human resource etc. Whereas, the external forces are, whenever there are new business opportunities, change in credit appetite of the economy, competitors' position as well to accommodate new policy and directives of NBE, and Federal rules.

3.2.3. Administration, measurement and monitoring process

As explained in the literature part, measurement or assessment of credit risk is of vital in credit risk management to know how much credit risks a particular loan request or the overall credit portfolios carry. To be effective in credit risk management, banks need to devise mechanisms to measure the credit risk. Generally, credit risk measurement involves both subjective and objective criteria. Among the objectives one, use of internal rating mechanism is the most common method.

The rating system should be consistent with the nature, size and complexity of a bank's activities according to Principle number 10, of the Basel committee for banks supervision, credit risk management guideline of Pakistan and credit risk research paper by Achou and Tenguh, 2008.

From the above different supporting papers we can say that having proper internal risk rating system is an important tool to facilitate early

identification of risk profiles of borrowers. Nevertheless, among the banks under study only 33% had said that they do have an internal rating system as a mechanism of credit risk measurement being used while assessing a loan. When saying this, it shouldn't be understood the rating systems to be like S&P, Moody's etc, of the economically developed countries, nor, was the sophisticated systems (models) used by world's largest banks like the KMV's Portfolio Manager and JP Morgan's Credit Matrices models, etc.

Because of the importance of ensuring that internal ratings are consistent and accurately reflect the quality of individual credits, responsibility for setting or confirming such ratings should rest with a credit review function independent of that which originated the credit. It is also important that the consistency and accuracy of ratings to be examined periodically by an independent body. But, these were not true for the banks applying the methods, as the researcher confirmed while making the interview.

On the other hand, the most common method for measuring credit risk being usually utilized by all the banks were the five C's of credit, financial statements and human judgment through experience. All banks also agree that even the sophisticated quantitative models do not

replicate experience and judgment rather these techniques help and reinforce subjective judgment.

Probability of default is one of the most important inputs, which is used in credit risk measurement. According to the survey, 67% of the banks don't calculate probability of default and the remaining 33% of the banks said that their studies, which is related to calculating probability of default were still going on.

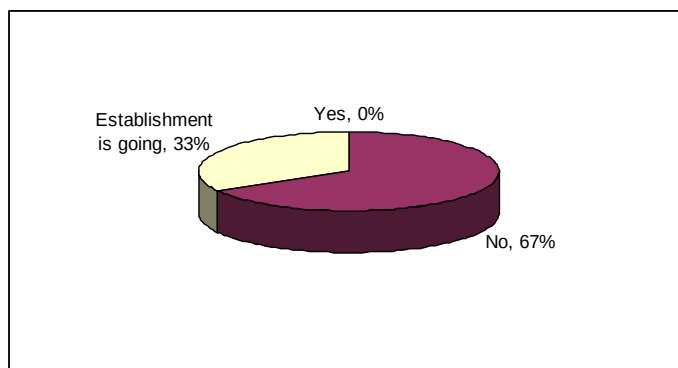


Chart 6: Calculating of credit risk measurement inputs-Probability of default

The other input, which is used to calculate credit risk measurement, is recovery rate. As per the response and as seen in the following Chart 6, 100% of the banks calculate recovery rate of loans. All banks said that they do this on quarterly basis while determining NPLs ratio of their bank's to be sent for NBE.

