Addis Ababa University

College of Business and Economics

Department of Accounting and Finance

ASSESSMEN ON CHALLENGES of FINANCING MANUFACTURING PROJECTS IN CASE OF COMMERCIAL BANK OF ETHIOPIA

PREPARED BY: YezihalemTilahun

ADVISOR: Dr. Abebaw Kassie

JULY 2019

ADDIS ABABA, ETHIOPIA

Addis Ababa University
College of Business and Economics
Department Of Accounting and Finance

ASSESSMENT OF FINANCING MANUFACTURING PROJECTS IN CASE OF COMMERCIAL BANK OF ETHIOPIA

By

YEZIHALEM TILAHUN

Advisor

ABEBAW

A thesis submitted to the Department Of Accounting and Finance of Addis Ababa University in partial fulfillment of the requirements for the Degree of Masters in accounting and finance.

JUNE2019

ADDIS ABABA, ETHIOPIA

Addis Ababa University
College of Business and Economics
Department Of Accounting and Finance

This is to certify that the thesis prepared by YezihalemTilahunentitled "*Assessment of Financing Manufacturing Projects in case of Commercial Bank of Ethiopia"*, which is submitted in partial fulfillment of the requirements for the Degree of Masters in Accounting and Finance, complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Approved by Board of Examiners:

_____ Signature_____ Date_____

Advisor

_____ Signature_____ Date_____

Internal Examiner

_____ Signature_____ Date_____

External Examiner

_____ Signature_____ Date_____

Chair of Department or Graduate Programs Coordinator

Declaration

I, the undersigned, declare that this thesis is my original work and has not been presentfor a degree in any other university and that all sources of materials used for the thesis have duly acknowledged.

Declared by: **Confirmed by Advisor:**

Name: _____ Name: _____

Signature: _____ Signature: _____

Date: _____Date: _____

ACKNOWLEDGMENTS

At the outset I want to thank the Almighty God for giving me this chance of academic advancement.

I would like to take this opportunity to forward my deepest gratitude to my advisor Dr. Abebaw Kassie who contributed a lot for my achievement.

I would also like to carry my gratitude to employees of CBE for their friendly and dedicated cooperation.

My special gratitude goes to my family for their invaluable encouragement throughout the study period.

Finally I would like to express my sincere appreciation to those individuals who forwarded their help to me.

Table of Contents

Contents **page**

ACKNOWLEDGMENTS i
List of tables iv
Abstract v
CHAPTER ONE 1
1. Introduction 1
1.1.Background 1
1.2. Statement of the problem 5
1.3 Objectives of the study 7
1.3.1 General objective 7
1.3.2 Specific objectives 7
1.4 Significance of the study 8
1.5 Scope and limitation of the study 8
1.6.Limitation of the study 9
1.7. Organization of the study 9
CHAPTER TWO 10
2. REVIEW OF RELATED LITERATURE 10
2.1 Theoretical Literature Review 10
2.1.1 General Overviews; Meaning and nature of a Project 10
2.1.2 Project finance definition 11
2.1.3. Characteristics of Project Finance 11
2.1.4.Project Appraisal 14
2.1.5. Credit Follow-Up and Portfolio Management 17
2.1.6. Credit Risk and Risk Management in Project Financing 19
2.1.6.1. Credit Risk in Project finance 19
2.1.6.2. Credit Risk Management in Project Finance 20
2.1.7. Credit Risk Management Techniques Risk Transfer 22
2.1.8. Methods of Credit Rating 24
2.2 Empirical Literature Review 27
2.2.1 Studies in other Countries 27
2.2.2 Studies in Ethiopia 28
2.3. Research gap 31

CHAPTER THREE 33
3.METHODOLOGY ..... **Error! Bookmark not defined.**
3.1 Introduction 33
3.2 Research design 33
3.3 Population and Sampling Procedure 34
3.3.1 Population of the Study 34
3.3.2 Sampling Design and Size Determination 34
3.4 Data collection 35
3.5 Validity and Reliability Tests Validity test 35
Table 3.1 Total Reliability Statistics 35
3.6Data analysis 36
3.7 Measurement of factors or variables 36
3.8 Ethical Considerations 37
CHAPTER FOUR 38
4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION 38
4.1. Introduction 38
4.2. Characteristics of the Respondents 38
4.3. Assessment of the Factors 40
4.3.1. Appraisal 40
4.3.1.1. Background information of the customer, 5C's and Basic Appraisals 40
4.3.1.2. Financial Viability 42
4.3.1.3. Technical Appraisal 43
4.3.1.4. Credit Rating 44
4.3.1.5. Project Loan Follow-Up 45
4.3.2. Risk Management Techniques, Diversification, Transfer & Retention 46
2.3.1.Project Loan Performance 47
4.4. Discussion of results 48
CHAPTER FIVE 51
5.CONCLUSIONS AND RECOMMENDATIONS 51
5.1. Conclusion 51
5.2. Recommendations 52
Reference 54
Appendices 58

List of tables

Table 3.1 Total Reliability Statistics 35
Table 4.1 Characteristics of the Respondents 39
Table 4.2 Descriptive Statistics Background information of the customer, 5C's and Basic Appraisals 41
Table 4.3 Descriptive Statistics for Financial Viability items 42
Table 4.4 Descriptive Statistics for Technical Appraisal 44
Table 4.5 Descriptive Statistics for Credit Rating items 45
Table 4.6 Descriptive Statistics for Project Loan Follow-Up 46
Table 4.7 Descriptive Statistics for Risk Management Techniques, Diversification, Transfer & Retention 47
Table 4.8 NPL ratio 48

Abstract

The study focused on the Assessment of manufacturing project financing in the case of commercial bank of Ethiopia. Cross sectional descriptive survey design was employed. The case study involved 88 respondents comprising of all the technical staff from the three sub departments of credit process center in Commercial Bank of Ethiopia, namely credit appraisal, credit follow up and credit risk management. a descriptive analysis was used to assess the loan appraisal, financial viability, technical feasibility, credit rating, credit follow-up, risk transfer, risk diversification, risk retention and loan performance. The findings indicated that loan appraisal, credit rating, financial viability, technical feasibility; credit risk management are the main influential factors in manufacturing project financing. Finally, the researcher recommended to the Bank to give a due emphasis on project loan appraisals with different approaches from traditional financing and take appropriate credit follow-up procedures after disbursement of the project loan since failing to do so will be adverse on performance. Similarly, the bank should minimize risks on this newly entered financing through employing various credit risk management techniques, including transfer, diversification and technical retention.

CHAPTER ONE

1. Introduction

1.1. Background

Banking Industry in Ethiopia

The banking industry in Ethiopia dates back to 1905 when the establishment of Bank of Abyssinia in the reign of Minilik II by the agreement made between the Government of Ethiopian and Egyptian. It was inaugurate 16 February 1906 (nbe.gov.et).

By 1931, Bank of Abyssinia legally replaced by Bank of Ethiopia shortly after Emperor Haile Selassie came to power. Bank of Ethiopia was a purely Ethiopian institution and the first indigenous bank in Africa established by an official decree on August 29, 1931 with capital of £750,000. Ethiopian government owned 60 percent of the total shares of the Bank and all transactions supervised by the Minister of Finance (nbe.gov.et).Bank of Ethiopia had operating all commercial activities of the Bank of Abyssinia and continued successfully until the Italian invasion in 1935. During the Italian invasion, the Italians established their own Banks namely Banca d'Italia, Banco di Roma, Banco di Napoli and Banca Nazionale del lavoro and started operation in the main towns of Ethiopia(nbe.gov.et).

In 1941, another foreign bank, Barclays Bank, came to Ethiopia with the British troops and organized banking services in Addis Ababa, until its withdrawal in 1943. Then on 15th April1943, the State Bank of Ethiopia commenced full operation after 8 months of preparatory activities (nbe.gov.et).In 1963, the Ethiopian Monetary and Banking law that came into effect has separated the function of commercial and central banking by creating the National Bank of Ethiopia (NBE) and Commercial Bank of Ethiopia (CBE)(nbe.gov.et).

In 1974 due to change of government and the declaration of socialism as the guiding ideology, the government nationalized all banks and merged all private banks and commercial Bank of Ethiopia by proclamation No.184 of August 2, 1980 to form the sole commercial bank in the country till the establishment of private commercial banks in 1994(nbe.gov.et).

Commercial banks have always had an active role in project The fact that commercial banks play an intermediary role between savers and investors, it contributes to the flow of savings into investment, as the backbone of economic progress, as the investments are the main supporter of the national economy. The establishment of investment projects affecting the national economy and projects always dependent upon credit facilities, so credit facilities play an important role of advancement of the national economy. The Ethiopian banking sector is the main source of credit. The commercial bank of Ethiopia is the main and important source in the financing of various economic enterprises. The most important role played by commercial banks is to fund investors or customers in general. Credit facilities are the most important functions provided by commercial banks, credit facilities is the most sensitive and dangerous issue to gain profit, so granting credit facilities to customers it should have a guarantees and warranties cover a loan amount or more, that to ensure the bank to recover his capital with profit through interest and commission (Tarawneh 2002).

Commercial banks have always had an active role in project finance transactions. Actually, modern project finance by commercial banks generally thought to have begun in the 1930s when a Dallas bank made a non-recourse loan to develop an oil and gas property. It “came of age” in the 1970s and 1980s with the successful financing of North Sea oil and gas projects. This day, beyond their traditional role in project finance transactions, commercial banks are developing new roles in providing advisory services; construction financing; intermediation to permanent long-term fixed rate financing; commodity, currency and interest rate risk management; foreign tax absorption; and working capital financing for projects throughout the world (Gatti, 2008).

The credit facilities are the most important source of financing the investors to complete their various projects. Investors depend on credit facilities to establish their projects granted by the commercial banks, Credit facilities have several forms and the most accepted one is the direct credit facilities. It is Known as " those facilities that pay for the customer in cash or credited to their account with the bank, including the current account debtor, bills discounted and loans " (Tarawneh 2002), and here it must be noted that the most important and dangerous jobs offered by banks is to grant credit facilities for achieving profit. The credit facility divided into two parts: direct banking facilities put a certain amount at the disposal of the client, and indirect banking facilities constitute a binding on the bank in the future while achieving certain

conditions, such as documentary credit. (Institute of Banking Studies, 1996), therefore the risk management banking considered one of the most important topics at the global level, especially in the sequences of financial crises, from the financial crisis in Mexico in late 1994 and early 1995 and through financial crises in Southeast Asian countries, Brazil, Russia and Turkey, and most recently in Argentina (Hashad, 2005).

In Ethiopia, as in many developing countries, the growing demand of investors for infrastructure and investment opportunities in agriculture, industry, construction, hotel and tourism, energy, water, transportation, and mining increases the requirement of more funds to be invest. In this regard, the commercial bank of Ethiopia, when established, known as the State Bank of Ethiopia, which had assumed a responsibility to provide a commercial and regulatory role. However, in 1963 the bank divided into the central bank, the Bank of Ethiopia and the Commercial Bank of Ethiopia. Eventually in 1980, the Ethiopian government decided to merge the Addis Bank with Commercial Bank of Ethiopia, making the CBE the country's sole commercial bank. Addis Bank created by the Ethiopian government from the merger of the Ethiopian operations of Banco di Napoli and Banco di Roma with the newly nationalized Addis Ababa Bank (CBE, 2009/10). Commercial Bank of Ethiopia (CBE) as the largest bank in the country should be able to finance such projects. As CBE is a State bank, its plan be aligned with the country's five years Growth and Transformation Plan (2010/11-2014/2015) that necessitates new investment opportunities in the different sectors in general and in the manufacturing sectors in particular (Mulugeta,2012).

Ministry of Finance and Economic Development has classified manufacturing sector in to large, Medium Scale, and Small Scale. These have also subsectors such as Textile and Garment, Agro-Processing, Metal and Metal Products, Leather and Leather Products and others.

The manufacturing sector began to flourish in our country with the establishment of central government, formation of cities, and development of infrastructures like railway, roads, and beginning of trade relation with foreign nations that create an opportunity for entering of technology (Mulugeta, 2013)

The manufacturing sector development in Ethiopia dates backs to the 1920s, but it has remained weak due to various challenges. Cottage and handicraft industries were dominant in the early 1950s, which manufactures subsistence goods and products such as clothes, tools, and leather

goods. After the Second World War, some modern industries were introduced that has contributed to the development of the national economy (Mulugeta, 2013).

Development, ownership and marketing strategy of manufacturing sector in Ethiopia has been different depending on political ideologies and development policy of each government.Such as import substitution and private sector led (from early 1950s to 1974, the Imperial regime); the import substitution and state owned (from 1974 to 1991, the Dergue regime), and the export oriented and private sector led (since 1991, the Ethiopian People's Revolutionary Democratic Front, (EPRDF)) (Mulugeta 2013).

Ethiopian Industrial contribution to the national GDP has been about 5% in the periods 2000 to2010. After change of the DergRegime, the economic reform and privatization of state owned enterprises have attracted foreign investment to the industrial sector. Under Ethiopia's Growth & Transformation Plan (GTP), which ends by the year 2014/15, the country has envisioned for industrial development by boosting the manufacturing sector.

In the above background, a few questions arise. Does the CBE have sufficient expertise as to how to lend safely to Manufacturing projects? Is the mechanism to identify and measure risks during due diligence in the appraisal process in place? The absence of a straightforward answer to these questions is itself quite disconcerting. Ethiopian bankers are on a learning curve as far as the understanding the mechanics of manufacturing financing is concerned (Argaw, 2016). For that matter, so are the project promoters, policy makers and regulator.

