PROJECT APPRAISAL IN NIGERIA

A CASE STUDY OF INTERNATIONAL MERCHANT BANK (NIGERIA) LIMITED

BY

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A PROJECT SUBMITTED TO THE POST-GRADUATE SCHOOL, AHMADU BELLO UNIVERSITY, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER[1] OF BUSINESS ADMINISTRATION (M.B.A.)

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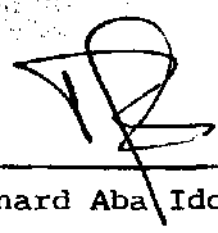
OCTOBER, 1985

D E D I C A T I O N

To the suffering rural majority who have no "viable" projects for appraisal.

D E C L A R A T I O N:

It is hereby declared that this project work is entirely the result of my own research findings and I alone bear responsibility for this work. It is original and any other person's work referred to have been gratefully acknowledged in the footnotes and bibliography.



Benard Aba Idoko



Date

C E R T I F I C A T I O N

This project report entitled, "Project Appraisa' in Nigeria; A case study of International Merchant Bank (Nigeria) Limited by Benard Aba Idoko meets the regulations governing the award of the degree of Master of Business Administration (M.B.A.) of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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ABSTRACT

Project appraisal is concerned with decisions about whether, when and how to spend money on projects. Such decisions were discovered in this project to be very crucial both to the project promoter and the lender, as large sums of money are often committed in an irreversible manner with no certain knowledge of the size of future benefits. Problems identified as militating against project appraisal included the uncertainty of projections, dearth of standards for comparison and government credit guide lines/shortage of funds, amongst others.

Traditional appraisal techniques as reviewed in the literature comprise of market analysis, economic analysis, technical and management analysis, then financial analysis. IMB's project appraisal techniques were found to conform to the traditional techniques except in the area of financial analysis. While the traditional tools of financial analysis are the Net Present Value, Internal Rate of Return, Accounting Rate of Return, Payback Period and Profitability Index, the bank's a financial analysis simply comprise of a review of the project cost, financing source and project profitability/debt service ability using the projected financials usually provided.

It was also found out that the bank relies more on the financial analysis of projects in taking the accept/reject decision and that relationships other than the Banker/ Customer relation are brought to bear in the accept/reject decision. Also discovered was the fact that collateral security is viewed seriously and could lead to the rejection of a project if found inadequate. Also discovered was the fact that the bank's project appraisal objectives are in agreement with the Federal

Government development objectives except that projects with short gestation periods are favoured — which is however in response to the bank's sources of funds. The above were all found true in the analysis of a tipically 1MB - appraised project which was named BENCO in the case study. To ensure a prudent financial management of the project (BENCO) a member of convenants were entered into between the bank and the project sponsors as conditions precedent to the loan.

It was also recommended amongst others that;-

the bank adopts the discounted techniques of project appraisal since such technieques favour projects with longer and higher economic benefits.

- Where financial appraisal is restricted to profitability and debt-service ability, the bank should take minimal collateral security since it must have satisfied itself that ' the project can conveniently service the debt.

- The bank incorporates some elements of risk analysis in its appraisal techniques so as to discourage the heavy reliance on collateral security in lending.

Social connections/extra-curricular relationships should never be brought to bear in prject appraisal as this has the effect of reducing the competitiveness of the project.

- Project promoter need to be honest and provide actual figures obtained rather than window dressing projects to attract patronage.

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CHAPTER 1

I N T R O D U C T I O N

1.1 The Importance of Project Appraisal

The problem of optimal investment decision has occupied the minds of men for a very long time. It is generally realised that societal welfare and standard of living can only be increased through rational and meaningful investment decisions. From the limited resources of the community, entrepreneurs, individuals and corporate bodies alike, are expected to take such investment decisions that will maximise the wealth of the resource owners and the society at large; - this is what project appraisal is out to achieve. Project appraisal has therefore been defined as that important aspect of the investment decision process which helps in deciding whether it is worth committing resources to a project, and the particular project to select.[1] Generally, investment/project appraisal is concerned with decisions about whether, when and how to spend money on projects. Such decisions are important ones for the companies involved and the lenders alike, because, often large sums of money are committed in an irreversible decision with no certain knowledge of the size of future benefits.

As practised by most lenders, project appraisal is based on feasibility reports and discussions held with the clients. Such reports are prepared by the client, and as should be

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1. M. O. Kayode - The Art of project Evaluation - IUP Ibadan, 1979 page 1.

expected, no client will come up with a doubtful or an unimpressive report. Some feasibility reports are designed as window dressing for projects in order to attract patronage. Accepting such projects on their face value could be dangerous, - as the lenders are not willing to commit resources into all projects that are tabled before them, at least for the reason of inadequate funds. It therefore becomes necessary to evaluate/appraise these reports in light of certain economic realities and perceptions of the lender, so as to commit resources in the optimum mix and to projects that will maximise returns.

It is often thought that a project needs to be analysed carefully only when it appears marginal. But a project with a high rate of return, of say, 100 per cent is not necessarily an acceptable investment, since there may be better ways of designing the project.[2] An irrigation project for example may be designed to supply water thinly over a large area or concentrated in a smaller area; there may be several hydro-electric sites or different techniques for generating enough power to meet the growth in demand, and so on. Project analysis attempts to ensure that the chosen option for a project is the best possible, - not only in terms of its size, technology, location and timing, but also in terms of the ultimate beneficiaries and the quality of output. The analysis, in short, must demonstrate that the proposed project will create more net benefits to the economy than any other option.

2. Anandarup Ray - A new Approach to the Economic Analysis of Projects - Finance and Development, Vol.16/No.1 March 1979 page. 29.

To be sure, the search for a better option may be limited by practical considerations, including its cost; but it is always wasteful to proceed with the project if a better option is known to be feasible.

The importance and significance of project appraisal further lies in the fact that such appraisals normally concern long-term investments that involve large outlays of cash. Such funds are not always easily available but once taken, are tied up and may require several years to return their cash equivalent. Furthermore, such funds have a cost, depending on the source and timing, and are also irreversible and represent a fixed cost of doing business for some years to come, once expended on the project.

Project appraisal does not only concern the worthiness, timing and mode of financing a project but also relies heavily on forecasted/projected estimates which need to be used judiciously before arriving at pptimal decisions; - therefore the need for professionals in project appraisal. Project appraisal, taken in its full meaning is supposed to be two dimensional; (1) the assessment of the chances of successful implementation and (2) the appraisal of the contribution of a project to given goals. Project appraisal is therefore a continuous exercise which serves as a guide in the realisation of the goals of the project.

1.2 Statement of the Problem

Despite the importance of Project Appraisal to all parties concerned, it is riddled with a number of problems, some of which include the following:

(a) Uncertainty of projections: We cannot foretell the future, yet project appraisal requires that we make assumptions about the future and derive from these assumptions, specific estimates of the project's future cashflows. But as Benjamin Franklin of the U.S. remarked, only death and taxes are certain, - everything else is possible but not inevitable. A decision to invest in a project with a ten-year life span involves an implicit ten-year sales forecast which could be uncertain. An erroneous forecast could have serious repercussions, as an appraisal cannot be better than the data input;- the old saying "garbage in garbage out" is certainly applicable to project appraisal.

(b) Dearth of Standards: While project appraisal is expected to come up with an accept or reject decision on a project, there are no universally acceptable standards for such decisions. A project that appeals to a particular lender might not appeal to another lender. Likewise, a project that is appraised favourably by a particular appraiser might not receive the same favour if appraised by another person within the same lending organisation. This is very conspicuous in the developing countries where there are no previously computed industrial average figures and where many starp-up projects are actually

the first in their own fields/industries. The accept/reject decision therefore becomes subjective as the maximisation of the resource-owners wealth is not a straight forward computation.

