ADDIS ABABA UNIVERSITY
SCHOOL OF COMMERCE
GRADUATE STUDIES
DEPARTMENT OF PROJECT MANAGEMENT

ASSESSMENT OF PROJECT FINANCING PRACTICES AT NIB INTERNATIONAL BANK S.C.

By

ENJORE TEFERA

November, 2018
Addis Ababa, Ethiopia

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ADVISOR
WUBESHET BEKALU (PhD)

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Approval Board of Examiners

Advisor _____ signatures_____ Date_____

Internal Examiner _____signature_____Date_____

External Examiner_____ signature_____ Date_____

DECLARATION

I, the undersigned, declare that the project paper entitled "**Assessment of Project Finance Practices at Nib International Bank S.C**." is my original work and has not been presented or submitted for a degree, diploma or fellowship in any university, and that all sources of materials used for the paper have been duly acknowledged.

Enjore Tefera

November, 2018

CERTIFICATION

This is to certify that this project paper entitled "**Assessment of Project Finance Practices at Nib International Bank S.C**." submitted to the **School of Graduate studies of Addis Ababa University, School of commerce** in partial fulfillment of the requirement for the award of **Master of Arts Degree in Project Management**, done by Mr. **Enjore Tefera,** I.D. No**. GSE/6955/08** is an authentic work carried out by him under our guidance. The matter embodied in this thesis has not been submitted earlier for the award of any Degree or Diploma to the best of our knowledge and belief.

Advisor:

Wubeshet Bekalu (PhD)

Addis Ababa University, School of Commerce

Addis Ababa, Ethiopia

Signature_____

Date_____

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First of all, I would like to praise the Almighty for every steps of my life.

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ACRONYMS

ADB: African Development Bank

ADSCR: Annual Debt Service Cover Ratio

CRM: Credit Relationship Management

EBITD: Earning Before Interest Tax and Depreciation

LLCR: Loan Life Cover Ratio

MARR: Minimum Attractive Rate of Return

NBE: National Bank of Ethiopia

NPL: Non-Performing Loan

NPV: Net Present Value

PF: Project Finance

PRLRP: Project Rehabilitation and Loan Recovery Process

SBB: Supervision Banking Business

SPV: Special Purpose Vehicle

ABSTRACT

The study was focused on the assessment of the project finance practices of Nib International Bank S.C. the study employed quantitative and qualitative research approach. Descriptive design was used to construct meaning from extracted data collected from primary and secondary sources particularly through survey, interview and document reviews. This study was supplemented with literature reviews. the study came up with the finding that assessment of project finance emanated from technical, structural, market, finance and project finance risk aspects. Accordingly, from the technical angles the bank was found to be somehow technically deficient in the assessment of appropriate technological need of the project finance request and having calibered staff for the assessment of same. With respect to structural aspect of the project, almost all of the structural aspects of the project were not exercised by the bank. From the marketing perspectives, the assessment are mainly macro and industry analysis of the project environment, largely dependent on the feasibility study presented by the project sponsors and lacks precision and consciousness on the specific project market positioning and marketing mix strategies. Last regarding project finance and project finance risk assessment techniques, it was found that the techniques employed were analogous to traditional short term working capital financing and techniques of project finance were not exploited. Cognizant of the forgone findings, the study recommends the bank to pay due attention to technological assessment need of the project proposed to be financed, to exploit project finance structure features, to assess the viability of the potential market at appropriate detail and to cross check the feasibility study and finally to wave on relying conventional lending practices. Last to use separate techniques for project financing and to boost staff capability in the assessment of project financing techniques by providing intensive trainings.

Key words: project finance, *project finance risk, project technical appraisal, project market appraisal, project structure appraisal, feasibility study, market positioning, marketing mix, working capital finance.*

CHAPTER ONE

INTRODUCTION

This chapter deals with background of the study, background of the organization, statement of the problem, research questions, objective of the research, significance of the research, scope and limitations of the research and thesis organization.

1.1 Background of the Study

The financial system is concerned about money, credit and finance – the terms intimately related yet somewhat different from each other. It implies a set of complex and closely connected or inter-mixed institutions, agents, practices, markets, transactions, claims and liabilities in the economy. (Paul,1971)

A financial system is a complex, well – integrated set of sub-systems of financial institutions, markets, instruments and services which facilitate the transfer and allocation of funds, efficiently and effectively. There are four constituents of financial system, viz. financial institutions, financial markets, financial instruments and financial services. (Murray & Tomas,1981)

There are five main functions of a financial market which project financing can do. These are (1) ex-ante information production and the efficient allocation of capital, (2) ex-post monitoring of investments and enforcing corporate governance, (3) the facilitation of diversification and the management of risk, (4) the mobilization and pooling of savings, and (5) the facilitation of transactions (Levine, 1997). If markets are underdeveloped and do not function well in these areas the transaction costs of capital increase

Financial institutions are business organizations that act as mobilizes and depositors of savings and as purveyors of credit or finance. They also provide various financial services to the community.

Banking institutions participate in the economy's payments mechanism, i.e. they participate in the economy's payment mechanism, i.e., they provide transactions services. Their deposit liabilities constitute a major part of the national money supply and they can, as a whole, create deposits or credit which is money (Herbet & Gaumnitz,1980)

The banking sector is a vital cog in the machinery of any modern economy. It is one of the major financial pillars of the financial system. Banks are one of the oldest of financial intermediaries in the financial system. They play a crucial role in the mobilization of deposits and disbursal of credit in of credit to various sectors of the economy. A well-functioning banking system efficiently deploys mobilized savings in productive sectors and a solvent banking system ensures that the bank is capable of meeting its obligations to the depositors.

Commercial Banks render a number of services such as provisions of different credit facilities, mobilizing savings, fixed time, demand deposits, local and foreign money transfers, transaction of currency, credit and debit cards and other related activities. The principal business line of commercial banks extends credit service to customers (Banking Business Proclamation No. 592/2008).

Commercial banks can provide project financing because they are able to evaluate complex project financing transactions and to assess and assume the construction and performance risks usually involved in such financings. However, largely because of the short-term nature of a commercial bank's liabilities (its deposits), commercial bank participation is usually limited in amount, although banks closely monitor and control their project finance assets much as they do their other long-term assets (J.Paul Forrester, 2001)

Project finance traditionally described certain kinds of instruments or transactions with unique characteristics, which enabled promoters of a project finance transaction to shift debt burden, operating risk and accounting liabilities to third parties, while at the same time retaining some of the benefits of the project. These days, the meaning of project finance has transformed into a definition of a way of financing off-balance sheet. (Buljevich & Park, 1999) Project finance means that debt is supported by the project, not by the project's sponsoring companies. Nevitt & Fabozzi (1995) define project finance as a means of financing a particular economic unit in which a lender is satisfied to look to the cash flows and earnings of that economic unit as the source of funds from which a loan will be repaid.

Project finance is an area where the bank is involved in medium and long term finance to provide finance to new projects, expansion and renovation related with agriculture, industry,

multipurpose commercial building hotel and other feasible project (Nib International Bank Credit Procedure).

Put simply, for a lending banker, project financing means the process of appraising the commercial / economic, technical, structural, market viability of the project, identifying risks and mitigations for the project, tying up of funds through equity and long-term loans for implementing the project, and monitoring the implementation, operation, and debt servicing of the project. Lenders base credit appraisals where the source of repayment is the projected revenue/cash flows from operations of the facility rather than general assets or the balance sheet of the sponsor. They rely on the assets of the project facility, including revenue-producing contracts and other cash flows generated by the facility as collateral for the debt.

At the heart of project financing is the performance of the project, both technical and economic, and, therefore, the debt terms are not based on the sponsor's balance sheet, collateral, or value of physical assets of the project. The financial package is unique to the project, and often the interest rates and spreads are not proportionate to the risks involved in the project; they depend on the cash flows expected by the project and whether the cash flows can support the debt-service burden. Repayment profiles, creation of reserves, and contingency triggers, such as cash sweep and cash trap, are sculpted around expected cash flows. The term project financing is widely misused and perhaps even more widely misunderstood. It is important to clarify what the term project finance does not mean: raising funds to finance a project that is economically weak and may not be able to service its debt or provide an acceptable rate of return to its equity investors.

1.2 Background of the Organization

Nib International Bank is a privately owned commercial bank established in 1999 in accordance with the "Licensing and Supervision of Banking Business Proclamation No. 84/1994" of Ethiopia, now superseded by Proclamation No. 592/2008 to undertake commercial banking activities.

The Bank obtained its license from the National Bank of Ethiopia (NBE) on 26th May 1999 and started its business activities in the month of October 1999.the bank established with vision of

“ To become an icon of excellence and the leading commercial bank in Ethiopia” and its mission is ”To provide customer focused, efficient, effective and full-fledged commercial banking services by deploying qualified, honest and motivated staff, state –of-the-art technology and thereby optimize stakeholders” It operates through its Head Office in Addis Ababa and 215 branches and 3 agency offices for foreign exchange transactions in and outside Addis Ababa.

In an endeavor to satisfy the growing needs of various business client, the bank is observed to engage in various new banking services. In addition to financing the working capital need of various business communities, the overall effort exerted in financing significant number of project loans has been commendable. It has become evident that owing various development projects prevalent in the economy and to engage in long term financings, the bank has been involved in financing various projects.

The ratio of the bank NPL had shown remarkable progress as it was evidenced by the bank annual reports. It was 11.22 % in 2005 but later in 2014 the bank managed to had 3.13 %. Similarly, Provision holds and NPL of project finance for the same period were 1.67, 2.1 and 6.09 %, 10.22% respectively (Getachew,2016)

At the close of 2015/16 financial year, Nib international bank total outstanding loan and advances stood at birr 7.6 billion. Loan and advances extended by the bank covered a wide range of sectors of the economy. The sectoral distribution of loans and advances of the bank during the financial period specified earlier indicates that the lion share (22.07 %) goes to Manufacturing sector followed by Domestic Trade and services (17.42%), Building and Construction (15.4%), Export (15.13 %) and Import (12.10 %).

1.3 Statement of the Problem

In 2015/16, there were about 852 projects licensed by the Ethiopian Investment Commission and Regional Investment Offices; the Commission remarked that investment projects are increasing, all of projects were private and command capital of birr 6.76 billion (NBE annual report 2015/16). The foresaid numbers will continue to increase following establishment of industrial zones across the country. Thus, financing of the project is deemed inevitable.

The very nature of the project financing is that repayment is largely dependent on cash flow generation (projection) of the project. It essentially granted for relatively longer period. Thus adequate assessment of the project financing should not be understated or marginalized.

Project finance is different in scope and management method while compared with ordinary short term working capital financing and hence it captures the attention of core management of the bank.

In accordance with SBB/43/2008 of the regulatory directive, nearly all private banks have to support the overall development endeavor of Ethiopia by financing small to medium and large scale project.

Financing the project is a tuff business hence most project entails refinancing the project for several times, delay in the implementation of the project, hindered by macroeconomic business environment and affected by political and legal constraints if not adequately assessed for it.

In addition, non-performing loan (NPL) of project finance stood at 10.22 % as of June, 2014 (Getachew, 2016). If this figure was not absorbed by relatively best performance of other lending, it would have been danger for the bank owing the maximum NPL allowed by the regulatory organ is 5%

There are a number of studies conducted on the assessment or evaluation of credit management and credit risk management of the banking industry in Ethiopia (Getachew,2016). However, a study on project finance is very limited little. As far as researcher knowledge is concerned, very few studies were conducted on the assessment of project finance.

Getachew Aragaw (2016) in his research tried to establish a relationship between project financing and performance of private banks. However, the assessment method employed relied on conventional credit appraisal techniques such as the 5 Cs and lacks project finance evaluation techniques.

Berhanu Kasahun (2016) researched on the assessment of challenges of project financing a case study on commercial bank of Ethiopia. The research focused as titled on the challenges of project finance and not on the assessment employed

Sisay Zeleke (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 over runs are determined by a number of factors emanated from various sources. the results of the study indicated that shortage of foreign currency supply, inconvenient terms and pre-condition for phase loan disbursement, poor due diligence assessment to know the customer, under-financing, fund diversion for unintended purpose were the major determinant of project schedule overrun. On the other hand, incomplete and not well prepared feasibility study presented by the project promoter, un planned expansion or change order, lack of resource planning, delay from borrower side were identified as determinant project cost overrun.

1.4 Research Questions

In line with the problem statement, the research question aimed at how Nib International bank assessed and evaluated project finance request of various customers particularly the Study is guided by the following research questions:

1) How technical appraisal of project finance is assessed in Nib International bank?
2) How structural appraisal of project finance is assessed in Nib International Bank?
3) How market appraisal of project finance is assessed in Nib International bank?
4) How finance appraisal of project finance is assessed in Nib International Bank?
5) How project finance risk is assessed in Nib international bank?

1.5 Objective of the study

1.5.1 General objective

The general objective of this study is to assess the practices of project financing in Nib International Bank S.C.

1.5.2 Specific objectives

In light of the general objective, the study has the following specific objectives are to:

- Evaluate technical appraisal of project finance at Nib international bank S.C.

- Assess the project structural appraisal techniques adopted by Nib International bank.
- Assess the market appraisal techniques adopted by Nib international bank.
- Evaluate the project finance appraisal techniques adopted by Nib International Bank S.C.
- Reflect on project finance risk assessment of Nib International Bank.

1.6 Significance of the study

Understanding the contribution of project to the economy and its significance to sustainable economic growth, appropriately appraising financially viable projects that contribute to the national economy in general and to the profitability of the bank in particular couldn't be marginalized.

This study is paramount important to the management of Nib International Bank to Improve the project lending practices. Some of the findings will serve as input for the bank. It would enable the bank to reconsider its appraisal techniques adopted

It further aid in dwindling of nonperforming loan which is one of the hindrance or bottleneck facing the Bank which are mainly emanated from poor assessment of project finance there by improve the asset quality of the bank.

Moreover, the study contributes to upgrade comprehensive due assessment of project finance thereby unqualified projects are end up in rejecting at its early phase and improve the sunk cost

At last it contributes to body of knowledge in practical project loan financing practice of private bank which is almost inaccessible in the industry.

1.7 Scope and limitations of the study

It would be more significant if more other appraisal techniques of project finance such as economic and social appraisal which are mainly focused on contribution of project at national level and society wellbeing respectively have been included.

Owing time and cost constraints, the study focused on project financing practices of Nib International bank. Therefore, the findings from the assessment are limited to the study area and

the conclusions found may not possibly represent or be generalized to others private bank engaged in the same sector.

Further, the bank project financing is further constrained by the regulatory directive of not financing those projects its finance need is beyond 25 % of the bank Paid up capital thus, the study is limited by the lending capacity of the bank.

Last the appraisal methods are limited by practicality of the techniques in our business environment in such a way that advanced project finance appraisal techniques such as Black Sholes, Real options, binomial, Monte Carlo Simulation, and derivate instrument such as forward and Swap currency and interest rate mitigation tools which are highly dependent on liberalization of capital market, availability of secondary market and various economies index are intentionally omitted instead, the researcher focused on the conventional methods of project finance appraisal techniques such as technical, structural, market , finance and project risk evaluation tools .

1.8 Thesis Organization

The research work consists of five chapters. The first chapter introduces the background of the study, background of the organization, followed by statement of the problem, research questions, objective of the study, significance of the study, scope and limitation of the study and organization of the thesis. The second chapter deals with literature review, in this regard; the theoretical and empirical literatures are reviewed. Chapter three states about methodology and describes the study area, the research design, population and sampling procedures, population of the study, data gathering instrument, procedure of data collection, measurement of factors or variables, validity and reliability test and method of data analysis. Chapter four is devoted to the analysis and presentation of the findings, interpretation of data, and the related information. The fifth chapter winds up the assessment by giving conclusions in the light of the findings and at last recommendations are made based on the concluded findings.

CHAPTER TWO

LITRATURE REVIEW

Under this chapter, the available literatures on the area of the research-topic were reviewed. These literatures were obtained from books, journals, magazines and other dependable sources. The chapter begins with theoretical review and followed by empirical review.

2.1 Theoretical Review

2.1.1 Basic of Project Finance.

There is no singular definition of project finance. Here are some of the most notable important definitions:

A typical definition of project financing might be: "The financing of the development or exploitation of a right, natural resource or other asset where the bulk of the financing is to be provided by way of debt and is to be repaid principally out of the assets being financed and their revenues." A guide to project finance, Dentons.com

Project finance is the structured financing of a specific economic entity—the SPV, or special-purpose vehicle, also known as the project company—created by sponsors using equity or mezzanine debt and for which the lender considers cash flows as being the primary source of loan reimbursement, whereas assets represent only collateral. (Gatti, 2008,)

Project finance is the financing of an economic unit which is viable technically, commercially and financially, and whose future generated cash flow is judged high enough, with a safety margin, to cover operating costs, debt servicing and an adequate return on investment. (Samet, 1980)

Project finance is a form of financing based on a standalone entity created by the sponsors, with highly levered capital structures and concentrated equity and debt ownerships. Due to its contractual idiosyncrasies it is also used to segregate the credit risk of the project from those of its sponsors so that lenders, investors, and other parties will appraise the project strictly on its own economic merits. Typically used for funding public and private capital-intensive facilities

and utilities – such as power plants, refineries, toll roads, pipelines, industrial plants, and telecommunications facilities –, project finance is an economically significant growing financial market segment, but still largely understudied. (Joao& Paulo)

World Bank defines project finance as the "use of nonrecourse or limited-recourse financing." Further defining these two terms, "the financing of a project is said to be non-recourse when lenders are repaid only from the cash flow generated by the project or, in the event of complete failure, from the value of the project's assets. Lenders may also have limited recourse to the assets of a parent company sponsoring a project." (Bruce Comer 1996)

"Project finance (PF) is a method of funding in which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure. This type of financing is usually for large, complex and expensive installations that might include, for example, power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure. Project finance may take the form of financing of the construction of a new capital installation, or refinancing of an existing installation, with or without improvements. (…) In such transactions, the lender is usually paid solely or almost exclusively out of the money generated by the contracts for the facility's output, such as the electricity sold by a power plant. The borrower is usually an SPE that is not permitted to perform any function other than developing, owning, and operating the installation. The consequence is that repayment depends primarily on the project's cash flow and on the collateral value of the project's assets. In contrast, if repayment of the exposure depends primarily on a well-established, diversified, credit-worthy, contractually obligated end user for repayment, it is considered a secured exposure to that end-user." (Basel-Committee, 2006: para. 221. and 222.)

The majority of authors agree on defining project finance as financing that as a priority does not depend on the soundness and creditworthiness of the sponsors, namely, parties proposing the business idea to launch the project. Approval does not even depend on the value of assets sponsors are willing to make available to financers as collateral. Instead, it is basically a function of the project's ability to repay the debt contracted and remunerate capital invested at a rate consistent with the degree of risk inherent in the venture concerned.

2.1.2 Project Financing Appraisal

Project appraisal can be defined as a comprehensive and systematic assessment of the viability of a project from different aspects. It aims at serving as a guide to the decision-maker in the selection / rejection of projects from among competing alternatives for investment proposals.