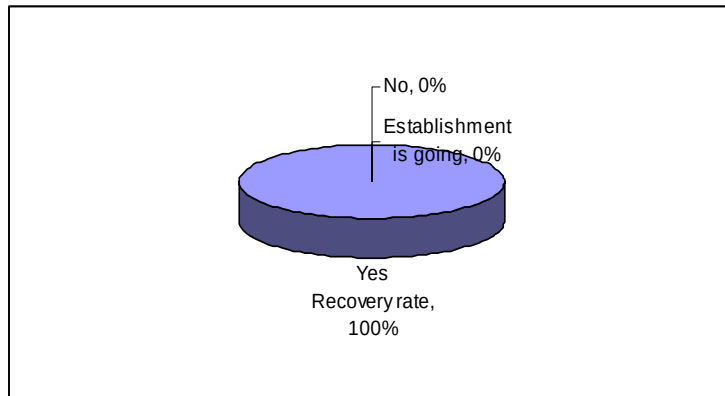
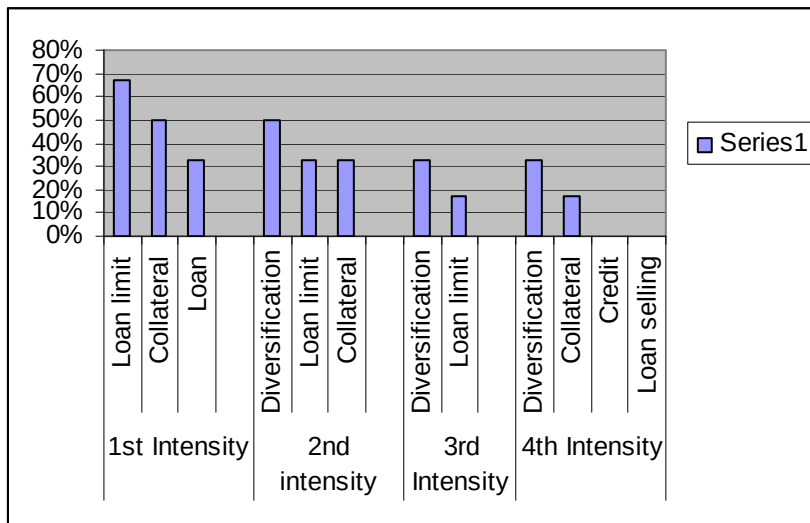


Chart 7: Calculating of credit risk measurement inputs-loan recovery rate

3.2.3.1. Credit risk management tools

In credit risk management banks use various methods to mitigate credit risks such as credit limits, taking collateral, diversification, loan selling, syndicated loans and credit insurance. In Ethiopia, the methods which the banks use according to the using intensity or priority given are shown in Graph 6. According to the first using intensity, 67% of the banks said that they used credit limit method, 50% of the banks said that they used taking collateral and 33% of the banks said that they used syndicated loan in credit risk management. In the second using intensity, diversification (50%), credit limits (33%) and taking collateral (33%) are the methods which are used by the banks in credit risk management. In the third using intensity, diversification (33%) and taking collateral (17%) are used by the banks. In the fourth using intensity, diversification (33%) and limit (17%) are used. As seen in

graph5, the banks don't use the methods such as loan selling and credit insurance because these products' markets are not developed in Ethiopia. The banks mostly use taking collateral, credit limits and diversification.