(c) Credit Guidelines/Shortage of Funds: Credit Guidelines refer to the control exerted on lenders (Banks) by the Government whereby the total amount that could be lent to a particular sector of the economy is restricted irrespective of the return on investment (ROI) obtainable in that particular sector. This negates the cardinal principle of project appraisal which should favour investments in sectors where the resource-owner's wealth will be maximised. Sometimes, not all favourably appraised projects can be funded or adequately funded as desired, due to shortage of funds and/or Credit Guidelines.

(d) Others: Sometimes, projects whose appraisal turn out unfavourable are still funded by lenders. This is due to the fact that appraisals are done at much lower levels than where the final decision to invest lies. Clients who are "connected" at senior management levels are therefore able to see their less viable projects through. The decision to invest in less viable projects could also be as a result of government policy which aims at uniform sectoral development.

1.3 Objectives of the Study

This project work has been carried out with the following objectives in mind :

(i) To identify the project appraisal techniques used by the bank to appraise medium to long term projects.

(ii) To compare such techniques, as may be identified in (i) above with traditional techniques of project appraisal as reviewed in the theoretical framework to this study.

(iii) To find out if such appraisal methods as used by the bank comform to the Federal Government's Development objectives.

(iv) To assess the findings of (i) to (iii) above and on the basis of these, make appropriate recommendations and suggestions relating to project appraisal as done by IMB.

1.4 Hypothesis

The following will form the working hypothesis for this study:

(i) IMB's project appraisal techniques allocate the bank's financial resources to projects that promise the highest financial returns, irrespective of the economic sector of the project.

(ii) There is a direct relationship between the "social connections" of a project applicant and the project's final approval by IMB.

1.5 Limitations of the Study

As with most research studies, this study is limited by the following factors:

i. The study is confined to the pre-investment appraisals of corporate medium to long term start up, projects conducted by IMB.

ii. The study is further restricted to information provided to the bank as at the time of loan request.

iii. Due to time constraint, dearth of information-on all relevant projects, and the unco-operative attitude of some staff members of the bank, only one case study will be analysed. It will however be a typically IMB appraised project.

1.6 Research Methodology

In view of the fact that the study is of a case type, a combination of literature exploration and interviews with the bank's officers were used. Secondary data were collected from the following sources:

-Official records, Annual Reports and Accounts of IMB (Nigeria) Limited.

-Other statistics from relevant banks, notably the Central Bank of Nigeria (The Bullion), and journals of Financial Institutions.

-Newspaper Accounts and Magazines

-Past studies in relevant areas

-Personal observations

1.7. Significance of the study

The significance of this study is obvious from different perspectives;

Firstly, it is an intellectual and practically-biased contribution to the area of project appraisal. It is therefore believed that the study will give students/scholars of, and writers on, Banking and Finance, the practical aspect of project appraisal as it applies to banks and IMB in particular.

Secondly, the study will be useful to prospective investors who may wish to apply to the bank for long term funds; they will know how to package their projects to attract the bank's financing.

Thirdly, the study will be able to assist the bank in re-appraising its investment appraisal system so as to keep abreast of the ever changing economic, social and political climate in the country, and the world at large.

1.8 Definition of Important Terms:

The following terms used in the study should be understood in the context defined below:

Feasibility Report: This is the output of an examination, analysis, and investigation of all factors surrounding the marketing, management, technical/product and financial aspects of a business venture.

Project financing - This refers to structuring techniques, and financial/contractual arrangements that enable lenders to look primarily to the cashflow from a project to repay the loans with limited or no resourse to other assets of the sponsors.

Cost Overrun - The instance of the actual cost of a project substantially exceeding the planned/estimated cost at the time of loan approval.

Credit Commitment - Lender's internally prepared document (containing all facilities and their terms to a particular borrower), on which the bank's appropriate signatories give their approval/ commit the bank.

Debenture:- An instrument issued by a company, acknowledging its indebtedness as at a given time and charging by way of security, its stated assets, to the lender in case of default.

Perfection of Documentation - The act of procurring executing and stamping/registering (if need be) all the documents called for in a loan package so as to set them ready for presentation if a disagreement arises over the loan.

Working Capital - This refers to the stock of current assets (including cash, short term securities, accounts receivable, inventories of raw materials, materials in process and transit, finished goods etc) needed to start a new business.

CHAPTER 2

PROJECT APPRAISAL:- A THEORETICAL FRAMEWORK

2.1 Introduction

In as much as literature abound on bank lending, there seems to be a paucity of materials on project appraisal. Most literature in the area of project appraisal, approach it from the corporate point of view where emphasis is on selection between projects using the appraisal techniques. Stevenson Rowley (1974)[3] writing on methods of capital project selection reported the result of a study in this areas, carried out by the United States National Association of Accountants. Their findings revealed that

(a) The discounted cashflow methods of analysing capital investments has increased in use.

(b) The financial statement analysis technique is seriously being criticised, though still in use.

(c) The payback method is exclusively used as a supplementary test of capital investment decision.

J. Price Gittinger (1974)[4] writing on Agricultural Project Analysis for World Bank lending, approached the topic through two different perspectives:- Financial Analysis and Non-Financial Factors. Under financial analysis he emphasised the use of Net Present Value (NPV) and Internal Rate of Return (IRR) methods through the application of discounted cashflows. For non-financial factors, he advocated

3. Stevenson Rowley - Capital Project Selection - Management Science Vol. 15, No. 9, April 1974.

4. Price Gittinger - Agricultural Project Analysis for World Bank Lending, - Finance & Development, March 1974 Vol.II/No. 1 p.35

the appraisal of the surrounding technical, managerial, and economic circumstances. H. Lipman further went on to identify three major groups that are likely to be interested in the evaluation of an investment proposal and whose appraisal perspectives are likely to differ ; They are:[5]

(a) Providers of long term risk capital - Shareholders.

(b) Providers of medium and long term capital in the form of debenture loans

(c) Providers of basically short term finance in the form of commercial bank loans and trade credits.

Some writers assume that other things will be equal and simply go on to look at the project as given in the projected cashflows. Investment decision is then based on a number of computations from the available cashflows. Some other writers take a more realistic view of the investment climate by not using only the projected cashflows as basis for accept/reject decision but go further to pay considerable attention to the fact that other things are not always equal. They thereby give a quantitative and qualitative assessment of the investment proposal, looking critically at those variables that are relevant to the success of a project but cannot easily be quantified.[6]

2.2. Market Analysis:

The aim of market analysis is to ascertain the future total demand for the product, determine the competitive position of the project in the industry, establish

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5. H. Lipman - "Investment Appraisal Yardsticks," - Managerial Finance Vol/2/1975/page 139.

6. M. O. Kayode - op. cit page 28.

the annual quantity which it may sell, estimate the future selling prices and design the marketing programme for the project.[7] In appraising the marketing aspect of a project, special consideration needs to be given to the following areas:

(a) Market Description:- the dispersion of the market, methods of transportation, channels of distribution and general trade practices in the market.

(b) Demand; - The major consumers of the product, consumption during the past 5 - 10 years and projected consumption for the next 5 years

(c) Supply;- Supply and source (local and/or imported) for the past five years, price, brand, market share and factors affecting trends in past and future supply.

(d) Competitive Position;- Past and present selling prices indicating the trend, effect of seasonality (if any) and the competitiveness of the quality of the project.