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 purpose of project appraisal is to establish whether a project is worthwhile in the light of its costs in terms of resource commitments and the projects expected benefits. That is, appraisal is an ex ante assessment of a project and is the key element in the decision as to whether or not to proceed with a project. This will involve the consideration of alternative projects 9 with option[s]), or alternatively, by comparison with the status quo (that is, the do – nothing option). In practice, this is an intricate and sophisticated process of enquiry, with substantial data requirements. Examination of the viability of the project may require the specialized services of appraisal missions and appointed consultants. Appraisal covers five major aspects of the project: technical, structural, market, financial and project risk.

2.1.2.1 Technical Aspects

Technical appraisal is one of the methods and mechanisms of appraising a viability of the project finance. This is mainly concerned with issues related to physical scale, layout, location of facilities, technology used, cost estimates and their relation to engineering or other data on which they are based, proposed procurement arrangements, procedures for obtaining engineering, architectural or other professional services, the potential impact on the human and physical environment, and a range of other similar concerns related to the technical adequacy and soundness of the project. Technical appraisal involves the followings:

Location and site: Initially, as many locations as possible should be identified which meet the most fundamental operational requirements of the proposed project. These should then be

evaluated and an optimum location selected using the criteria of material versus market orientation, quality standards, infrastructural status, local laws, and socio-economic and living conditions. Within the geographical location so selected, alternative sites are similarly identified and the most optimal one selected after considering factors like terrain, local climate land its impact on plant & equipment and their operation), availability and cost of land (plus its development), local infrastructural facilities and their costs (power; water: road/ air/water transport; telecommunications; etc.), socio-economic conditions, availability and quality of labor and construction equipment, valid waste disposal alternatives and their costs, local living conditions, public policies, local law, and taxes, etc. Resource-oriented projects like mining of minerals involve items like geological analysis covering geological structure, hydrological conditions, characteristics of the resource, resource reserves, prospecting status, and expected geological problems.

Plant size: Determination of an optimum plant size is critical to the success of a project. A plant represents sunk costs and any under-utilization of its capacity means either reduced profits or, for levels below the Break-Even Point, losses. The adverse impact of an extra-large capacity is felt all the more keenly during the early years when profits are all the more important for survival. It is therefore normally better to err on the lower side and to build a plant having a capacity that is likely to be fully utilized quickly, rather than to go in for a large capacity in the fond hope of a growing share of the market. In a feasibility study, one-begins by looking 'at projections of the demand-supply Feasibility and Technical Analysis gap in the market and anticipated arrives' at the possible range of project sizes after considering various constants like availability of materials, technology, equipment, public policy (for example, a large company may be precluded from setting up capacities beyond a size) and finances, etc... The best possible size of plant & equipment is then recommended after analyzing the availability, economics, and practicability of different size options.

Technology: The same product or service can generally be obtained using quite different technologies. The latest technologies usually represent many improvements over the existing or older ones. They may also offer certain unique features. However, newly emerging technologies may have some inherent dangers as well.

What is important for formulating a successful project is to weigh available alternative technologies and select the one that is most appropriate in the prevailing situation, rather than

blindly adopt the latest, state-of-the-art technology assuming that it will work since it works elsewhere. A technology is considered appropriate only if it is assessed to be satisfactory, and relevant.

After the existing technologies have been ranked, these have to be further assessed vis-à-vis acquestional aspects, viz the available modes of procuring it and the associated costs in focal or foreign currencies. The important questions to be asked include: Is the technology available as a technical know-how, or through a technical collaboration, or a joint venture? Are patents, trademarks, or licensing involved? At what terms and with what legal obligations? Will it tie down the investor to procure equipment as well from a specific country or company?

Design, layout and process: The feasibility study should broadly specify the recommended design of the processes and plant (giving essential assumptions and design calculations). It should also present a rough layout of various facilities and list out all the major equipments needed, with key specifications and available source(s) of supply. Moreover, it should consider and evaluate alternative equipment as well and give reasoned recommendations about them.

The importance of thoroughness of planning at this stage of the feasibility study can hardly be over emphasized. Many delays, cost overruns, and even failures of projects can be avoided provided the design and physical formulation of the project are based on a sufficiently deep analysis and have the support of the owner at the highest level. Otherwise, the project is likely to encounter mid-steam changes, with untoward consequences. There is a general impression that "minor" midstream changes would not pose much of a problem. This is not so. A project is a multi-task entity with complex linkages and interrelationships between its various constituents, and even "small" changes, which may result in certain made-to-order procured equipment being rendered unsuitable and thus throw the project schedule and costs haywire.

The aim of all the efforts at this stage is to design a viable operating entity which not only works, but works harmoniously (and with minimum costs) in relation to the stipulated inputs and local environment. Apparent as well as latent and relatively infrequent factors having a bearing on the effectiveness of the project must therefore be identified and considered. Neglect of climatic and geographical aspects (e.g. monsoons, floods, snowstorms, dust-storms, heat/cold-waves, earthquakes, typhoons, etc.) at this stage can prove quite costly later on. It is equally important to ascertain and give due consideration to local industrial and safety standards.

Infrastructural facilities: Availability and characteristics of roads, bridges, railway facilities (like station, yards), air transportation, waterways, ports, etc. depending upon their relevance to the assessed requirements of the project at both implementation and operation stages need to be studied. After studying the appropriateness of the infrastructure existing around the project location, the infrastructural requirements at the project site itself. A large part of the land area is normally required to be reserved for service roads, storm water mains, railways, over-ground or overhead gas, steam, and air pipelines, water reservoirs, and even harbors for certain large-scale industrial projects. A detailed study of all such requirements and of their implications in terms of time, resources, and approximate costs is necessary to avoid surprises later on.

Technical analysis rarely proceeds in a linear fashion. There is a great deal of interactive information exchange in respect of many of these aspects. At the end, however, it should result in:

- a fairly comprehensive recommendation about the "technical" parts of the project package,

- a precise recommendation with or without conditionalities about the technical feasibility of the package (stating the assumptions, made) and

- Detailed project specifications, which should form the basis for calling bids, etc. during the implementation phase.

Needless to say, the greater the thoroughness with which the technical analysis is carried out, the more reliable and complete the Project Specifications are, and the lesser the chances of major unforeseen problems cropping up and jeopardizing the project.

2.1.2.2 Structural Aspect

The objective of many projects is not merely to add to physical assets and capital, but also to create and enlarge human and institutional capabilities to manage and maintain development undertakings. Institutional appraisal is concerned with a large number of questions which deal with the adequacy or otherwise of such human capability and the institutional framework in which projects are implemented. This is possibly the most challenging aspect of the project's overall success. There may be no shortage of technically well-designed and well-endowed projects (in terms of their 'hard' inputs). However, many projects have limitations at the human

and institutional level (the so-called 'soft' inputs). Therefore, project appraisal requires careful and sensitive consideration of the institutional dimension and local conditions.

Structural appraisal involves types of project, how sponsors, project and institution is established and legal covenants

Types of project

One of the complicating (and interesting) features of most projects is the considerable number of parties with differing interests that are brought together with the common aim of being involved to a greater or lesser extent with a successful project. It is one of the challenges of those involved with a project to ensure that all of these parties can work together efficiently and successfully and cooperate in achieving the project's overall targets. It is inevitably the case that, although all of the parties will share the same overall aim in ensuring that the project is successful, their individual interests will vary considerably and, in many cases, will conflict. With many projects, there will be an international aspect which will involve different project parties located in different jurisdictions and there will often be tensions between laws and practices differing from one country to another.

- No recourse on signing
- Loan guaranteed during pre-completion: the loan is secured against pre completions
- A form of cash deficiency agreement: A deficiency agreement is an arrangement in which a party provides a firm with funds to cover any shortfalls arising from capital or cash flow restraints, allowing the company to service its debt. A deficiency agreement will usually have a cumulative limit specified by the lending party. It is not uncommon to see this expression called a cash deficiency agreement. For project finance sponsors, a deficiency agreement makes up for any shortfall caused by insufficient working capital or cash inflows. In these instances, they may also be referred to as a makeup arrangement.
- Sponsor guarantee against failure: securing guarantee from the project promoters (sponsors)
- Syndicated financing: In most projects there will be a syndicated loan agreement entered into between the borrower, the project lenders and the facility agent. It will regulate the terms and conditions upon which the project loans may be drawn down and what items of project expenditure the loans may be used for. The agreement will contain the usual provisions relating to representations, covenants and events of default found in other

syndicated loan agreements but expanded to cover the project, project documents and related matters.

- Full recourse financing: Full recourse debt is a type of secured debt that gives the lender rights to assets beyond just collateral to cover full repayment of a borrower's loan obligations

  Full recourse is a state in which a debt obligation is owed regardless of the borrower's personal and financial situation. When a borrower enters into a secured loan contract it may be either full recourse or non-recourse. With full recourse the provisions of the loan give the lender rights to additional assets beyond just the specified collateral to cover full repayment of a borrower's loan obligations. Full recourse debt is nearly risk free to the lender. Lenders may choose to integrate full recourse into a lending agreement if they believe that the collateral value on a secured asset has a high likelihood of falling. This can be common in a mortgage loan which uses a real estate property as collateral. If the borrower defaults on their mortgage loan, a lender will be led to seize the property and foreclose. If the value obtained from the resale of the property does not fully cover the entire amount owed by the borrower on the loan, then a full recourse provision gives the lender the right to go after additional assets for the remaining amount. Depending on the recourse loan terms a lender may have rights to a borrower's bank accounts, investment accounts or employment wages.

- Non-recourse finance: Non-recourse finance is a loan where the lender is only entitled to repayment from the profits of the project the loan is funding, not from other assets of the borrower. These types of projects are characterized by high capital expenditures, long loan periods and uncertain revenue streams.

  In contrast, non-recourse debt does not give a lender any rights to additional assets if default occurs on a secured loan. In a non-recourse mortgage loan, the lender would not have rights to any assets beyond the real estate collateral. This presents some collateral risk for the lender since there is a chance that the collateral value could fall below a borrower's repayment value. As a mortgage loan progresses the collateral risk will decrease for the lender since greater portions of the loan are paid off. The risk of the collateral value falling is generally an important consideration in the underwriting process. This is one reason that lenders typically have a loan-to-value threshold for the principal amount they will issue to

a secured borrower. Most lenders will usually issue a loan for up to approximately 70% of the value of a borrower's secured collateral.

Full recourse loans are common with construction and other shorter term commercial real estate financing, such as a mini-perm loan that finances lease up and stabilization of an asset. A non-recourse loan is defined as a loan where the borrower or guarantors are not personally liable for repaying any outstanding balance on the loan.

- Limited recourse financing: when lenders have repaid from the asset of a parent company sponsoring the project.
- Some mixture of guarantee and support: a combinations of different guarantees and support from the project sponsors

the sponsors

One of the first, and most important, issues that the project sponsors will face in deciding how to finance a particular project will be how to invest in, and fund, the project. There are a number of different structures available to sponsors for this purpose. The most common structures used are:

A joint venture or other similar unincorporated association, a partnership, a limited partnership, an incorporated body, such as a limited company (probably the most common). Of these structures the joint venture and limited company structure are the most universally used.

- Corporate company as equity participant; when project have equity shareholder from corporate companies.
- Financial guarantee from government: When project is backed by the government
- Supply and sales agreement with dependable companies: this is mainly backward and forward linkages with dependable companies. They may be strategically aligned through supply chain. In this case inputs and outputs are guaranteed.
- Completion undertaking by a corporate company: the project sponsors may give a completion guarantee to the project company, guaranteeing that completion will take place at a certain date. No completion risk due to plant capacity is expected because of corporate companies are giant and capable of delivering the project.
- Partnership of a strategy aligned and graded companies: similar to supply and sales agreement in this case the project and the companies are strategic partner.
- guaranteed by export credit insurance companies: for export of the project output fully

secured by insurance companies

the project

- repayment tied to counter trade opportunities: proceeds of loan repayment is secured from trade and contractual agreement
- repayment tied to the export earnings of the project: proceeds of loan is serviced from export earnings of the project
- lenders control over project assets : this is non-recourse project financing
- high return on total project investment (debt and equity): profitability expected from the project
- high investment on loan investment:

institutional

- syndication with other major commercial banks: joint financing with other commercial banks
- Co-financing with development partner: the loan is availed with development partner.
- Availability of export credit insurance: from securing the export proceeds.
- Partnership of local bank: there are partnership agreements with local banks.

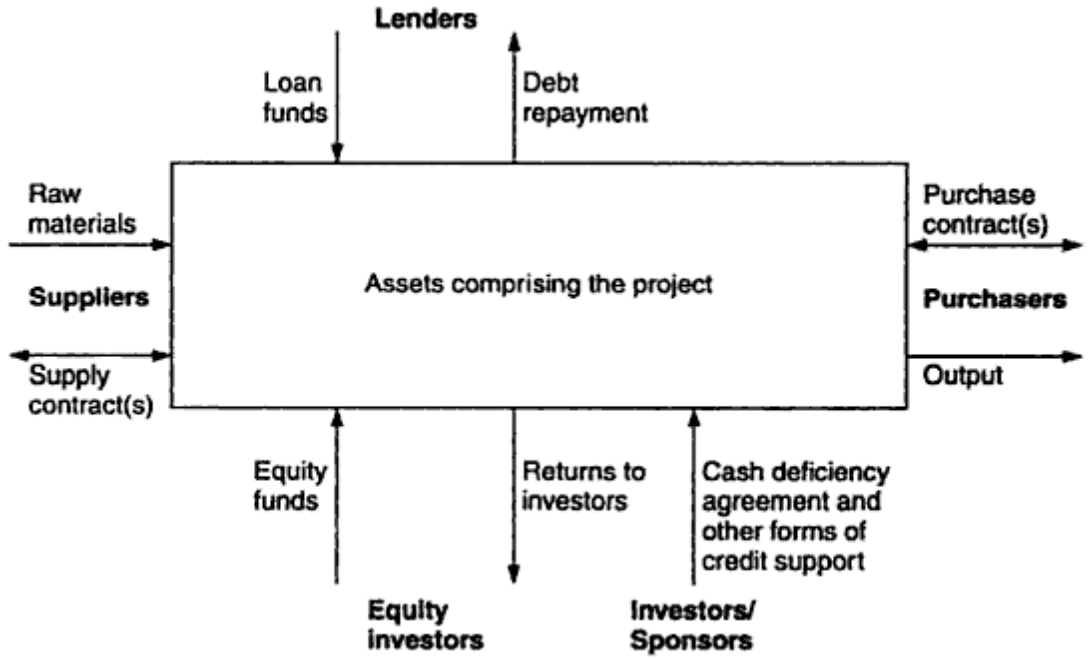


Figure 1 shows the basic elements in a capital investment financed on a project basis (Finnerty, 1996, p. 3).

In broad terms, a covenant in loan agreement can be defined as an undertaking in which the corporate borrower agrees to maintain specified economic and operational factors during the term of the loan. Covenants bind the borrower in the conduct of its business during the period of commitment and for the duration of the loan. The essence of the covenant, as a contractual controlling and monitoring device, is that the breach of a covenant is frequently determined as an event of default in the loan agreement.

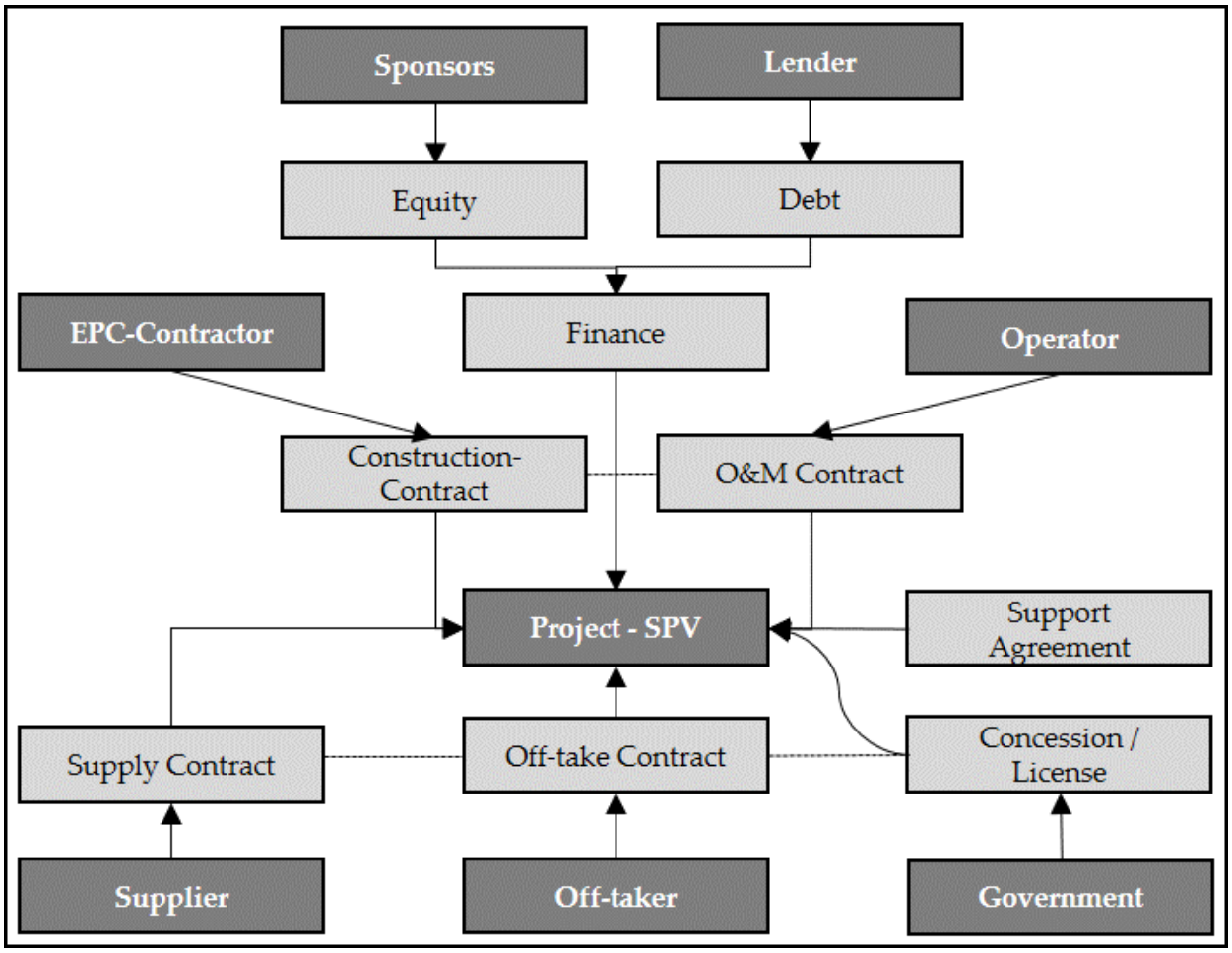
Project finance is structured around a center of contracts, focused around a special purpose vehicle (SPV) entity, which becomes the counterparty to all operating, financing and revenue agreements. The SPV is comprised of representatives from the sponsoring firms/equity-providers. They are in turn the SPV's shareholders who arrange financing with a syndication of banks, headed by a principal Lead Arranger who provides all funds to financially close, design, procure and construct the project. Various agreements transfer the risk away from the SPV and lenders such as:

a) sales off-take agreements with the off-taker/purchaser (and sales take-or-pay guarantees towards the SPV); A long-term sales contract may provide for sales on arm's-length terms, with the price calculated by reference to market prices at the relevant time, but not commit the purchaser to buy. Ideally, and this is what the lenders will be looking for, the project company would require a guaranteed cash flow from which to repay the project loan.