CBE's credit policy is purely align with financing projects in line with government priority area. Those major areas of the CBE's financing include sectors like Commercial Agriculture, Agro-processing and Manufacturing Industry. Which identified as crucial economic sectors to bring fast and sustainable develop within the country (CBE, 2010/11). The lack of expertise resulting in poor confidence level of lenders contributes in impending the growth of manufacturing. This call for a fresh look at the way projects being appraised by the bankers. Most of this investment in manufacturing structured as project financing which deviates from traditional corporate financing both in terms of financing structure and from risk sharing. It seems that appraisal, primarily based on the strength of the promoter, financial viability and the security is not able to capture the entire range of financing manufacturing (Ibid).

The present research focuses on elaborating and describing the general, financial and technical issues in appraisal of manufacturing projects from the perspective of Commercial Bank of Ethiopia. Thereafter, the researcher examines the credit appraisal mechanism, credit follow up, credit risk management that CBEs use, and statistically examines the attitude of credit officers towards relative importance of these variables under each factor used in manufacturing project financing.

1.2. Statement of the problem

The growth rate of manufacturing (large and medium scale and micro and small-scale manufacturing) has been consistent across the years. Despite of the government effort to increase the share of industry by policy to get priorities credit and foreign currency, it has not shown satisfactory improvement. The laggardness of manufacturing sector may be due to many factors like institutional, policy, labor and resource factors. As a result measuring these factors is very critical for measuring performance of manufacturing sector (Tseganesh, 2012).

In Ethiopia since the last two decades, banking sector has been playing important role in Economic development of the country. In Ethiopia, financial intermediation is heavily depending on the Banks since there is no secondary market as such. In fact, the banking sector in Ethiopia is the glue that holds the country's economy (Tseganesh, 2012). Shak and Bayush (2017) revealed that Ethiopian commercial banks take into account many considerations as a factor of credit management, which helps them to minimize the risk of default that results in financial distress and bankruptcy. This is due to the reason that while banks providing credit they are expose to risk of interest and non-repayment, which need to be manage effectively to acquire the required level of loan growth and performance. They have also focus on specific projects on much investment is made which has great importance on the development, due to defective feasibility study of some project that are performed and presented by project promoters makes CBE's credit appraisal process challenged (Tesfaye, 2015). Although proper evaluation and appraisal process will help the bank to identify the viability and feasibility of the project, to screen out the negative and positive aspects of the project promoter that required project finance and efficient allocation of scarce resources the analysis of the bank face difficulties within the domain of the proper project credit appraisal.

In addition to the above, the essence of project finance is the analysis of project risks including, among others, construction risk, operational risk, market risk (to both input and output of the project), regulatory risk, insurance risk and currency risk. These risks often contractually allocated to the parties best able to manage through construction guaranties, power purchase agreements, and other types of output contracts, fuel and raw material supply agreements, transportation contract, indemnification and insurance policies and other contractual agreements. However, project financing in all sectors, commercial banks are exposed to significant market risk as the debt generally issued with recourse or, in some cases, with limited recourse to project sponsor .i.e. the debt often is primarily secured by the project's assets and cash flows, not by the assets or general credit of the project sponsors (Henry,2003).

Ethiopian banks in general and CBE in particular are on a learning curve in so far as the understanding the mechanics of manufacturing financing is concerned. For that matter, so are the project promoters, policy makers and regulator. The lack of expertise resulting in poor confidence level of lenders contributes in impending the growth of manufacturing. These calls for a fresh look at the way manufacturing projects are being appraise by the CBE.

Appraising officers and experts in commercial banks, trained by decades of security backed lending, need to understand the sudden change of financing structure of projects from corporate finance to project finance. This change in structure needs a better appraisal methodology that also focuses on understanding of various project parties involved in project structure and numerous contracts and agreements. A study made by Argaw, (2016) and Bayew (2017) shows a positive correlation between basic loan appraisal and project loan performance. This implies, proper appraisal of the project loan before financing is very vital for the good performance of the project loan.

Because of projects in manufacturing being, green field in nature, risk identification, analysis and mitigation assumes significance. More importantly, the bankers need to reassess the credit rating mechanism, which used for rating projects, deciding on the pricing of loans and asset classification and capital adequacy norms. It is an intuition that standard credit scoring models which are just an extension of models used in corporate finance and may lead to inappropriate rating leading to inappropriate pricing decisions. It is necessary that the banks should have the

required expertise for appraising technical feasibility, financial viability and bankability of projects, with particular reference to the risk analysis. Banks are also required to ensure that the individual components of financing and returns on the project are well defined and assessed. Various researchers have been carried out so far to assess the credit risk management focus on specific performance indicators for banks but there is no adequate researches/findings that asses the factors that influence manufacturing project financing at CBE. There for this research paper aimedto identify the factors related to project financing by CBE.

Some of the basic research questions that addressed during the study are the following:

1. What are theappraisal processesofmanufacturing project financing in the commercial bank of Ethiopia?
2. Whatare the project credit rating criteria of manufacturing project financing in the commercial bank of Ethiopia?
3. How does credit follow-up exercised for manufacturing project financing in the commercial bank of Ethiopia?
4. What are the credit risk management techniquesfor manufacturing project finance in the commercial bank of Ethiopia?

1.3 Objectives of the study

1.3.1 General objective

The general objective of this study is to assess manufacturing project financing by commercial bank of Ethiopia.

1.3.2 Specific objectives

The specific objectives of the study include:

1. To assess the credit processing, analysis and appraisal of the project and the performance of project financing in the Commercial Bank of Ethiopia.
2. To assess the credit rating mechanism that CBE applies for measurement of project financing.

3. To assess the project loan follow-up and monitoring practices and the performance of the project financing in Commercial Bank of Ethiopia.
4. To describe credit risk management techniques of project financing, as explained in terms of risk transfer, diversification and retention in the context of Commercial Bank of Ethiopia and its impact on the credit performance.

1.4 Significance of the study

This study expected to assist existing as well as new commercial banks established in the future, to perform effective lending practices of project loans and develop workable guidelines. Therefore, the paper play its role in minimizing the risks of nonperforming loans in the banks and ultimately improve performance of Commercial Banks in Ethiopia. Moreover, the paper also adds knowledge for credit appraisal, credit follow up and credit risk officials by identifying the solutions towards project loan financing and management problems after wards.

The research result helps to understand and to make known the problems of the manufacturing project financing for Managements of the CBE to take corrective actions. In addition to this, other interested parties, like government, corporate customers and other who may have concern in alleviating the difficulties of project financing.

1.5 Scope and limitation of the study

Project financing is a broader concept in principle. It includes big public infrastructure projects, social projects intended in improving lively hoods and profit oriented commercial projects. Also understood that projects can be in the form of initial startup, expansion and renovations. This paper is however delimit to the manufacturing projects, which financed in the discretion of the Commercial Bank of Ethiopia with a profit target. For the research purpose only the start up or new project financing are considered and no expansion as well as renovation project financing are takes as a sample.

The research is therefore limited in the area of manufacturing project financing focused on challenges and prospects. In this regard, the respondents for this research are staff members of credit appraisal and credit management departments at CBE's H.O – Credit CPC (Central

Processing Center) by focusing on the credit performer's perception who directly involve in project financing from the inception to the end of the project life cycle that means only from the bank side. This is due to the perception of the credit experts' action working on project finance significantly influenced by their perception. Hence, it can also affect the project performance of the loan in project financing. The CPC is consists of Business and Corporate Customers relationship management, Commercial customers relationship management and credit appraisal. This study will be incorporate (limited to) only at head office (Addis Ababa) since big project financing request are being handle at CPC due to presence of better expertise and loan approving limit.

1.6.Limitation of the study

It would have been the researcher interest to evaluate and assess all the commercial banks in Ethiopia. However, the government owned financial giant commercial bank of Ethiopia included in the study due to its earliest establishment and with higher loan portfolio. It was also difficult to get specific loan exposures to few manufacturing projects.

1.7. Organization of the study

This study have five chapters. The first chapter consists of the introduction that includes; background of the study, statement of the problem associated with questions, objective of the study, significance of the study, scope of the study, and organization of the study. The second chapter provides theoretical, empirical literatures review and the conceptual framework. The third chapter covers research methodology, chapter four include the data analysis, interpretation and summary of the chapter. Finally, chapter five provide conclusions, and recommendation.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

In this chapter, a critical review of related literature carried out. The chapter discusses both the theoretical and empirical reviews in accordance with the objectives and factors considered in the study.

2.1 Theoretical Literature Review

2.1.1 General Overviews; Meaning and nature of a Project

A project is a temporary endeavor undertaken to create a unique product, service or result. The temporary nature of projects indicates that a project has a definite beginning and end. The end reached when the project's objectives have been achieve, or when the projects objectives will not or cannot be met, or when the need for the project is no longer exists, (Gatti2008).

A project may also be terminated if the client (customer sponsor, or champion) wishes to terminate the project. Temporary does not necessarily mean the duration of the project is short. It refers to the project's engagement and its longevity. Temporary does not typically apply to the product, service, or result created by the project; most projects are undertaken to create lasting outcome. For example, a project to build a national monument will create a result expected to last for centuries. Project can also have social, economic, and environmental impacts that far outlive the projects themselves. In every case, however, the duration of project is finite; projects are not ongoing efforts (Cooper et al., 2005).

Every project creates a unique product, service, or result. The outcome of the project may be tangible or intangible. Although repetitive elements may be present in some project deliverables and activities, this repletion does not change the fundamental, but unique characteristics of the project work. For example, office buildings can be constructed with same of similar materials and by the same of different teams. However, each building project remains unique with a

different location, different design, different circumstances and situations, different stakeholders, and so on (Ibid).

2.1.2 Project finance definition

Different scholars have defined project and project financing in different ways. Some of the definitions given by three scholars:

Project finance is the raising of funds to finance an economically separable capital investment project in which the providers of the funds look primarily to cash flow from the project as the source of funds to service their loans and provide the return of and a return on the equity invested in the project, (Finnerty, 1996,p.2.)

Project finance is the financing of a particular economic unit in which a lender is satisfied to look initially to the cash flow and earnings of that economic unit as the source of funds from which a loan will be repaid and the assets of the economic unit as collateral for the loan, (Nevitt and Fabozzi,2000,p.1).

Project finance involves the creation of a largely independent project company financed with non- recourse debt (and equity from one or more sponsors) for financing a single purpose, industrial asset, (Esty, 2004, p.25).

Of these definitions, the third definition is a little more than other two. The same author further stated that project financing means arranging funds for the implementing a new project or undertaking expansion, diversification, modernization and/or rehabilitation of the existing projects.

In project finance the project is appraised by some competent agency while taking into consideration of the technical feasibility, managerial competency, financial and commercial viability and environmental, economic and political viability.

2.1.3. Characteristics of Project Finance

According to Buljevich& Park, 1999 the unique attributes of project financing can be summarized by the following points:

I. Cash flows of the project must be legally isolated by other activities (ring-fence). It usually is, but not necessarily, realized through the establishment of a corporate vehicle (special purpose vehicle-SPV) to isolate assets in a separate entity;
II. Financing decisions are based on the cash flows that the project is expected to generate. The project is financed as a stand-alone entity rather than as part of a corporate balance sheet;
III. Expected cash flows must be sufficient to meet debt service (appropriate cover ratios are identified);
IV. The risks of the project, that are reflected in a more or less variability of costs and revenues of the project, must be identified, analyzed, evaluated, and distributed among various parties involved in the project. The risk sharing should be realized through a complex system of contracts which reflects a process of negotiation between different stakeholders.
V. Projects usually have two main distinct phases (construction and operation) characterized by different risks and cash flows structures.

As discussed by Esty, 2004, the general characteristics of project financing also can be described by the following nine terms;

Capital-intensive: Project financings tend to be large-scale projects that require a great deal of debt and equity capital, from Tens of millions to billions of dollars. Infrastructure and other big investment projects tend to fill this category.

Highly leveraged: These transactions tend to be highly leveraged with debt accounting for usually 65% to 80% of capital in relatively normal cases.

Long term: The tenor for project financings can easily reach 10 to 20 years.

Independent entity with a finite life: Similar to the ancient voyage-to-voyage financings, contemporary project financings frequently rely on a newly established legal entity, known as the project company, which has the sole purpose of executing the project and which has a finite life "so it cannot outlive its original purpose." In many cases, the clearly defined conclusion of the project is the transfer of the project assets.

Non-recourse or limited recourse financing: The project company is the borrower. Since these newly formed entities do not have their own credit or operating histories, it is necessary for

lenders to focus on the specific project's cash flows. That is, "the financing is not primarily dependent on the credit support of the sponsors or the value of the physical assets involved." Thus, it takes an entirely different credit evaluation or investment decision process to determine the potential risks and rewards of a project financing as opposed to a corporate financing. In the former, lenders "place a substantial degree of reliance on the performance of the project itself. As a result, they will concern themselves closely with the feasibility of the project and its sensitivity to the impact of potentially adverse factors." Lenders must work with engineers to determine the technical and economic feasibility of the project.

Controlled dividend policy: To support a borrower without a credit history in a highlyleveraged project with significant debt service obligations, lenders demand receiving cash flows from the project as they generated. This aspect of project finance recalls the Devon silver mine example, where the merchant bank had complete access to the mines output for one year. In more modern major corporate finance parlance, the project has a strictly controlled dividend policy, though there are exceptions because the dividends subordinated to the loan payments. The project's income goes to servicing the debt, covering operating expenses and generating a return on the investors' equity. This arrangement usually contractually binding. Thus, the reinvestment decision removed from management's hands.

Many participants: These transactions frequently demand the participation of numerous participants. It is not rare to find over ten parties playing major roles in implementing the project. The different roles played by participants described in the section below.