(e) Marketing Programme;- Present marketing practices of competitors, proposed marketing programme of the project, including terms of sale, distribution channels, sales outlets, transportation/warehousing arrangements, promotions/advertising plans and packaging.

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7. Rudolfo Sumicad, - Marketing Study Aspects of Project Feasibility Study-Seminar paper (SSID/ILO), C.M.D. Lagos, 1980.

(f) Projected Sales;- Expected annual volume of sales for the next five years considering demand, supply, competitive position and marketing programme.

2.3 Technical Analysis:-

The purposes of this analysis are:-

-to provide assurance that the project is technically feasible and that there are no technical considerations which would prevent success.

-to make tentative choices among technical alternatives so that the following cost estimates can be made;

-investment costs

-operating costs.

-manufacturing

-selling and distribution

-general and administrative

-start up costs

-venture initiation costs

To accomplish these purpose, the technical analysis will therefore attempt to answer questions relating to the following areas:

-alternative technologies available to produce the product

-social and economic side effects of the alternatives

-requirement in men, machines, methods, materials, tools, and their availability.

-plant capacity, location, layout and installation.

-manufacturing process and waste disposal method

-building and other structures/facilities including costs

-maintenance of machines and equipments

-personnel training and transfer of technology.

2.4 Economic Analysis:

The economic analysis of a project assesses its likely impact on the relevant development objectives by comparing the various ways in which the scarce resources required by the project might be used instead.[8] These resources may include different types of labour and skills, land, imported and demestic equipment/materials etc. The costs of the project are the forgone benefits which these resources would have produced elsewhere, which must of course be less than the projected benefits if the project is to be a sensible one. Investing in a project reduces the total goods and services available for current consumption but increases the level of consumption possible in the future. In order to judge the worth of a project from the national point of view, it is necessary to aggregate the various gains and losses accruing to different individuals over different periods into a single gain/loss measure.

Granting that rapid growth is the overriding objective of developing countries, economic viability of projects in such countries is often couched in terms of their contribution to economic growth as indicated by the estimated economic rate of return. Thus, for a project to be economically viable, it must, first, be undertaken in those sectors of the economy whose promotion are likely to contribute remarkably to overall economic growth; second, the project must contribute significantly to the growth of that priority sector and, third, its contribution must be sufficiently large to justify the use of the required

8. Herman Van der Tak - A new approach to the economic analysis of projects -, Finance and Development March 1979/Vol.16/ No.1/pp.28.

amount of the resources which are needed (considering their opportunity cost). While financial appraisal considers cost and benefits from the narrow viewpoint of the private investor, economic appraisal looks at them in relation to the whole economy.

2.5 Management Appraisal:

The basic aim of management appraisal is to ascertain if there is an effective organization which will help carry out the objectives of the project proponents. The appraisal encompasses the organization for the pre-operating period as wellas for the actual commercial operations. For the Commercial Operation stage, management appraisal is concerned with the details of the following aspects:

-selecting the appropriate form of business organisation
-designing the internal structure of the organisation
-staffing the internal structure with qualified and competent hands
-making adequate arrangement for technical management, personnel training/development and ultimate transfer of technology.

2.6 Financial Analysis

Financial analysis aims to quantify the data derived in both the market analysis and technical analysis into proforma and projected financial statements; such as the balance sheets, income statements, statements of total project cost, working capital and cashflows. These statements serve as the basis for analysis and evaluation of the project in terms of its

commercial profitability, capability to make sufficient returns on investments, and cashflow to service debts and protect creditors.

2.6: The Payback Method

The payback period of an investment project shows us the number of years taken to recover the initial investment from the net cash inflows from a project.[9] If the cash proceeds are equal constant amounts (annuity), the payback period can be determined by dividing the total original cash outlay by the amount of the annual proceeds expected. If the expected stream of benefits are unequal amounts, the payback period is determined by adding the proceeds expected in successive years until the total is equal to the original outlay. The method is simple and easy to understand but suffers the flaw of not considering cashflows realised after the payback period. Thus in two projects with the same initial capital outlay with one having a shorter payback period than the other; the method suggests a selection of the project with a shorter payback period even if there are no cashflows beyond the payback period while the project with a longer payback period has a number of year's cashflows after the payback period. The method does not consider the time value of money. The method however appeals to long term lenders as they are interested in having back their money with interests as soon as possible to avoid the risks of the impredictable future.

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9. Linda Wiper and David Longbottom, "Financial Criteria and Techniques for appraising individual and portfolios of investments", Managerial Finance Vol.3 No.2 1977 pp.121.

2.6 2 The Average Rate of Return (ARR):

This represents the ratio of average after - tax profits to capital investment

$$ARR = \frac{\bar{X}}{\bar{C}}$$

where:

$\bar{X}$ = average after-tax profits

$\bar{C}$ = Average Capital Investment

The method is used to ascertain return on investment. Once this is determined, it is compared with a required rate (usually cost of capital) or a cut-of. rate of return to decide if a particular project proposal should be accepted or rejected. The method is based on accounting income rather than on actual cashflows and further ignores the time value of money.[10]

2.6 3 The Net Present Value (NPV):

This method of appraisal involves calculating the present equivalents of expected receipts and payments involved in a project and ascertaining whether in aggregate, the present value of receipts outweighs the present value of payments. The net present value of a project may be interpreted as the increase in consumption made possible by the project, valued in current terms.

A project has a positive NPV if the present value of its cash inflows exceed that of its outflows. The general formula is written as; $NPV = \sum_{t=1}^{t=\infty} \frac{S_t}{(i+i)^t} - C_o$

10. James Van Horne - Financial Management and Policy 3rd. Ed. (Prentice Hall International Inc. London, 1975, page 71

Where:

S_t = net cashflows in year t.

C_o = Investment outlay assumed to be made at the start of the project

i = Interest rate.

While a project with a positive NPV will add to the value of the firm, one with a negative NPV will have an adverse effect on the firm's value and would therefore be rejected. The higher the NPV, the better the project. Wiper and longbottom[11] however argue that the interest rate is ambiguous as it could be the risk-free rate, borrowing or lending rate of the firm, the firm's average cost of capital, the opportunity cost or the rate which could be earned in the next best alternative.

2.6 4 The Internal Rate of Return (IRR):

The IRR is defined as the interest rate that equates the present value of the expected future cashflows or receipts to the initial cost outlay.[12] It is the rate of interest at which the difference between the present value of the project and the initial outlay is equal to zero i.e. NPV=0.

$$\sum_{t=1}^{n} Vi\left[\frac{1}{1+r}\right]^{i} = C_o$$

where: Vi = cashflow in period i.

n = number of years

r = rate of interest

Co = initial cost outlay

r is determined in the expression and compared with a predetermined cut off rate, say the cost of capital, and

11. Linder Wiper and David Longbottom - Op. cit pp.125

12. J. Fred Weston and Eugene F. Brigham, - Essentials of Managerial Finance - 5th Edition, 1979, Dryden Press Illinois pp.292.

all projects with a higher IRR than the cut off rate are accepted, given sufficient capital. The logic behind this is that all projects with IRR higher than the cut off rate will raise the value of the firm and thus contribute to the wealth maximisation objective of the firm, while those with a low IRR will have an opposite effect and as such would not be accepted.

2.6 5 The Profitability Index (PI)

The PI or the benefit/cost ratio as it is sometimes called, is another variation of the discounted cashflow decision criteria. It is the present value (PV) of the net cashflows divided by the initial - cost cash outflow (C)[13]

$$PI = \frac{\text{present value of net cashflows}}{\text{Initial cost cash outflow.}}$$

The decision criterion here is that when PI is greater than or equal to 1 (one), the proposed project is acceptable, and not acceptable if PI is less than one. The method offers no advantage over the others except that it helps in ranking proposals.