   Different types of sales agreement have been developed to guarantee the amount and/or continuity of cash flow. The most popular of these are: • "Pass through agreements" • "Take-or-pay agreements". Where charges are calculated on a pass-through basis, they are calculated by reference to the costs incurred by the project companies which are passed through to the buyer. This is a common structure in power projects. Typically, the costs passed through to the buyer can include the whole or any part of the costs of purchasing fuel or other commodities required for the project, repayments of principal to the project lenders, payments of interest to the project lenders, operating and maintenance costs, administrative costs, insurance costs and an amount representing the sponsor's return on capital. In each case, the costs

passed through are those relating to the period to which the payment by the purchaser/off taker relates. In a take-or-pay agreement, as is noted above, the buyer pays for supplies of the project company's product, provided that they are available for delivery even if the buyer does not require them. There will often be a "hell or high water" provision which will attempt to establish that the buyer must pay despite non-performance by the seller or the existence of circumstances which would otherwise frustrate the contract. The type of sales/off take agreement will depend, to a large extent, on the product in question. For example, in the gas industry, long-term off take contracts are very common, whereas in the oil industry they are rare, most oil being traded spot or in the short futures market.

b) Concession/environmental/permitting authorizations from the local and national authorities: the concession agreement will be the key project document as it is the document that will vest in the project company the right to explore, exploit, develop or operate, as appropriate, the concession or other relevant rights to the project. At the other end of the spectrum, all that may be needed for a project company to be vested with the necessary legal rights to exploit is a license.
c) input supply agreements with local suppliers;
d) shareholder agreements with the various project sponsors; and
e) Loan-facility agreements with lenders who are providing the debt.



Project finance organization chart (Source: Yescombe (2013)

2.1.2.3 Marketing Aspect

In most cases, the first step in project analysis is to estimate the potential size of the market for the product proposed to be manufactured (or service planned to be offered) and get an idea about the market share that is likely to be captured. Put differently, market and demand analysis is concerned with two broad issues: What is the likely aggregate demand for the product/service? What share of the market will the proposed project enjoy?

These are very important, and yet difficult questions in project analysis. Intelligent and meaningful answers to them call for an in-depth study and assessment of various factors like patterns of consumption growth, income and price elasticity of demand, composition of market, nature of competition, availability of substitutes, reach of distribution channels, so on and so forth. Yet, in many cases, project feasibility studies seem to make a short shrift of market and

demand analysis. It is not uncommon to find cursory statements like “the market is attractive” or “the demand is expected to exceed supply” as substitutes for a thorough market and demand analysis in project evaluation exercises. Given the importance of market and demand analysis, it should be carried out in an orderly and systematic manner.

Demand pattern

To manage fluctuating demand in business, it is imperative to have a clear understanding of demand patterns, why they wary, and the market segments that comprise demand at different points in time. If an organization has detailed records on customer transactions, it may be able to disaggregate demand by market segment, revealing patterns within patterns. Or the analysis may reveal that demand from one segment is predictable while demand from another segment is relatively random.

Degree of competition

Market structure refers to the nature and degree of competition in the market for goods and services. The structures of market both for goods market and service (factor) market are determined by the nature of competition prevailing in a particular market. On the basis of competition, a market can be classified in the following ways: perfect competition, monopoly, duopoly, oligopoly and monopolistic competition.

Product variety

The number and range of brands or products offered by a supplier. How many variants of a product a supplier markets will depend on the degree to which the market is segmented and the number of product variants offered by competitors. In making product variety decisions, the firm must consider how to position its brands do as to serve its target market segments without excessive duplication of brands in any segment, and the additional costs of producing small volumes of many varieties with consequent loss of standardization economies.

Product quality

Product quality means to incorporate features that have a capacity to meet consumer needs (wants) and gives customer satisfaction by improving products (goods) and making them free from any deficiencies or defects. Product quality mainly depends on important factors like

1) The type of raw materials used for making a product
2) How well are various production-techniques implemented
3) Skill and experience of manpower that involved in the production process

4) Availability of production related overheads like power and water supply, transport etc.

Price cost advantages

A cost advantage is a firm that can produce a particular product or service at a lower cost than the competition. Cost is a result of factors such as technology, automation, process, productivity and resource.

Control over Distribution channels

The path through which goods and services travel from the vender to the consumer or payments from those products travel from the consumer to the vendor. A distribution channel can be as short as a direct transaction from the vender to the consumer. Or may include several inter connected intermediaries along the way such as wholesalers, distributors, agents and retailers. Each intermediary receives the item at one pricing point and movies in to the next higher pricing point until it reaches the final buyer.

Control over factor of supply:

The willingness and ability of scarce resources or factors of production to offer their services for use in productive activities. Factor supply relates price and quantity, specifically; factor supply is the range of factor quantities that are supplied at a range of factor prices. This is one half of the factor market. The other half is factor demand. The factors of production subject to factor supply include any and all of the four scarce resources--labor, capital, land, and entrepreneurship. However, because labor involves human beings directly, it is the factor that tends to receive the most scrutiny and analysis.

Factor supply is the supply side of the factor market, capturing the relation between the price and the quantity supplied of a factor. In general, a higher factor price induces an increase in the quantity supplied, while a lower price has the opposite effect.

Factor supply works much like the market supply of any good or service. Sellers, or factor owners, are enticed to offer a larger quantity for sale at a higher price. However, because the factors supplied are diverse (labor, capital, land, and entrepreneurship), so too are the principles underlying supply. In fact, some factors are produced goods with supplies governed by the same production and cost principles governing market supply, especially the law of diminishing

marginal returns. Other factor supplies involve human resources and are governed by other principles, especially consumer demand theory.

Power over customers /Bargaining Power of Suppliers /

The Bargaining Power of Suppliers, one of the forces in Porter's Five Forces Industry Analysis Framework, is the mirror image of the bargaining power of buyers and refers to the pressure suppliers can put on companies by raising their prices, lowering their quality, or reducing the availability of their products. This framework is a standard part of business strategy. The bargaining power of the supplier in an industry affects the competitive environment and profit potential of the buyers. The buyers are the companies and the suppliers are those who supply the companies. The bargaining power of suppliers is one of the forces that shape the competitive landscape of an industry and helps determine the attractiveness of an industry. The other forces include competitive rivalry, bargaining power of buyers, the threat of substitutes, and the threat of new entrants.

Customer service is the process of ensuring customer satisfaction with a product or service. Often, customer service takes place while performing a transaction for the customer, such as making a sale or returning an item.

Speed and flexibility of supply

There are many additional scenarios that can be considered in consideration of supply, this includes

Supply planning – Which products to make? Which countries should each product be sourced from? Which suppliers to buy materials from?

Distribution planning – Where to open additional distribution center (DC)s? Which DCs to close? What is the optimal inventory level at each DC?
Load planning – How to best load each shipping unit (container/truck/box car/etc.)?
Cost-to-serve – How to organize distribution and inventory operations to best serve each customer?

Reverse logistics – How to track net value of returns (e.g., detailed unit costing, etc.)?

Demand planning – What is the impact when product mix changes? What is the true profitability by customer? By order? By product?

If evaluating supply chain network design planning tools, consider only those technologies that offer complete flexibility and customization. The best software will allow you to quickly model your existing network, and then allow you the ability to analyze nearly any what-if scenario that needs considering, all-the-while keeping the company's stated profitability goals in mind.

The market and competitive analysis framework

The market and competitive analysis framework is proposed as a conceptual background by which to gather, analyze and interpret data about the project and its market. The core of the model is the project's market. Competitiveness revolves around the interactions of suppliers and consumers in the market. Suppliers compete in a market by using available resources to serve market needs better than their competitors. Their offerings take the form of product features designed to generate customer benefits that meet customer needs. To the extent that existing competitors fail to meet market expectations they leave behind market performance gaps. In order for a new project to be successful, therefore, it must identify unsatisfied market needs for which it can develop competencies and position itself so as to fill market performance gaps. Project competitiveness is assumed to be a factor of the ability of the project to develop market competencies and to correctly position itself in the market as part of a continuing self-correcting process.

The project competitiveness

The competitiveness of a project is assessed through a process of disaggregating demand and supply with respect to the market need that the project aims to satisfy and setting market segments and competitor sets against the main consumer choice factors.

Market size and market growth are estimated in the context of the demand and supply analysis based on the project relevant market. Market share is taken to be the relative project supply adjusted by an estimate of the project competitive edge (positive or negative) in each targeted market segment. Finally, considerations regarding the project's organization ability to adapt itself to market expectations and changing market conditions should drive the projected estimates for market share growth.

Identifying market performance gaps

Market performance gaps refer to the notional distance between market expectations and the level of satisfaction (or customer value) attained by the products and services of current suppliers. A market performance gap applies both to the reasonable expectations of existing as well as potential customers.

A project can aim to use available resources to create capabilities such as "scale", "distribution coverage", "information", "flexibility and responsiveness" and so on, to create product features which are likely to give it a competitive edge in the market. Sources of project capabilities may be found in many areas.

Preference and taste of primary customer

Consumer Preference the underlying foundation of demand, therefore, is a model of how consumers behave. The individual consumer has a set of preferences and values whose determinations are outside the realm of economics. They are no doubt dependent upon culture, education, and individual tastes, among a plethora of other factors. The measure of these values in this model for a particular good is in terms of the real opportunity cost to the consumer who purchases and consumes the good. If an individual purchases a particular good, then the opportunity cost of that purchase is the forgone goods the consumer could have bought instead. Consumer preferences are defined as the subjective (individual) tastes, as measured by utility, of various bundles of goods. They permit the consumer to rank these bundles of goods according to the levels of utility they give the consumer. Note that preferences are independent of income and prices. Ability to purchase goods does not determine a consumer's likes or dislikes.

Consumption behavior of the market

Marketing is so much more than creating a catchy phrase or a jingle people will sing for days. Understanding consumer behavior is a vital aspect of marketing. Consumer behavior is the study of how people make decisions about what they buy, want, need, or act in regards to a product, service, or company. It is critical to understand consumer behavior to know how potential customers will respond to a new product or service. It also helps companies identify opportunities that are not currently met.

A recent example of a change in consumer behavior is the eating habits of consumers that dramatically increased the demand for gluten-free (GF) products. The companies that monitored the change in eating patterns of consumers created GF products to fill a void in the marketplace. However, many companies did not monitor consumer behavior and were left behind in releasing GF products. Understanding consumer behavior allowed the pro-active companies to increase their market share by anticipating the shift in consumer wants.

2.1.2.4 Financial Aspect

Financial appraisal (investment appraisal) is concerned with such questions as the adequacy of funds, the financial viability of the project, the borrower's ability to service debt, procedures for recovering investment and operating costs, etc, and, ultimately, does the project return a profit? This is different from economic appraisal, which addresses the issue of whether a project is worthwhile from the broader point of view of its contribution to aggregate or national economic and social welfare through the use of social cost-benefit analysis as the appraisal technique.

There are several different cash flow based methods that can be used to measure the financial feasibility of investment projects, such as

Personal judgment

Payback period,

Financial Ratios,

The Net Present Value (NPV),

Annual Equivalent Worth (AE) ,

Benefit- Cost Ratio (B/C),

Internal rate of return (IRR) and

Modified internal rate of Return (MIRR). These measures will be discussed turn by turn.

Personal judgment relied on the experience of the company most experienced individuals. When data are inaccessible and difficult to compile some company relied on the experience of individuals who has been engaged heavily with the venture.

The payback period is a method that is sometimes used in financial feasibility analysis. The method determines when the project will break even, i.e. how long it takes for revenues to pay investment outlays. However, the method does not measure profitability, as it only measures the time it takes to recover the initial investment outlay but not the profit that is made after paying

back the initial investment. The method ignores all revenues and cost after the payback period and does therefore not allow for the possible advantages of a project with a longer economic life. Also, the method does not recognize the time value of money, though that can be remedied by using the discounted payback method.

Financial Ratios

Financial statements are records of actual financial activities of a business entity and are therefore not available for prospective projects. However, by forecasting the revenues and costs of the entity, financial statements can be projected and analyzed to gain a better understanding of the performance of the entity. A decision on whether or not to invest in a new, unproven investment project should nevertheless not be based solely on the outcome of this analysis.

Financial ratios can be divided into five categories; liquidity ratios, asset management ratios, profitability ratios, market trend ratios and debt management ratios (Park, 2002). Only ratios that are appropriate and of use for prospective investment projects will be studied in this thesis. Ratios from four categories will be studied; liquidity ratios, profitability ratios, market trend ratios, and debt management ratios

Liquidity Ratios

Liquidity ratios are used to determine whether a business entity is able to pay off its short-term debts. The ratios show the relationship between the entity's cash and other assets to its current liabilities (Park, 2002).

The current ratio is a liquidity ratio and it shows the relationship between liquid assets and payment commitments. It shows to which extent current liabilities are covered by current assets. The ratio is well established in practice, but has however some disadvantages, such as being time-related (i.e. a static figure) and too closely linked to the balance sheet. There is also a trade-off between liquidity and profitability, which should be taken into account when using the ratio for analysis (Wiehleet al., 2006).

The formula for the current ratio is:

Current Ratio = Current Assets / Current Liabilities

If a business entity gets into financial difficulty and current liabilities rise faster than current assets, the current ratio will fall (Park, 2002). As a rule of thumb, an acceptable current ratio should total 200%. If the ratio is below 100% it is regarded as threatening to the entity's existence (Wiehleet al., 2006).

Another liquidity ratio that is suitable for analyzing investment projects is the quick ratio, also known as acid-test ratio. The ratio is often used to determine how quickly a company is able to pay off its current liabilities.

The formula for the quick ratio is:

Quick ratio = Current assets – Inventories / Current Liabilities

The quick ratio differs from the current ratio in that it excludes inventory, as while inventory may be fully paid for and have value, it may not necessarily be quickly converted into cash. As for the current ratio, the quick ratio should exceed 100% for the current liabilities to be covered by the entity's cash position and total receivables (Wiehle et al., 2006).

Profitability ratios

Profitability ratios show the combined effects of liquidity, asset management, and debt on operating results (Park, 2002). The ratios are used to measure whether a business entity is able to generate profits based on its earnings, expenses, and debt obligations. The ratios are compared to the same ratios from the previous year, or to ratios of firms within the same industry.

The return on investment (ROI) ratio is a profitability ratio that, when taken over time, helps in measuring the performance of the capital employed. It is a key indicator for investment decisions and it is comparable across different industries (Wiehle et al., 2006).

The formula for the return on investment ratio is:

ROI = Earnings before interests and taxes /
Total liabilities and shareholders' Equity

The return on equity (ROE) ratio is a profitability ratio that measures the rate of return to stockholders. The higher the ratio, the more efficient is the use of stockholders' equity, and the more return for investors (Groppelli and Nikbakht, 2006).

The formula for the return on equity ratio is:

ROE = Net profits after taxes /
Shareholders' Equity (Groppelli and Nikbakht, 2006,)

The ROE ratio is highly relevant in practice and a good indicator for investments.

However, it does not take debts into account and returns should be observed over the long term when using the ratio for analysis (Wiehle et al., 2006).

Market Trend Ratios

Market trend ratios relate the business entity's stock price to earnings and book value per share. The ratios give an indication of what investors think of the entity's past performance and future prospects (Park, 2002).

The internal value of shares describes the relationship between equity and capital.

The ratio is an indication of what the value of shares might be in the future. The higher the ratio is, the more value of shares.

The formula for the internal value of shares ratio is:

Internal value of shares = Total Equity /
Total Capital

The ratio is dependent on dividend payments, since higher retained earnings increase the total equity, which results in a higher ratio.

Debt management ratio

The level of debt that can be raised for a project is based primarily on its projected ability to pay interest and repay loan principal installments as they fall due, with a comfortable margin of safety. To assess this margin of safety, lenders calculate cover ratios, namely:

- Annual debt service cover ratio (ADSCR)
- Loan life cover ratio (LLCR)
- The averages of the ADSCR and LLCR over the term of the debt
- The project life cover ratio (PLCR)
- Drawdown cover ratio
- Repayment cover ratio

It should be noted that none of these cover ratios can be calculated for a period before the Project Company begins operating, as they all deal with the relationship between operating cash flow and the level of debt or debt service requirements.

Annual debt service ratio

The ADSCR assesses the Project Company's ability to service its debt from its annual cash flow, and is calculated as:

- Operating cash flow of the project over the year-i.e., operating revenues less operating expenses-taking account of any Maintenance Reserve Account or similar Reserve Accounts covering anything other than debt service, and ignoring any noncash items such

as depreciation. This may look similar to the EBITDA (earnings before interest, depreciation, and tax) measure used in corporate financing, but should be based on cash flow rather than accounting results.

Divided by

- Debt service of the project over the year-i.e., interest payments and principal repayments, ignoring transfers to or from Reserve Accounts for debt service.

The ADSCR is usually calculated semiannually, on a rolling annual basis. The ratio can obviously only be calculated when the project has been in operation for a year, although because it may affect the ability to pay dividends, it may be calculated for the previous 6 months only for the first period after the project begins operation. The lenders look at the projected ADSCR for each period throughout the term of the loan and check that this does not fall below their required minimum at any time. The actual ADSCRs are reviewed (and projections may be recalculated) once the project is in operation.

The minimum ADSCR requirement obviously varies between projects. Higher cover levels would be required for a project with nonstandard risks, or located in a country with a poor credit risk. It should be noted that, unlike in corporate loans, the cash flow cover ratio for annual interest (as opposed to total debt service) is not generally considered a significant measurement. This is because corporate loans are often renewed from year to year, whereas project finance loans have to be repaid because the project has a finite life; therefore, the Project Company must be able to reduce its debt each year as scheduled, and payment of interest alone is generally not adequate.

Loan Life cover ratio

The LLCR is based on a similar calculation, but taken over the whole term of the loan:

- Projected operating cash flow (calculated as for the ADSCR), from the date on which the project is projected to begin operations, to the date on which the loan is repaid, discounted to its NPV at the same interest rate as that assumed for the debt (taking account of any interest swap or other hedging)

Divided by

- Debt outstanding on the calculation date, less the balance of debt-related Reserve Accounts

Apart from the initial LLCR on project completion, the LLCR may be recalculated throughout the rest of the project life, comparing the projected operating cash flow for the remainder of the loan terms with the remaining loan outstanding on the calculation date.

LLCR is a useful measure or the initial assessment of a project's ability to service its debt as a whole and for continuing to look at it over its remaining life, but clearly it is not so useful if there are likely to be significant cash flow fluctuations from year to year. ADSCR is thus a more significant measure of a Project Company's ability to service its debt as it falls due.

Average ADSCR AND LLCR

If the projected ADSCR from year to year is at the same level, the average ADSCR will be the same as the LLCR. However, if the ADSCR is higher in the earlier years, the average ADSCR will be higher than the LLCR, and vice versa- Therefore, average ADSCR is sometimes given more weight by lenders than LLCR as a long-term measure of coverage; if so, the minimum requirements are likely to be similar to those for LLCR.