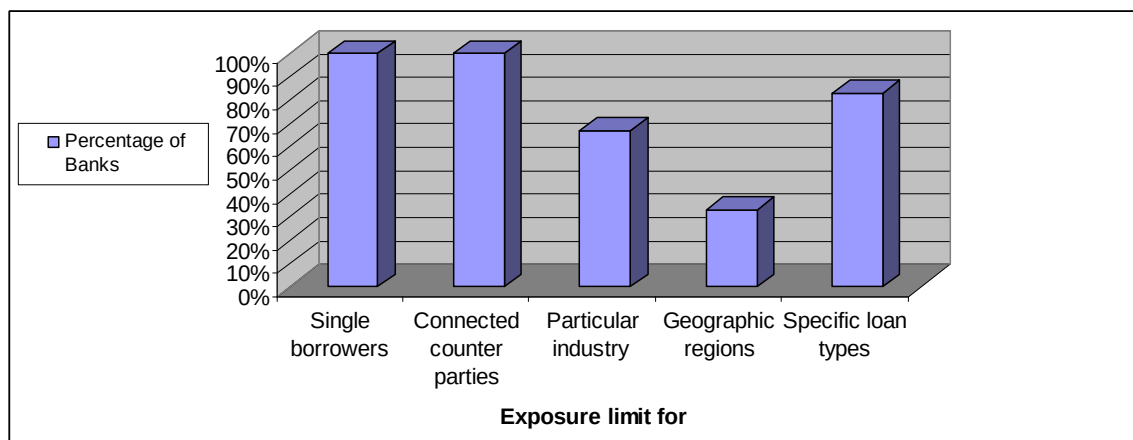
Graph 6: Credit Risk Management Tools

Result of different researchers on credit related topics reveals that a continuing source of credit-related problems in banks is concentrations within the credit portfolio. Concentrations of risk can take many forms and can arise whenever a significant number of credits have similar risk characteristics. Concentrations occur (according to David Shimko, 2004), and Risk management guidelines of Bank of Pakistan, when, among other things, a bank's portfolio contains a high level of direct or indirect credits to:

- A single counterparty
- A group of connected counterparties

- A particular industry or economic sector
- A geographic region,
- A type of credit facility, etc.

These could tell us that a high level of concentration exposes the bank to adverse changes in the area in which the credits are concentrated. However, they should also be careful not to enter into transactions with borrowers or counterparties, which they do not know or engage in credit activities and/or do not fully understand simply for the sake of diversification. Hence, they need to have appropriate procedures and policies in this regard. As depicted in Graph 7 all banks do have policy of maximum credit exposure limit for single borrowers, in line with the NBE's directive No.SBB/29/2002, which is 25% of each bank's total capital. Besides, all banks responded that they are complying and using the NBE's directive as internal policy in regard to the maximum exposure limit for groups of related parties, which is 35%. On the other hand, 33% and 83% of the banks said that they do have credit exposure limit policy at geographic category and for specific loan type, respectively.



Graph 7: Credit exposure limit policy

100% of the banks said that they have credit management policies and objectives for categorizing loans that defines types of loans, collection procedures, property appraisal policy, maximum tenures for different loans and authority and responsibility of committees. However, 50% of them don't have credit policies and objectives with regard to geographical limits for loan.

As stated in the literature part credit administration is a critical element in maintaining the safety and soundness of a bank. Once a credit is granted, it is important to ensure that the credit is properly maintained using appropriate up to date credit file. The credit files should include all of the information necessary to ascertain the current financial condition of the borrower or counterparty as well as sufficient information to track the decisions made and the history of the credit. 100% of the banks confirmed that they maintained credit files of all borrowers with related

information like purpose of the loan, planned repayment schedule, loan contract and other legal documents. Moreover, they all said that the appropriate financial statements drawn to ascertain repayment capacity of the borrower(s) and the respective loan approval documents are also kept attached with the file.

Banks must have a system in place for early remedial action on deteriorating credits, managing credits problem and similar workout situations. One reason for establishing a systematic credit review process is to identify weakened or problem credits. A reduction in credit quality should be recognized at an early stage when there may be more options available for improving the credit. 100% of the banks said that their banks maintain up dated list of problem loans and list of all loans reviewed along with credit rate assigned in line with NBE's loan classification guidelines and date of review.