2.6 6 Financial Ratios:

The financial ratios of company annual accounts and those of projected financial statements for proposed projects are useful guides in determining the financial strengths and weaknesses of such companies/projects rather than looking at the absolute figures. A financial ratio expresses a mathematical relationship between two accounting figures.

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13. Steven E. Belten and Robert L. Conn - Essentials of Managerial Finance: Principles and Practice. 1981 Houghton Mifflin Co. Boston, pp.196.

The degree of emphasis placed on the ratios depend on the interest group that wish to use these ratios. The main categories of financial ratios are as follows:

(a) Liquidity Ratios:- These ratios measure the ability of the firm to meet its current obligations, if its current assets were converted into cash in the ordinary course of business. Creditors of the firm are usually interested in these ratios as they would want to know how well-off the firm is, in paying its maturing debts. Some liquidity ratios are as follows:

$$\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Quick Ratio} = \frac{\text{Current assets - stocks}}{\text{Current liabilities.}}$$

(b) Leverage Ratios:- These show the proportions of debts and equity in the company's capitalisation. Creditors and long term lenders are usually interested in the equity contribution of the owners of the firm, against the total capitalisation so as to determine the margin of safety of their funds. The higher the equity contribution, the lower the leverage of the firm and the more comfortable, the lenders. The proportion of debt in the capital structure of a firm affects the financial risk (of insolvency) and also the variability of the returns to the equity shareholders. Some leverage ratios are:

$\frac{\text{Total Debt}}{\text{Networth}}$, $\frac{\text{Long-term Debt}}{\text{Total Capitalisation}}$ $\frac{\text{Networth}}{\text{Capitalisation}}$.

(c) Profitability Ratios:- These ratios measure the management's ability to operate the business with sufficient success not only to recover from revenues of the period, the cost/expenses of operating the business but also to leave a margin of reasonable compensation to the owners for providing their capital at risk. Some profitability ratios are:

$$\text{Gross profit Margin} = \frac{\text{Gross profit}}{\text{Sales}} \%$$

$$\text{Return on Assets} = \frac{\text{Net Profit(before interest and taxes)}}{\text{Total Net Assets}}$$

$$\text{Shareholder's Return} = \frac{\text{Net Profit(after tax and interest)}}{\text{Shareholder's Equity(Share Capital + Reserve)}} \%$$

(d) Efficiency Ratios: These ratios reflect the firm's efficiency in utilising the resources at its disposal. Ratios here include:

$$\text{Total Asset Turnover} = \frac{\text{Sales}}{\text{Total Net Assets}}$$

$$\text{Stock turnover period (days)} = \frac{\text{Stocks} \times 365}{\text{Sales}}$$

$$\text{Debtors turnover period(days)} \quad \frac{\text{Debtors} \times 365}{\text{Sales}}.$$

Chapter 3

THE PROJECT SETTING

3.1 Historical Background:

International Merchant Bank (Nigeria) Limited - IMB - was incorporated on May 24, 1974 as a fully owned subsidiary of the First National Bank of Chicago (FNBC), a leading U.S. money centre bank. On July 22, of the same year, IMB was issued a licence to operate as a Merchant Bank under the name of the First National Bank of Chicago (Nigeria) Limited -(FNBCNL).

FNBCNL commenced operation on August 1, 1974 at 18, St. Gregory's Road, Ikoyi, Lagos with a staff strength of 15, made up of 12 Nigerians and 3 Expatriates. In September, 1976, the Federal Government of Nigeria acquired 60% of the bank's shareholding in response to the Nigerian Indigenisation Act. The bank's name was changed from FNBCNL to IMB after the Federal Government took 60% shareholding of the bank while FNBC retained management under the terms of a Technical Service Agreement.

The period 1975-1980 was one in which having laid a solid operating foundation, the bank sought to establish a strong capability in the delivery of corporate banking and operational services. It developed banking relationships with major multi-national and indigenous businesses and in 1979, IMB opened a branch

in Kano to strengthen its services and meet the increasing needs of its customers in the Northern part of the country. As a result of the success of this strategy, IMB's total assets grew by over 300% from ₦16.5m in 1975 to ₦118m in 1980. Profit after tax also grew by almost 500% in the same period from ₦0.24m to ₦1.4m. The bank's Port-Harcourt branch was opened in 1981. In 1982, IMB Securities Limited, (IMBSL), a subsidiary of the bank, was incorporated and licensed on the Nigerian Stock Market as a dealer.

3.2 Staffing:

The bank employs highly qualified, competent and experienced Economists, Accountants, Engineers, Business Analysts, Bankers and Administrators. Recruitment is normally done after a thorough interview conducted by a number of the bank's Senior Managers. The total staff strength of the bank as at September 30th, 1984 is 360 persons distributed as follows; Head Office, 279 persons, Kano branch 50 persons and Port-Harcourt branch 31 persons.

Table I: IMB: Distribution a Number of Staff(As at June, 1984)

Divisions	Senior Staff	Intermediate Staff	Junior Staff
Corporate Banking Div.	19	10	15
Corporate Finance Div.	8	12	17
Treasury & Finance Services Division	7	14	21
Development Finance Div.	7	9	19
Operations Division	21	46	54
Kano Branch	12	19	19
Port-Harcourt Branch	7	11	13
TOTAL	81	121	158

3.3 Organisation Structure:

The bank is organised into seven functional divisions, as listed above under distribution and number of staff. Each division is headed by an Assistant General Manager (AGM), except the Corporate Banking Division which is headed by a General Manager and the Port-Harcourt Branch which is headed by a Branch Manager. The divisional/branch heads report directly to the Managing Director who is assisted by a Deputy Managing Director. The Managing Director is of course, the bank's chief executive. Following the Managing Director, Deputy Managing Director, G.Ms and A.G.Ms are the Managers and Deputy Managers, who make up the bank's senior management. The middle management comprises the Operation/Credit Officers, Financial Analysts, Operations Assistants, Supervisors, Assistant Supervisors and Secretaries. Further down are the Senior Clerks and clerks. The supporting staff include Drivers, Receptionists, Messengers, Cleaners, Stewards and Security Guards.

3.4 IMB: Divisions & Functions:

The Head Office is divided into five functional divisions: Treasury and Financial Services, Corporate Finance, Corporate Banking, Operations and Development Finance. There are of course Kano and Port-Harcourt branches and IMB Securities Limited, - a subsidiary of the bank.

3.41 Treasury & Financial Services Division: (T&FSD):

The T&FSD's primary function is to provide funding for the various financial services and products offered by the bank. It actively markets for deposits of varying maturities and seeks to ensure an acceptable geographical customer, and maturity distribution of the bank's deposits. The T&FSD has played a pioneering role in the development of the Nigerian Money Markets by making inter-bank placements and deposits and deals actively in the market for Negotiable Certificates of Deposits (NCDs) and Bankers Acceptances (B/As).

The Division manages short-term funds on behalf of institutional and private investors who desire a high yield on their short-term funds. It also finances imports and the working capital requirements of companies through various money market instruments including B/As, Commercial Papers (CPs), fixed and floating rate notes etc.

3.42 Corporate Finance Division-(CFD):

The CFD provides the following services: Equipment Leasing, Syndicated Loans, Debt Issues, Equity Issues, Investment Management, and Financial Advisory Services. The Division is responsible for managing large multi-bank and multi-institutional loans to new and established corporate customers, investments which may

also include export credit and other international financing arrangements. The issuance of debt and equity stocks on behalf of companies including raising common shares, debentures, stock, loan stock and preference shares forms a major aspect of its activities.