Allocated risk: Because many risks are present in such transactions, often the crucial element required to make the project go forward is the proper allocation of risk. This allocation achieved and codified in the contractual arrangements between the project company and the other participants. The goal of this process is to match risks and corresponding returns to the parties most capable of successfully managing them. For example, fixed-price, turnkey contracts for construction, which typically include severe penalties for delays put the construction, risk on the contractor instead on the Project Company or lenders.

Costly: Raising capital through project finance is generally more costly than through typical corporate finance avenues. The greater need for information, monitoring and contractual agreements increases the transaction costs. Furthermore, the highly specific nature of the financial structures also entails higher costs and can reduce the liquidity of the project's debt.

Margins for project financings also often include premiums for country and political risks since so many of the projects are in relatively high risk countries. On the other hand, the cost of political risk insurance factored into overall costs.

2.1.4. Project Appraisal

Credit risk management is a process that involves a series of steps; identifying and analyzing loss exposures through the appraisal technique, measuring loss exposures, selecting the technique or combination of techniques to be used to handle each exposure, implementing the techniques chosen and monitoring the decisions made and making appropriate changes. It is also the support, control systems and other practices necessary to manage the outstanding risk assets, normal repayment and to monitor business risk.

The appraisal technique involves credit initiation, evaluation, negotiation, and approval of facility. As an important step in initiation process, credit officer should visit the potential customer to gather information on client's business, mode of operation, management, and financial situation. Banks should base their credit analysis on the five C's principals of lending. The 5Cs as discussed by Pandey, (1997), Van Horne, (1998), Sinkey, (1998) and Allyn Bacon, (1996) include the customer's character as determined by their honesty and ethical reputation. It also refers to the capacity of the client as determined by their cash flows, and capital as determined by the client's real net worth. The collateral pledged for the credit facility is another aspect, and the condition, that is the vulnerability of economic fluctuations. In credit evaluation, a consistent and rating scheme to all investment opportunities should be apply if credit decisions are to be made in consistent manner, which results in aggregate reporting of risk exposure Santomero, (1996).

Several authors (Santomero (1996), Bannet (1984) and Harrison (1996) agree that credit scoring should be used in the appraisal process to predict the credit worthiness of would be borrowers. However, external factors like competition, economic cycle, natural disasters, technological advances, regulatory changes, industry changes, demographic factors affect the credit evaluation process and this at times results in problem loans Wayne, (1998). Project appraisal is an important function in loan management. It refers to the critical evaluation of proposals in the

aspect of various types of risks and returns. In the past the appraisal system was not effective because bankers used to lend on the basis of the securities offered by the borrower. But according to changing environment and situation, the banker's attitude and style of lending have been changed. The competition is in increasing way but a prudent hanker cannot accept any investment proposal unless it is convinced that the project is sound. So for this purpose they have to appraise the proposals in good way. The methods and techniques to appraise proposals depend upon the nature of banks. But some general methods and mechanisms of appraisal for loan proposal are as follows:

(1) Technical appraisal:

Technical appraisal is one of the methods and mechanisms for appraisals of loan proposal by the bank. Under this loan approval process in bank, the following requirements should be appraised, Location of the project and infrastructure.

i. Legal aspects – law banned or incentive given by the government.
ii. Technology – quality, availability, price, stability for project.
iii. Plant & equipment efficiency – suitability, price, efficiency, repairs & maintenance etc.
iv. Investment in research and development.
v. Production process.
vi. Technical competence of the technicians.

(2) Commercial appraisal:

Commercial appraisal is another methods and mechanisms appraisal of loan proposal by the bank. The capability of the borrower depends upon the sale of product at his estimated price. Under this loan approval process in bank, so bank should consider the nature of products, style, desirability, quality, consumer's demand, substitutes, competition, advantages, market share, ability to expand, distribution system, advertising and promotional activities, socio-political factors, government regulations & economic conditions. Under commercial feasibility, the bank should consider the following elements:

i. Sources and supply of raw materials
ii. Quality and types of customers
iii. Credit terms and policies
iv. Aging schedule

v. Anticipated economic condition

vi. Market Risk

(3) Managerial appraisal:

Managerial appraisal is one of the methods and mechanisms for appraisals of loan proposal by the bank. It is the appraisal of management which plays a deciding role to forge ahead of competitors. Under this loan approval process in bank, bank evaluates the following:

i. Quality of managers

ii. Performance: growth, consistency, flexibility, adaptability, judgment, outstanding performance, relations with staff etc.

iii. Philosophy: aggressive, conservative, public minded, secretive etc.

iv. Capability: Managerial, technical, financial, planning, marketing etc.

(4) Financial appraisal:

Credit risk rating, According to Treacy& Carey, (2000), in large U.S. Banks and development finance institutions are becoming increasingly important in credit risk management. They argued that credit rating summarizes the risk of loss due to failure by a given borrower to pay as promised. However, each development finance institutions' rating systems differ significantly from the other both in architecture and operational design as well as in the uses to which ratings are put. One reason for these differences is that, ratings are assigned by bank personnel and are usually not revealed to outsiders. For large development banks, whose borrowers may number in the tens of thousands, internal ratings are an essential ingredient in effective credit risk management. In short, risk ratings are the primary summary indicator of risk for banks' individual credit exposures and risk rating are provided mainly by risk rating agencies.

Credit rating agencies gather and analyze all sorts of pertinent financial and other information, and then use it to provide a rating of the intrinsic value or quality of a security as a convenient way for investors to judge quality and make investment decisions Hickman, (1996). Hickman showed that during the twentieth century in the United States, ratings provided investors with information that reflected the likelihood that an issue would go into default and guidance as to the loss consequences of such events. How well did ratings agencies perform in assessing probabilities of defaults in the state and local debt markets is the question that all stake holders always seek an explanation. Hempel, (1971) studied 264 agency-rated issues that defaulted in

the great depression era in the United States and came up with the finding that although these issues were small in numbers compared to the total defaults of that era, they did represent more than three-fourths of the dollar value of defaulted state and local debt.

However, Partnoy, (1999) takes a cynical view of the use of rating agencies. They argue with some vehemence that the agencies are in the business of selling regulatory licenses. This view is less a critique of the agencies than it is of financial regulatory authorities that adopt and use agency ratings in their regulatory procedures. On the other hand, Firdson, (1999), a proponent of the newer view of the independent rating agencies, argues that by prohibiting the asset managers from investing in or retaining bonds of less than a specified rating, asset-owners and asset-guarantors can significantly limit their risk through use of ratings, even though they lack the expertise to quantify that risk themselves. According to Fridson, it is hardly a perfect system, but it is a method of constraining and disciplining the behavior of asset managers and issuers at a low monitoring cost.

2.1.5. Credit Follow-Up and Portfolio Management

According to Robinson (1962) and Anjichi (1994), many of the agonies and frustrations of slow and distresses credits can be avoided by good loan supervision. Supervision helps keeping a good loan good. It may be visiting the borrowers' premises to investigate the general state of affairs and maintenance of plant and equipment. Inadequate maintenance is often an early sign of It is clear that effective credit monitoring involves looking into various operations of the company including operations of the loan, checking whether the company is properly managed, and the environment in which the company is carrying out its business is satisfactory.

In this connection, Portfolio management is also an important aspect of credit assessment process. It is relationship management process that focuses on measuring and containing individual credit risk within strategic guidelines. It involves the administration of the credit facility to ensure orderly and full payment, monitoring of the credit facilities as well as the workout strategies in situations when the credit actually deteriorates.

The Success of Banks depends on its ability to adapt to changing circumstances (Kagwa, 2003). Institutions should have a culture of handling funds that must be repaid. They should be prepared to seize the client collateral if necessary (Garber, 1997). The organization should have a system of tracking late payments or real losses, deploy staff or collection agencies to collect these loans in order to maximize return of resources. The purpose of portfolio management is to assess the

likelihood that the credit is repaid, as well as whether or not the classifications of the loan proposed by the bank is adequate. Other considerations are the quality of the collateral held and the ability of the borrower's business to generate necessary cash (Greuning et al, 1999) Portfolio administration involves the aspects of asset classification. Asset classification is a process whereby an asset is assigned a credit risk grade that is determined by the likelihood that the debt obligation was serviced and the debt liquidated according to contract terms. In general, all assets for which a bank is taking risk should be classified. Assets are classified at the time of origination and then reviewed and reclassified as necessary (according to the degree of risk) a few times per year.

The review should consider the loan service repayment, borrower's financial conditions, economic friends and changes in respective markets and the performance (Greuning et al, 1999). Credit administration involves the management of the financial situations, covenants, collateral, and repayments as well as credit review. It focuses on ensuring that creditworthiness of the clients earlier on established is maintained. Once a loan is on the books, it must be managed actively to ensure that it does not deteriorates and that it is repaid. Good loan management can rarely overcome poor judgment, but many good credits become problem loans because lending officials did not heed the warning that arose over life of the loan.

The credit administration process involves on- site visit, regular contact as well as checking for compliance with covenants in the loan agreements. Borrowers who change their behaviors (moral covenant) and those who do not supply timely and accurate information (asymmetric information), presents the most difficult monitoring challenge (Sinkey,1998). During administration, the credit officer can detect early warning signals of non-compliance or deterioration. These signals help to maximize the effects of corrective actions and to minimize the potential loss of the bank. Some of the signals may include lower deposits, persistent failure to keep appointments, persistent rolling over credits, and requests for short term facilities on top of current facilities as well as requests for increments without retiring the previous facility.

2.1.6. Credit Risk and Risk Management in Project Financing

2.1.6.1. Credit Risk in Project finance

Lending to a project exposes banks to credit risk. It is the typical risk in lending business. It refers to the borrower's ability to service its debt. The borrower is usually a special purpose vehicle (SPV) that is not permitted to perform any function other than developing, owning, and operating the project. Such credit risk exposure involves every kind of loans in project finance. Credit risk is most simply defined as the potential that a bank borrower will fail to meet its obligations in accordance with agreed terms. In a limited meaning of the "credit risk", it affects the extreme case of insolvency, namely the fact that debtor does not meet his payments. Credit risk definition can be enlarged including the reduction of creditworthiness. Even this reduction does not automatically translate into insolvency; however, it could increase the probability of insolvency. The payment may ultimately be made, but credit risk is a concern because the delay in receiving payments is costly. In a wider perspective, credit risk refers to the likelihood that the borrower will default or fail to make timely payments of principal and interest. Credit risk should be measured not with reference to a single binomial distribution ("default" vs. "no default") but with reference to a distribution of different levels of insolvency probability, in which the insolvency event is only the extreme event that could occur in the future. Generally, the loan agreement in the project finance sets some possible "events of default" that allow lenders to take action against the project company. Once an event of default has occurred, the project company is no longer able to manage the project without lender involvement. These events do not put the project in default automatically. A decision has to be made by the lender after the event of default has occurred. As correctly argued by Yescombe (2002, p. 319) typical events of default could be the followings: -

- the project company fails to make any payment under the financing documentation on its due date; the project company does not fulfill any of its covenants or undertakings under the finance documentation;
- there is any change in the ownership or control of the project company prior to an agreed date; - the project company is subject to a court judgment for more than a certain amount;
- insufficient funding remains to complete construction of the project;

- any permit or license is revoked;
- the project is abandoned;
- Any party defaults under a project contract. Over the past, banks have invested many resources in modeling the credit risk arising from their loans to project finance business.

The supervisory regulation aims to strengthen the soundness and stability of banks by adopting more risk sensitive capital requirements. It imposes a strict control over the bank lending policies. A significant innovation is the greater use of risk assessments provided by bank's internal rating systems. It has promoted the adoption of stronger risk management practices by banks. These advanced risk management practices aim to produce quantified measures of risk and economic capital, allowing banks to use internal credit risk models for regulatory capital purposes.

2.1.6.2. Credit Risk Management in Project Finance

Due to its unique financial characteristic, the credit risk assessment in project finance lending is particularly complex than other ordinary credit. Basically, the credit risk of project finance loans is affected by the timing and uncertainty of project cash flows. The main components of credit risk (probability of default, loss given default, and exposure at default) are closely connected with the nature and characteristics of the project, the economic sector of the project, the guarantees afforded to creditors, the potential alternative use of the assets that belong to the special purpose vehicle.

Project finance loans are structured in such a way that repayment of the loan depends principally on the cash flow generated by the asset rather than the credit quality of the borrower (Basle Committee on Banking Supervision, 2001). For this reason loans possess unique loss distribution and risk characteristics. Such credit exposures are treated separately from the corporate exposure. Basle Committee on Banking Supervision has proposed a specific regulatory treatment for these exposures (specialized lending). In contrast with corporate and other working capital loan exposures, there is no common industry standard for the estimation of credit risk in project finance lending.

Every project has unique characteristics, unique financing schemes and different risk sharing mechanisms that allocate risks among different parties involved (Esty, 2004). In addition, to calculate rigorous probability of defaults is necessary to base such calculations on valuable

databases. Nevertheless, historical loan performance data for project finance exposures are scarce. Furthermore, defaults in project finance are quite rare because the failure of the project company generally involves a debt restructuring or a takeover by a new project company. Project finance exposures are characterized by few time series of defaults and losses. So, it is unlikely that a bank may rely on historic estimates of probability of defaults (PD) and loss given defaults (LGD) for the portfolio of project finance loans. Project finance operations usually have a complex structure. It implies that project finance rating is primarily based on future cash flows expectations rather than on historical data.

The project finance has two sources of funds: debt and equity. Debt capital is usually provided by commercial banks and international investment banks. Equity capital is usually provided by project promoters or sponsors and outside equity investors, such as commercial banks, investment funds specializing in project finance equity, venture capital and private equity vehicles. Banks are the largest providers of debt capital in project finance and the financial structure of the project (leverage ratio) is very important in convincing bankers to provide capital. It implies that banks must pay particular attention to the evaluation of the credit risk of the project. The failure of the project, and the subsequent borrowers' insolvency, may damage lenders heavily. Project finance is characterized by high leverage financing scheme. It is possible to achieve much higher leverage ratios than promoters could sustain on their own balance sheets. In addition, project finance loans on average have a longer term than corporate loans.