3.2.3.2. Trends of Non-performing loans of the banks and Comparison with NBE's desired maximum level

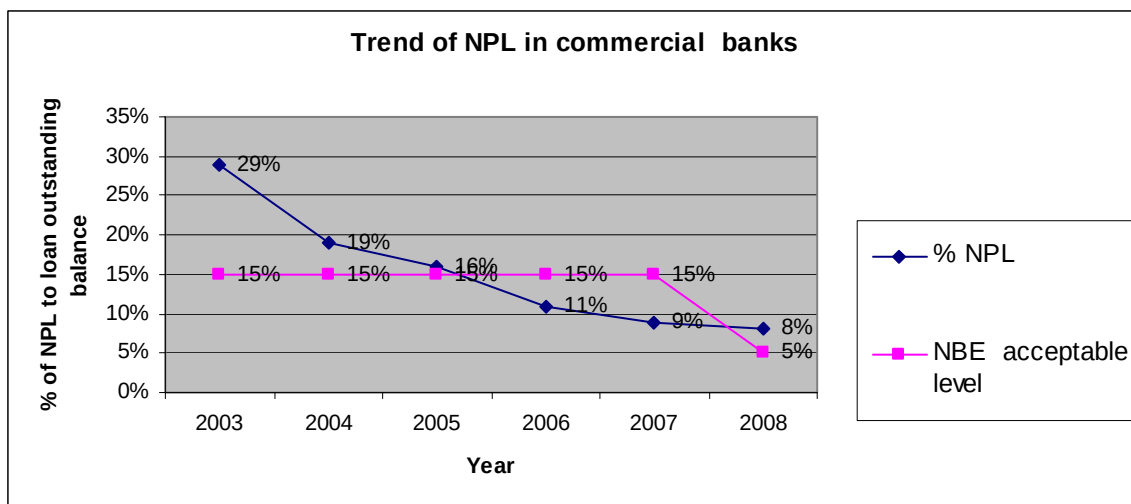
The following table shows trends of non – performing loans of the banks and acceptable/desired maximum level set by the National Bank of Ethiopia. As indicated in Table 10, NBE's acceptable maximum NPL's was 15% of the total outstanding balance of each bank up to June 30, 2007. Though the current 5% maximum desirable NPLs ratio, which

came in to effect since July 2007, not officially distributed in the form of directive to concerned banks of the country, the researcher learnt from NBE's concerned body that banks are being controlled via the 5%. To this effect also, all banks are aware of it, because NBE was responding them while each bank sent its NPLs position for each quarter, added by the respective official of NBE.

Table 10: Trend of Non-performing loans of the banks

Year	% NPL	%change	NBE acceptable/desired level
2003	29%	-	15%
2004	19%	(34%)	15%
2005	16%	(14%)	15%
2006	11%	(30%)	15%
2007	9%	(21%)	15%
2008	8%	(7%)	5%

Source: Primary data, statistical report of the banks and own computation.



Graph 8: Trend of Non-performing loans of the banks

Though, the existing level of NPL of the banks' was continuously falling and also below the acceptable level of the NBE for the period from July 2006 up to June 2007, currently is still above NBE's desired level as we can learn from the above table 10 and graph 8. The existing high proportion of NPL still poses a red light for the banks and desires a lot of effort to bring the level of NPLs to minimum level and at the same time retaining their market share in the industry.

The magnitude of non-performing loans is used to measure the loans quality portfolio of banks. Berg, Forsund, and Jansen (1992), Hughes and Mester (1993) uses non-performing loans to proxy for loan portfolio because other dimensions of service and product quality are difficult to measure.

As can be seen from the table 10, proportion of non – performing loans of the banks reached 29% of the total loan portfolio administrated by the banks in year 2003. The total proportion has been registering good reduction and reached 8% by the end of June 2008, which was 46.67% below the acceptable ceiling set by NBE.

Internal credit reviews, which are conducted by individuals' independent from the credit function, provide an important assessment of individual credits and the overall quality of the credit portfolio. Besides, such credit review function can also help evaluate the overall credit administration

process, determine the accuracy of internal risk ratings and judge whether the account officer is properly monitoring individual credits. In this regard as seen in chart 8, 83% of the banks said that they do have independent internal review policy and procedures. Nevertheless, while making discussion to conduct the interview, the researcher learnt that only two banks (i.e. 33%) had independent internal review and reporting systems and the remaining stated that the same job is done by their internal auditors and credit follow up sections, which is part and parcel of the credit department of the banks. Moreover, they were doing these activities rather on a need basis at some interval periods instead of as a regular activity.