3.43 Corporate Banking Division (CBD):

CBD serves as the major centre of relationship between the customer and the bank; providing professional and customised credit facilities and suport services. Working closely with the customer, the Division is responsible for identifying and reviewing the customer's specific financing problems and needs, and providing the appropriate services and products. The Division is organised along industry lines and each industry and company is assigned a Relationship Officer with experience of the Nigerian Financial Market. The Relationship Officer is not only responsible for providing regular banking services but is also able to call on other specialised Division of the Bank to meet the customers specific financial requirements.

Services offered by this arm of the bank include; short-term facilities for working capital financing, import and export letters of credit, clean credits, advances, overdrafts and bills discounting. Others are facilities for guarantees and bid, performance and

advance payment bonds, and term loans to finance capital investment programmes.

3.44 Operations Division:

This Division is the delivery point for the various products and services provided by the other Divisions of the bank and is structured to deliver fast and efficient banking services to companies as follows:

a) processing of foreign exchange applications and advising customers on foreign exchange regulations.
b) providing multinational funds transfer services to all parts of the world.
c) providing domestic funds transfer services including the issuance of drafts, transfers, clearing of cheques and money market transactions.
d) Opening documentary letters of credit routed through international banks around the world.
e) providing agency services for syndicated credits and acting as confirming house for state-owned banks.

3.45 Development Finance Division (DFD):

The DFD was set up to provide finance and financial advice in those areas vital to the economic Development of Nigeria such as agriculture, housing, small businesses and start-up projects. The division services the needs

of indigenous enterprises by providing loans for potentially viable start-up projects primarily in the area of manufacturing. It has developed specialised skills in financial and economic analysis, financial structring and project cost analyses and the review of joint venture management contracts, technical services agreements and other project-related documentation.

The division finances real estate projects including the provision of mortgage loans for owner-occupier families and the financing of commercially viable housing estates, hotel and office developments. It also provides consultancy services and actively finances agro-allied projects which utilise local and imported primary products.

3.46 Branches:

Kano and Port-Haorcourt branches are each divided essentially into two departments: Credits/Marketing and Operations. The two departments come together to provide services as done by the Corporate Banking Division (CBD) in Lagos and can call on specialised divisions of the bank in meeting customers specific financial requirements. While the Kano Branch supervises the bank's projects in the northern states, the Port-Harcourt branch overseeas projects in Anambra, Bendel, Cross-River, Imo and Rivers states. The Head-Office in Lagos is incharge of projects located in Lagos, Ogun, Oyo and Ondo states.

3.47 Subsidiaries:

IMB Securities Limited (IMBSL) is a subsidiary of the bank and a licenced stock brokerage firm, providing a wide range of financial and investment services to individuals, companies and financial institutions. It's services include investment management, insurance agency, trusteeship, money market operations and stock-broking.

3.5 Credit Approval Limits/Procedures

To ensure that credits are approved at the appropriate level of lending authority while at the same time apprizing senior management of lending activities within the bank, IMB has the following approved lending limits:

a)	Authorised Managers	₦250,000
	Assistant General Managers	₦500,000
	General Managers	₦600.000
	Deputy Managing Director	₦1,000.000
	Managing Director	₦1,500.000

b) Credits of over ₦1.5m and up to ₦3.00m and credits of periods of over 5 years and up to 7 years maximum. The approval of such facilities rest with the bank's Credit Committee.

c) Credits of over ₦3.00m and credits extending beyond 7 years duration. The final approval of such facilities rest with the bank's Board of Directors.

3.6 Financial Highlights:

The financial highlights given below show that IMB has been growing from strength to strength in virtually all areas of its operation. By the end of 1983, total assets had grown by 325% to ₦502 million from ₦118m in 1980. Profits before tax increased from ₦3.4m to ₦12.6m, total deposits increased to ₦464m from ₦107m and IMB emerged as the leading merchant bank in Nigeria in terms of assets, deposits, profitability and innovativeness.

Table 2: IMB Financial Highlights

₦'000

₦'000	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Profit before tax	(89)	865	898	1,869	2,429	2,367	3,863	4,861	10,578	12,584
Profit after tax	(89)	240	457	1,022	1,042	1,403	2,009	2,486	4,923	5,320
Shareholders Funds	1,411	1,851	1,881	2,638	3,378	4,381	5,890	8,875	14,819	19,066
Total Assets	7,210	16,534	27,198	56,632	70,154	71,432	118,372	191,288	440,086	501,848
Total Deposits	5,634	14,188	24,039	52,996	66,776	63,761	106,723	176,078	407,171	463,568
Loans and Advances	327	10,309	14,435	26,884	28,191	38,517	53,078	96,001	242,087	241,514
Dividends paid	–	–	240	458	1,022	1,042	400	500	800	962
Total Staff	17	28	35	49	58	76	117	204	282	357

Source: The Nigerian Enterprises, - November, 1984- No. ISSN, 0331-5851 page 37.

3.7 The Future:

IMB sees the future as one of maintaining their commitment to excellence and service in the face of increasing competition. In line with their committment to providing efficient and quality services, the bank

has installed extensive electronic data and word processing hardware in order to automate its services. Their staff development programme has been accelerated and various support and staff functions substantially strengthened.

Work is nearing completion on the bank's new Head Office building (IMB PLAZA) and Senior Staff Quarters both in Victoria Island Lagos. The bank has established a standard for the industry and an unrivalled level of professionalism. The challenge is to maintain and surpass these standard as they adjust to a changing economic and social environment.

Chapter 4

PROJECT APPRAISAL IN IMB

4.1 Procedure:

Project appraisal in IMB is done by Credit/ Investment Analysts and can be carried out both at the Head Office and branches. The place of appraisal is normally the branch/office that has jurisdiction over the state in which the project is located. The final approval however rests with the appropriate authorised signatory as on the bank's approval limits. The time lag between the receipt of loan application (usually a feasibility study) from a client and the final approval of the project vary from client to client and from project to project. The time lag could vary from one month to upwards of six months.

Project proposals submitted to the bank are classified into two broad groups viz:

a) Proposals from existing firms that have been operating for a period of time and as such have a record of operating performance for a number of years. Such track records are usually in the form of financial statements such as the balance sheet, income statement and cashflow statement for the past three to five years. Proposals from such clients are usually in the form of expansion, modernisation of facilities and diversification.

b) Proposals from clients that have no previous records to show. Such proposals are usually start-up projects. Financial statements submitted by such clients are projected figures based on the technical and market studies of the proposed projects. This research paper will be limited to this type of projects.

It is important to note that the bank's clients are expected to be corporate bodies except in the case of mortgage loans, where individual persons are considered. When a proposal is received from a corporate client, the bank usually requests for the following documents/information:

i) Feasibility Report
ii) Certificate of Incorporation (copy)
iii) Memorandum Articles of Association
iv) Share Capital; authorised and issued
(v) Shareholders, together with curriculum vitae
(vi) Copy of title deed to landed property to be developed.
(vii) Details of securities to be provided.

After appraisal, the credit appraiser passes his recommendations to his immediate manager who approves/ disapproves of the project based on stated reasons, or further recommends it to his own immediate superior if the requested facility is above his approval limit. This chain of recommendations continue on a formally prepared credit commitment till it gets to the appropriate

approval signatory who takes the decision to approve/ reject the proposal.