The traditional debt-based financing model is the bank loan. It is the traditional way to raise longterm funding for long-term projects. A new debt-based financing model is the issue of project bonds (Scannella, 2012). Using financial techniques and financial market conventions for project appraisal, design, and financial structure, project bonds might represent an innovative way to perform the function of financial intermediation instrument and long-term project financing instrument. The assessment of economic and financial feasibility of the project made by the banks should primarily evaluate the expected economic return of the project on medium and long term, rather than focusing on collaterals provided by sponsors or third parties. To assess the "bankability" of a project is necessary to carry out a feasibility study. A bank, before starting the assessment process, has to evaluate the existence of key (base) elements to participate in a project finance. Banks have to differentiate bankable projects from not bankable ones. Preliminary test of project practicability (viability test) is the first step for banks. The project

should be technically feasible and economically viable (Esty, 2003; Fabozzi&Nevitt, 2000; Yescombe, 2002).

A "static" analysis of the project focuses on assets characteristics, tangibility and marketability of corporate assets, as well as firm's solvency ratios. In the standard corporate lending the lender has security over tangible assets. A "dynamic" analysis is necessary in funding project finance because lender's primary security is the future revenue stream of the project. It is a different type of analysis that focuses on the expected economic and financial returns associated with the project. In particular, a lender should deeply evaluate the degree of innovation of the project, the professional skills of people who will execute and manage the project, the capabilities, competences, and knowledge of firms involved in the project, the reaction of the target market to the introduction of new services and products. The implementation of a dynamic perspective of analysis of projects to be finance implies a "paradigm shift" in the bank lending assessment process (standard corporate lending vs. project finance lending).

2.1.7. Credit Risk Management Techniques Risk Transfer

According to the International Association of Insurance Supervisors (2003), Financial Services Authority (2002), and Rule (2001b) who examined credit risk transfer between banks and nonbank financial sectors, including the insurance sector argue that banks are shifting credit risks from their balance sheets to insurance companies, amongst others, and insurance companies are issuing catastrophe bonds that are being sold to institutional investors such as investment funds and other end-investors. Although risk transfer markets have the potential to enhance financial stability by diffusing exposures, there are concerns that they may equally lead to more concentrated and non-transparent risks, Andersen, (2001). This was supported by Häusler, (2004) who discusses how the blurring of boundaries between insurance and other financial institutions implies heightened importance of insurers for financial stability. It is also in line with the work of Podpiera, (2003) who explored the potential for the insurance sector to affect the vulnerability of the financial system, focusing on the banking-type activities that life insurance companies have increasingly taken on, as well as risks stemming from the possible failure of a large reinsurer. To achieve the risk transfer, use of derivatives has gained significant importance

in the financial sector as standard and Poor's (2003) and Fitch Ratings, (2004) provide a review of the factors underlying banks' use of credit derivatives.

Rule, (2001) pointed out that that banks and insurance companies are exposed to various credit, market and insurance risks in the course of their business, and they can manage these risks in three ways: Arrange for another entity to take on the risk at the outset. For example, a bank might arrange a bond issue for a corporate customer rather than lending itself; or an insurance company might arrange for a customer to 'self-insure' by establishing a captive insurance company rather than buy insurance cover.

They can also retain risks on their balance sheets and seek to control them through careful monitoring, pricing and diversification and hold the risk only temporarily before selling it into a secondary market, hedging it with another offsetting transaction or repackaging it in order to sell/hedge it. In principle, firms can use risk-transfer methods to disperse risks making them less vulnerable to particular regional, sectoral or market shocks.

Banks have tended to take on a bundle of risks attached to term lending but more crucial among them all is the credit risk since it affects borrower's willingness and ability to pay.

Risk Diversification

Brannan, (2000), argued that diversification is the primary tool for lenders to control borrower risk, and highlighted the fact that risks arise well before default occurs and warned against the construction of "bullet-proof" portfolios that can under perform. Jose Lopez, (2000), supported this by discussing that there was value in diversification of credit portfolios and pointed out how this value can be measured. However, there are several factors that contribute to the degree of diversification for a credit portfolio and because these factors vary over time, the measurement of credit diversification is particularly challenging. Wilson, (1998), brought out the benefits of diversification in credit portfolios. The finding indicate that there is a significant difference in performance of portfolios concentrated in one region from that diversified to different economies. Therefore, Wilson's argument focuses on advocating for diversification of loan portfolios across nations where the benefits are much stronger than they are when diversification occurs across sectors in a given economy. However, the above argument is criticized by Campbell et al. (2001), who discussed that the degree of diversification for a credit portfolio will depend on several other factors like; Size of the portfolio, and issues of maturity variation.

Risk Retention

According to Sanderson, (1991), today's business environment demands lean, cost efficient operations with no waste. As an important part of this process, risk managers seek to reduce the economic impact of risk on their organizations through opting for greater levels of risk retention. Risk retention analysis will help you decide how much risk you are able to retain which could be accomplished through risk rating models Amato et al, (2004). Gordy's, (2003) work shows that, knowing the right amount of risk to retain promotes financial efficiency. Risk retention analysis provides you with answers to the following question; how much risk is there in my current loan structure? This provides you with a risk retention capacity for your organization or financial institution. Consideration is given to a number of factors in order to derive an estimate of the ability to retain risk. These include; Historical financial information from reports & accounts, future financial projections for the organization, market conditions and economic trends. As a

2.1.8. Methods of Credit Rating

1. through the cycle

In this method of credit rating, the condition of the obligor and/or position of exposure are assessed assuming the *worst point in the business cycle*. There may be a strong element of subjectivity on the evaluators‟ part while grading a particular case. It is also difficult to implement this method when the number of borrowers /exposures is large and varied.

2. Point in Time

A rating scheme based on current condition of the borrowers /exposure. The inputs are provided by financial statements, current market position of the trade /business, corporate governance, overall management expertise etc. Banks adopt a point in time approach because it is relatively simple to operate while at the same time providing a fair estimate of the risk grade of an obligor/exposure. It can be applied consistently and objectively. Periodic review and downgrading are possible depending on the position.

The goal of credit rating is to create accurate and consistent risk rating yet allow professional judgment to significantly influence a rating where this is appropriate.

ii) Scores / Grades in Credit Rating

The main aim of the credit rating system is the measurement or quantification of credit risk so as to specifically identify the probability of default (PD), exposure at default (EAD) and loss given

default (LGD). Hence it is a tool to implement the credit rating method (generally the point in time method). The agency also needs to design appropriate methods for various grades of credit at an individual level (a close analogy is the marks obtained by a student in various subjects and the final outcome in the form of ultimate grade achieved in an exam) or at a portfolio level. These may be in the following forms:

Alphabet: AAA, AA, BBB etc.

Number: I, II, III etc.

The fundamental reasons for various grades (as an outcome of aggregate score) are to signal default risk of an exposure, facilitating comparison of risk to aid decision making, to show compliance with regulatory requirements of asset classification and risks of exposure and providing flexible means to ultimately measure the credit risk of an exposure.

Components of score

Scores are mere numbers (1, 2 etc) allotted for each quantitative and qualitative parameter - out of a maximum allowable for each parameter as may be fixed by any bank - of an exposure. The issue of identification on specific parameters, its overall marks and finally relating aggregate marks (for all quantitative and qualitative parameters) to various grades is a matter of management policy and discretion- there is no statutory or regulatory compulsion.

However the bank is guided by the sector and the product that it is offering. A basic requirement in risk grading is that it should reflect a clear and fine distinction between credit grades covering default risks and safe risks in the short run. While there is no ideal number of grades that would facilitate achieving this objective, it is expected that more granularity may serve the purpose.

The scores are assignbased on cut off scores given by banks against each parameter. However, there are a large number of parameters, which are subjective. In addition, the scoring is used to rate all projects in all sectors. Based on the scores given by the bankers, a cumulative score for the borrower is calculated which is then converted into rating which is used for pricing as well as monitoring the account by creating transition matrices for ratings over a period of time.

Table4. Credit Rating Mechanism

Ser no.	Total Score for an exposure	Grade accorded	Implications for grades accorded
1	86 – 100	AA+	Excellent safety
2	71-100	AA	Very good safety
3	61-70	A	Good safety
4	51-60	BB+	Ordinary safety
5	41-50	BB	Less ordinary safety
6	36-40	B	Low safety
7	31-35	C	Unsafe
8	0-30	D	Low category

Source: BIS www.bis.org.

Commercial Bank of Ethiopia has been using these parameters, which are Financial Risk, Business/Industry Risk, Management Risk, Account Performance Risk, and Customer Relationship Risk. These parameters are then scored based on the specifically applicable objective/subjective parameter scales of measurement and a borrower's actual score is determined. That is, each credit risk parameter is scored on Credit Risk Grading Score Sheet prepared for the purpose. The final overall Achieve Score gives the Bank measurable risk implication whether a borrower is bankable/non-bankable.

Table**5. Credit Rating Mechanism of CBE**

Ser no	Achieve Score	Risk implication
1	**>=85**	Bankable
2	**70-84**	Bankable
3	**60-69.9**	Bankable
4	**50-59.9**	Exceptionally Bankable
5	**40-49.9**	Very exceptionally Bankable
6	**30-39.9**	Non- Bankable
7	**25-29.9**	Non- Bankable
8	**<25**	Non- Bankable

1. Risk Quality and Rating

The quality of risk covers both the default probabilities and the recoveries in the event of default. Ratings qualify the risk of losses in the event of default, a combination of default probabilities and recoveries. The ratings are rankings, not quantitative measure of risk quality. Common rating

systems include from six to ten different ranks, which is sufficient to discriminate among risk classes. Ratings attached to facilities are useful whenever guarantees and agreements are attached to individual facilities.

2.2 Empirical Literature Review

2.2.1 Studies in other Countries

Marshal, T. Edun and Femi (2011),the study investigates the bank lending and economic growth on the manufacturing output in Nigeria. Time series data covering a period 36 years (1973-2009) were employed and tested with the co-integration and vector error correction model (VECM) techniques. The findings of the study show that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria. However, the relationship between the manufacturing output and economic growth could not be established in the country. These results, therefore, call for concerted the effort by the government, manufacturers and lending institutions to reviewing the lending growth policies and provide appropriate macro-economic environment. These are investment- friendly lending and borrowing by the financial institutions.

According to Ahmed et al (2003) and Wa'elAlaghbari (2005), the external factor of poor economic conditions such as foreign currency supply and inflation rate would significantly give impact to project's cash flow, and hence affect the timely performance of the project. The underlying causes to financial market instability, which will then lead to cash flow problems in construction project include (1) increment of interest rate in repayment of loan, (2) inflation of material prices, labour wages and transportation costs and (3) increment of foreign exchange rate for imported materials and plants.

According to Kaming et al (1997), one of the most important factors causing delays in high-rise projects in Indonesia is the shortage of resources. In addition, Noulmanee et al (1999) investigated the causes of delays in highway construction in Thailand and concluded that one of the main causes of delays is the insufficient resources of an organization. A survey by Ubaid

(1991) concluded that the contractor's resources are the major measures on the contractors' performance that cause delays. The resources include financial resources, human resources, material resources and equipment resources. However, only the financial resources are focused in the research, as Abdul-Rahman et al (2006) addressed that lack of funds may affect the project's cash flow and lead to delay in site possession, which consequently causes delays in the project as whole. The factors that would cause insufficient financial resources are (1) difficulties in obtaining loan from financiers and (2) allocation of government budget not in place.

One of the principal finance documents in project finance arrangement is the information memorandum (Fight, 2006). In view of the syndicated nature of debts to finance the projects company under project finance, information memorandum outlines details and requirements of all the participants in the project (Walker, 2005). It is a legal document that specifies the objectives, exposures and conditions of investments associated with the project (Ayano, 2010). According to Graham (2005), preliminary information memorandum is a document that contains management's estimation of the projects expenditure revenue term sheet, and other relevant information in relation to the project. In addition, information memorandum provide specific project information such as general description, project company & sponsors, project participants, technical information, economic information, contacts, project schedules, government's commitment, the market, the independent engineer, access to raw materials, project's profitability, environmental legislation and foreign exchange risk (Fight,2005). The main purpose of this document is to make the project attractive to prospective lenders and investors (Yescombe, 2002).

2.2.2 Studies in Ethiopia

Bayew (2017) identifies the determinants of loan default for project financing in the case of Development Bank of Ethiopia from the credit experts view point.. The study funds that policy induced attributes and credit evaluation criteria during project appraisal have a significant and negative impact on the loan default in project financing which was consistent with the Researcher's expectation. While source of equity contribution and nature of commodity attributes was found to have no significant contribution of loan default. The findings reveals that

the credit evaluation criteria such as DBE's credit project appraisal and evaluation parameters don't genuine for the realization of the project, the commodity research data are not reflect realistic facts, the project appraisal financial projections are exaggerated and unrealistic, and finally there is no prudent lending practice in the bank, were statically significant determinant of loan default performance of DBE's financed projects.

Argaw (2016) aimed to assess the performance of project financing in Private Commercial Banks in Ethiopia. The findings indicated that loan appraisal, credit rating, financial viability, technical feasibility; credit risk management had a positive and significant relationship with loan performance or in other word there exist significant negative correlation between the factors and NPLs of project loans. Finally, it is recommended to the Private Commercial Banks in Ethiopia to give a due emphasis on project Loan Appraisals with different approaches from traditional financing and take an appropriate credit follow-up procedures after disbursement of the project loan since failing to do so will be adverse on performance. Similarly, it is also recommended that private banks should minimize risks on this newly entered financing through employing various credit risk management techniques, including transfer, diversification and technical retention.