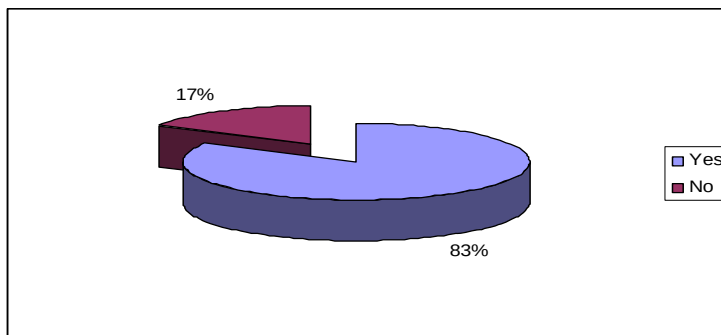


Chart 8: Existence of independent internal review

All of the above banks (i.e. 83%), which said we do have an independent internal credit review system, 67% of them said that their review are addressed to the BODs, 50% of them report to their senior management and 67% of them to control department. Moreover, they also said that the same report is prepared the NBE on demand.

As said at the beginning of the paper, the goal of credit risk management is to maintain a bank's credit risk exposure within parameters set by the board of directors and senior management. The establishment and enforcement of internal controls through independent internal review ensure that credit risk exposures do not exceed levels acceptable to the individual bank. Such system will enable bank management to monitor adherence to the established credit risk objectives. Likewise, 100% of the banks said they do have an internal review system that performs the following functions:

- Determines whether loan approvals were in line with the banks credit policy and procedures
- Determines whether loan approvals were within the limits of the bank's lending authority
- Determines documentations were satisfactory prior to the loan approved
- Determines new loans have been posted accurately.
- Examines entries and checks interest posting to various loan accounts and control ledgers and
- Confirms collaterals on a test basis

It should be noted that all the above functions are performed by internal auditors in all the banks under study.

CHAPTER IV: CONCLUSION AND RECOMMENDATION

4.1 Conclusion

Risk is the fundamental element that drives financial behavior. Without risk, the financial system would be vastly simplified. However, risk is omnipresent in the real world. In other words, risk is a fact of life in every business and if not managed properly, it would adversely affect the very existence of any business. However, the damage could be more severe in the case of banks as banking business is not only a stake of the owners but also that of depositors(public), other banks and hence, the economy as a whole. Banks, therefore, should manage the risk effectively to survive in this uncertain world. The futures of banking will undoubtedly rest on risk management system. Only those banks that have efficient risk management will survive in the market in the long run.

The analysis of secondary and primary data revealed some interesting aspects about the credit risk management practices of the commercial banks under study. The important among them are listed below:

- The tools which are used in credit risk management by the banks are taking collateral, credit limits and diversification. The banks don't use the other methods like loan selling and credit insurance

for mitigating and transferring credit risk. Because loan selling market and credit insurance sector haven't developed yet.

- The most common and frequently occurring risk in the commercial banks is credit risk.
- Lack of coordination among lending banks, failure of due diligence and independent monitoring are the major reasons given by the banks for the frequency of the credit risk occurrence in their banks.
- Only 17% of the banks had credit risk management department, which is independent from the loan origination function.
- Still there are Banks who do not have written credit risk policy.
- Only 33% of the banks said that they effectively communicate their credit risk strategy and policy through out their organization.
- More popular credit evaluation techniques like KMV's Portfolio Manager, Altman's Z score model, J.P. Morgan credit matrix, etc do not find a place in the credit evaluation tool kit of the commercial banks.
- Poor credit assessment in determining the viability of a project as a result of lack of relevant and reliable information is the reason that forces the banks to follow collateral based lending system

- All banks disclosed that NBE's centralized credit information data base was not properly serving them and the banks also lack cooperation on sharing customers' credit information.
- Presence of unfavorable economic development like drought and war in the country during the past and effect of the world economic crises are also the other reasons for credit risk in the banks.
- Subjective decision-making by credit personnel's of the banks also had contributed for the accumulation of non-performing loans and in a Weaken the credit risk management system.
- Many banks that experienced asset quality problems lacked an effective credit review process (and indeed, almost all banks had no independent with well equipped credit review function).
- As expected the larger share of the banks' income has come from loans and related activities. Hence, we can conclude that lending is the major source of profit and credit risk for banks.
- The study shows that there is a significant relationship between bank performance (in terms of profitability) and credit risk management (in terms of loan performance). Better credit risk management results in better bank performance. Thus, it is of crucial importance that banks practice prudent credit risk management and safeguarding the assets of the banks and protect the investors' interests.