4.2 The BENCO Case Study

Given below is a case study of an IMB appraised project which was found viable and subsequently financed. The project has been herein nicknamed BENCO as the bank does not encourage for research purposes, the use of actual names of projects financed by it. The choice of this particular project is in response to the objectives of the study.

Incorporated in August, 1981 to produce bitumen emulsion which is used in the construction and maintenance of highways, the project is expected to cost about ₦2,100,000.00. With an authorised share capital of ₦500,000.00 which is issued and fully paid, the project is being sponsored by some Nigerian individuals/companies and a French technical partner. The study prepared on the project established that there is a substantial market for bitumen emulsion in Nigeria and that the major raw materials-bitumen-abound in Kaduna and Warri through the NNPC refineries.

4.3 Analysis of Documents

Documents scrutinised at this early stage are usually the certificate of incorporation, memorandum and articles of association and title deeds to properties.

The essence of scrutinising the certificate of incorporation is to ensure that the company has been properly registered in the form desired by the bank for lending purposes. The original document might be called for inspection purpose. The memorandum and articles of association are studied to know the exact business of the company, its capabilities and the powers of the directors/shareholders. These are necessary to ensure that the bank deals with legistimate clients. Title documents presented by the company are checked and title search conducted at the appropriate land registry, in the case of landed properties, to ensure that titles are not encumbered.

Documents presented to the bank by the BEMCO project were found to be genuine and satisfied the bank's lending requirements. In a search report submitted to the bank on the company's landed property it was stated that, "the property is free of all encumberances and good for mortgage purposes."

4.4 Market Analysis:

The main thrust of IMB market analysis is to interprete information from the feasibility study relating to the demand and supply position of the envisaged product. From this, a demand/supply gap is established. There is usually no formal market survey. At times, clients

provide the bank with a list of prospective consumers of the proposed product,together with letters of intent from such prospective users. The analyst goes further to establish the place of such product/products in the economy (the product's desirability) and the competitiveness of the proposed product amongst similar products already in the market (if any). Other advantages of the product (if any) are also given. Also analysed here are the company's marketing plan with regards to terms of sale, distribution channels, promotion/advertisement plan, packaging and the relative advantage/disadvantage of the company in doing these.

The market analysis of the BENCO project was quite favourable. The product itself-bitumen emulsion-was identified to be about the most durable and at the same time, the cheapest road surfacing material ever produced. Some of the advantages of the product over other road surfacing materials are as follows:

i) usability in all climates, making construction work possible throughout the year.

ii) savings in cost/energy and pollution arising from the non-usage of petrol and heat.

iii) easy manipulation and high stability as a result of the absence of petrol.

iv) quick adhesion to road surfaces

v) avoidance of risk of inflation.

On the demand side of the product,-bitumen emulsion,-

the BENCO project had a letter of intent from the Federal Ministry of Works promising to use at least 20,000 tons of bitumen emulsion per annum for the next five years, subject to adequate budgetary allocations. A reputable construction firm in Nigeria, which is a subsidiary of the technical partners to the BENCO project is to use BENCO's products for all its construction works. The company had at hand, construction contracts worth about ₦13m spread over three years as at the time of the BENCO project appraisal. It was also conservatively estimated and projected that the BENCO project will capture 20% of the road construction and maintenance requirements in eight states in the northern part of the country and the Federal Capital Territory (FCT). The statistics built on this estimate alone outstrips the supply capability of the project, moreso the project had letters of intent from all the state governments concerned, promising to use the product, depending on its quality. The demand statistics is as given in table 3, on the next page.

On the supply side, betumen emulsion is a completely new product never produced in West Africa before. The available road surfacing materials in Nigeria are mainly coal-tar and asphalt which cost more than bitumen emulsion aside from the advantages of bitumen emulsion over them. Supply of road surfacing materials in Nigeria are presently met by local production and some importation. There is therefore an assurance that bitumen emulsion will find a ready market in Nigeria, particularly in the north where is presently no producer of road surfacing material.

Table 3: Project Demand (Tons)

State	1983	1984	1985	1986	1987	1988	1989
Kaduna	9000	10000	11500	14000	17000	17700	19000
Kano	6000	7500	8000	9500	10000	12000	13500
Sokoto	4000	5000	6500	7000	9300	10000	11500
Niger	1500	1500	2800	3500	3800	4500	5700
Plateau	2000	2000	3000	3700	4500	5700	6500
Bauchi	3000	3500	4000	5600	6500	8000	10000
Borno	6000	6500	8000	9300	11900	12000	12000
Gongola	4000	4500	5000	6000	7000	8000	9000
F.C.T.	12000	13000	15000	17000	20000	21000	22000
TOTAL	47500	54500	63800	75600	89100	98900	109200

4.5 Technical Analysis:

Here, IMB is interested in the locational advantages of the project, the simplicity or otherwise of the production process, and the source of supply of the machineries/tools together with arrangements made towards such supply. An import licence might have been secured or is in the process of being secured or an arrangement made with reputable suppliers in the case of imported machineries. Also of interest to the bank are arrangements for installation and maintenance of the machineries, civil construction work arrangements and sources of supply of raw materials.

The technical analysis of the BENCO project was straight forward and concise. The technical partners to

the project were identified as the world's leading producer of bitumen emulsion equipments and user of bitumen emulsion. It has also served as technical partner to twenty-three similar projects scattered all over the world. The technical partners will supply the machinery and equipments under an agreement to be acceptable to the bank. They will also instal the machinery and take charge of maintenance for the first three years. The plant is designed to have an annual capacity of 60,000 tons of bitumen emulsion but will start off only at 28% capacity due to the fact that the product will be new in the market. The plant will operate a single shift of 8 hours per day for 250 working days per annum to attain the annual installed capacity of 60,000 tons. The plant is to be located at a compromise place between Kaduna and Abuja which are the major source of the raw material and target market respectively. Bitumen, the major raw material constituting about 90% of raw material cost is abundantly available in Kaduna, --through the NNPC refinery,---and there was a letter of undertaking by the refinery to supply the raw material requirements of the project. Only emulsifiers, which constitute about 10% of the raw material cost willneed to be imported from France, through the technical partner.

The production process of bitumen emulsion was found to be simple; the principle of bitumen emulsion is to mix bitumen and water.

The emulsion is made possible without heating, through the action of chemical products called emulsifiers. The buildings and other civil engineering construction of the project was won by a very reputable Nigerian firm which had started working on the site at the time of the project appraisal by IMB.

4.6 Management Appraisal: It would be economically unwise, for instance, to entrust a loan of ₦1 million in the hands of incompetent managers, even though their investment proposal is attractive. To avoid such a situation IMB usually request for brief historical background of key executives of the client company. Such reports usually contain the age, educational background, work experience, nationality and present responsibility of the executives. Where such executives have not been appointed, the client company supplies **hhs** recruitment plans including proposed remuneration, work experience, educational background etc. Where foreign technical management is involved, the bank calls for such management agreements; noting the pricing, plan for technological transfer/training, and background/reputation of the technical partners. On the basis of this, the bank is able to conclude if the proposed project is going to be adequately managed if fund is committed to it. The bank also looks at the background of the firm (foreign and/or local) to handle the development of the physical structures (mainly buildings). Under management, the bank also looks at the ownership structure of the company to determine the type of persons behind the project and compliance with the Nigerian Indigenisation requirements.

The ownership structure of the BENCO project was 68% Nigerian and 32% Foreign which was in comformity with the provision of the Indigenisation Act of 1976. The Nigerian ownership percentage of 68% is shared amongst three prominent Nigerians and a reputable company while the 32% foreign participation is owned by the French technical partners to the project.