The average LLCR (i.e., recalculating the LLCR every 6 months for the remainder of the loan, and then taking the average of these figures) is also used as a measure by some lenders, although its usefulness is perhaps questionable.

Project Life Cover Ratio

Another point that lenders check is whether the project has capacity to make repayments after the original final maturity of the debt, in case there have been difficulties in repaying all of the debt in time. This extra debt service capacity is known as the "tail," and lenders normally expect at least a year or two of cash flow cover in this way. The tail can be based on:

- The general ability of the Project Company to keep operating and so generating cash after the loan term (in any case the technical life of the project should be significantly longer than the loan term)
- The existence of Input Supply and Off take Contracts, or a Concession Agreement, which specifically ensure that the Project Company will continue to operate

The value to lenders of the tail can be calculated using the PLCR; here the net cash flow before debt service for the whole life of the project (not just the term of the debt as for the LLCR) is discounted to its NPY and this figure is divided by the debt outstanding. Obviously the PLCR will be higher than the LLCR; lenders may wish to see it around 15-20% higher than the minimum ADSCR

Drawdown cover ratio

The drawdown cover ratio This ratio measures the loan life NPV to the total to be borrowed from the banks (the 'peak debt amount'). If this cover ratio is used, it will be precedent condition to the drawdown of any loan that the required drawdown cover ratio is not breached.

Repayment cover ratio

The repayment cover ratio This ratio measures how much needs to be repaid under a credit agreement on any given repayment date. A borrower would be required to repay an amount to ensure that the repayment cover ratio would be within its required level (say 1.75:1). This ratio can also be used as a trigger to an event of default, e.g. if the ratio falls to say below 1.4:1.

(Fight , 2006)

Net Present Value

Net Present Value (NPV) is the difference between the present value of all cash inflows and cash outflows associated with an investment project. The NPV establishes whether or not the investment project is an acceptable investment, given the return the investor requires from the investment. Remer and Nieto (1995) claim that maximizing or minimizing the NPV of a project, depending upon the situation, will provide the most efficiency, and as a result, the most profitability.

In order to calculate the NPV, the interest rate used for discounting the cash flows needs to be determined. The interest rate is often referred to as Minimum Attractive Rate of Return (MARR) and it represents the rate at which the investor can alternatively invest his money, i.e. the return of the most preferable alternative investment. The planning horizon of the project also needs to be determined, and the cash flows for each period of the planning horizon projected (Park, 2002). The formula for NPV is:

$$NPV(i) = Ao/(1+i)0 + A1/(1+I)1 \ldots AN/(1+I)N$$

$$= \text{sum of } AN/(1+I)N$$

Where:

An = Net cash flow at the end of period n;

i= MARR;

N = Service life of the project. (Park, 2002, p. 289)

If the NPV(i) is positive for a single project, the project should be accepted, since a positive NPV means that the project has greater equivalent value of inflows than outflows and therefore makes a profit (Park, 2002).

According to Park (2002) the decision rule for NPV is:

If NPV (i) > 0, accept the investment;

If NPV (i) = 0, remain indifferent to the investment;

If NPV (i) < 0, reject the investment.

When comparing mutually exclusive alternatives the one with the greatest positive NPV is selected. According to Remer and Nieto (1995), when comparing alternatives, it is important to use the same interest rate for all alternatives. All projects must also be compared over equal time periods, and sometimes adjustments have to be made for to account for this. In the case of mutually exclusive alternatives generating the same revenues, Park (2002) suggests comparing the projects on a cost-only basis. Then the project resulting in the smallest, or least negative, NPV should be accepted, since the objective is to minimize cost (not maximize profits).

Even though the NPV is a widely used criterion for financial feasibility it suffers from two limitations. First, the NPV assumes that periodic cash flows will be reinvested at the discount rate, which in reality is not always possible. Second, when considering two mutually exclusive projects of unequal size, the criterion's ranking of the projects may give different results than from the Internal Rate of Return criterion, as will be discussed further below (Kierulff, 2008).

Annual Equivalent Worth

The Annual Equivalent Worth (AE) method is a variation of the NPV method. Instead of discounting all cash flows to present value, the AE method converts all cash flows to a series of equal cash flows over a specified time (Remer and Nieto,1995). Usually the AE determines equal payments on an annual basis, and by that provides a basis for measuring investment worth. The AE is given by:

$$AE(i) = NPV(i)\{ I(1+I)^N / (1+I)^N - 1 \}$$

where

i= MARR;

N = Service life of the project (Park, 2002, p. 346)

The decision rule for a single revenue project is:

If AE (I) > 0, accept the investment;

If AE (I) = 0, remain indifferent to the investment;

If AE (i) < 0, reject the investment.

The AE criterion is consistent with the NPV criterion in evaluating projects, i.e. if a project is accepted by the AE criterion it will also be accepted by the NPV criterion (Park, 2002)

The AE method has several advantages. When comparing mutually exclusive projects, the AE method does not require the projects to have the same service life, i.e. the projects do not have to be compared over equal time period as with the NPV method. The method also delivers simple and easily understood results, as it can be easier for some people to understand the prospects of a project by examining yearly costs/benefits per dollar, instead of examining one cash flow resolved to the present date (Remer and Nieto, 1995). In some situations, the AE analysis is even preferred over the NPV analysis, such as when unit cost/profit is needed, when project lives are unequal or when consistency is needed in report formats (Park, 2002).

When comparing mutually exclusive projects the same applies for the AE analysis as for the NPV analysis, i.e. the project with the greatest positive AE is selected (Sullivan et al., 2006).

Benefit-Cost Ratio

The benefit-cost method is often used for public projects. The method compares project benefits to the cost of the project, and for the project to be viable, the benefits have to be greater than the cost. By definition, project benefits are the favorable consequences of the project to the public, and project cost is the monetary disbursement required of the government (Sullivan et al., 2006).

Park (2002) describes benefit-cost analysis as "a decision-making tool used to systematically develop useful information about the desirable and undesirable effects of public projects". He defines three types of benefit-cost analysis problems:

1. Maximizing the benefits for any given set of cost;
2. Maximizing the net benefits when both benefits and costs vary;
3. Minimizing cost to achieve any given level of benefits.

The worthiness of a public project can be expressed by comparing the benefits (B) of the project to the cost (C) of the project by taking the ratio B/C, i.e. the Benefit- Cost ratio. The ratio is calculated as:

B / N = sum N n = 0 b n (1 + I) –n / sum N n = o C n (1 + I) –n

Where:

bn Benefits at the end of period n, bn> = 0;

cn Expense at the end of period n ,cn< = 0;

N Project life;

I Interest rate. (Park, 2002, p. 808)

The values of B and C have to be expressed in present value equivalents. For the project to be accepted the B/C ratio has to be greater than 1. The Benefit-Cost ratio yields the same investment decision as the NPV criterion. The decision rule is in fact the same, as seen from:

B / C > 1

B > C

B – C > 0

PV (i) = B – C > 0 Park (2002, p. 809)

This shows that the Benefit-Cost Ratio could in fact be used to evaluate private projects and the NPV criterion could be used to evaluate public projects. When comparing mutually exclusive alternatives, the Benefit-Cost Ratio cannot be used unless using incremental analysis. This is due to the fact that the ratio does not differentiate between investments of different sizes, e.g. a $10 investment and a $1000 investment. Then the incremental differences for each term are calculated and the B/C ratio taken from these differences (Park, 2002).

Internal Rate of Return

Internal Rate of Return (IRR) is a concept based on the return on invested capital in terms of a project investment, or as Park (2002) defines it: "IRR is the interest rate charged on the unrecovered project balance of the investment such that, when the project terminates, the unrecovered project balance will be zero". In other words, the investment has zero NPV at this rate of return, noted as i*.

Therefore, i* serves as a benchmark interest rate, making investors able to accept or reject decision consistent with the NPV analysis. For simple investments, i.e. investments with only one sign change in cash flows, the IRR is the same as the i* (Park, 2002).

The IRR is equal to the rate of return for which the following function is zero:

NPV (i*) = Sum of N, n=0 A n / (1 + i*) n = 0 (Park, 2002, p. 410)

Investors usually want to do better than breaking even in their investments. Their investment policy usually defines a MARR, in which case the IRR and the MARR can be used to decide whether a project is feasible or not. The decision rule for a simple project is as follows:

If IRR > MARR , accept the project;

If IRR = MARR , remain indifferent;

If IRR < MARR , reject the project.

However, if the investment is non- simple, i.e. with more than one change in sign in the net cash flow series, the decision rule becomes more complicated

In the case of mutually exclusive alternatives the project with the highest IRR may not always be the preferred alternative. In fact, in this case the NPV and the IRR criterion may give different results, which is due to the fact that the IRR criterion ignores the scale of the investment. In order to use IRR as criterion for mutually exclusive projects an incremental analysis is needed.

According to Lee et al. (2009), the NPV is usually considered a superior method to the IRR. However, they also stress that the viability of the IRR should not be dismissed, since in some cases it may be better suited than the NPV.

Modified Internal Rate of Return

Over the past years there has been some criticism on the lack of robustness in the NPV and IRR methods, as these two measures can rank projects differently and assume reinvestment is always possible at the discount rate or IRR. The Modified Internal Rate of Return (MIRR), also referred to as External Rate of Return, is a measure that avoids these problems and provides a different and more accurate measure of financial feasibility (Kierulff, 2008).

The MIRR method is almost identical to the IRR method, except that the MIRR does not assume that all cash flows are reinvested at the calculated IRR, but instead assumes that all cash flows are reinvested at another rate, i.e. an external rate of return (Remer and Nieto, 1995).

The MIRR has not gained the same attention as NPV and IRR, and it is not commonly used for financial feasibility analysis within the industry. This might partly be explained by lack of academic support, but also some find it difficult to understand and compute. The MIRR may be challenging in practice because the user is required to specify both a return on investment that takes account of the risk of the investment, and a reinvestment rate given the risk associated with the future investments of the cash flows (Kierulff, 2008).

Fabozzi and Peterson (2003, p. 433) have listed the following steps involved in MIRR calculations:

1. Calculate the present value of all cash outflows, using a reinvestment rate as the discount rate;
2. Calculate the future value of all cash inflows reinvested at some rate;

3. Solve for rate – the MIRR – that causes future value of cash inflows to equal present value of outflows.

They also define the decision rule for MIRR as:

If MIRR > Cost of Capital , accept the project;

If MIRR = Cost of Capital , remain indifferent;

If MIRR < Cost of Capital , reject the project.

As with the IRR and the Benefit-Cost ratio, the MIRR cannot be used as a criterion for mutually exclusive projects unless using incremental analysis (Kierulff, 2008)

Even though the MIRR has not been commonly used in the past, Kierulff (2008) thinks that it is likely that the criterion will gain acceptance over time, as investors learn how to interpret the measurement and start using it in their decision making process.

2.1.2.5 Project Finance Risk Aspect

Successful project finance structuring rests on the strength of the project itself. Identifying the project's risks and then analyzing, allocating, and mitigating them are the essentials of project financing. A project is appraised to identify its risks and to assess its technical and environmental feasibility (that is, whether it will function as expected), along with its financial and economic viability (that is, whether it will generate sufficient cash flows to repay debts and produce a satisfactory rate of equity return). This is a critical initial step.

Because each project is based in its own environment and hence is unique, the relative emphasis placed on each aspect of the appraisal will depend on the individual project. The various risks identified will also affect the financing structure appropriate for the project.

Completion risk

The risk is that the project might not be completed. Lenders are particularly sensitive to becoming creditors of a "dead horse". They will therefore insist on taking back their investment if completion fails to occur. Completion risk has a monetary aspect and a technical aspect. The monetary element of completion risk concerns the risk either (1) that a higher-than-anticipated rate of inflation, shortages of critical supplies, unexpected delays that slow down construction schedules, or merely an underestimation of construction costs might cause such an increase in the capital expenditures; or (2) that a lower-than-expected price for the project’s output or a higher-than-expected cost for a critical input might reduce the expected rate of return to such an extent that the sponsors no longer find the project profitable. The other element of completion

risk relates to the technical processes incorporated in the project. In spite of all the expert assurances provided to the stakeholders, the project may prove to be technically infeasible. Subsequently, it may require large expenditures, in order to be technically feasible so that the project may become uneconomic to complete within the original plan.

Market risk

Changes in the demand for project output have been the leading cause of revenue and profitability problems in many projects. The quality of the market analysis, and of accompanying revenue and margin forecasts, greatly affects future profitability. Often the appraisal of market demand is overoptimistic, perhaps because the strength of new trends is not fully appreciated, and the project never achieves the sales and revenue volumes projected. Market risk is difficult to hedge against specifically, unless there is a single buyer or small group of buyers for the output. Signing a purchase or sales agreement with the price and quantity clearly specified with a seller or buyer who has a good credit standing is an excellent way of hedging product price risk to ensure the project will generate revenues. Projects having a single product whose price may vary widely, as is the case in the mining sector, are particularly vulnerable to changes in demand and need to hedge against product price risk. Equally important, in projects whose success or failure rests on the price of one raw material input, there is a need to hedge the price of that material. Sponsors of projects have used several mechanisms to mitigate market risk, notably power purchase agreements, other off take agreements, call and put options, and forward contracts.

Management risk

It is not uncommon for a new operation, perhaps in an emerging market environment unfamiliar to the project sponsors, to run into managerial or technical difficulties. If a project is in a sector that is completely new to the country, there may be no qualified technical and managerial personnel to run it. In such cases, it may be necessary to obtain sustained technical assistance from, and a management agreement with, a foreign technical partner. Sponsors may also issue a letter of comfort to assure creditors that the project company will be run in a sound business manner. Maintenance expenditures may account for a significant share of operating cost, particularly for projects using high-technology equipment. Project profitability may be undermined if the equipment fails to meet initial technical specifications and performance or frequently breaks down. Technological performance is normally guaranteed by the provider of

the technology or equipment, but the expense of routine maintenance has traditionally been borne by the project company. An important part of the appraisal is to estimate the cost of maintenance over the life of a project. Maintenance risk can then be mitigated through a long-term service agreement with the manufacturer of the equipment, who is in the best position to understand the technology and associated cost risks. Such an agreement not only reduces the uncertainty surrounding future maintenance costs but also provides incentives to improve the efficiency and reliability of the equipment, which in turn can improve profitability.

Financial risk

Proper sequencing of loan repayments can reduce the bunching of loan service, thus relieving the project of undue pressure on cash flows matching loan repayment schedules to take advantage of large cyclical cash flows is another way of securing loan repayment.

Economic risk is that demands for the project's products or services will not be sufficient to generate the revenue needed to cover the project's operating costs and debt service and provide a fair rate of return to equity investors.

A project's financial sustainability through all phases of its life can also be affected by interest rate and foreign exchange risk Currency risks arise whenever foreign exchange funds, in the form of equity or debt, are used to finance the project. Such risks are associated in part with foreign exchange convertibility and the foreign exchange rate. Macroeconomic stability, the balance of payments situation, and the foreign exchange rate policy in the project country are important factors to consider in assessing currency risks. Foreign exchange risk can be a major concern, particularly if the project generates revenues only in local currency.

Environmental risk

The drivers for environmental risk is due diligence. The inclusion of environmental risk factors into the project appraisal process is not a new discipline. Aware of the devalued collateral of contaminated land and possible lender liability for cleanup, largest commercial banks factor basic environmental issues (legal compliance, contamination, outstanding compensation claims) into their due-diligence process when lending to industries. In the case of project finance, diminishing value of collateral is not the primary driver for undertaking environmental due diligence. Well-structured project finance identifies and addresses all the factors that may weaken financial returns. While rarely "deal killers" in their own right, environmental, health and safety, and social issues can have a negative impact on operating cash flow, divert management

attention from other priorities, or generate adversarial relationships with employees, regulatory agencies, or the local community. In this sense, environmental due diligence for project finance is very much centered on seeking assurance that day-to-day operations will run smoothly during project design, construction and operation. In turn, the project's bottom line will not be negatively affected by environmental risks.

Sound project finance needs to be based on understanding the context in which the project must operate and ensuring that the right mechanisms are incorporated into the loan documentation in order that applicable environmental standards of performance are met. Without such mechanisms, attempts to verify smooth day-to-day operations may prove problematic.

Political risk

One of the challenges posed by a prospective limited-recourse project in emerging markets lies in assessing and managing political risks over the long life that most projects have. Political risk arises from the fact that some unforeseen political event may change the project's prospects for profitability. This might be an act of government (for example, a change in a law, regulation, or administrative decision), or general instability in the political or social system as a result of war, strife, or frequent changes in government.

The political risks could be seriously influential to big investment projects. The cancel or delay of a project due to the political changes could lead to the bankruptcy of a project company. Political risk has been shown to be particularly large to very big investment projects. This is because such projects are especially visible and are often used for political purposes. It is difficult to mitigate all risks pertaining to a specific project. One way to avoid entering into high political risk situations is to borrow through, or in conjunction with, multilateral agencies such as the World Bank and other regional development banks such as the Africa Development Bank (ADB). The rationale behind this is that when one or more of these agencies are involved in a project, the risk of an uncooperative or unhelpful attitude from the host country is reduced since the host government is unlikely to offend any of these agencies for fear of cutting off a valuable source of credit in the future. Being in conjunction with national export credit agencies tends to probably enjoy a similar "protected’ status since there is a government element in addition to purely commercial element.

Political risk insurance is another way of directly protecting against potential political risks, another important way for a foreign sponsor to mitigate local political risk is to attract local

participants into the project. The sponsor could offer to share equity with local investors, borrow from local lenders, or enter into a local purchasing agreement for raw material supplies. Under such arrangements, the local participants are likely to become stakeholders in the success of the project. Their interest in the project will provide important protection against arbitrary national or local government decision.

Force majeure risk

Force majeure risk: the risk that some discrete event might impair, or prevent the operation of the project for a prolonged period of time after the project has been completed and placed in operation. Such an event might be specific to the project, such as a technical failure, a strike or a fire. Alternatively, it might be an externally imposed interruption, such as an earthquake that damages the project's facilities or an insurrection that hampers the project's operation. Lenders normally insist on being protected from loss caused by force majeure. Certain events of force majeure, such as fires or earthquakes, can be insured against. Lenders will require assurances from financially capable parties that the project's debt service requirements will be met in the event force majeure occurs. If force majeure results in abandonment of the project, lenders typically require repayment of project debt on an accelerated basis. Project sponsors can sign the insurance contract with the insurance company to protect themselves from force majeure risk. In case that the force majeure events happen, the project company will be paid for their loss by the insurance company

2.2 Empirical Review

As far as researcher knowledge is concerned, a thesis on the title project finance is nearly inaccessible in Ethiopian context. As a result, I have reviewed other studies conducted elsewhere.

Djorn Holmgren &Kerin Lindh (2018) had conducted on the title project finance, finding the right source of funding particularly how Swedish companies arrange project finance for large scale projects. The result of the study had showed that three factors are of special importance when choosing a certain financial arrangement. These factors were the region in which the project was located, duration of the project and size of measured in monetary terms.