SisayZeleke (2017) on his studies, determinants of cost and schedule overrun on private projects financed by Commercial Bank of Ethiopia found out that schedule and cost overruns are determined by a number of factors emanated from various sources. The results of the study indicated that shortage of foreign currency supply, inconvenient term and pre-conditions, poor due diligence assessment to know the customer, under financing, fund diversion for unintended purpose, were the major determinants of the project financing overrun.

SenayGetu(2016) on his research reveals that, low level of quality and completeness of project feasibility study provided by project promoters, unavailability of reliable and quality data and up to date information related to manufacturing projects, poor credit culture, lack of well trained and experienced consultants for complex manufacturing project study, level of knowledge and skill of project appraisal are the challenges faced in the process of project appraisal.

The empirical study made by Fikiret (2015) indicates the existence factors in connection with credit origination i.e. poor due diligence assessment to know the customer and weak credit

negotiation have found to be the major determinant of loan default as per the results obtained from the survey. In addition the interview result also affirms these facts. Weak credit assessment made by the Bank and lack of proper skills of the loan officers were found to be the cause of default, as per the study made by Fikirte, (2015). However, speedy loan processing due to external pressure as a factor for loan default was not supported by the survey result. Additionally, there is a significant relationship between over-finance and the occurrence of NPL, as the survey result indicated. The survey result also indicates the existence of strong relationship between poor loan monitoring and NPL. Moreover, according to the researcher the interview result and the document study have supported such finding. However, inadequate debt recovery regulations were not mentioned as a cause of default, as per the study made by Fikirte (2015).

AdmasuLegesse (2013): Determinants of failure for projects financed by DBE. This explanatory research is made to investigate the major determinant of failure for projects financed by DBE assuming that the causes of project failures emanates from project specific, credit management system of the bank, macro-economic and sociopolitical factors. In this study both descriptive and explanatory analysis using econometrics regression model is employed to analyze cause-effect relation between determinants of failure of the projects. The findings are the country's traditional market system inefficiency and marketing knowledge gap of our local entrepreneurs, manpower below required knowledge, skill and number, investment cost overrun which largely caused by change in exchange rate have positive relation with the failure of the project. However, the attention of the bank about its projects planning capacity: because the model result for correction measures used for solving problems esteem from project planning (loan rescheduling, weaving and fund reallocation) found significant with negative effect to project failure. This means that DBE's project planning lack to consider the unique nature of the projects during disbursement and repayment scheduling, fund allocation etc. Finally the researcher proposes some of the corrective measures that should be considered by concerned stake holders in order to reduce project failure regarding financed projects with regard to the market problem the bank need to be involved in finding of market destination for the output of projects and advising the promoter and DBE has to recruit professionals from different profession and train about project appraisal technique.

FelekeTsegaye (2015): The Performance of Project Rehabilitation and Loan Recovery Process (PRLRP) in the case of DBE: The main objective of the study was evaluating the impact of monitoring and follow- up activities, government policy and performance measurement criteria on performance of PRLRP at head office level in DBE during the year 2009 to 2014. In this research analysis, descriptive and inferential statistics were applied for the result obtained. The findings are performance measurement criteria, monitoring and follow-up and government policy had positive statistically significant relationship with the performance of PRLRP at 1% level. The researcher recommended that qualification of staffs to be employed in the project should be considered on the credit policy of the bank as a basic requirement for loan provision and as well minimizing the entrance of new default projects.

2.3. Research gap

To conclude the empirical evidences, There are limited studies providing empirical evidence to the manufacturing project financing problems. Most Studies focused on the relationship between risk management practice and financial performance of banks mostly have been conceptual in nature, often drawing the theoretical link between good risk management practices and improved bank performance. However, the unique nature of projects requires evaluating the performance of project financing in relation to Credit appraisal, monitoring and follow-up and risk management technique of the banks under consideration. To assure that and to evaluate the performance level of project financing in the context of CBE must be studied. We cannot tell the performance level from the scratch or simply from the theory. Evaluating the performance level of project financing is needed, to make bank's credit department well aware about their position and its impact towards profitability of their business. Further it is also very much important for policy makers. It is well known that banks in our country are profitable for the time being, however to sustain their profit in the future and even to make them more profitable than before, the performance level of their project financing must be evaluated and corrective action must be taken in advance. When the researcher says corrective action, it's referring appropriate project financing mechanisms to the banks.

According to McNaughton (1996)Credit Appraisal, Credit Follow-up and Credit Risk Management and loan performance is related. Credit risk is divided into three components

namely: the appraisal component, the credit follow-up and monitoring and other risk management techniques. Appraisal has three elements namely: technical feasibility, credit rating, and financial viability. On the other hand, other risk management techniques has elements namely; risk transfer, risk diversification and risk retention. The two components form the basis for monitoring and managing credit risk as explained by Harrison, (1996). The two components of risk management if properly applied in a financial institution will lead to favorable loan performance. Loan performance has indicators like ratio of non- performing project loans to total project loan advances, and ratio of provisions to total project advances.

However, as per the researcher's knowledge no study conducted to see the manufacturing project financing performance in Ethiopia. Hence, this study aims to fill the gap in the literature by focusing on the assessing project appraisal, credit follow up and credit risk management practices of the commercial bank of Ethiopia.

CHAPTER THREE

3. METHODOLOGY

3.1 Introduction

This part, presents details of the research design in terms of the data source, population and sampling procedure, data gathering instrument and gathering procedure, measurement of variables or dimensions in the study, validity and reliability of the study instruments and finally the method of data analysis used.

3.2 **Research design**

Research design is a master plan that specifies the methods and procedures for collecting and analyzing needed information. It is essentially a statement of the object of the inquiry and the strategies for collecting the evidences, analyzing the evidences and reporting the findings. The intention of the research design that can be formulated was based on the objectives of the research and research problem questions. (Zikmund et al, 2009).

Descriptive research design was used. according to Zikmundet al, (2009) descriptive research is, when a research problem known but the researcher not fully aware of the situation. When a particular phenomenon of the nature is under study, it is understandable that research needed to describe it, to explain its properties and inner relationships. Descriptive statistics likemeans, standard deviation etc. used to describe the data. Setting of major determinants of default for CBE financed projects were done based on literature review and factors unique to CBE projects. The researcher collected the data using questioner data at one point in time to know assess the determinant of default in project finance from the credit performer's point of view.

The research was also made based on both qualitative and quantitative data with the intention of meeting ultimate objective of the study. The researcher used the research design effectively so as to ensure that the evidence obtained enables to answer the research question as unambiguously as possible.

3.3 Population and Sampling Procedure

3.3.1 Population of the Study

According to Diamantopoulos (2006), a population is a group of items that a sample drawn from. The target population of the study was all employees in credit processing center. The credit process of the CBE has two wings the Credit Appraisal and Credit Management. The total population is 94 (HR data, 2018).

The participants for the study is those employees of the three respective sub departments, namely Credit Appraisal Department, Credit Follow-up Department and Credit Risk Management Department, in fact Customer Relationship Management Department were also considered, where available. The total target participants of the study were therefore all employees of these four departments mentioned. Other employees of the bank, including branch loan officers and branch managers were excluded from the target participant even though they participate in the loan appraisal process at branch level. They were excluded, because, since the researcher was particularly concerned with the project financing, and such financing, almost all appraised in the Head Office.

3.3.2 Sampling Design and Size Determination

A sample was drawn as a result of constraints that make it difficult to cover the entire research population (Leedy and Ormord,2005). The sampling technique that used in the study is non probabilistic purposive sampling in representing sample members from the target population this enables the researcher to choose the respondents that are most relevant and suitable for the purpose of the study plan. Therefore, Data was collected through questionnaire from technical staff from credit appraisal department, technical staff from credit follow-up department, technical staff from risk management department, and from customer relationship management department, from the departments. In addition to this, an interview was held with 2Director of Credit Appraisal and Management. All the department employees and technical staff were targeted to respond to the questionnaire. Thus the research sampling is census.

3.4 Data collection

The types of primary data that was used in this research involve both unstructuredinterview and close-ended questionnaire that was delivered to credit experts, credit analysts and credit relationship managers. The credit experts and credit analysts though they have varying ranks/grades they were doing the same tasks with different level of exposures and risks. Unstructured interview was also been held to Directors Credit Appraisal and Credit Management of the CBE. Therefore, whole population credit experts and analysts from the Credit Appraisal team and relationship managers from Credit Management team were considered in the questionnaire. The secondary data used from annual reports of CBE.

3.5 Validity and Reliability Tests Validity test

Content validity test index (C.V.I) is used to test for validity of questionnaire. A four point scale of relevant, highly relevant, quite relevant, somehow relevant and not relevant was used by two experts to rate the relevancy of questions on the questionnaire on the study variables. The questionnaire was also commented by the experts in the financial industries, mainly in the banking sector and academia.

Reliability tests

Reliability analysis is used to test how well the items in a set are positively correlated to one another. Cronbach alpha is used to determine the consistency of scales used to measure study variables. according to Cronbach's (1951), a reliability value (á) greater than 0.600 is also acceptable. The final total reliability statistics result shows all items in the six variables scored 0.780 (see table 3.1 below) point which is near to.8 and meet the acceptable point.

Table 3.1 Total Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.766	.780	6

3.6Data analysis

After the data was collected from primary source it was checked to detect errors that had been committed by the respondents. Then, the edited data were coded and manually entered in to statistical package for social science (SPSS) version 25 computer software.

Analysis of quantitative data in this research was done by using descriptive statistical methods like: mean. The qualitative data was collected from the management staffs are also analyzed along with document analysis and discussed with quantitative data as deemed necessary.

In the process of data analysis, data in the Likert's scale was processed by reducing it to the ordinal level. This was done by combining all "Strongly Agree", "Agree", "Undecided (Neutral)", "Disagree", and "Strongly Disagree" in turn within their categories. The responses were processed into categories of accept and reject a proposition. The rating so recorded was assigned rating values ranging from 5 to 1 respectively.

3.7 Measurement of factors or variables

- Appraisal was measured as a composite of General background of the customer, 5c's, technical feasibility, financial viability, and credit rating using attitude statements of a 5 – point Likert – scale ranging from strongly agree, agree, uncertain, disagree and strongly disagree.
- Credit follow-up was measured using attitude statements of a 5 – point Likert – scale ranging from strongly agree, agree, uncertain, disagree and strongly disagree.
- Risk management techniques was measured as a composite of risk transfer, risk diversification, and risk retention using a 5–point Likert scale ranging from strongly agree, agree, uncertain, disagree and strongly disagree.

- Loan performance was measured by ratio analysis using secondary data obtained from the annual reports of the selected bank. The two ratios used were: ratio of non – performing project loans to total project loan advances, and ratio of provisions to total project loan advances. This was because non performing project loans and provisions may be exist due to the default of project loan extended to the customers. According to NBE's Directive No. SBB/43/2008, all commercial banks should kept provision 1% for

loans under pass status, 3% for special mention, 20% for sub- standard, 50% for doubtful and 100% for loss status loans. Since provision includes healthy (pass) loans, ratio of non – performing project loans to total project loan advances is relatively better measurement of performance. However, most banks use both ratios to measure success or failure of their project financing.

3.8 Ethical Considerations

The principle of voluntary participation was adhered to respondents into participating in the research. The research ensured confidentiality. Individual permission was sought from CBE, and Individuals expected to participate in the study. The respondents were informed of the consent and the purpose of this research study. To ensure confidentiality names of the respondents was not used in the study.

CHAPTER FOUR

4. DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1. Introduction

This chapter covers areas including presentations of results obtained through both primary and secondary sources, interpretation of the results and analysis of the results in line with the theoretical and empirical literatures presented in chapter two. The results are presented, interpreted and analyzed according to study objectives which were: evaluation of the practices and impact of credit processing, analysis and appraisal of the project loan requests on the Performance of Project loans in the context of Commercial Bank of Ethiopia, assessment of the impact of follow-up practices of project loans on the credit performance against the recommended practice and policies and procedures of the bank, Review the credit risk management of project financing and its effect on credit performance in the study context.The performance is mainly described as the ratio of NPLs on this project loans to the outstanding balance of respective project loan balances.

4.2. Characteristics of the Respondents

The results that follow show the background characteristics of the respondents that were involved in the study. 94 questionnaires were administered and dispatched to respondents in the four sub departments namely Credit Appraisal Department, Credit Follow-up Department, credit relationship and Credit Risk Management Department. Overall, 88 responded to the questionnaires which represented a response rate of 93.6 % as reflected in the table 4.1 below.

Table 4.1 Characteristics of the Respondents

		Frequency	Percent
GENDER	Male	64	72.7
	Female	24	27.3
	Total	**88**	**100.0**
CURRENT POSITION	Credit Appraisal (analysis)	34	38.6
	CRM department	26	29.6
	Follow up officer	15	17.04
	Risk officer	13	14.8
	Total	**88**	**100.0**
EDUCATION LEVEL	Undergraduate	57	64.77
	Post-Graduate	31	35.2
	Total	**88**	**100.0**
EXPERIENCE	Less than 1 year	7	7.7
	1-3 years	21	23.9
	4-6 years	28	31.8
	7 years & more	32	36.6
	Total	**88**	**100.0**

Frequency tables were used to study the status of respondents' distribution by gender. The frequency distribution presented illustrates that there is a huge gap in the distribution of male and female professional staffs in the work areas under consideration. Results in the table 4.1 above show that majority of respondents were males representing about 72.7 % and about 27.3% of those responded to questioners were females.