Under a 5 year technical management agreement, the technical partners will provide the following:

- The General Manager, Plant Engineer and Laboratory Analyst
- Technical management to the project
- Guide the production of different types of emulsions of bitumen
- Control the operation and continuity of production
- Determine the appropriate emulsion for particular problems
- Train Nigerian for eventual take over by Nigerian management.

While the technical management agreement was to be governed by the laws of the Federal Republic of Nigeria, the Company (BENCO) was to bear all costs relating to the management agreement including a technical management fee of 3% of sales, per annum. The management posts to be filled by Nigerians include the Assistant General Manager, Administration Manager/ Company Secretary, and Accountant. There was however a covenant between the company and the bank that all management appointments are to be approved by the bank.

4.7 Economic Appraisal

The bank does not pay much attention to the macro economic aspects of projects, as long as the Central Bank of Nigeria's (CBN) sectoral allocation of credit guidelines are observed. It however justifies projects in terms of their employment opportunities to Nigerians and sometimes, satisfaction to be derived by consumers of the expected product, as well as foreign exchange savings to the country.

The BENCC project was to generate an employment opportunity for 19 persons; 16 of whom will be Nigerians. The project was also seen as being in a relevant sector of the economy, particularly with Nigeria's plan to construct feeder roads to the rural areas to boost agriculture and check rural-urban migration. The project is equally important in terms of maintenance of already constructed roads and the boost it will give to road transportation in Nigeria. The economic appraisal is further enhanced by the high quality of the product, coupled with the savings in foreign exchange which the project will enhance.

4.8 Financial Analysis

This analysis usuallly examines three aspects of the finance:

(a) -- the amount of money required to bring the facility into operation (project cost)

(b) -- the source from which the money is to be obtained (financing source)

(c) -- capability to make sufficient returns on investment and cashflow to service debts (profitability).

4.81 Project Cost

This is essentially the naira value of the technical analysis coupled with the market study. Items regularly found under project cost of typical start-up manufacturing projects are as follows: Land and Developments, Buildings, Plant and Machinery, Furniture and Fixtures, Utilities, Motor Vehicles, Interest During Construction, Pre-operating expenses and Working Capital. The schedule of the project cost enable the bank to examine the component costs with regards to overstatement/understatement and foreign/local cost requirements. The schedule of the BENCO project cost is as summarised below in table 4.

TABLE 4: The BENCO Project Cost Schedule

₦000's	Foreign Currency (₦ Equivalent)	Local Currency Cost incurred	Local Currency to be incurred	Total Cost
Land and Improvements	-	17	103	120
Buildings	-	-	328	328
Machinery & Equipments	340	18	151	509
Electric Generator--250KVA	-	-	60	60
Utilities	-	26	14	40
Office Equipments	-	9	11	20

₦00's	Foreign Currency ₦ Equivalent	Local Currency Cost Incured	Local Currency To be Incured	Total Cost
Office Equipments	-	9	11	20
TOTAL FIXED COST	340	70	667	1,077
Interest During Construction	-	-	75	75
Pre-operational Expenses	-	340	-	340
TOTAL CAPITAL COST	340	410	667	1,492
Working Capital	-	-	500	500
Contingency(10% of Fixed Costs)	-	-	108	108
TOTAL PROJECT COST	340	410	1,250	2,100

The components of each of the cost units above were carefully examined and found adequate. To take care of any cost escalation that may be experienced within the one year construction period of the project , a contingency provision of ₦108,000 (representing 10% of fixed costs) was made. The bank was however not satisfied with the pre-operational expenses which was as much ₦340,000.00. The break down of the pre-operational expense supplied to the bank is given under Appendix A. The bank saw this expense as a window dressing and used it as a good cause to be hard on the sponsors by asking for a substantial increase in their equity stake, if the bank was to finance the project. All other cost items were found satisfactory.

4.8 2 The Financing Source.

This classifies the sources of funds to finance the project's total cost into equity contribution and bank loan. Bank loan may further be classified into term loan and working capital facility (overdraft). The essence of IMB's analysis of the sources of financing is to determine the leverage i.e., debt/equity ratio. The bank, as a matter of policy does not

finance start-up projects whose debt/quity ratio are beyond 3:1. A project with a debt/equity ratio of 3.1:1 and above is considered highly leveraged and the sponsors are asked to increase the equity participation if the bank's financing is required.

In our case study - the BENCO Project -, while the sponsors proposed the financing plan given under "A" below, the bank proposed "B". Alternative B was finally used as A would give a debt/equity ratio of 3.2:1 which is considered highly leveraged by the bank.

Table 5: Financing Plan of the BENCO Project.

₦000's	Alternatives	
	A	B
Equity Contribution	500	800
Bank Term Loan	1,100	800
Bank Overdraft	2,100	500
	2,100	2,100

Alternative B, which was accepted, represents an increase of ₦300,000 over the ₦500,000 authorised and paid up capital of the BENCO project. The alternative also gives a debt/equity ratio of 1.625:1 which is considered good by the bank.

$$\text{Debt/Equity ratio} = \frac{₦800,000 + ₦500,000}{₦800,000} = 1.625:1$$

$$\text{Equity to Total Project Cost} = \frac{₦800,000}{₦2,100,000} = 38.10\%$$

The two ratios were considered good by the bank.

4.8.3 Project Profitability

Here, I.D analyses projected financial statements to determine some ratios and the project's ability to service the requested loan. Of importance are relationships such as the net working capital; (defined as current assets less current liabilities), current ratio, inventory turnover, return on sales, returns on investments, networth and total assets. Others are interest coverage ratio and most important, the debt service ability. At times the payback period is calculated to give a rough idea of the project's repayment ability.

On the BENCO project, the financials submitted were not used in total. They were adjusted to reflect a conservatively assumed 25% decline in the projected sales level. The adjustment affected only sales and sales-related costs. The adjustment was aimed at determining the sensitivity of the project to the market/sales and its profitability/debt service ability under a reduced marekt share. The adjusted financial statements (projected profit and loss account, cashflow projections and projected balance sheets) used by the bank are given under Appendices B, C and D respectively. The highlights of the projected financials together with some calculations are given here-under:

Table 6: Summary of Projected Profit and Loss Account (₦'000)

Year	1	2	3	4	5
Net Sales	3,400	9,000	9,600	10,810	10,810
Profit Before Tax	13	986	1,122	1,366	1,380
Profit After Tax	13	529	600	731	735
Return on Sales	0.4%	6%	6%	7%	7%
Return on Equity(₦800)	2%	66%	75%	91%	92%
Return on Total Investment (₦2.1m)	0.6%	25%	29%	35%	35%
Return on Fixed Assets	1.3%	61%	79%	113%	136%

While the returns on sales were considered poor, the returns on equity, fixed assets and total investment were considered satisfactory by the bank. The poor returns on sales were attributed to the high contingency provision in the production cost, which if relaxed, will present a better picture. On the whole, the returns were considered fair.

Table 7: Highlights of Cashflow Projections (₦'000)

Year	0	1	2	3	4	5
Total Cash Inflow	1,600	135	1,108	1,244	1,488	1,502
Total Cash Outflow	2,100	(165)	728	676	801	795
Cash Surplus	(500)	300	380	568	687	707

The resultant cash surplus which gave an annual average of ₦357,000 after honouring all cash obligations was seen as reasonable and indicative of a good ability to service the requested loan.