Constautin Hafzilambros (2016) had conducted on the subject determinant of the cost of credit for project finance debt in Africa. The study found out that secured loans were priced in a

different category to unsecured loans. Further the study concluded that country risk ranking was the most significant pricing determinant for non- recourse loan in the African continent

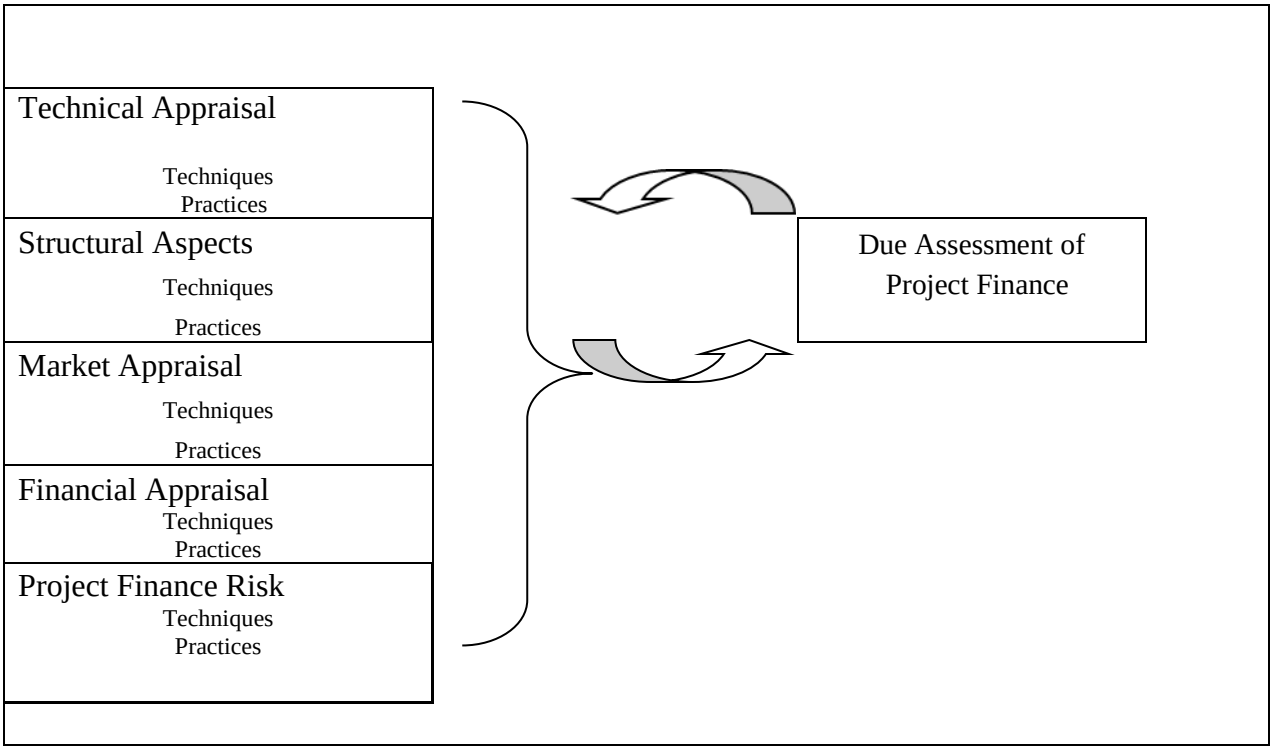
Kabeja Faustin (2016) had conducted on the role of project financing appraisal on the credit risk management in banking sector in Rwanda; A case study of Guaranty Trust Bank. The study found out that commercial banks in Rwanda had faced a high rate of credit risks due to inadequate financial project appraisal tools while financing various projects.

Nunomouinho (2015) had conducted on the subject the relative importance of financial and non-financial analysis in project evaluation- evidence from Portuguese firm. The study found remarked the importance of incorporating non- financial aspects into the appraisal of projects and some of non – financial aspects were greater relevance than those attributed to the financial element

Jonnes Mua Nzivo (2016) had conducted on the role of projects appraisal on the performance of financial institution in Kenya; A case of family bank Ltd. The study had established a strong positive relationship between performance of financial institutions in Kenya and projects appraisal. Further, project financial appraisal, technical appraisal, market appraisal and managerial appraisal were found to be strongly and statistically determinants of performance of financial institution in Kenya

Getachew Argaw (2016) conducted assessment of the performance of project financing on selected private commercial banks in Ethiopia and found out that loan appraisal, credit rating, financial viability, technical feasibility and credit risk management had a positive and significant relationship with loan performance

2.3 Conceptual Framework



(conceptual framework compiled by the researcher)

CHAPTER THREE

RESEARCH METHODOLOGY

The starting base for identifying and evaluating the project finance appraisal techniques was the literature survey. The researcher assessed the appraisal of the project loan financing in Nib International banks. The research methods employed to adequately answer the research question involves research design, population and sampling procedure, data gathering instrument, measurement of factors or variables, validity and reliability test and method of data analysis.

3.1 Research Design

"Research Design" refers to the plan or organization of scientific investigation, designing of a research study involves the development of a plan or strategy that will guide the collection and analysis of data (Poilt and Hungler,1985). 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). Cognizant that all methods have limitations, researchers felt that biases inherent in any single method could neutralize or cancel the biases of other method (Creswell, 2003). Quantitative and qualitative researches were employed. Quantitative research defined by Cooper (2006) as the accurate sum of behavior, knowledge, opinion or attitude. In order to understand the assessment of project finance practice at Nib International bank a structured questionnaire was developed. Moreover, for getting additional insight a more flexible qualitative approach was used. Accordingly, higher caliber officials were interviewed for supporting the quantitative data compiled from structured Likert scale methods. Furthermore, document review on some project loan file was undertaken.

3.2. Population and Sampling Procedure

3.2.1. Population of the Study

According to Diamantopoulos (2006), a population is a group of items that a sample will be drawn from. The target population of the study was drawn from Nib International Bank S.C. staffs which are directly involved in the project financing process. The potential respondents had to satisfy certain qualifications. It was considered that the lists of potential respondents could

satisfactorily be confined to the technical staffs of the banks which carry a substantial Evaluation of project finance particularly worked at Credit Appraisal and Credit Relationship Management Departments. Those expert staffs in the departments were selected to fill the questionnaire and higher officials were selected for interview. The total target participants of the study were therefore all the technical employees of the departments. Other employees of the bank including loan officers and branch managers are not appropriate hence the specified officials' duties are limited only on recruitment of the applicant and document compilations. In an endeavor to include the opinion of the target population, 30 questionnaires were distributed physically; however, due to unavailability of some credit performers in their duty and other reasons, only 26 of them have filled and returned the questionnaire successfully. Hence, the respondent rate is 87%. In addition, since the population is homogeneous, the researcher assumed the responses obtained from the 87% represent the population.

3.2.2. Census

A sample means some members of a society who represent the society and are homogenous with other members. A sample was drawn as a result of constraints that make it difficult to cover the entire research population (Leedy and Ormord, 2005). Owing manageable numbers of project appraisal technical staffs, the researcher used census type of survey design and simply took all respondents from Credit Appraisal and Credit Relationship Management Departments.

A complete enumeration of all items in the "population" is known as a census inquiry. It can be presumed that in such an inquiry, when all items are covered, no element of chance is left and highest accuracy is obtained. However, it needs to be emphasized that when the universe is small, it is no use resorting to a sample survey (Jaipur,1990). Regarding interviews, those who are directly involved in the credit appraisal process or process owner are selected.

3.2.3. Source of Data

The study used both primary and secondary data sources. Primary data was obtained using structured questionnaire and unstructured interviews with credit performer of Nib International Bank. For the purpose of supporting the forgone, secondary source of data was obtained from project loan files. However, portfolio of project loan is inaccessible hence system segregation was not enabled and projects are classified in their economic sectors.

3.3 Data Gathering Instruments

Questionnaires were prepared and administered based on the literature review. These questionnaires were distributed to project appraisal technical staffs of the bank. The questionnaire was standardized and adopted from previous related studies made by Sabah A. Fedhley (1991), a study of project finance banking; with a special reference to a determinants of investment strategies for major petroleum project located in less developed countries, Melati Ahmed Anwar (2005), appraisal techniques used in evaluating capital investment conventional capital budgeting and real options approach, Feleke Tsegaye (2015); the performance of project Rehabilitation and loan recovery process (PRLRP) and Savvakis C. Savvides (1990), marketing analysis in project evaluation. However, some modification was made to reveal the assessment of project financing in Nib International Bank and to validate the variables employed. The questionnaire was of the guided structured and close ended type having a central focus on multiple choice assertions and concepts that require verification. Technical staffs were asked to express importance of the study assertions with degree of importance by ranging from most important to not at all important and circling the answer that best describes what they think and degree of agreement were incorporated when deemed appropriate. A very limited open ended question was included. Such kinds of questionnaires are used because of their appropriateness to obtain relevant information, opinions, and attitudes from the population within a short period of time.

The questionnaires are designated in Likert Scale and had two parts. The first part was about the general characteristics of the respondents and the second part captured elements of the appraisal namely technical viability, structural, market feasibility, financial viability, and project finance risk assessment in order to avoid biases by the respondents, the researcher made it clear at the beginning to use the findings for academic purpose and confidentiality is maintained

Unstructured interview were conducted with senior officials. This has been done intentionally cognizant of their involvement in project financing.

So as to strengthen the above data collection instruments, project loan files were reviewed and the result of it is included in the study.

3.4. Procedures of Data Collection

With regard to primary data collection, Questionnaire was used to pinpoint the assessment of the project loan financing. The questionnaire was arranged in standardized five point Likert's scale. In order to strengthen the quality of data; unstructured interview was conducted with higher officials. Finally, the data was entered in SPSS version 20, to analyze quantitatively using statistical tools such as percentages, frequency, mean, Variance and standard deviations. Information obtained through interviews and document reviews were summarized to support the information obtained from census.

Procedures;

Step1: Questions that are believed to be addressing all factors/variables essential to respond the research questions was incorporated. The questions were commented by Bank Professionals who are working in the credit area. Validity of the data was assured by this process in addition to the Content Validity Index.

Step 2: Both questionnaires and interview prepared are reviewed by the advisor.

Step 3: Reliability test was conducted using the questionnaires and the questionnaire was tested using Cronbach's Alpha

Step 4: Researcher is personally involved in the distribution and collection of the data.

3.5. Measurement of Factors or Variables

Appraisal was evaluated as a composite of technical feasibility, structural, market potential, financial viability, and project risk valuations using attitude statements of a 5 – point Likert – scale ranging from very important and not at all important. in some other compelling situations some of the factors are rated within the range of strongly agree, agree, uncertain, disagree and strongly disagree.

Interviews were conducted with higher officials who have been engaged in project financing for a number of years

Loan file reviews were also conducted to see the trends of project financing practices.

3.6. Validity and Reliability Tests

The researcher adopted structured questionnaires, interviews, document reviews and complied secondary data from different sources. Merging and converging of research data collected from different sources and techniques can eliminate any biases in the study and increases reliability of the findings. Hence the researcher used data triangulation as a one way of confirming validity and reliability

The researcher also believes that this study is reliable in consideration of respondents' profile in the assessment of project finance

Validity

The study is conducted using the instrument other researchers used in other related studies of course with some modification to fit the purpose of the study. In addition, the questions are pre-tested with technical staffs who are engaged in project financing and some modifications were received. Jargons and confusing words, double meaning words were rectified. Moreover, relevancy of the questionnaires was confirmed.

Reliability

According to Ho (2006), the reliability of a measuring instrument is defined as its ability to consistently measure the phenomenon it is designed to measure. Cornbach's alpha is a coefficient of reliability used to measure the internal consistency of a scale; represented as a number between 0 and 1. Cronbach alpha is used to determine the consistency of scales used to measure study variables. The internal consistency reliability is higher if the Cronbanch's alpha is closer to 1. The most common techniques used in the literature to assess the scale's reliability and stability is use of Cronbach Alpha Statistics. As tabulated in table 2.1, all the Cronbach Alpha coefficients for the variables under the study were above 0.7 implying that the scale used to measure project finance appraisal were consistent and hence reliable.

Table 2.1 Reliability test

No.	Description of Factors	No. of Items in the Factors	Cronbach's Alpha
1	Technical Appraisal	9	0.8256
2	Structural appraisal	6	0.728
3	Structural appraisal	5	0.835
4	Structural appraisal	4	0.725
5	Structural appraisal	6	0.749
6	Structural appraisal	4	0.758
7	Market Appraisal	15	0.712
8	Financial Appraisal	7	0.798
9	Financial appraisal	9	0.8956
10	Financial appraisal	11	0.789
11	Project finance risk	7	0.701
12	Project Finance Risk	12	0.725

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter covers areas including presentations of results obtained through both primary and secondary data sources, interpretation and analysis of the results in line with the theoretical and empirical literatures presented in chapter two. The results obtained through questionnaires, interviews and document reviews are presented, interpreted and analyzed according to study objectives which were: assessment of project financing practices of Nib International Bank particularly it endeavored to answer how the technical, structural, market, finance and project finance risk were assessed.

The chapter is organized into two sections; the first section is the respondent's profile, including their response rate, gender, their experience in the overall banking carrier, educational qualification and the post they assume. The second part describes the responses of the respondents regarding the appraisal techniques that the bank adopted.

4.1. Analysis and Interpretation of Respondents Profile

This section details the respondents' profile regarding response rate, gender, educational background, experiences in the overall banking business, position respondents assumed and tenure in current position.

4.1.1 Response Rate

Thirty questionnaires were administered and delivered to the project appraisal technical staffs. Overall, twenty-six were returned complete and met the screening requirements, representing a response rate of 87% for further analysis as reflected in the table 4.1 below.

Table 4.1 Distributed questionnaires and response rate

	Distributed Questionnaires	Usable Questionnaire	Frequency	percentage
	30	26	26	87%
Total	30	26	26	87%

Source: census result, 2018

4.1.2. Gender of Respondents

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. The following frequency table demonstrates the fact.

Table 4.2 gender of Respondents

		Frequency	percent	Valid Percent	Cumulative Percent
Valid	Male	21	81%	81%	81%
	Female	5	19%	19%	100
	Total	26	100	100	

Source: census result, 2018

Results in the table 4.2 above show that, majority of respondents were males representing about 81% and about 19% of those responded to questioners were females.

4.1.3. Educational Qualification of Respondents

The status of respondents with respect to their qualification attained was tabulated hereunder.

Table 4.3 Educational background of respondents

		Frequency	percent	Valid Percent	Cumulative Percent
Valid	Degree	17	65 %	65%	65%
	Masters	9	35%	35%	100
	Total	26	100	100	

Source: census result, 2018

As clearly indicated in table 4.3, majority of the respondents were having first degree (about 65 %). On the other hand, 9 (35 %) 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.

4.1.4. Working Experience in the Banking industry

Frequency distribution was used to obtain the working experiences of respondents as indicated in the table 4.4 below.

Table 4.4 working experience in the banking industry

		Frequency	Percent	valid percent	cumulative
valid	< 3 Year	4	15.38	15.38	15.38
	3 - 7 years	7	26.92	26.92	42.31
	7 - 10 years	9	34.62	34.62	76.92
	> 10 Years	6	23.08	23.08	100.00
	total	26	100.00	100.00	

Source: census result, 2018

Regarding the work experience of respondents, as depicted in table 4.4 above, about 58 % of the respondents have more than seven years of banking experience, implying that most of the respondents are senior staffs.

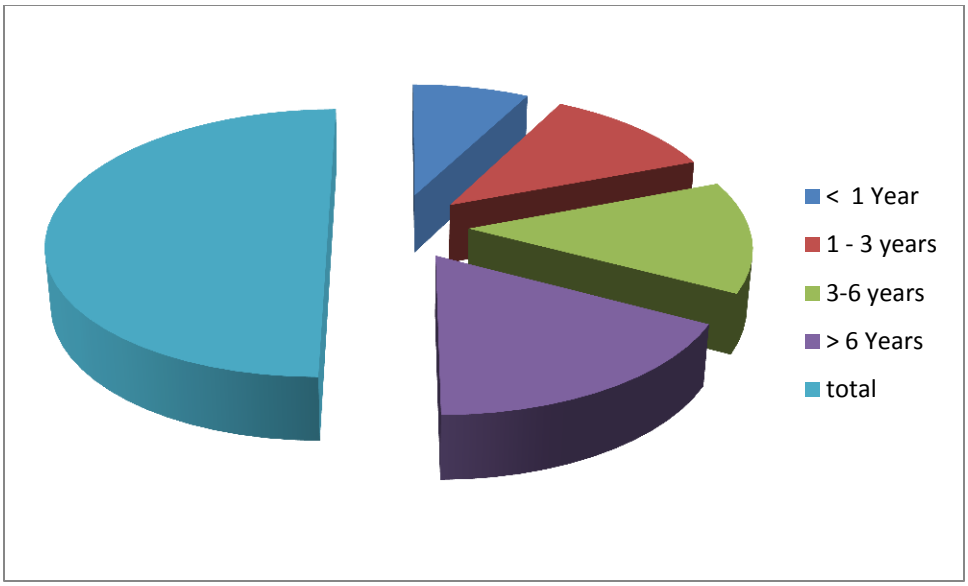
4.1.5. Respondent's experience in the Bank's project finance process

Table 4.5 work experience of respondents in the project finance process

		Frequency	Percent	Valid Percent	Cumulative
valid	< 1 Year	4	15.38%	15.38%	15.38%
	1 - 3 years	6	23.08%	23.08%	38.46%
	3-6 years	7	26.92%	26.92%	65.38%
	> 6 Years	9	34.62%	34.62%	100
	total	26	100	100	

Source: census result, 2018

From the table above it can be shown that more than 62 % of the respondents have more than three years of experience in their existing credit and project financing related positions, implying that their exposure in financing project is substantial. According to Jaipur (1990) experience survey means the survey of people who had practical experience. As a result of their experience, opinion and point of view on their project finance exposure would enable to assess project lending practice of the bank.