The status of respondents with respect to the highest qualification attained was obtained using frequency distribution table and the findings as clearly indicated in table 4.1 above, majority of the respondents were having first degree (about 64.77%). On the other hand, (35.2%) of the

respondents had a postgraduate qualification. The fact that all of the department staffs are holding first degree and above clearly signifies the qualification required for these positions are relatively high.

Frequency distribution was used to obtain the working experiences of respondents as indicated in the table 4.1 above. 68.4 % of the respondents have more than four years of banking experience, implying that most of the respondents are senior staffs. Regarding the Position of Respondents majority of the respondents are from Credit Appraisal (analysis) department, 34 respondents (38.6 %) signifying that most of the credit work is accomplished under this section. On the other hand, 26 respondents, (29.6%) were found in from CRM department.

The results indicate that many of the professional staffs are well experienced with credit and other related experience with adequate knowledge. These shows the majorities of the respondents were educated/or professional and experienced that can contribute more for the effectiveness of their intended work. Hence, this may be one of the clarifications obtained otherwise.

4.3. Assessment of the Factors

4.3.1. Appraisal

4.3.1.1. Background information of the customer, 5C's and Basic Appraisals

The response obtained on Background information of the customer, 5C's and Basic Appraisals reveals that the mean value for the category on average is 3.4. This implies that the overall average response for the basic appraisal task including the 5c's are considered in Project loan, which is to the extent of above average. Among the variables under the category, collection of all the necessary documents from client before credit process, proper analysis of the feasibility study to identify risk exposure, looking at relevant experience of the loan applicants, consideration of cash flow projections of a given project before financing, consideration of capacity of the loan applicants, consideration of the past track record of repayment, if any, looking at the character of loan applicants and looking at the credit trustworthiness of loan applicants have got relatively higher rates as described by a mean score of above 4.1.

On the other hand, from the 18 items in the category of basic appraisals, availability of separate credit procedure for project financing, existence of separate division for manufacturing project

financing in the structure and requirement for certified feasibility study from all project clients/ borrowers have got mean of less than average. Their scores are 2.6705, 2.0341 and 2.7273 respectively. Implying that the bank are not yet fully taking separate concern for the project financing as a different kind of financing from the ordinary working capital financing.

The same result has been substantiated from the interview made with the credit department officials saying that much of the operational procedures undertaken to finance the manufacturing project loan request is more or less similar to the previously used procedures and with same technical professional staffs in the credit department.

In general, as presented in table 4.2 below, there exist favorable basic appraisal and know your customer (KYC) identification mechanisms employed in the CBE, except that there still exist no separate consideration and treatment of Project loan financing from the ordinary credit financing activities.

Table 4.2 Descriptive Statistics Background information of the customer, 5C's and Basic Appraisals

	N	Mean	Std. Deviation
The bank has separate credit policy for manufacturing project financing	88	3.8523	1.51270
The bank has separate credit procedure for manufacturing project financing	88	2.6705	1.45998
The bank has separate division for manufacturing project financing in the structure	88	2.0341	1.42594
We collect all the necessary documents from client before credit process	88	2.7273	1.41200
We demand for certified feasibility study from all project clients/ borrowers	88	3.2614	1.41823
We properly analyze the feasibility study to identify risk exposure	88	3.0568	1.43325
We consider professionalism in the respective projects	88	3.8977	1.44667
We look at relevant experience of the loan applicants	88	3.1932	1.38844
We critically analyze and comment on assumptions employed for cash flow projection	88	3.9659	1.24521
We consider capacity of the loan applicants	88	3.1818	1.36074
We look at the long term planning horizon of every loan applicant	88	3.2273	1.35381
We look at the conditions i.e. economic, political, environmental and others, before we finance a project	88	3.8182	1.42672

We look at collateral security as last way-out for the project loan	88	3.9432	1.44920
We consider the past track record of repayment, if any	88	3.2386	1.32174
We look at the character of loan applicants	88	3.0114	1.33472
We look at the credit trustworthiness of loan applicants	88	4.1773	1.46983
We consider the leadership quality or capacity of managers.	88	3.2614	1.44233
The bank charge higher interest rate for project loan compared to other loans	88	3.8523	1.39407
Total Valid N (listwise)		3.4	

4.3.1.2. Financial Viability

Respondents were also given a chance to reflect their opinion on overall consideration of the financial viability of the manufacturing project while financing. Financial viability has a mean score of 3.73, which is above the average score. Under the category, items of looking at the quality of financial feasibility study presented, analyzing projected financial reports, calculation of ratio analysis for profitability, efficiency, leverage and analysis of projected growth in sales of the banks borrowers got higher scores of more than 4.0. The actual mean scores are 4.10, 4.48, 4.52 and 4.81 respectively; implying good concern is being given in the analysis of financial feasibility as far as the aforementioned items are concerned.

Table 4.3 Descriptive Statistics for Financial Viability items

	N	Mean	Std. Deviation
We request for past financial reports from all clients for project finance, if any	88	3.0682	1.50704
We look the quality of financial feasibility study presented	88	4.1023	.78842
We analyze projected financial reports	88	4.4886	1.03939
We calculate ratio analysis for profitability, efficiency, leverage	88	4.5227	1.14447
We analyze projected growth in sales of our clients/ borrowers	88	4.8182	1.28247
Interest coverage ratio is important before we finance	88	3.7500	1.19626
We look for sound financial management policies of our borrowers	88	2.9886	1.31738
We only finance projects with sound financial management policies	88	3.1023	1.47811
Financial analysis determines credit strength of a client	88	3.2500	1.18661
We invite technical experts if the project type is new for the bank	88	3.3864	1.13898
We consider the projected net worth of the business	88	3.5341	1.21247
Total Valid N (listwise)		3.73	

4.3.1.3. Technical Appraisal

Technical appraisal is vital in maintaining quality of project loans. Meanwhile, the mean value of the items stated under the factor is 3.72, which is sharply above average value. Besides three of the ten items in this category have scored mean value of above 4.0. Namely, we look at the location of the project, considering availability of raw material before financing a project and financing projects with potential market/ trade scored mean value of 4.21, 4.02 and 4.45, respectively. This response illustrates that private banks are more concerned with market situations, availability of raw materials and most importantly location of the project sight while financing project loans.

Despite the above facts, the item which states qualified staff to assess the level of technology" got the lowest mean score of 3.0, which is again slightly lower than the average. This implies that, CBE are relatively concerned on traditional method of technical appraisal. Since recent projects are more capital oriented, the challenge will be precipitated by not having such a professional expert who have the right know how and experience of the technology.

This fact goes more in congruence with the interview results obtained from credit officials. The interview response for the question about the availability of technical staffs that can support in explaining the technological fitness of the project items, or whether or not invitation of any external technology expert, if not available in house, was not made. Instead, the officials answered, all technical appraisals are conducted based on entirely the information given by the customer or the presented feasibility study.

Table 4.4 Descriptive Statistics for Technical Appraisal

	N	Mean	Std. Deviation
We finance projects with potential market/ trade	88	4.1023	1.23213
We look at consumption behaviors of the market	88	3.3068	1.20686
We look at the marketing strategy of loan applicants	88	2.9773	1.42213
We finance projects that use appropriate technology	88	3.6364	1.01915
We have qualified staff to assess the level of technology	88	3.0114	1.26395
We look at access to infrastructure	88	3.4886	1.19380
We consider availability of raw material before we finance a project	88	4.6591	1.08157
We look at the implementation plan of all projects	88	3.7273	1.05838
We consider if the project has specialized manpower	88	3.4091	1.17088
We look at the location of the project	88	4.6023	1.19904
Total Valid N (listwise)		3.7	

4.3.1.4. Credit Rating

Credit rating was assessed using eight categories of questions. The factors mean score was 3.55, which is above average; implying the bank is granting loans after analyzing the credit rating. From the questions responded, availability of internal rating system in the bank scored highest mean of 4.51. This is an important tool in the credit management as the rating is particularly important to quantify risk and through rating the debt capacity of the loan applicant can be determined. The lowest, and in fact below the average rate is scored for usage of both public and private information in rating. The score was 2.93.

The same response is substantiated from the management interview in that the rating was entirely dependent on the available financial and private data. No other public information are inculcated in the rating computation. Besides, some banks are also exempting new borrowers from rating due to the fact that they only use historical financial information and presented private information, instead of using public information.

Table 4.5 Descriptive Statistics for Credit Rating items

	N	Mean	Std. Deviation
The bank has an internal credit rating system.	88	4.5114	1.25940
We do credit rating on all projects	88	3.3636	1.22410
The bank quantifies risk through credit rating	88	3.7727	1.17177
We rate the management capacity of loan applicants	88	3.6136	1.04422
Our rating system predicts debt serving capacity of loan applicants	88	3.3068	1.00981
The rating used can determine deteriorating / non-performing loans	88	3.7500	.71519
We use public and private information in rating	88	2.9318	.69142
I know how to use rating system	88	3.1705	1.15690
Total Valid N (listwise)		3.55	

4.3.1.5. Project Loan Follow-Up

From the response obtained in the category, the follow up factor scored mean value of 3.38, which is only slightly above the average score. However, there are relatively many questions in this category that were responded below average scores indicating a crucial problem in the factor analysis. The categories, indicated below the average mean score of 3.0 are; involvement of appropriate technical expert in project follow up, invitation of independent professional assessors if required, maintaining separate report for project loans and existence of a separate division or department to follow project loans in the bank with their respective scores of 2.71, 2.55 and 2.43.

The response for NPLs in project finance is greater than other sectors is 2.63, indicating slight disagreements. However, this response is in contradiction to the response obtained from the interview of higher officials in the follow up departments and credit department managers as well.

While giving the response during the interview, one of the managers explained that granting loan is a simple task to the bank management compared to the challenges faced in collecting repayments. This fact is more applicable in manufacturing project financing, as there are additional challenges attributing to the special features to the method of financing.

Unlike the other five sets or categories of responses, no question in this category scored a mean value of more than 4.0. Rather most of the favorable scores are also above the mean averages with a slight margin, again indicating that there are considerable challenges in the follow up activities of the project financing.

Table 4.6 Descriptive Statistics for Project Loan Follow-Up

	N	Mean	Std. Deviation
We look at the implementation plan of all projects	88	3.6591	1.06011
We periodically monitor projects financed	88	3.7386	.89049
The management periodically visit the project site	88	3.8295	.69846
The Bank management check the progress of project during implementation	88	3.5000	1.07211
Appropriate technical expert will involve in project follow up	88	2.7159	.87031
We have all types of Engineers to appraise and estimate all collaterals and project assets	88	3.7727	.85403
We invite independent professional assessors if required	88	2.5568	1.10233
We maintain separate report for project loans	88	2.4318	1.11206
We know the performance of project loans in the bank	88	3.6932	.92672
The bank monitors all problem loans	88	3.6136	.73394
There exist a separate division or department to follow project loans in the bank	88	3.5227	1.11394
The NPLs on project loan is higher than NPLs of other sectors	88	2.6364	.64651
We provide appropriate and adequate grace period for all projects	88	3.7159	.66000
Interest rate during grace period is collected appropriately	88	3.9773	.77277
All customers bring implementation schedule of the project	88	3.4432	1.14328
Total Valid N (listwise)		3.38	

4.3.2. Risk Management Techniques, Diversification, Transfer & Retention

The overall mean score of risk Management technique is 3.76, the study reveals, implying that it is above average. From the variables included under risk Management technique in the study, almost all items in the category scored above average of 3.0, except that availability of separate credit risk management policy scored below average, 2.72. Indicating that risk management techniques of diversification, transfer and retention is implemented in project finance in the banks. However, there is still a problem of assigning or treating the project finance as a separate business division in the risk management aspect. Four items in the category scored high rate of more than 4.0. These are the bank has a risk management policy, the loan portfolio is invested in different sectors of the economy, diversification has reduced risk exposure in this institution and We consider equity contribution of the borrower both in kind or investment progress and in cash with their respective score of 4.31, 4.46, 4.67 and 4.85. This implies the bank is using diversification of sectors as one of the techniques in reducing risk and considering equity contribution of the borrower in kind.

Table 4.7 Descriptive Statistics for Risk Management Techniques, Diversification, Transfer & Retention

	N	Mean	Std. Deviation
The bank has a risk management policy	88	4.3177	.66159
The bank has a separate credit risk management policy for project finance	88	2.7727	.72282
The bank has pre-set concentration limits in every sector	88	3.7045	.91173
The bank has pre-set portfolio limits	88	3.3295	1.15193
The bank quickly responds to market changes	88	3.7386	.65204
We periodically assess credit quality of our loan portfolio	88	3.9091	.72137
Our project loan portfolio is fully insured	88	3.6364	.87338
Clients are requested to provide financial guarantees	88	3.2500	1.18661
Risk transfer improves loan recovery	88	3.4432	.94514
The loan portfolio is invested in different sectors of the economy	88	4.4659	1.10327
We do not concentrate our loan portfolio in particular sectors of the economy	88	3.4659	.60551
Diversification has reduced risk exposure in this institution	88	4.6705	.67333
Default level have reduced due to diversification	88	3.8636	.64651
We have widely used risk retention to know how much that exist in our loan portfolio	88	3.2045	1.15628
We consider equity contribution of the borrower both in kind or investment progress and in cash	88	4.8523	.68715
Cost overrun, if any, on project cost is covered by the borrower	88	3.6023	.92897
Total Valid N (listwise)		3.76	

2.3.1.Project Loan Performance

The quality of loans disbursed is measured, among others, by the level of loan arrears accumulated after the repayment schedule. National Bank of Ethiopia for this purpose, classified the loans in to five categories, namely “pass”, “Special mention”, “substandard”, “doubtful” and “loss”. The last three classifications are termed as Non-Performing Loans based on the extent of the arrears day of more than 90 days. The following table presents the NPLs ratio of the commercial bank of Ethiopia for the financial years starting from 2005 up to 2018. From the table above, it can be inferred that the NPLs ratio of the bank under considerations are reducing from year to year. This improvement is observed principally due to learning curve effect and the continuous pressure by the governor. According to the National Bank of Ethiopia, a ratio of 5% is accepted to be non-performing and the higher the ratio from the specified threshold, the worse the loan performance. Performance of loan portfolio may be measured using proxies for credit risk and measures of loan quality such as provision for loan losses, net losses or charge offs, non-performing assets, return on net assets and return on equity among others.