- The study also reveals that banks with good or sound credit risk management policies have lower loan default ratios (bad loans).
- The study shows that there is a direct but inverse relationship between profitability (ROE, ROA) and the ratio of non-performing loans to total loans. These results are in line with the researcher's expectation and actually tallies with conventional wisdom. This has led to accept my hypothesis and conclusion that banks with higher profitability have lower non-performing loans, hence good credit risk management strategies. However, statistically the banks interest income and non-performing loans shows positive relation despite the theoretical assumption of negative relationship. The positive relationship was, however, at insignificant level. This may be attributed to the insignificant annual percentage growth shown in the Banks interest income as compared to the percentage decline of average NPLs.

4.1. Recommendation

In line with the findings obtained, the following recommendations are forwarded:

- ✓ As credit information is crucial for the development of the credit system and for addressing the problems of NPLs, banks should take the maximum caution in dissemination of credit information of borrowers.
- ✓ In order to maintain credit discipline and to enunciate credit risk management and control process, the banks are advised to establish a separate department /unit independent of the loan origination function.
- ✓ In order to be effective, credit policies must be communicated throughout the organization, implemented through appropriate procedures, monitored and periodically revised to take into account changing internal and external circumstance.
- ✓ Banks should diversify their credit portfolios by avoiding huge credit concentration on one or two sectors and /or on individuals or companies.
- ✓ Except one bank, which currently has independent risk compliance department, hence, others are also advised to implement same.

- ✓ Also, NBE made some regulations about risk management. But, credit risk management is not to be in desired level and there are some shortcomings and problems in credit risk management. Lack of sufficient data about credit risk measurement inputs is also one of these problems. Hence, its centralized credit information data base should also be reorganized to meet the requirements of banks.
- ✓ NBE should also regularly control and follow the banks financial performance and their adherence of its liquidity, capital adequacy and asset quality requirements.
- ✓ In order to reduce concentration risk the banks should incorporate geographic loan limit in their credit procedures.
- ✓ The purpose of credit review is to provide appropriate checks and balances to ensure that credits are made in accordance with bank policy and to provide an independent judgment of asset quality, uninfluenced by relationships with the borrower. Effective credit review not only helps to detect poorly underwritten credits, it also helps prevent weak credits from being granted, since credit officers are likely to be more diligent if they know their work will be subject to review. An effective credit review department and independent collateral appraisals are important protective measures, especially

to ensure that credit officers and other insiders are not colluding with borrowers.

- ✓ Specifically, as expected interest income has proven to be the main determining factors for the profitability of the banks. The negative relationship of credit risk to banks profitability may evident that the more commercial banks exposed them selves to credit risk, the more accumulation of unpaid loans, implying that these loan losses have produced lower returns to the banks. There should therefore prior concern to give due diligence in maintaining sound asset quality management, sound portfolio and risk management, prudent loan processing and selection strategies together with optimum utilization of the available financial resources and findings ways to maintain reasonably cheap source of loanable fund.
- ✓ A well-structured internal risk rating system is a good means of differentiating the degree of credit risk in the different credit exposures of a bank. This will allow more accurate determination of the overall characteristics of the credit portfolio, concentrations, problem credits, and the adequacy of loan loss reserves. Thus, all banks are encouraged to develop and utilize an internal risk rating system to manage credit risk.