Source: census result, 2018

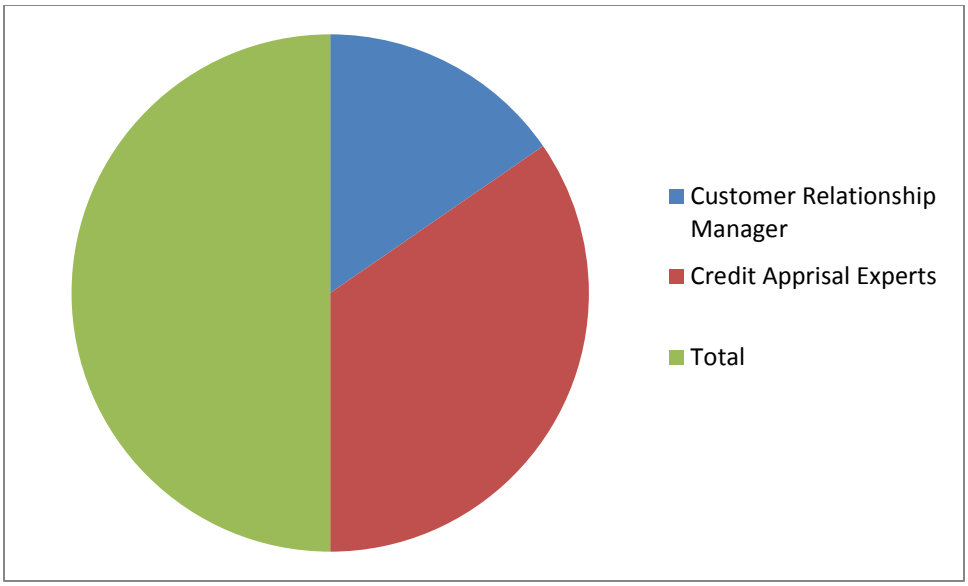
4.1.6. Position of Respondents

Table 4.6 position of respondents

		Frequency	percent	Valid Percent	Cumulative Percent
Valid	Customer Relationship Manager	8	31%	31%	31.5
	Credit Appraisal Experts	18	69%	69%	100
	Total	26	100	100	

Source: census result, 2018

The table illustrate that 69% of the respondents are credit appraisal experts and the remaining 31% are customer relationship managers. Customer relationship managers are in touch with the customers from customer recruitment to final loan disbursement. Further, follow-up of the project status up until completion of the project is the responsibility of the CRM. Whereas, credit appraisal experts are those who are in charge of independently appraise the viability of the project. These individuals are the one in charge of appraising project finance request.



Source: census result, 2018

4.2 Assessment of Project Financing

Project appraisal 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. In order to appreciate the performance of project finance in Nib International Bank, the researcher reviewed statistics of problem loans dubbed as non-performing loan mainly compiled from secondary sources. Nonperforming loans are either substandard, doubtful and pass which are in arrears for more than 90 days. (NBE, asset Classification directive). Further according to NBE, a ratio of 5% is accepted to be non-performing and the higher the ratio from the specified threshold, the worse the loan performance. The table depicts NPL of Nib International Bank for total loan, project loan and provision held by the bank from 2005 till 2014.

Table 4.7 project loan performance of the Nib international bank

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
NPL total	11.22%	8.47%	5.56%	6.73%	14.10%	7.40%	5.20%	2.50%	4.02%	3.13%
NPL project	6.09%	5.21%	6.59%	5.76%	10.62%	8.59%	6.98%	12.26%	9.69%	10.22%
provision	1.67%	1.64%	3.20%	4.10%	4.83%	4.06%	4.30%	2.79%	2.57%	2.10%

Source: census result, 2018

The table depicts contrary to the improvement of overall average NPLs ratios, NPL ratio of the project loan has been increasing across time .NPL for project loan has a mean of 8.2 which is well beyond the allowed NPL by regulatory body and a variance and standard deviation of 5.22 and 2.285 respectively.

Appraisal covers five major aspects of the project: technical, structural, market, financial and project finance risk.

4.2.1. Technical Appraisal

Technical appraisal is one of the methods and mechanisms of appraising a viability of the project finance. Responses obtained depicts that the mean value of the items stated under the factor is 4.12, which is sharply above average value. This implies that the overall average response for technical appraisal is considered in project financing. Among the variables under technical category; thoroughness of the process, suitability of the project site, consideration of access to infrastructure, considerations of implementation plan and determination of an optimal plant size have got relatively higher rates as described by a mean score of above 4.3. This response illustrate that the bank is more concerned with infrastructure availability, suitability of the project site and most importantly thoroughness of the process while appraising the project.

In between the two extremes, consideration of location and appropriateness of the project design have got mid weight average

On the other hands, from the 9 items in the category of technical appraisal, appropriateness of technology and availability of technical staff have got mean of less than average. Their scores are 3.6 and 3.2 respectively this implies that, Technical assessment of technologically innovative projects is at stack.

This fact goes more in congruence with the interview results by which the concerned officials claimed location, infrastructure, site and plant size are adequately assed in the appraisal.

Projects often involve complex technology and engineering works that must be thought of since the initial prefeasibility studies. Technical processes, technical know-how, machinery and equipment, all the construction works and the layouts shall be properly studied in order for the project to be implemented successfully. The plant size shall be determined and suitable location shall be selected considering factors affecting the project. The raw materials and supplies required by the project are identified and the required quantity and quality these inputs shall be specified during feasibility study of projects.

Table 4.8 technical appraisal

	Factors considered	N	Mean	S.D	Variance
a	The bank finance project that use appropriate technology	26	3.6	1.07	1.16
B	The bank has qualified staff to assess the level of technology.	26	3.2	1.23	1.51
C	The bank look at access to infrastructure	26	4.4	0.52	0.27
D	The bank look at the implementation plan of all projects	26	4.3	0.82	0.68
E	The project has to have a well thought and defined process	26	4.5	0.71	0.50
F	The bank look at the location of the project	26	4.2	1.23	1.51
G	The project should specify the recommended design of the process and plant	26	4.2	0.79	0.62
H	Suitability of the project site has to be verified while appraising the project	26	4.4	0.70	0.49
I	Determination of an optimal plant size is critical to the success of the project	26	4.3	0.95	0.90
	TOTAL 9 items	26	4.12	0.89	0.85

Source: own census result, 2018

NB: the mean column is measured by degree of agreement by 5-likert scale interval to the factors considered 5= strongly agree, 4= agree, 3 = uncertain, 2 = disagree, 1 = strongly disagree.

4.2.2. Project Structure Appraisal

Project structure appraisal is evaluated through the analysis of types of project structure, sponsors credit support, project specific security value, project institutional factors and project structure covenants.

4.2.2.1 Types of Project Structure

The most important element of the project finance definition is “non-recourse" finance, with the project lender's "rights" relating only to the assets and future earnings of the project. Leeper (1979) argues that the concept of non-recourse is the essence of project finance because the theory of project finance is really concerned with ‘spreading risks’: The phrase suggests that the security structure involves the sharing of risks by a "community of interest" made up of the parties concerned. Needless to say, Full-recourse debt is a type of secured debt that gives the lender right to assets beyond just collateral to cover full repayment of a borrower’s loan obligation.

On the other hand, for project finance sponsors, a deficiency agreement makes up any shortfall caused by insufficient working capital or cash inflows. In these instances, they may also be referred to as a makeup arrangement. A deficiency agreement will usually have a cumulative limit specified by the lending party. Other forms project finance includes; loan guaranteed during pre-completion, sponsor guarantee against failure and some mixture of guarantee and support.

Respondents were also given a chance to reflect their opinion on type of project finance in order to learn the practice. Accordingly, types of project structure have got a mean score of 2.51 which is just on average. Under the category, items of guaranteeing cash deficiency, mixing guarantee & support and loan guaranteed during pre-completion have scored 3.12, 2.65 and 2.54 respectively which was beyond the cumulative average.

This implies that performance guarantees (cash deficiency agreement, mixing guarantee & support and pre completion guarantees,) are prioritized over full recourse and no recourse financings. This also remarks that the risk that if the "independence" from the parent is complete or perfect, the sponsor may walk away from the project in the event of a probable default situation arising, leaving the lender with all the risk. It is more likely that the sponsor could abandon a segregated project than a linked project, because the former may not affect other operations materially. Somehow a strong linkage between the project and the sponsor is

therefore a source of security to the lender against the event of probable default. The implication is that while the mechanics of Project Finance involves the legal and physical separation or independence of the project. However, it is also somehow imperative is to establish commercial linkage between the sponsor and the project. These types of undertakings enable to establish economic and commercial linkage between the project and its sponsors. The findings are in line with definition of Samet, 1980. (Fadhley, 1991)

However, project finance structure terms are not fully understood by some of the technical staffs and interviewed higher officials. Some of them failed to differentiate non –recourse and recourse financing and other related terms.

Table 4.9 types of project finance

	Factors considered	N	Mean	S.D	Variance
A	no- recourse on signing	26	2.15	1.67	1.29
B	loan guaranteed during pre-completion	26	2.54	1.4	1.18
C	a form of cash deficiency agreement	26	3.12	1.41	1.19
D	sponsor guarantee against failure	26	2.31	1.21	1.10
E	full- recourse finance	26	2.31	1.83	1.35
F	some mixture of guarantee and supports	26	2.65	1.15	1.07
	6 items	26	2.51	1.45	1.20

Source: census result, 2018

4.2.2.2 Sponsor Credit Support

The respondents were requested to rank the importance of the sponsor support when lending to a major project. These are Corporate Company as equity participant, financial guarantee from the government, Supply and sales agreement with dependable company, Completion undertaking by corporate company, Partnership of strategy aligned and graded companies and Guaranteed by export credit insurance companies.

The aim of the questionnaires was to develop evidence of credit transfer (The process of incorporating the credit of the stronger members of the sponsor companies in the PF structure is the phenomenon of "transference of credit") and to measure the extent of such transfer.

the result shows that guaranteed by export credit insurance company, completion undertaken by corporate company, financial guarantee from government and supply and sales agreement with dependable companies are well beyond the subgroup mean which was 2.54 while corporate company as equity participants and partnership of a strategy aligned and graded company was at the bottom of the list

The overall merit shows that guarantying export credit insurance, completion and financial guarantee is relatively more important in the credit assessment of the project than the equity participation such as corporate company as equity participant and partnership of a strategy aligned and graded company. This closely relates to the critical importance of insuring export earnings and completion & financial baking than the role of technology, marketing and management services which are provided by various parties in the credit assessment of borrowing projects.

Table 4.10 sponsor credit support

	Factors	N	Mean	S.D	Variance
a	corporate company as equity participant	26	1.92	1.76	1.33
b	financial guarantee from government	26	2.65	1.61	1.27
c	supply and sales agreement with dependable companies	26	2.54	2.17	1.47
d	completion undertaking by corporate company	26	2.85	1.90	1.38
e	partnership of a strategy aligned and graded companies	26	2.42	1.24	1.12
f	guaranteed by export credit insurance companies	26	2.85	1.51	1.23
	Source: census result, 2018	26	2.54	1.70	1.30

4.2.2.3 Project-Specific Security Value

The next project finance structure relates to the project-specific factors which represent the inherent security value of the project. As most literature definitions of project finance have suggested the primary security of the loan relates to the cash flow of the project and the collateral value of its assets. The security value of projects when arranging finance was analyzed by five project specific advantages. These advantages are; Repayment tied to counter trade opportunities, Repayment tied to the export earnings of the project, Lenders control over project assets, High return on total project investment and High return on loan investment.

Respondents' prioritized high return on total project investment and repayment tied to export earning of the project which are above the subgroup mean (2.26) while lender control over project assets and high investment on loan investment are the least important. Implies the most important security in project finance structure is profit followed by project export earnings. This was in turn followed by tying repayment to counter trade opportunity and loan investment

The results also show that the lender's earning as measured on the loan investment is more important than repayment tied to counter trade opportunities and lenders control over project assets. This particular finding was resembled to non- recourse financing than full- recourse financing

Table 4.11 Project specific security value

		N	Mean	S.D	Variance
a	repayment tied to counter trade opportunities	26	2.15	1.75	1.32
b	repayment tied to the export earnings of the project	26	2.23	1.49	1.22
c	lenders control over project assets	26	1.92	0.99	1
d	high return on total project investment (debt and equity)	26	2.96	1.50	1.22
e	high investment on loan investment	26	2.04	1.50	1.22
	Source: census result, 2018		2.26	1.45	1.20

4.2.2.4 Project Institutional Factors

Four institutional factors were employed in project structure appraisal techniques they are: Syndication with other major commercial bank, Co financing with development partner, Availability of export credit insurance and Partnership with local bank.

The results illustrated that partnership of local bank was number one priories which are beyond the subgroup mean (2.5) while co-financing with development partner and syndication with other major commercial banks was least important. This implies that, the role of the local, national and regional banks was not considered important this was mainly because of undeveloped market. However, interviewed officials claimed that availability of export credit insurance is their number one priorities.

Table 4.12 project institutional factors

		N	Mean	S.D	Variance
a	syndication with other major commercial banks	26	2.38	1.78	1.33
b	co-financing with development partner	26	2.04	2.11	1.45
c	availability of export credit insurance	26	2.46	1.71	1.31
d	partnership of local bank	26	3.1	1.37	1.88
		26	2.50	1.74	1.49

Source: census result, 2018

4.2.2.5 Project structure covenant

From various legal agreements and undertakings listed under table 4.12, the respondents average degree of importance (mean) attached to the factors while compared to the overall mean of the variable in their descending order are sales off- take agreement, concession, shareholder agreement and loan facility agreement were rated as 2.35, 2.23, 2.50, and 1.69 respectively

Loan facility agreement and shareholder agreements was less prioritized over sales off and concession agreement. The findings are consistent with interview results by which interviewed officials claimed that sales- off- take agreement are their first priorities cognizant of important role covenant plays in securing stable market.

Table 4.13 project structure covenants

	Factors considered	N	Mean	S.D	Variance
A	sales- off-take agreements with the off- taken /purchaser/ and sales take -or-pay guarantee towards the SPV	26	2.35	1.71	1.33
B	concession / environment/ permitting authorizations from local and national authorities	26	2.23	2.02	1.42
C	shareholder agreement with the various project sponsors	26	2.50	2.02	1.42
D	loan facility agreement with lender who are providing the debt	26	1.69	0.52	0.72
	4 items	26	2.19	1.57	1.22

Source: census result, 2018

Interview and document reviews of project structure appraisal

While reviewing project finance file, project structure was literally meant the composition of debt and equity the project should have. The same were reflected in the interviews held with higher officials. The officials further defined project finance as techniques that the appraisal depended on the cash flow of the project. The silent feature of project finance that was not appreciated by the respondents includes:

- The debtor is a project company setup on adhoc basis that is financially and legally independent from the sponsors
- Project Company may be non-recourse or limited recourse.
- The equity of the project company and the project assets including the project documents and other cash flow are pledged as collateral for the loan
- Project finance is structured around a center of contract. It is contractually ring-fenced away from the borrower and their parent companies. Binds parties to the project company and transfer the risk accordingly through the extensive use of non-financial contractual (NFC) agreements.i.e., the main security for lenders is the project company's contract, license, or ownership of rights of natural resources
- The repayment of the exposure depends primarily on a well-established diversified credit –worthy, contractually obligated parties. It is considered a security exposure to the end user

4.2. 3 Project Market Appraisal

One of the most important appraisal techniques in project evaluation is viability of the market. The bank in charge of financing the project is expected to verify soundness of the project from the marketing angles. Respondents were asked to rate the importance of marketing factors in the project appraisal that was derived from (Savvakis C. Savvides,1990, marketing analysis in project evaluation) the result revealed the followings:

Market assessment factors that have value more than the overall mean (4.24) are demand pattern, product variety, product quality, price cost advantages, preference and taste of primary customers, consumption behavior of the market and control over factors of supply holdings individual mean of 4.6, 4.6, 4.4,4.4,4.4,4.4, and 4.3 respectively.

On the other hands, speed and flexibility of supply, promotional support, power over customers are rated less favorable by the respondents with respective mean of 3.9, 3.9, and 4 respectively.

The study remarks that demand pattern (trends of the past in order to predict the future) was the respondents' number one priorities. Product variety which clams the number of variants in a supplier market to which a market is segmented is second priories. Product quality, price cost advantages and preferences and taste of primary customers followed in their order of importance. Moreover, respondents attached relatively less importance to speed & flexibility of supply and promotional support. This remarks that primary due attention was given to augmented features of a product in terms of variety, quality and cost along with potential market that are identified through demand pattern and taste and preferences of the market.

Table 4.14 market Appraisal

	Factors considered	N	Mean	S.D	Variance
A	Demand pattern	26	4.6	0.52	0.27
B	Degree of competition	26	4.2	0.42	0.18
C	Product variety	26	4.4	0.70	0.49
D	Product quality	26	4.6	0.52	0.27
E	Price cost advantage	26	4.4		

				0.52	0.27
F	Control over distribution cannels	26	4.2	0.79	0.62
G	Control of factor of supply	26	4.3	0.82	0.68
H	Power over customers	26	4	0.94	0.89
I	Promotional support	26	3.9	1.20	1.43
J	Speed and flexibility of supply	26	3.9	1.29	1.66
K	Project's competitive edge	26	4.1	0.99	0.99
L	Competitor competitive edge	26	4.1	0.99	0.99
M	Market performance gap	26	4.1	0.99	0.99
N	Preference and taste of primary customer	26	4.4	0.70	0.49
O	Consumption behavior of the market	26	4.4	0.97	0.93
	Fifteen items	26	4.24	0.82	0.74

Source: census result, 2018

From documents reviews and interviews, macro and industry analysis were primary, then demand and supply analysis to learn market performance gap were cross checked, later details about viability of the market plan and sales strategies mainly analyzed from the feasibility studies were analyzed. The followings are constrains in the market assessment of project financing practices:

The bank heavily relied on feasibility study presented by the project companies. From interviews and documents review the researcher noticed that no efforts were exerted to verify the study.

Due attentions were given to demand analysis, market pan and marketing strategies in broad terms mainly from data compiled from macro and industry database. But lacks details on the

specific poisonings, pricing, promotion, product strategies of the project, other segmentation, targeting and positions strategies were also note explicitly stated. Last competitors move, alternative planning and different what if and scenario analysis were not covered in the analysis.

4.2.4. Project Finance Appraisal

Traditional Finance appraisals were divided into undiscounted and discounted techniques at the outset. Undiscounted techniques are techniques that do not take into account the time value of money. They are personal judgment, payback and financial ratios. Personal judgments are subjective based on expertise knowledge and experiences. On the other hand, Paybacks method determines when the projects will breakeven i.e. how long it will take for revenues to pay investment outlays. The other is financial ratios which are basically derived from financial statements they are further categorized as Liquidity Ratio, Asset Management Ratio, Profitability Ratios, Market Trend Ratios and Debt Management Ratio.

Discounted techniques includes Net Present Value (NPV), Annual Equivalent Worth (AE), Benefit cost Ratio (B/C), Internal Rate of return (IRR) and modified Internal Rate of Return (MIRR). Net present value (NPV) is the difference between the present value of all cash flows and cash outflows associated with an investment project. Annual Equivalent worth (AE) methods convert all cash flows to a series of equal cash flow over a specified time. Benefit – Cost Ratio (B/C) compares project benefits to the cost of the project, and for the project to be viable, the benefit has to greater than the cost. Internal Rate of Return (IRR) is the interest rate charged on the unrecovered project balance of the investment such that, when the project terminates the unrecovered project balance will be zero. Because of some criticism on the lack of robustness in the NPV and IRR methods, modified internal rate of return (MIRR) comes into the picture. MIRR does not assume that all cash flow is reinvested at another rate i.e. an external rate of return

Financial appraisals were assessed using eight factors. The factors mean score was 4.12, which is above average; implying Nib international bank is granting loans after analyzing some of the factors. From the factors listed out, IRR, financial ratio, NPV and payback period was given higher mean in their order of importance. Moreover, the forgone holds mean value of 4.3, 4.3, 4.2 and 4.2 respectively

On the other hand cost benefit analysis, annual equivalent worth (AE), and personal judgment are rated as relatively less important specifically weighted of 3.7, 4.1 and 4.1 respectively.