Table 4.8 NPL ratio

NPL RATIO	27.5	22.5	14.5	53.3	36.6	1.7	0.9	6.1	2.2	1.4	1.8	2.5	2.8	3.4
YEAR	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018

Source: CBE and NBE annual reports

4.4. Discussion of results

Basic Loan Appraisal

Proper loan appraisal will help identify and analyze loss exposures, use a combination of techniques to handle each exposure to ensure loan performance of any given portfolio. The findings are in agreement with literature by Rupp, (2002) Hameed (2015)and Aragaw (2016) whose works asserts that the appraisal technique process helps to identify and analyze loss exposures, and this leads to select control techniques to handle these exposures. For this reason only experienced and with high level of educational qualified staffs are recruited for the position. This response goes in line with the basic profile of the respondents obtained using the primary data, by which most of the second degree graduates are available in the credit appraisal departments.

Financial Appraisal

Whenever the project's financial viability improves, following proper appraisal of the financial viability of a particular project, then the NPLs of project loans will decrease. Similarly, whenever the financial analysis of a given project is done properly, then this will lead to an improvement in the loan performance that is to say; an improvement in the ratios of non – performing loans to total advances. The finding is supported by the work of Bayew (2017), Shimelis (2015) Hammed, (2015), Aragaw (2016) and Griffith, (1985) whose work reveal that use of such ratios help in judging the attractiveness or creditworthiness of a company and can enhance loan performance.

Technical Appraisal

When the technical feasibility of a project loan is done properly, the NPLs ratio will reduce significantly. This further implies that when there is technical change in form of new technology adoption which leads to productivity, the loan performance will also improve. This is in line with the work of Fria, (2002) who discusses that technologies produce impact on the production process, and being first to adopt a new and more efficient technique means being able to enjoy productivity gains before rivals and this has an implication on the efficiency in loan servicing.

Credit Rating

The result in credit rating section is in contrary to the work of Fernando et al. (2004), who argued that ratings measure and reveal the long-term fundamental credit strength of companies, that is to say their long-term ability and willingness to meet debt servicing obligations. This may happen due to the fact that the bank are not using wide range of source of information, both private and public, in rating as explained by the primary questionnaire interview.

Credit Follow up

As per the mean result the finding is supported by (Machiraju, 2006), who explained that banks rarely lose money solely because the initial decision to lend was wrong. Even where there are greater risks that the banks recognize, they only cause a loss after giving a warning sign). More banks lose money because they do not monitor their borrower's property, and fail to recognize warning signs early enough. When banks fail to give due attention to the borrowers and what they are doing with the money, then they will fail to see the risk of loss. The objective of supervising a loan is to verify whether the basis on which the lending decision was taken continues to hold good and to ascertain the loan funds are being properly utilized for the purpose they were granted.

Credit Risk Management

The process of risk management is improved through both risk transfer and diversification, the loan performance will also improve. Note that diversification of loan portfolio mean investing the loan portfolio in different sectors of the economy, or different region and this will control risk and lead to loan performance. This finding is supported by Brannan (2000) Hammed,

(2015), Aragaw (2016),Bayew (2017) and Shimelis (2015) who argued that diversification is the primary tool for lenders to control borrower risk and realize loan performance and diversification of loan portfolio across nations where the benefits are much stronger than they are when diversification occurs across sectors in a given economy.

CHAPTER FIVE

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusion

The broad objective of this research was assess the major factors contributing to the performance of manufacturing project financing of commercial banks in Ethiopia specifically Commercial Bank of Ethiopia. For this intention, the study was intended to answer quite specific questions which were derived from this broader objective. Hence, the study focused on examining the project loan appraisal, project loan follow-up and credit Risk management with project loan performance.

Mixed research approach was used to answer the specific questions of this research and achieve the principal objective of the study. Based on the research analysis and interpretation, the findings revealed the following conclusions.

The study indicated that: there exist favorable basic appraisal and know your customer (KYC) identification mechanisms employed in CBE, except that there still exist no separate consideration and treatment of Project loan financing from the ordinary credit financing activities.

Overall consideration of the financial viability of the project while financing implying good concern is being given in the analysis of financial feasibility as far as the aforementioned items are concerned. However, in bridging the technical inadequacy gap observed in project financing by inviting appropriate experts in the area.

Banks are relatively concerned on traditional method of technical appraisal. Since recent projects are more capital oriented, the challenge will be precipitated by not having such a professional expert who have the right know how and experience of the technology.

Credit Rating is an important tool in the credit management as the rating is particularly important to quantify risk and through rating the debt capacity of the loan applicant can be determined. The lowest, and in fact below the average rate is scored for usage of both public and private information in rating.

Regarding Credit follow up there are considerable challenges in the follow up activities of the project financing. Finally, credit risk management result implies the banks are using diversification of sectors as one of the techniques in reducing risk and considering equity contribution of the borrower in kind.

In recapitulating the findings, the study demonstrated that the three primary factors of Appraisal, Credit Follow-up and Risk management have significant relationship to the project loan performance.

5.2. Recommendations

Based on the findings from the study, the following recommendations are forwarded;

i. The bank need to improved measures in lending loan to enhance their risk appraisal. Through risk appraisal, the bank will be able to know credit worthiness of clients and thus reduce non-performing loans. Further, it is important for the bank to formulate an appraisal procedure, format that details ways of capturing all the credit risk. This should guide in selection of technique or combination of techniques to handle each exposure.

ii. Under risk management risk transfer, risk diversification and risk retention are part of the variables which are given same results. Hence, it is recommended to use insurance firms certain extent to transfer or share risk in case of default. It is also important for the bank to start practicing advanced hedging methods for example use of derivative products like swaps, option, and futures. Moreover, Diversification of loan portfolio should be part and partial of banks policy in a bid to spread risk.

iii. Internal credit rating should be part and parcel of the appraisal process, project loan policy and procedure, even though the factor is not significantly correlated with the loan performance. This is because from the questionnaire response as well as information obtained from the interview; In addition technical staff should be trained to be able to conceptualize, design, and made operational an internal credit rating system that suits the banks' operations to control risk exposures.

iv. More importantly, the bank should make timely and proper follow-up and monitor project loans financed in order to keep the performance of the loan healthy. Borrowing money is simple compared to collection. Banks should give special attention to project loans before and after disbursement. Proactive management is essential in reducing or

minimizing the default rate of the loan, and such actions could be more addressed from the initial appraisal process of the loan.

v. Regarding areas for further research,the study was only focused on the government owned commercial Banks in Ethiopia. However, it could be expanded to cover other commercial bank in the country. The study also concentrated on establishing the relationship between credit appraisal, follow-up and management and project loan performance. This should also be widened to establish the relationship between credit management and performance of commercial banks.

Reference

AOgari, S.E. Nkamare and Charles Effiong., 2014. 'Commercial Bank Credit and Its Contributions on Manufacturing Sector in Nigeria Department of Banking & Finance' *Research Journal of Finance and Accounting* Vol.5, No.22.

Across Country Analysis' Emerald Group Publishing Limited, *Journal of Financial*

Ahmad, Soroush, Karimbakhsh, Shadab, and Mortezaei., 2013. 'Assessing the effect of banking

Antje Schimke, Thomas Brenner., 2008. Long-run Factors of Firm Growth. Available at

Baghchi, S.K, (2005). "Credit Risk Management", Jaico Publishing House. Bart Juttee. PP 216. 2010. Project Risk Management, Rules and Mitigations. McGrew-Hill Publishing Company Limited.

Balu, K, (2002). "Infrastructure Financing by Indian Banks and FI'S", Indian Institute of Bankers.

Basel Committee on Banking Supervision, (2001) ."Working Paper on the internal rating based approach to specialized Lending."

Bhattacharya, S. and A Thakor (1993)," Contemporary Banking Theory" ,Journal of Financial Intermediation, p. 3.

Boudriga, Boulila , Sana Jellouli., 2009. 'Banking Supervision and Non-performing LoansChandra P. (2007). Planning, Analysis, Selection, financing, Implementation, and Review. Edition ,Tata McGrew-HIl Publishing Company Limited.

Chandra, P., (2001). Projects: Planning, Analysis, Financing, Implementation and Review, Tata McGraw Hill, New Delhi

Chandra, P., (2002). "Projects: Planning Analysis, Financing, Implementation and Review", CTM -TMH Professional Series.

Chris and Roland, 2012.The Effect of Interest Rate Fluctuation on the Economic Growth of

Christodoulou A. (2008). Factors of Successes for Effective Implementation of Lean Manufacturing Projects Within The Banking Sector In South Africa: Unpublished Master Thesis, University of Pritoria, South Africa

Collier P.M (2009). Fundamentals of Risk Management for Accountants and Managers, Linacre Jordan Hill, Oxford OX2 8DP, UK: Elsevier Ltd.

Commercial Bank Ethiopia, (March 2013). Credit Process Procedure (Volume I). Commercial Bank of Ethiopia: Credit Procedure Vol. I, August, 2009 Commercial Bank of Ethiopia,(2009/2010). Annual Report, Addis Ababa, Ethiopia.

Commercial Bank of Ethiopia, *Credit processing procedure*, Volume I, March 2013

Commercial Bank of Ethiopia,(2010/2011). Annual Report, Addis Ababa, Ethiopia

Commercial Bank of Ethiopia. 2014. Credit Portfolio Management Sub-process, *Review on*

Cooper D.F., Grey S.,Reymond G. and Walker P. (2005). Project Risk Management: Managing Risk in Large Projects and Complex Procurement, UK: John Wily & Sons, Ltd.

Damodran, A, (2002).“ Corporate Finance”, Second Edition, John Wiley and Sons (Asia) Pvt Ltd.

Dhliwayo,, 2014. Role of the banking Sector in Promoting Growth and Development of Small

Economic Policy, Vol. 1 Iss: 4, pp.286 – 318.

econpapers.wiwi.kit.edu/downloads/KITe_WP_21. [Accessed 29 July 2015].

Esty, B., (2004). When do Foreign Banks Finance Domestic Investment?New Evidence on the Importance of Legal and Financial Systems, Harvard Business School Mimeo, September.

FikaduKetema (2004). Productivity of large and medium scale manufacturing firms in Ethiopia: The effect of trade variables market structure and firm specific effects, Unpublished Master‟s thesis, Addis Ababa University, Addis Ababa.

FikremariamNigussie (2004). Determinants of Technical inefficiency of Small Scale Manufacturing Industries in Ethiopia, Unpublished Master’s thesis, Addis Ababa University, Addis Ababa.

Finnerty.J.D.,(1996). Project Financing: Asset-Based Financial Engineering. New York. John Willy &Sons.Inc.

Ford, P.W. (2006). Project Risk Management :(accessed on Dec. 15, 2014) https://www.pwc.com/gx/en/automotive/pdf/transfer-pricing.pdf

Gatti, S.(2008).Project Finance in Theory and Practice.London ,UK.ElsevierInc.

GetachewArgaw, (2016). Assessment Of The Performance Of Project Financing: A Study On Selected Private Commercial Banks In Ethiopia.ST. MARY'S UNIVERSITY. Unpublished

Henery A. Davis (2003). Project Finance-Practical Case Studies, Second Edition, London, Euromoney Institutional Investor PLC.

International Finance Corporation (2009). Project Finance in Developing Countries – Lessons of Experience

J. Price Gittinger, (1992) Economic Analysis of Agricultural Projects, Second Ed.

KibreMoges and WorkuGebeyehu (2005).Industrial Linkages in the Ethiopian Manufacturing Sector, Unpublished Paper presented at the Third National Conference on the Ethiopian Economy, Addis Ababa, Ethiopia.

Larry, W. (1980). "Essential elements of project financing", Harvard Business Review.May-June, p.166.

Lawrence, and Mohammed. 2013. 'Commercial Bank Credit Accessibility and Sector Output

Marshal T., T.Edun and Femi A. (2011), "Bank Lending, Economic Growth and the Performance of Manufacturing Sector in Nigeria",European Scientific Juornal, February edition Vol.8 No.3.

Medhin, A. (2012). Evaluation of Credit Risk Grading System of Commercial Bank of Ethiopia: Unpublished at Human Resource Development Office, Addis Ababa, Ethiopia.

MulugetaWondie, (2013). Challenges and Prospects of Commercial Project Financing in Commercial Bank of Ethiopia.

Nevitt, P. K. &Fabozzi, F. J.(2000), Project Financing, 7th Ed., London, UK, Euromonry Books

Nigeria, International Journal of Business and Social Science Vol. 3 No. 20 *of Applied and Basic Sciences*, Vol., 4 (7).

Orgeldinger, John, (2006). "The Development of Basel II confirming Model", Journal of Structured Finance, Winter. *Priority Sector Credit*.

Proclamation No. 592/2008. A Proclamation to Provide for Banking Business, Federal NegaritGazeta, 25thAugust ,2008.

Raguraman, Jain, Sinha, Pangotra, Morris, (1999). " Infrastructure Development and Financing." Indian Institute of Management resource mobilization on financial resource attraction' *International Research Journal*

Smith, R. C. & I. Walter, (1990). Global Financial Services: Strategies for Building Competitive Strengths in International Commercial and Investment Banking, NY, Harper Business.