- ✓ Generally, the banks under study evaluates loan proposals through the traditional tools of project financing, computing maximum permissible limits, assessing management capabilities, and prescribing a ceiling for an industry exposure. As banks move into a new high powered world of financial operations and trading, with new risks, the need is felt for more sophisticated and versatile instruments/models for risk assessment, monitoring and controlling risk exposure. It is, therefore, time that banks management should equip themselves fully to grapple with the demands of creating tools and systems capable of assessing, monitoring and controlling risk exposures in a more scientific manner.

Addis Ababa University School of graduate studies
Department of Accounting & Finance

SAHLEMICHAEL MEKONNEN

Senior Graduate Student

Date: _____

(Questionnaire to be filled by management members).

I am graduate student in AAU carrying out a research under the topic “**Credit Risk Management**” system and practice of Ethiopian Commercial Banks taking some public & private Banks as a case study.

Therefore, your precise and clear answers to these questionnaire & interviews will ended be critical for the success of this study. All information provided would be kept entirely confidential and the interviewee can't be identified and will remain anonymous. This research is undertaken as part of fulfillment for the program

Thank you for taking some minutes of your precious time.

Part I. Personal information

1. Gender ☐ Male ☐ Female
2. Position in the bank _____
3. Years of service:- _____
4. Educational level (E.g. diploma in Accounting) _____
5. Name of the Bank in which you are working _____

Part II. General issues in credit risk management

Put thick mark (✓) to indicate your answer (put more than once if necessary)

1. How long since the bank is established and began operation _____
2. Is there any risk, which the bank has faced during the last ten years period
Yes ☐ No ☐

3. If your answer for question No.2 is yes, what type(s) of risk(s) is (are)

☐ Credit risk

☐ Operational risk

☐ Liquidity risk

☐ Interest rate risk

☐ Others, please specify. _____

4. If your answer for question No.3 is credit risk, what were the main reasons?

☐ Subjective decision making by senior management of the bank

☐ Failure of due diligence and in adequate monitoring

☐ Credit concentration risk

☐ Lack of coordination among lending banks

☐ Others please specify.

5. What problem did the bank face in regard to credit risk management?

Part III. Credit risk environment

1. Do you have Credit Risk Management Department /unit?

Yes ☐

No ☐

Establishment is still going on ☐

2. Does function of your credit risk management department independent of the loan origination function?

Yes ☐

No ☐

3. Do you have a written credit risk policy, guidelines and procedures that explain objectives and principles of credit risk management process?

Yes ☐

No ☐

Establishment is still going on ☐

If yes, has it been reviewed periodically and is helpful for processing credit request?

4. If your answer for question No.3 is yes, is the policy and procedures approved by the Board of Directors?

Yes ☐

No ☐

5. If your answer for question No.4 is yes, what are the responsibilities of the Board of Directors?

- ☐ Defining the bank's overall risk tolerance in relation to credit risk.
- ☐ Ensuring the bank's overall credit risk exposure is maintained at prudent levels and consistent with the available capital
- ☐ Ensuring that top management as well as individuals responsible for credit risk management possesses sound expertise and knowledge to accomplish the risk management function
- ☐ Ensuring that the bank implements sound fundamental principles that facilitate the identification, measurement, monitoring and control of credit risk.
- ☐ Ensuring that appropriate plans and procedures for credit risk management are in place.
- ☐ Others, please specify. _____

6. What are the responsibilities of senior management in the credit risk management?

- ☐ Ensuring that credit risk management policies are embedded in the culture of the organization.
- ☐ Establish credit policies and credit administration procedures
- ☐ Ensuring effective implementation of the policies.
- ☐ Periodically reviewing the Bank's credit risk management strategies, policies and procedures
- ☐ Others, please specify. _____

7. Does the credit risk strategy and policies be effectively communicated through out the organization.

Yes ☐

No ☐

8. Do credit management policies & objectives of your bank reviewed periodically to take in to account internal and external circumstances?