Financial ratios, paybacks were among the preferred appraisal techniques. This implies Appraises were failed to differentiate discounted and non-discounted cash flow project finance appraisal methods. Some of the respondents preferred non-discounted over discounted financial appraisal methods which fundamentally erodes the basic premises of finance which claim a dollar today Worth's more than a dollar tomorrows.

While respondents were asked to choose their best techniques, 50 percent of the respondents' rated financial ratio as the best techniques while the other quarter relied on NPV and the remaining quarter preferred IRR and payback period. however, it would have been very logical, if their preference relied on MIRR and any of the other discounted appraisal techniques (such as NPV, AE, IRR, regardless of their sequence) and then the discounted cash flow techniques implying that the technical staff more or less don't heavily relied on the financial appraisal techniques. Further no single techniques among the broader classification (discount Vs Non discount) preferred over others techniques instead the techniques are recommended to use in combinations.

Table 4.15 project finance appraisal techniques

	Factors considered	N	Mean	S.D	Variance
a	personal judgment	26	4.1	1.20	1.43
b	payback period	26	4.2	1.23	1.51
c	financial ratio	26	4.3	0.95	0.90
d	NPV	26	4.2	0.79	0.62
e	Annual equivalent Worth (AE)	26	4.1	1.20	1.43
f	cost benefit analysis	26	3.7	1.49	2.23
g	IRR	26	4.3	0.67	0.46
	Seven items	26	4.1285	1.08	1.23

Source: census result, 2018

Respondents were also asked to rate different financial ratios, accordingly, they preferred current ratio, return on equity, return on investment and quick ratio with weighted mean of 4.6, 4.5,4.4 and 4.4 respectively which is well beyond the overall mean (4.11).

On the other hand, draw down cover ratio, annual debt service ratio, loan life cover ratio, project life cover ratio and repayment cover ratio are well below the mean average and rated as 3.7, 3.7, 3.8, 3.9 and 4 respectively. Among ratio appraisal techniques, the respondents preferred current ratio, return on equity and return on assets and quick ratio instead of drawdown cover ratio, annual debt service ratio, loan life cover ratio, project life cover ratio and repayment cover ratio. This implies respondents were not differentiating working capital financing from project financing. The former was at most important in working capital financing appraisal whereby liquidity positions matters however the later were more deemed appropriate for long term finance which is the case of project finance. Further a decision on whether or not to invest in a new, un-proven investment project should nevertheless not be relied on the outcome of financial ratio.

Table 4.16 project financial ratio appraisal techniques

	Factors considered	N	Mean	S.D	Variance
A	Current ratio	26	4.6	0.52	0.27
B	Quick Ratio	26	4.4	0.70	0.49
C	ROI	26	4.4	0.84	0.71
D	ROE	26	4.5	0.71	0.50
E	Annual Debt Service Ratio (ADSR)	26	3.7	1.16	1.34
F	Loan life Cover Ratio	26	3.8	1.14	1.29
G	project life cover ratio	26	3.9	1.20	1.43
H	draw dawn cover ratio	26	3.7	1.16	1.34

I	repayment cover ratio	26	4	1.15	1.33
	9 items	26	4.11	0.95	0.97

Source: census result, 2018

The judgment of the technical staff for using financial techniques was averaged at 3.93. higher values are attached to the techniques enhances effectiveness in evaluating project finance, information obtained using the techniques is relevant for project financing decision making, the techniques enabled to make decision more efficiently, the appraisal techniques are practical for project finance decision making experience, the techniques provide sufficient information for decision making and attached a weighted mean value of 4.4, 4.3, 4.2, 4.1, and 4 respectively.

However, results of the appraisal techniques are rigid and inflexible, the appraisal techniques allow to appraise almost all project financing needs, the appraisal techniques enabled to quantify the flexibility of changing the finance decision in the future and reliability of the information obtained through the techniques are weighted as 3.2, 3.6, 3.7 and 3.8 respectively.

Reliability of the techniques, sufficiency of the information, rigidity & inflexibility of the techniques and its applicability for all projects financing need was doubted by the technical staffs.

Table 4.17 project finance appraisal evaluation

	Factors considered	N	Mean	S.D	Variance
A	Using the appraisal techniques enhances our effectiveness in evaluating and financing projects	26	4.4	0.52	0.27
B	Using the appraisal techniques enable us to make decision more efficiently.	26	4.2	0.79	0.62
C	Using the appraisal technique enable us to quantify the flexibility of changing the finance decision in the future	26	3.7	1.25	1.57
D	Using the appraisal technique enable us to analyze a series of related financing needs or to different financing alternatives	26	3.9	0.99	0.99
E	The appraisal technique is easy to understand and use.	26	4	0.67	0.44
F	The appraisal technique produces results that are rigid and inflexible	26	3.2	1.23	1.51

G	The appraisal technique allows to appraise almost all project financing needs.	26	3.6	0.97	0.93
H	Information obtained by using the techniques is relevant for project financing decision making.	26	4.3	0.67	0.46
I	Information obtained by using the technique is reliable	26	3.8	1.14	1.29
J	The appraisal technique provides sufficient information for decision making	26	4	0.82	0.67
K	Based on our project finance decision making experience, we believe using the appraisal technique is practical	26	4.1	0.57	0.32
	11 items	26	3.93	0.87	0.82

Source: census result, 2018

4.2.5. Project Risk Appraisal

A project is appraised to identify its risks and to assess its technical and environmental feasibility along with its financial and economic viability. In project finance the most prevalent risks are; Completion risk is the risk that the project might not be completed, Market risk sourced from changes in the demand for project output, Management risk emanated from loss of key personals, Financial risk is project financial sustainability across all phases of the project life, Environmental risk is mainly from lack of due diligence, Political risk act of government and general instability in the political and social system, Force majeure the risk that some discrete event might impair, or prevent the operation of the project for a prolonged period of time after the project has been completed and placed in operation.

In order to identify project finance risk exposure, the respondents were asked to weight the importance of each risk. Accordingly, the researcher compared respondents' average degree of importance (mean) of each factor for project finance risk appraisal against the overall mean of the variable which are listed out in descending order. In this regard, factors that have valued more than the overall mean are articulated by the respondents as more important while analyzing project finance risk and the one below the overall mean value have judged as less important as compared to the others. Accordingly, market risk, financial risk, management risk and completion risks having weighted mean of 4.9, 4.8, 4.6, and 4.4 respectively are weighted more than the overall mean which is 4.33. On the other hand, force majeure, environmental risk, and political risk having weighted

mean of 3.7, 3.8, and 4.1 respectively are weighted less than the overall mean. This implies, the bank emphasized on the business aspect of the project and comparatively less attention was given to those factors which are sourced beyond the project control.

On the other hand from document reviews and interviews, the researcher noticed that the bank was paid attention to management risk, business risk, financial risk, ownership risk and collateral risk. However, identification mechanisms employed in the bank was identical for all types of borrowing request. Thus, no separate consideration and treatment of Project loan financing from the ordinary credit financing activities were noticed

Table 4.18 types of project finance risk

	Factors considered	N	Mean	S.D	Variance
A	completion risk	26	4.4	0.84	0.71
B	market risk	26	4.9	0.32	0.10
C	management risk	26	4.6	0.52	0.27
D	financial risk	26	4.8	0.42	0.18
E	Environmental risk	26	3.8	1.32	1.73
F	political risk	26	4.1	1.20	1.43
G	Force majeure risk	26	3.7	0.82	0.68
	7 items	26	4.33	0.78	0.73

Source: census result, 2018

To further assess the judgment of technical staff of Nib international Bank, another evaluative judgmental question was developed and depicts that analyzing feasibility study to identify risk exposure, diversification has reduced risk exposure of the bank, considering of equity contribution both in kind or investment progress and in cash, quantifying risk through credit rating, the rating system predict debt serving capacity of loan applicant, investing project in

different sector of the economy, diversification has reduced the default level and credit rating on all projects are quantified to have weighted mean beyond the mid weight of 3.81. On the other hand, responding to market change, requesting client to provide financial guarantees, using risk based pricing in project assessment and covering cost overrun by the client having weighted mean of 2.7,3.2,3.5, and 3.5 respectively are at the bottom of the list

Table 4.19 project finance risk evaluation

	Factors considered	N	Mean	S.D	Variance
a	we properly analyze the feasibility study to identify risk exposure	26	4.3	0.67	0.46
b	we do credit rating on all projects	26	3.9	0.88	0.77
c	the bank quantifies risk through credit rating	26	4	0.94	0.89
d	our rating system predicts debt serving capacity of loan applicants	26	4	0.94	0.89
e	the bank quickly responds to market changes	26	2.7	1.25	1.57
f	we use risk based pricing in our project assessment	26	3.5	1.27	1.61
g	clients are required to provide financial guarantees	26	3.2	1.23	1.51
h	project loan is invested in different sectors of the economy	26	4	1.05	1.11
i	diversification has reduced risk exposure for the bank	26	4.3	1.06	1.12
j	default level have reduced due to diversification	26	4	1.41	2.00
k	we consider equity contribution both in kind or investment progress and in cash	26	4.3	0.67	0.46
l	cost overrun, if any, on project cost is covered by the borrower	26	3.5	1.51	2.28
	12 items	26	3.81	1.07	1.22

Source: census result, 2018

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The broad objective of this research was to assess project financing practices of Nib International Bank. For this intention, the study was intended to answer quite specific questions which were derived from this broader objective. And hence, the study focused on examining how the bank conducted technical, structural, market, finance and project risk evaluation tools

Descriptive research approach was used to answer the research questions and objective of the study. In this chapter the summary of the major findings of the study, the conclusion drawn from data analysis and recommendations are discussed. Last, areas for future research are presented.

5.1. Summary of Basic Findings

This study attempted to examine project financing practices of Nib international bank in terms of the five major project financing appraisal techniques: Based on the data analyzed in chapter four, using mean and percentage frequency of respondents for quantitative data, document reviews and narrative approach for qualitative data collected through interviews the researcher comes up with the following results.

Technical aspect of project finance appraisal

The overall weight given to the technical aspect of the project appraisal deemed appropriate at the outset. However, lack of qualified staff to assess the level of technology, appropriateness of the project technology, looking at the location of the project and necessity of the project to have the recommended designed of the process and plants were weighted relatively weaker while compared to others.

Structural aspect of project finance appraisal

Under types of project finance structure, Project performance guarantees (cash deficiency agreement, mixing guarantee & support and pre-completion guarantee) were prioritized over full recourse and no recourse financings.

While appraising sponsor credit support, guarantying export credit insurance, completion and financial guarantee was relatively more important in the credit assessment of the project than the equity participants such as corporate company as equity participant and partnership of a strategy

aligned and graded company. This closely relates to the critical importance of insuring export earnings and completion and financial backing than the role of technology, marketing and management services which are provided by various parties in the credit assessment of borrowing projects.

In line with appraising project specific security value, the most important security in project finance structure was profit followed by project export earnings this was then followed by tying repayment to counter trade opportunities and loan investment. The results also showed that the lender's earning as measured on the loan investment is more important than repayment tied to counter trade opportunities and lenders control over project assets. This particular fining was resembled to non- recourse financing than full recourse financing

Moreover, the role of the local national and regional banks (development partners) was not considered important as far as institutional factors of projects are concerned. This was mainly because of undeveloped market. However, interview officials claimed that availability of export credit insurance was their number one priorities

From legal undertakings, loan facility agreement and shareholder agreements was less prioritized over sales –off and concession agreement. The findings are consistent with interview results by which interviewed officials claimed that sales off take agreement are their first priorities cognizant of important role covenants plays in securing stable market for the project.

Last, Project finance structure was loosely defined by higher officials of the bank. Their understanding lack very important features of project finance features, transactions and elements.

Marketing aspect of project finance appraisal

The weighted average mean of the market assessment factors seemed reasonable. However, speed and flexibility of supply, promotional support, power over customers were perceived as comparatively less important while compared against the weighted mean.

Due attentions were given to demand analysis, market pan and marketing strategies in broad terms mainly from data compiled from macro and industry database. But lacks details on the specific poisonings, pricing, promotion, product strategies of the project, other segmentation, targeting and positions strategies were also not explicitly stated. Last competitors move, alternative planning and different what if and scenario analysis were not covered in the analysis. Moreover, Reliance of market viability rested on the feasibility study presented and no efforts

were exerted to verify the study. Last, the market appraisals were of best guesses and lack precisions.

Financial aspect of project finance appraisal

while apprising financial evaluation of the project, the respondents preferred non-discounted over discounted financial appraisal methods which fundamentally erodes the basic premises of finance which claim a dollar today Worth's more than a dollar tomorrows. In addition, respondents were observed failed to not differentiate working capital financing from project financing as far as financial ratios are concerned. Last, Reliability of the techniques, sufficiency of the information, rigidity & inflexibility of the techniques and its applicability for all projects financing need were doubted by the technical staffs.

Project finance risk aspect of the project

While evaluating project finance risk, market risk, financial risk, management risk and completion risks were found more important than force majeure, environmental risk and political risk. This implies, the bank emphasized on the business aspect of the project and comparatively less attention was given to those factors which are sourced beyond the project control. And again, the appraisal techniques, the respondents employed were identical to ordinary working capital financings.

5.2 Conclusion

The aim of this research was to examine the project financing practice of Nib International bank, In order to address the primary aim of this research; the following key research conclusions can be discerned.

As thoroughly discussed in the finding part regarding technical appraisal of the project, appropriateness of technology and having technical staff for assessing the level of the technology were not adequately evaluated during the appraisal practices.

Second, No-recourse on signing, a form of cash deficiency and full recourse finance features of project finance structure were not appreciated. Completion undertaking, repayment tied to counter trade opportunities and the use of financial guarantee were also not fully utilized. Sales of agreements with the off-taken /purchaser/ and sales take or pay guarantee towards the SPV and concession / environmental/ permitting authorization from local and national authorities were not yet capitalized in the assessment of project finance in Nib international bank.

Third, speed and flexibility of supply, promotional support, power over customers and still needing improvement in the market assessment. The overall market appraisal was very general and failed to address marking mix element strategies and market segmentation, targeting and position models.

Fourth, the financial tools the respondents relied on were IRR, financial ratios, NPV and payback. Among financial ratio the respondents were resembled to current ratio, return on equity, return on investment and quick ratios. Regarding judgment on the use of the appraisal techniques, the method employed was rigid and inflexible, in adaptable to the changing finance decision and reliability of the information obtained was somehow doubted.

Fifth, force majeure risks, environmental risks and political risk were below the overall weighted average mean. responding to market change, requesting client to provide financial guarantee using risk based pricing in project assessment and covering cost overrun by the client were not evaluated as important to others factors.

5.3. Recommendations

As the major objective of the study is to identify project financing practice of Nib International bank, the following recommendations are forwarded based on the findings.

- The appraisers have to give due consideration to all variables or factors of technical aspect of the project owing the greater the thoroughness with which the technical analysis is carried out, the more reliable and complete the Project Specifications are, and the lesser the chances of major unforeseen problems cropping up and jeopardizing the project.
- The salient features of project finance structure have to be optimized during the appraisal process
- Training has to be availed to the appraisal staff on project financing structure and appraisal techniques
- All factors of the market appraisal have to be incorporated and aided in the evaluation techniques of course cognizant of devil in the detail
- The bank is recommended to verify the assumption employed in the feasibility study.
- The market segmentation, targeting and position strategies of the project has to be duly assessed in the appraisal process

- Explicit assessment regarding marketing mix strategies has to be elaborately discussed in the assessment of project finance.
- Discounted cash flow techniques (such as NPV, IRR, Annual equivalent worth (AE) Cost Benefit Analysis (CBA) has to be preferred over the non-discounted such as financial ratio, payback period and personal judgments.
- To strengthen the viability of the project, the bank has to verify various project finance appraisal techniques
- No single financial appraisal techniques are preferred over other across the board. Instead, the techniques have to be supported by other techniques
- The banks are recommended to use various advanced project finance appraisal methods.
- All types of risks facing the projects have to be identified at the very beginning. Second, the identified risks have to be well diversified across various stakeholders and different mitigation tools have to be in place.
- The bank is recommended to appraise project finance differently from conventional working capital financing.
- The bank is recommended to analyze backward and forward linkage of the project in order to secure servicing of the loan as per terms and condition of the loan contract

5.4. Suggestions for Further Studies

The study was only focused on the project financing practices of Nib International bank. However; it could be expanded to cover other commercial bank in the country. The study also concentrated on the appraisal techniques such as technical, structural, market finance and project risk assessment. This should also be widened to incorporate some of others assessment techniques such as economics and social appraisal which are further detailing the contribution of the project from national income and society wellbeing respectively. Moreover, the appraisal techniques employed were customized to the prevailing business environment and No effort were exerted to incorporate advanced project appraisal techniques and project financing risk mitigation tools. The result would be different for cross border project that are capable of using the forgone.

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Appendix One

Addis Ababa University School of commerce

School of graduate studies

Masters of project management program

Dear respondents

This questionnaire is designed to collect data for the research to be conducted on the topic; "assessment of project finance practices at Nib International Bank S.C. "which will be used as an input for the research in partial fulfillment of masters of project management

I have compiled literature and empirical review for the study. I am now endeavoring to relate the theories to the practices as perceived by the project appraisal technical staff of Nib International Bank S.C.