Tseganesh T.(2012). Determinanats of Bank Liquidity and their Impact on Performance: Empirical Study on Commercial Banks in Ethiopia: Unpublished Master‟s Thesis, Addis Ababa University, Ethiopia.

UrgaiaRissa ,(2007). The Growth of Industrial Manufacturing in Ethiopia and its contribution to GDP: unpublished Master‟s Thesis, Addis Ababa University, Ethiopia.

Wang (2002). Project Finance in Developing Countries. New York, John Willy & Sons, Inc.

Williams C.J (2009). Project Management-Risk Management. Project Smart Journal, Volume 12P16-24,UK,London.

Zikmund, W., Babin, Carr,S., Griffin, M., (2009). Business Research Methods, South Western hub, U.S.A.

Appendices

Addis Ababa University

College of Business and Economics

Department of Accounting and Finance

Dear Respondents,

This questionnaire is prepared to collect data from Commercial Bank of Ethiopia (CBE) personnel to undertake thesis paper for partial fulfillment of MBA in Accounting and Finance on the title, assessment of factors that affect manufacturing project financing in the Commercial Bank of Ethiopia daily operation and management decision. The information that you provide will be used only for the analysis of the study which I am conducting as partial fulfillment of the MBA degree in Accounting and Finance.

I kindly request you to respond freely and honestly as your response has great value in assessing the current determinants of default in the Bank's operation and management decision.

I assure you that all your responses will be kept strictly confidential and used only for academic purpose. Thank you, for your cooperation and response in advance.

SECTION – IBasic attribute of the Credit Performer

Please indicate your responses by circling your choice

1. Your current position in the Bank
    1) Customer Relationship Manager
    2) Credit Appraisal Expert
2. Your experience in the Banking Industry
    1) 0-5 years
    2) >5 but ≤10 years
    3) >10 but ≤15 years
    4) Above 15 years
3. Your experience in the Bank project finance Process

1) 0-5 years

2) >5 but ≤10 years

3) >10 but ≤15 years

4) Above 15 years

4. Your Educational Background

1) Master's Degree

2) Bachelor Degree

3) Diploma

4) Others, please specify _____

SECTION II: Manufacturing Project Financing Related Questions

Please respond to the following statements by indicating the extent to which you agree or disagree as per the given choices. Please circle on the number.

Q.N	**CREDIT PROCESS AND APPRAISAL**					
1	The bank has separate credit policy for manufacturing project financing	5	4	3	2	1
2	The bank has separate credit procedure for manufacturing project financing	5	4	3	2	1
3	The bank has separate division for manufacturing project financing in the structure	5	4	3	2	1
4	We collect all the necessary documents from client before credit process	5	4	3	2	1
5	We demand for certified feasibility study from all project clients/ borrowers	5	4	3	2	1
6	We properly analyze the feasibility study to identify risk exposure	5	4	3	2	1
7	We consider professionalism in the respective projects	5	4	3	2	1
8	We look at relevant experience of the loan applicants	5	4	3	2	1
9	We critically analyze and comment on assumptions employed for cash flow projection	5	4	3	2	1

10	We consider capacity of the loan applicants	5	4	3	2	1
11	We look at the long term planning horizon of every loan applicant	5	4	3	2	1
12	We look at the conditions i.e. economic, political, environmental and others, before we finance a project	5	4	3	2	1
13	We look at collateral security as last way-out for the project loan	5	4	3	2	1
14	We consider the past track record of repayment, if any	5	4	3	2	1
15	We look at the character of loan applicants	5	4	3	2	1
16	We look at the credit trustworthiness of loan applicants	5	4	3	2	1
17	We consider the leadership quality or capacity of managers.	5	4	3	2	1
18	The bank charge higher interest rate for project loan compared to other loans	5	4	3	2	1
	FINANCIAL FEASIBILITY					
1	We request for past financial reports from all clients for project finance, if any	5	4	3	2	1
2	We look the quality of financial feasibility study presented	5	4	3	2	1
3	We analyze projected financial reports	5	4	3	2	1
4	We calculate ratio analysis for profitability, efficiency, leverage	5	4	3	2	1
5	We analyze projected growth in sales of our clients/ borrowers	5	4	3	2	1
6	Interest coverage ratio is important before we finance	5	4	3	2	1
7	We look for sound financial management policies of our borrowers	5	4	3	2	1
8	We only finance projects with sound financial management policies	5	4	3	2	1
9	Financial analysis determines credit strength of a client	5	4	3	2	1
10	We invite technical experts if the project type is new for the bank	5	4	3	2	1
11	We consider the projected net worth of the business	5	4	3	2	1
	THECHNICAL FEASIBILITY					
1	We finance projects with potential market/ trade	5	4	3	2	1
2	We look at consumption behaviors of the market	5	4	3	2	1

3	We look at the marketing strategy of loan applicants	5	4	3	2	1
4	We finance projects that use appropriate technology	5	4	3	2	1
5	We have qualified staff to assess the level of technology	5	4	3	2	1
6	We look at access to infrastructure	5	4	3	2	1
7	We consider availability of raw material before we finance a project	5	4	3	2	1
8	We look at the implementation plan of all projects	5	4	3	2	1
9	We consider if the project has specialized manpower	5	4	3	2	1
10	We look at the location of the project	5	4	3	2	1
CREDIT RATING						
1	The bank has an internal credit rating system.	5	4	3	2	1
2	We do credit rating on all projects	5	4	3	2	1
3	The bank quantifies risk through credit rating	5	4	3	2	1
4	We rate the management capacity of loan applicants	5	4	3	2	1
5	Our rating system predicts debt serving capacity of loan applicants	5	4	3	2	1
6	The rating used can determine deteriorating / non-performing loans	5	4	3	2	1
7	We use public and private information in rating	5	4	3	2	1
8	I know how to use rating system	5	4	3	2	1
CREDIT FOLLOW-UP						
1	We look at the implementation plan of all projects	5	4	3	2	1
2	We periodically monitor projects financed	5	4	3	2	1
3	The management periodically visit the project site	5	4	3	2	1
4	The Bank management check the progress of project during implementation	5	4	3	2	1
5	Appropriate technical expert will involve in project follow up	5	4	3	2	1
6	We have all types of Engineers to appraise and estimate all collaterals	5	4	3	2	1

	and project assets					
7	We invite independent professional assessors if required	5	4	3	2	1
8	We maintain separate report for project loans	5	4	3	2	1
9	We know the performance of project loans in the bank	5	4	3	2	1
10	The bank monitors all problem loans	5	4	3	2	1
11	There exist a separate division or department to follow project loans in the bank	5	4	3	2	1
12	The NPLs on project loan is higher than NPLs of other sectors	5	4	3	2	1
13	We provide appropriate and adequate grace period for all projects	5	4	3	2	1
14	Interest rate during grace period is collected appropriately	5	4	3	2	1
15	All customers bring implementation schedule of the project	5	4	3	2	1
CREDIT RISK MANAGEMENT						
1	The bank has a risk management policy	5	4	3	2	1
2	The bank has a separate credit risk management policy for project finance	5	4	3	2	1
3	The bank has pre-set concentration limits in every sector	5	4	3	2	1
4	The bank has pre-set portfolio limits	5	4	3	2	1
5	The bank quickly responds to market changes	5	4	3	2	1
6	We periodically assess credit quality of our loan portfolio	5	4	3	2	1
7	Our project loan portfolio is fully insured	5	4	3	2	1
8	Clients are requested to provide financial guarantees	5	4	3	2	1
9	Risk transfer improves loan recovery	5	4	3	2	1
10	The loan portfolio is invested in different sectors of the economy	5	4	3	2	1
11	We do not concentrate our loan portfolio in particular sectors of the economy	5	4	3	2	1

12	Diversification has reduced risk exposure in this institution	5	4	3	2	1
13	Default level have reduced due to diversification	5	4	3	2	1
14	We have widely used risk retention to know how much that exist in our loan portfolio	5	4	3	2	1
15	We consider equity contribution of the borrower both in kind or investment progress and in cash	5	4	3	2	1
16	Cost overrun, if any, on project cost is covered by the borrower	5	4	3	2	1

Thanks for your time and cooperation.

Interview questions

This interview's content is confidential and serves the purpose of collecting data for the research study. The researcher guarantees not to disclose respondents' identities in the work.

General Questions

1. What are the factors attributable for your bank to enter in to such a financing? What are the major difference between your traditional lending and manufacturing project financing?

2. What kind of manufacturing Project is financed by the Bank?

3. In your opinion, what type of risk exists in those products?

Question related to manufacturing project financing

1. Any bank has to deal with credit risk while financing project. How is the credit risk situation that your bank is dealing with? How many types of credit risk? In your opinion, which one is the most serious risk in manufacturing project financing by the bank?

2. Could you please kindly tell in detail about the bank's internal credit rating system? In your opinion, is it helpful to your bank's credit management?

3. Could you please kindly tell about bad debt rate control mechanism in your bank while financing a manufacturing project? Do you have any policies related to delinquent rate control?

4. Could you please kindly provide map of lending procedure and assessment of project financing in your bank?

5. Could you please kindly provide credit risk management structure of your bank?

6. Is there any customer categorization in manufacturing project financing? What are the criteria for that categorization? What type of customers is most likely to generate bad debt?

7. Did you ever have to loosen credit approval standards due to profit pressure?

8. What do you suggest for better performance of manufacturing project financing in the future?

APPENDIX II

CPA					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	1.1	1.1	1.1
	2.00	1	1.1	1.1	2.3
	2.25	1	1.1	1.1	3.4
	2.50	1	1.1	1.1	4.5
	2.75	5	5.7	5.7	10.2
	3.00	5	5.7	5.7	15.9
	3.25	11	12.5	12.5	28.4
	3.50	9	10.2	10.2	38.6
	3.75	11	12.5	12.5	51.1
	4.00	12	13.6	13.6	64.8
	4.25	11	12.5	12.5	77.3
	4.50	13	14.8	14.8	92.0
	4.75	3	3.4	3.4	95.5
	5.00	4	4.5	4.5	100.0
	Total	88	100.0	100.0	

FFA					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	2.3	2.3	2.3
	2.20	1	1.1	1.1	3.4
	2.40	1	1.1	1.1	4.5
	2.60	4	4.5	4.5	9.1
	2.80	4	4.5	4.5	13.6
	3.00	7	8.0	8.0	21.6
	3.20	5	5.7	5.7	27.3
	3.40	7	8.0	8.0	35.2
	3.60	8	9.1	9.1	44.3
	3.80	11	12.5	12.5	56.8
	4.00	12	13.6	13.6	70.5
	4.20	10	11.4	11.4	81.8
	4.40	5	5.7	5.7	87.5
	4.60	5	5.7	5.7	93.2
	4.80	4	4.5	4.5	97.7
	5.00	2	2.3	2.3	100.0
	Total	88	100.0	100.0	

TFA					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.50	3	3.4	3.4	3.4
	2.75	4	4.5	4.5	8.0
	3.00	7	8.0	8.0	15.9
	3.25	11	12.5	12.5	28.4
	3.50	9	10.2	10.2	38.6
	3.75	10	11.4	11.4	50.0
	4.00	14	15.9	15.9	65.9
	4.25	7	8.0	8.0	73.9
	4.50	12	13.6	13.6	87.5
	4.75	6	6.8	6.8	94.3
	5.00	5	5.7	5.7	100.0
	Total	88	100.0	100.0	

CRT					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1	1.1	1.1	1.1
	2.33	2	2.3	2.3	3.4
	2.67	8	9.1	9.1	12.5
	3.00	7	8.0	8.0	20.5
	3.33	8	9.1	9.1	29.5
	3.67	13	14.8	14.8	44.3
	4.00	18	20.5	20.5	64.8
	4.33	20	22.7	22.7	87.5
	4.67	7	8.0	8.0	95.5
	5.00	4	4.5	4.5	100.0
	Total	88	100.0	100.0	

CFU					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.67	1	1.1	1.1	1.1
	2.00	2	2.3	2.3	3.4
	2.33	1	1.1	1.1	4.5
	2.67	5	5.7	5.7	10.2
	3.00	9	10.2	10.2	20.5
	3.33	12	13.6	13.6	34.1
	3.67	14	15.9	15.9	50.0
	4.00	18	20.5	20.5	70.5
	4.33	8	9.1	9.1	79.5
	4.67	10	11.4	11.4	90.9
	5.00	8	9.1	9.1	100.0
	Total	88	100.0	100.0	

CRM					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	2	2.3	2.3	2.3
	1.50	2	2.3	2.3	4.5
	1.67	1	1.1	1.1	5.7
	1.80	1	1.1	1.1	6.8
	2.00	5	5.7	5.7	12.5
	2.20	2	2.3	2.3	14.8
	2.25	6	6.8	6.8	21.6
	2.33	4	4.5	4.5	26.1
	2.50	1	1.1	1.1	27.3
	2.60	2	2.3	2.3	29.5
	2.67	4	4.5	4.5	34.1
	2.75	3	3.4	3.4	37.5
	3.00	9	10.2	10.2	47.7
	3.20	2	2.3	2.3	50.0
	3.25	3	3.4	3.4	53.4
	3.33	7	8.0	8.0	61.4
	3.40	2	2.3	2.3	63.6
	3.50	6	6.8	6.8	70.5
	3.60	3	3.4	3.4	73.9
	3.67	2	2.3	2.3	76.1
	3.75	3	3.4	3.4	79.5
	3.80	2	2.3	2.3	81.8
	4.00	9	10.2	10.2	92.0
	4.33	4	4.5	4.5	96.6
	4.50	2	2.3	2.3	98.9
	4.67	1	1.1	1.1	100.0
	Total	88	100.0	100.0	