Yes ☐

No ☐

If yes, what were those circumstances under which the policies and objectives were reviewed?_____

Part Iv. Administration, Measuring and monitoring process

1. What are the tools used by the bank to measure credit risk

☐ Internal rating

☐ Through the five C's of credit

☐ Through financial statement ratios

☐ Human judgments through experience

☐ Others, please specify._____

2. Do you calculate probability of default of customers?

We calculate ☐ We don't calculate ☐ our studies are going on ☐

3. Do you calculate recovery rate of a loan?

Yes ☐ No ☐

If yes, when do you calculate this (Hint: at the time loan is pass, special mention, or at all time)._____

4. In credit risk management banks use various methods to mitigate risks:

(Please rank the following based on your priorities)

Criteria	Priorities					
	1	2	3	4	5	6
Credit limits						
Taking collateral						
Diversification						
Syndicated loans						
Credit insurance						
Loan selling						

5. Does your Bank has procedures/polices in regard to credit exposure limits, which is set for

- ☐ Single Borrowers
- ☐ Groups of connected counter parties
- ☐ For particular industries or economic sectors
- ☐ Geographic regions
- ☐ Specific loan type

6. Are there written credit management policies & objectives that establish

	Yes	No
Guidelines for categorizing loan		
Geographical limits for loans		
Authority & responsibility of committees & individual lending officers		
Definition of acceptable types of loans		
Maximum maturities for various types of loans		
Minimum financial information required at the inception of credit		
Collection procedures		
Loan pricing & appraisal policy		

7. Does your bank maintain credit files of all borrowers, which contain information on?

	Yes	No
Purpose of the loan		
Loan approval documents		
planned repayment schedule		
Loan contracts& other legal document		
Insurance coverage		
Financial statement		

8. Does the bank maintain up-dated list of problem loans & list of loans reviewed indicating the date of the review & the credit rating (hint pass, special mention etc)

Yes ☐

No ☐

9. What was your NPLs ratio as at June 30 of the following years?

Year	NPLs ratio (%of total loan)	Sector where the major NPLs came from
2003		
2004		
2005		
2006		
2007		
2008		

a) Does your bank have benchmark?_____, what is the rate?_____

Part V. Control over credit risk

1. Do you have internal credit review and reporting systems, which are conducted by individual's independent from the credit function to evaluate the overall credit administration process, determine the accuracy of internal risk ratings and judge whether the credit officer(s) is (are) properly monitoring individual credits.

Yes ☐

No ☐

2. If your answer for question No.1 is yes to whom does the report addressed

☐ Board of Directors

☐ Senior management with no lending authority

☐ Control department

☐ Others, please specify._____

3. Is internal review conducted at least semi annually for problem loans and/or for loans of huge amount & at least annually for all lending areas?

Yes ☐

No ☐

If no, please specify the Bank's trend_____

4. Does the bank have an internal review system that

	Yes	No
Determines loan approvals to be in line with credit policy & procedures		
Determines loan approvals are within the limits of the bank's lending authority		
Determines documentation is satisfactory prior to disbursing loan proceeds		
Determines new loan have been posted accurately		
Examines entries& checks interest posting to various loan accounts & control ledgers		
Confirms collateral on a test basis		

5. Finally, I appreciate if you can forward any experience, comments or opinions you might have about credit risk management practice of the Ethiopian banking industry

Thank you again for taking your time in answering the questions

Sahlemichael Mekonnen
Addis Ababa- MSc program

For interview

1. Does your Bank use credit rating like that of S&P, Moody's, etc?
2. Do you have any model or technique through which you manage your credit risk?
3. If the trend of NPLS ratio was increasing, what might be the reason (s)?
4. Do you think the current credit procedures; reviewing and approval culture is helping the bank to achieve its objectives?
5. In your opinion what are the main reasons for violating covenants of loan by customers.
6. How do you rate the level of cooperation among banks in sharing credit information regarding customers?
7. Give your comment or suggestions regarding the credit risk management system of the Bank.
8. Do you have any information about the current financial crises of the world (like American giant banks)?
9. Do you think that this have an impact on your Bank?

If Yes, how _____

If No, why _____

In response to this what measures especially on credit does your bank have taken? If in processes, please specify. _____

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