In line with responding the questionnaire, please note that:

a) The response to this questionnaire will be kept strictly confidential. No name of individual will be mentioned in the report
b) There are no correct and incorrect answers to the item included in this survey. Please respond to all questions as honestly and as accurately as possible
c) Most of the questions can be answered by circling the number assigned to various evaluative assumptions

Your cooperation in completing this questionnaire is greatly appreciated

I Socio Demographic Information

Please circle for each choice provided

1. Bio Data

A) Male B) Female

2. Respondent's Level of Education? A) Certification D) PHD
B) First Degree E) any other, specify
C) Master Degree _____

3. Work Experience in the Bank;
A) < three years C) 7-10 Years
B) 3-7 Years D) > 10 years

4. Current position;
A) Credit appraisal experts C) Credit Relationship manager
B) Portfolio & follow up manager D) any other (please
C) Division Manager specify) _____

5. Work Experience in the credit and project appraisal process;
A) < one year C) 3-6 Years
B) 1-3 Years D) > 6 years

II. Project Financing Related Questions

I PROJECT TECHNICAL APPRISAL

1	Please rate the relative importance of the following technical aspect of the project finance (please rate within the range of strongly agree (5) : strongly disagree (1)	Ratings				
A	The bank finance project that use appropriate technology	5	4	3	2	1
B	The bank has qualified staff to assess the level of technology.	5	4	3	2	1
C	The bank look at access to infrastructure	5	4	3	2	1
D	The bank look at the implementation plan of all projects	5	4	3	2	1
E	The project has to have a well thought and defined process	5	4	3	2	1
F	The bank look at the location of the project	5	4	3	2	1
G	The project should specify the recommended design of the process and plant	5	4	3	2	1
H	Suitability of the project site has to be verified while appraising the project	5	4	3	2	1
I	Determination of an optimal plant size is critical to the success of the project	5	4	3	2	1

II PROJECT STRUCTURE APPRAISAL

2	Please rank the importance of the following project structure while appraising project finance (please rate within the range of very important (5) : not at all important (1)	Ratings				
A	Corporate company as equity participant	5	4	3	2	1

B	financial guarantee from government	5	4	3	2	1
C	supply and sales agreement with dependable companies	5	4	3	2	1
D	completion undertaking by a corporate company	5	4	3	2	1
E	partnership of a strategy aligned and graded companies	5	4	3	2	1
F	guaranteed by export credit insurance companies	5	4	3	2	1
	The project structure					
A	repayment tied to counter trade opportunities	5	4	3	2	1
B	repayment tied to the export earnings of the project	5	4	3	2	1
C	lenders control over project assets	5	4	3	2	1
D	high return on total project investment (debt and equity)	5	4	3	2	1
E	high investment on loan investment	5	4	3	2	1
	Institutional structure					
A	syndication with other major commercial banks	5	4	3	2	1
B	co-financing with development partner	5	4	3	2	1
C	availability of export credit insurance	5	4	3	2	1
D	partnership of local bank	5	4	3	2	1
3	please rank the importance of the following loan structures .please circle one response for					
	each item listed within the range of very important (5): not at all important (1)					
	types of project finance	Ratings				
A	no- recourse on signing	5	4	3	2	1
B	loan guaranteed during pre-completion	5	4	3	2	1
C	a form of cash deficiency agreement	5	4	3	2	1
D	sponsor guarantee against failure	5	4	3	2	1
E	full- recourse finance	5	4	3	2	1
F	some mixture of guarantee and supports	5	4	3	2	1
4	please rate the importance of the following typical nature of project finance structure in the Appraisal process. (please rate within the range of very important (5) ; not at all important (1))					
A	sales- off-take agreements with the off- taken /purchaser/ and sales take -or-pay guarantee	Ratings				
	towards the SPV	5	4	3	2	1
B	concession / environment/ permitting authorizations from local and national authorities	5	4	3	2	1
C	shareholder agreement with the various project sponsors	5	4	3	2	1
D	loan facility agreement with lender who are providing the debt	5	4	3	2	1

III PROJECT MARKET APPRAISAL

5	Please rate the relative importance of the following market appraisal statements within the range of very important(5) : note at all important (1)	

A	Demand pattern	5	4	3	2	1
B	Degree of competition	5	4	3	2	1
C	Product variety	5	4	3	2	1
D	Product quality	5	4	3	2	1
E	Price cost advantage	5	4	3	2	1
F	Control over distribution cannels	5	4	3	2	1
G	Control of factor of supply	5	4	3	2	1
H	Power over customers	5	4	3	2	1
I	Promotional support	5	4	3	2	1
J	Speed and flexibility of supply	5	4	3	2	1
K	Project's competitive edge	5	4	3	2	1
L	Competitor competitive edge	5	4	3	2	1
M	Market performance gap	5	4	3	2	1
N	Preference and taste of primary customer	5	4	3	2	1
O	Consumption behavior of the market	5	4	3	2	1

IV PROJECT FINANCIAL APPRAISAL

6	how often do you use the following when evaluating credit worthiness of project Finance? please circle within the range of very often (5) : Never (1)	Ratings				
A	personal judgment	5	4	3	2	1
B	payback period	5	4	3	2	1
C	financial ratio	5	4	3	2	1
D	NPV	5	4	3	2	1
E	Annual equivalent Worth (AE)	5	4	3	2	1
F	cost benefit analysis	5	4	3	2	1
G	IRR	5	4	3	2	1
H	MIRR	5	4	3	2	1
I	other please specify					
	i	5	4	3	2	1
	ii	5	4	3	2	1
	iii	5	4	3	2	1
7	if you have indicated that you use more than one techniques above, please tick below to indicate the appraisal techniques that you consider to be the best among that you use					
	Types of Appraisal Techniques	Please Tick One Only				
1	Personal Judgments					1
2	Payback period					2
3	Financial ratios					3
4	NPV					4
5	Annual Equivalent Worth (AE)					5
6	Cost Benefit Analysis					6

7	IRR				7	
8	MIRR				8	
8	Among the financial ratio appraisal techniques of project. Please rank the relative importance of the under listed within the range of very important (5) : not at all (1)	Ratings				
A	Current Ratio	5	4	3	2	1
B	quick ratio	5	4	3	2	1
C	ROI	5	4	3	2	1
D	ROE	5	4	3	2	1
E	Annual Debt Service Ratio (ADSR)	5	4	3	2	1
F	Loan life Cover Ratio	5	4	3	2	1
G	project life cover ratio	5	4	3	2	1
H	draw dawn cover ratio	5	4	3	2	1
I	repayment cover ratio	5	4	3	2	1
9	for the single techniques that you either considered or the best techniques, please explain Your reason for preferring these techniques over others that are available. Please circle the most appropriate number within the range of strongly agree (5) : strongly disagree (1)	Ratings				
A	Using the appraisal techniques enhances our effectiveness in evaluating and financing projects	5	4	3	2	1
B	Using the appraisal techniques enable us to make decision more efficiently.	5	4	3	2	1
C	Using the appraisal technique enable us to quantify the flexibility of changing the finance decision in the future	5	4	3	2	1
D	Using the appraisal technique enable us to analyze a series of related financing needs or to define different financing alternatives	5	4	3	2	1
E	The appraisal technique is easy to understand and use.	5	4	3	2	1
F	The appraisal technique produces results that are rigid and inflexible	5	4	3	2	1
G	The appraisal technique allows to appraise almost all project financing needs.	5	4	3	2	1
H	Information obtained by using the techniques is relevant for project financing decision making.	5	4	3	2	1
I	Information obtained by using the technique is reliable	5	4	3	2	1
J	The appraisal technique provides sufficient information for decision making	5	4	3	2	1
K	Based on our project finance decision making experience, we believe using the appraisal technique is practical	5	4	3	2	1
10	For each of the statements below, please indicate your experience in using the single technique or the best technique					
A	How long have you applied the appraisal technique when evaluating project financing opportunities? ……. Years					
B	Describe your current experience level in applying the appraisal techniques.{Please circle within Range of very high (5): very small (1)	Ratings 5	4	3	2	1
V	PROJECT FINANCE RISK APPRAISAL					
11	How do you rate the relative importance of the following risks in the assessment of	Ratings				

	Project finance? (very important (5):not at all important (1)					
A	completion risk	5	4	3	2	1
B	market risk	5	4	3	2	1
C	management risk	5	4	3	2	1
D	financial risk	5	4	3	2	1
E	Environmental risk	5	4	3	2	1
F	political risk	5	4	3	2	1
G	Force majeure risk	5	4	3	2	1
12	please judge the following project risk assessment statement within the range of Strongly agree (5): strongly disagree (1)	Ratings				
A	we properly analyze the feasibility study to identify risk exposure	5	4	3	2	1
B	we do credit rating on all projects	5	4	3	2	1
C	the bank quantifies risk through credit rating	5	4	3	2	1
D	our rating system predicts debt serving capacity of loan applicants	5	4	3	2	1
E	the bank quickly responds to market changes	5	4	3	2	1
F	we use risk based pricing in our project assessment	5	4	3	2	1
G	clients are required to provide financial guarantees	5	4	3	2	1
H	project loan is invested in different sectors of the economy	5	4	3	2	1
I	diversification has reduced risk exposure for the bank	5	4	3	2	1
J	default level have reduced due to diversification	5	4	3	2	1
K	we consider equity contribution both in kind or investment progress and in cash	5	4	3	2	1
L	cost overrun, if any, on project cost is covered by the borrower	5	4	3	2	1

Your cooperation in this regard is highly appreciable

Appendix Two

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 do you mean by project financing? How is project finance differing from short term working capital financing?
2. Do you consider project financing riskier than other financing? if so why?
3. What kind of Project is financed by the Bank?
4. What type of risk exists in project finance?
5. Could you please list down the techniques employed by your bank to assess viability of the project?

Question related to Project financing

1. How do you appraise the technical viability of the project finance and among the factors which one is mandatory and optional?

2. How do you appraise the appropriateness of the project structure in project financing? What are the practices of project structure in the project financing?

3. How do you appraise the market viability of the project in your project financing practices?

4. How do you appraise the financial viability of the project in your project financing endeavor?

5. among the techniques of evaluating financial appraisal which one is you most of the time relied on?

6. How do you appraise the project finance risk in your project financing practices? What types of risk are the most prevalent in project financing practices?

APPENDIX THREE

Interview results

Respondent one

General Questions

1 What do you mean by project financing? How is project finance differs from short term working capital finance?

   Project finance is a usually a long term finance commonly used for the acquisition of construction machinery based on the analysis of feasibility study. It differs from other short term financing mainly the loan is repaid out of the income generated from the business. The loan is structured in debt and equity proportion

2 Do you consider project financing riskier than other financing? If so why?

   Of course project finance is riskier than other because of its newness and highly dependent on the projected cash flow proceeds.

3 What kind of Project is financed by the Bank?

   Machinery, manufacturing, hotel and tourism, construction and export business

4 What type of risk exists in project finance?

   Completion risk, market risk, foreign exchange risk, interest rate risk and soon

5 Could you please list down the techniques employed by your bank to assess viability of the project?

   Financial techniques, market assessment, technical assessment and risk assessment

Question related to Project financing

6 How do you appraise the technical viability of the project finance and among the factors which one is mandatory and optional?

   As the name implies we are appraising the project from the technical point of view. Mainly we look at project design and layout, theoretical and practical capacity of the machines, production per hour or per day, ergonomics and soon. No factors are dependable over others so at most effort is exerted to see the viability from different angle.

7 How do you appraise the appropriateness of the project structure in project financing? What are the practices of project structure in the project financing?

We look at establishment of the project. Principal promoters, owners, sponsors and managerial structure of the project

8 How do you appraise the market viability of the project in your project financing practices?

Stability of demand, quality of the product or services, competitive advantages over competitors, entry barriers, taste and preferences of primary customers, demand supply gap of the product and its sustainability, placement and pricing of the product and others

9 How do you appraise the financial viability of the project in your project financing endeavor?

Projected financial data are analyzed to verify the project ability to service its debt. The techniques employed are discounted payback period, financial ratios at different times, Net Present Values (NPV), Internal Rate of Return(IRR) and some other times what if analysis is conducted at different economic scenarios.

10 Among the techniques of evaluating financial appraisal which one is you most of the time relied on?

Payback period and different financial ratios are still important because of ease of application and its shortcut to know when the invested fund is get back.

11 How do you appraise the project finance risk in your project financing practices? What types of risk are the most prevalent in project financing practices?

Management risk, ownership risk, financial risk, market risk, political and socio economic risk are frequently evaluated

Respondent Two

General Questions

1 What do you mean by project financing? How is project finance differs from short term working capital financing?

Project finance is a financing in which the appraisal is dependent up on the cash flow of the project. It is usually a long term bases. The loan is differs from working capital loan first it is usually granted for more than five years, is based on the viability of presented feasibility study and equity contribution of the applicant is mandatory

2 Do you consider project financing riskier than other financing? if so why?

Because of lack of the learning curve and longer period of financing, this types of financing are riskier than other forms of financing

3 What kind of Project is financed by the Bank?

Agricultural, manufacturing, hotel and tourism, construction and export business

4 What type of risk exists in project finance?

Failure to complete the project as per plan, exchange rate risk, political risk, foreign exchange risk, political risk just to mention the most prevalent ones

5 Could you please list down the techniques employed by your bank to assess viability of the project?

Market analysis, technical analysis, financial analysis, management analysis, legal and force majeure analysis

Question related to Project financing

6 How do you appraise the technical viability of the project finance and among the factors which one is mandatory and optional?

Technical viability is assessed to confirm that the project utilized appropriate technology and established at appropriate location and site. It further used to assess availability of technical staff and their competency, appropriateness of plant size and capacity utilization. Regarding relative importance of the factors in technical appraisal, my judgment goes with the famous proverb which claim a single hole will sink the ship the moral is all variables are important

7 How do you appraise the appropriateness of the project structure in project financing? What are the practices of project structure in the project financing?

The project has to have the right structure and well defined relationship among various parties. Debt and equity proportion has to be well defined and project has to have the optimum capital

8 How do you appraise the market viability of the project in your project financing practices?

We are looking at demand and supply analysis at current and projected future, its pricing and other distinctive features to confirm competitiveness of the product or service, the overall market plan and market analysis are considered during the appraisal process

9 How do you appraise the financial viability of the project in your project financing endeavor?

Cash flow projected are very important as far as project finance is concerned and then we look at techniques such as payback period, financial ratios such as liquidity ratios, profitability ratio and other discounted cash flow techniques

10 Among the techniques of evaluating financial appraisal which one is you most of the time relied on?

Financial ratios at different time is paramount importance, and payback period

However, the rule of the thumb is to use various techniques together

11 How do you appraise the project finance risk in your project financing practices? What types of risk are the most prevalent in project financing practices?

We are endeavored to assess construction risk, market risk, financial risk, management risk, ownership risk and collateral risk

Respondent Three

General Questions

1 What do you mean by project financing? How is project finance differs from short term working capital financing?

As far as our bank is concerned, project finance is a financing highly relied on the analysis of the viability of the project. It is usually availed for construction of star hotels, new manufacturing companies and others. It differs from conventional lending because of its financing needs are substantial, usually for long period of time, and highly relied on viability of the proposal presented.

2 Do you consider project financing riskier than other financing? If so why?

Long term loans are riskier than short term loan as result project loans are riskier than others

3 What kind of Project is financed by the Bank?

Most of them are manufacturing, hotel and tourism, construction and export business

4 What type of risk exists in project finance?

It can be emanated from macroeconomic such as interest rate and exchange rate risk, from industry wide such as possible fall in demand or price risk and project specific risk such as completion risk, technical risk, management risk etc.

5 Could you please list down the techniques employed by your bank to assess viability of the project?

Technical, market, finance, legal, social, and risk analysis Question related to Project financing

6 How do you appraise the technical viability of the project finance and among the factors which one is mandatory and optional?

Technical analysis involves viability of the project in terms of site and location, availability of infrastructure and utilities at the project, appropriateness of technology, design and layout of the project, availability of man power and technical capability of the technician. Among the technical appraisal methods employed, not a single factors outweighs other instead all variables are important and has to be taken into consideration.

7 How do you appraise the appropriateness of the project structure in project financing? What are the practices of project structure in the project financing?

The organization structure of the project, its reporting and information exchange between various parties have to be well defined. Competency of the management and technician has to be ascertained

8 How do you appraise the market viability of the project in your project financing practices?

In market appraisal, we are looking at the market size and its projection in the coming future, the effect of substitutes, competitiveness of the product and services, its pricing methods, placement and promotion. The market plan and market strategy of the pro

9 How do you appraise the financial viability of the project in your project financing endeavor?

We usually look at project cash flow and its financial ratio at different times, payback periods, IRR and NPV

10 Among the techniques of evaluating financial appraisal which one is you most of the time relied on?

Usually a combination of techniques is used but most of the time Payback period and financial ratio at different period of time are considered

11 How do you appraise the project finance risk in your project financing practices? What types of risk are the most prevalent in project financing practices?

We are looking at management risk, ownership risk, financial risk and collateral risk

APPENDIX FOUR

Documents reviews

Analysis of project loan request

I document reviews on manufacturing project loans

1 Back ground of the applicant

Details about establishment, initial paid up capital, growth of the business and current status

2 Facility applied for and purpose of the request

Details about requested loan amount, purpose, repayment proposed

3 Project description

a) Overall about the project

b) Current status of the project: details what is on hand and what is needed along with cost determination

4 Financing structure: details about debt and equity contribution by the promoter and the bank contrasted with feasibility study and bank policy

5 Banking relationship: details about the applicant relationship with bank as a depositor, borrower, import and export business and others. Manner of meeting obligation is analyzed. Credit relationship with other bank is verified through national bank of Ethiopia credit references bureau to know how much the applicant is indebted and status of loan with other bank. Further, the applicant is requested to present tax clearance to learn about the applicant relationship with government office

6 Market analysis

a) Overall about the business the applicant is engaged with. Macro and industry analysis is reviewed

b) Demand and supply analysis: demand across the industry and supply of same to appreciate whether a market exist for the product or services. To identify unmet demand. Demand and supply projection from the feasibility study is analyzed. Later demand- supply gap is subject to verification

c) Market plan and sales strategy; viability of the market plan and marketing mix elements are analyzed. The market strategy. Plan of action the promoter is intended to pursue

7 Management analysis: the organization structure, capability of the professional measured in terms of experience and educational background is analyzed. Staff strength is also subject to verification

8 Technical analysis; location of the project, necessary utilities and infrastructure availability

9 Collateral analysis; details about the collateral presented where it is located, amount estimated and margin held

10 Risk analysis it discusses the following

a) Business risk; focused on profitability of the venture
b) Financial risk: relied on financial forecast and cash flow
c) Ownership risk; equity of the applicant
d) Collateral risk dependability of the collateral held as a security
e) Technology risk appropriateness of the project technology

11 Financial projection analysis: details about;

a) Reliability of basic assumptions; estimated cost, completion time, revenue projection and others operating costs
b) Profitability; from projected income statement, when it will make a profit, cash flow projection
c) Payback period when it will refund the amount invested
d) Net Present Value (NPV) and Internal Rate of Return (IRR); actability of IRR and NPV is verified
e) Sensitivity analysis: details about project at different scenario.

II document reviews on Hotel and Tourism project loan

1 Applicant profile: details about legal status of the business, its license, line of business and address of the applicant

2 Facility applied for: amount requested, duration, repayment schedule and purpose of the request

3 Legal formation of the applicant. How it is established, founding members, amount contributed by the founder and present capital

4 Types of business the applicant engaged with

5 Background of the project: overall about the industry the applicant engaged with and its reasonableness at the outset

6 Viability of the request by contrasting anticipated and current stages, verification of machines, vehicles equipment needed along with cost determination

7 Financing structure: debt equity proportion of the project

8 Market analysis. Overall about the economy and specific industry the project is engaged with, then market and demand analysis- existing demand vis-à-vis demand projection and current supply vis-à-vis supply project to lean about demand supply gap analysis then marketing strategy of the project is analyzed

9 Banking relationship: account utilization, credit relationship past and present, import and export performance if any, and its viability and same is confirmed across the bank.

10 Management; how the project is established, organizational structure, competency of the management and technical staff, staff strength

11 Technical analysis

   a) Viability of the project and its convenience availability of infrastructure and utilities
   b) Availability of inputs, machinery and essential raw materials and its appropriateness is duly assessed
   c) Production process: process flow viability
   d) Production capacity utilization, future capacity utilization plan and suppliers' conditions

12 Financial analysis

   a) Income statement analysis, projected balance sheet and profitability
   b) Computation of payback, net present value (NPV) and internal rate of return
   c) Collateral: viability of the collateral at rainy days and the margin maintained

13 Risk analysis paying due attention to the followings

   a) Management risk: competency of the management, loss of key professional staff and its indispensability without major impact

b) Business risk; mainly associated with industry favorableness of the sector
c) Financial risk; dependability of the forecasted cash flow

d) Ownership risk; proportion of debt and equity in the company, varied shareholder interest in the project
e) Collateral risk; marketability of the collateral in the rainy days mainly decomposed in terms of market value, convertibility to cash and collateral loan safety margin held's