Table 8: Highlights of Projected Balance Sheet

Years	1	2	3	4	5
Current Assets	335	1,083	1,710	2,516	3,223
Current Liabilities	200	457	522	635	645
Working Capital	135	625	1,188	1,881	2,578
Current Ratio	1.7	2.4	3.3	4	5
Paid up Share Capital	800	800	800	800	800
Retained Earnings	13	508	1,074	1,771	2,472
Debt/Equity Ratio	1	.5	.26	.12	.05
Sales	3,400	9,000	9,600	10,810	10,810
Inventory	193	528	562	630	630
Inventory Turnover	18	17	17	17	17

The current ratio which improves from 1.7 in year One to 5 in year Five and which averages 3.28 over the projected period was considered very good. The positions of the working capital and retained earnings over the years were considered very confortable so also was the debt equity ratio which improved

over the years as a result of strong build-up in networth position. The high inventory turnover which was made possible by the nearness of the major raw material and therefore less stock carriage, was considered fantastic for a manufacturing project. The financial appraisal of the BENCO project therefore presented a strong supporting factor for the financing of the project. To ensure a good financial management of the firm, so as to achieve and maintain the good financials projected, the company was given financial covenants as follows:

(i) Equity capital to be increased from ₦500,00 to ₦800,000 within six months

(ii) Positive working capital to be maintained at all times

(iii) Total liabilities not to exceed 2½ times share-holder's funds (networth) at any time.

(iv) No additional bank borrowing without the written consent of IMB.

(v) Dividends not to be decalred throughout the life of the bank's term loan.

(vi) Cost overuns (if any) to be borne by the borrower.

(vii) Quarterly financials of the company to be made available to the bank.

(viii) Employment of key management personnel to be approved by IMB.

4.9 Collateral

To safeguard the bank's lending against unforeseen circumstances which might prevent the customer from honouring its obligations when due, the bank usually takes collateral security for each lending made. This is normally in the form of mortgages over other properties owned by the borrower or mortgages over the property developed for the borrower by the bank. A good collateral to the bank is one that has a market value of at least 120% of the bank's loan to the customer.

In the case of the BENCO projects, the collateral was as follows:

(a) A mortgage debenture over the present and future fixed and floating assets of the company, including the factory premises. The fixed asset component of the project is expected to cost about ₦1,077,000 on completion of the project.

(b) A legal mortgage over a landed property to be provided by the company's major shareholder and Chairman. The property is to have a market value of at least ₦300,000.

(c) An unconditional guarantee of ₦256,000 to be given by the project's technical partners who are participating to the tune of ₦256,000 in the company's equity capital.

The collateral arrangement was rated A and therefore very much acceptable to the bank.

Chapter 5

CONCLUSION AND RECOMMENDATIONS

5.1 Summary

An attempt has been made in this study to identify the project appraisal techniques applied to medium and long term start-up projects in a typical merchant bank, - the International Merchant Bank (Nigeria) Limited (IMB). The importance of project appraisal and the problems associated with project appraisal were also highlighted in the study. The importance of project appraisal derives from the need to undertake only investments that will maximise the wealth of the resource owners and the society at large. The importance of project appraisal is better appreciated when it is realised that there could be different ways of executing the same project; the difference could be in terms of the size, technology, location, timing etc all of which have considerable effects on the benefits derivable from the project. Problems encountered in project analysis were identified to include the uncertainty of projections on which the accept/reject decisions are based, the dearth of standards for comparison, the influence of interpersonal relationships between the project sponsors and the appraiser/approval authorities, credit guidelines given by governments etc.

In the literature review, project appraisal techniques were subdivided into market analysis,

technical analysis, economic analysis, management and financial appraisals. Analytical tools used for the financial analysis were identified as the payback period, the Average Rate of Return, the Net Present Value, the Internal Rate of Return, the Profitability Index and Financial Ratios. Having made a comprehensive study of the project setting (IMB) in terms of its background, operations, divisions, services, staff and procedures, the study went on to identify the bank's project appraisal techniques and procedures, and applied them to a typically appraised project.

IMB's project appraisal techniques were identified as follows:

i) Analysis of Documents, which focuses on the legal documentation of the clinet in terms of it's legitimacy and capabilities.

ii) Market Analysis, which aims at establishing the demand and supply positions of the envisaged product and the qualities/desirability of the product.

iii) Technical Analysis, which mainly concern the plant, its capacity, sources of raw materials, production process and arrangement for maintenance.

iv) Management appraisal. This deals with the quality and background of the key management personnels, to ensure that set goals are achieved.

v) Economic Appraisal: this looks into the economic benefits to be generated by the project in terms of employment and contribution to national objectives.

vi) Financial Analysis. This analysis functions to determine the project cost, the optimal financing mix as seen by the bank, and the projects' profitability in terms of debt servicing.

vii) Collateral. This analysis deals with the security for the requested bank financing and functions to give the bank a good cushion for the recovery of its funds if the project turns out bad.

In comparison with traditional appraisal techniques as reviewed in the theoretical framework, IMB's techniques vary widely in the area of financial analysis. The traditional financial appraisal tools such as the Net Present Value, the Internal Rate of Return, the Accounting Rate of Return and Profitability Index were conspicuously omitted. Rather, the bank simply looks at the projected financials, assume a percentage fall in projected market share (and therefore sales) and go on to compute the project's profitability and debt service ability under the new scenario.

On the omission of traditional appraisal techniques in the bank's financial analysis, interviews with the staff of the Credit and Marketing Unit revealed

that the economic life of projects, and the discount rates as assumed by the traditional methods were unrealistic and do not in any way portray the debt service ability of projects in relation to the bank's sources of funds. The bank therefore analyses the financials of projects in relation to the tenure of the bank's proposed lending to the project. This has the effect of tilting the bank's funding decision towards projects promising shorterrepayment periods even if their contribution to national objectives are minimal. This is however, kept in check by the periodic credit guidelines and ceilings handed down by the Central Bank of Nigeria to the other banks. There is also the "big brother relationship" between some project sponsors and lenders, making less profitable project to be funded by the bank. These two effects help to broaden the sectoral lending of the bank.

5.2 Conclusion

International Merchant Bank (Nigeria) Limited (IMB), does not use the traditional and standard financial appraisal techniques in appraising medium and long term projects. It only uses the projected financial statements to assess the project's profitability, cashflow and loan repayment ability under a very conservative scenario. This conservative scenario assumed in analysing financial projections is in response to

client's over optimism in carrying out project feasibility studies. This conservative analytical method has however helped both the bank and the clients over the years. The percentage decline in a project's estimated market as assumed by the bank in financial analysis is commensurate to the bank's perceived degree of competition in the project's particular industry.

However, the bank's market, technical, management and economic appraisals conform to traditionally used techniques, except, may be, in terms of the depth of the analysis. It should however, be noted that the bank's accept/reject decision in the final analysis depends on the project's debt service ability. The effect of this method of analysis implies that project's with short gestation periods will be favoured, to the detriment of project's with long gestation periods and which might contribute more, in the long run, to the development goals of the nation.

The only consolation however, is that there are annual Central Bank of Nigeria credit guidelines to which banks are expected to adhere. The bank's appraisal techniques are further applied to project's submitted to the bank from the government favoured sectors to choose the more viable ones out of the lot. The accurate use of the techniques are however prevented by government guideline and interpersonal relationships

between the lender and the borrower. It should however be noted that the conclusions derived from this study are limited to the constraints under which the study was carried out, as previously stated in the limitations to the study.

5.3 Recommendations:

In response to the findings of the study, the following recommendations are made to guide both the clients and the bank in the formulation and appraisal of projects. The bank needs to adopt the traditional discounted techniques of project appraisal. This has the effect of making the bank to finance projects from which longer economic benefits can be derived even in the absence of credit guidelines from government and influence of "connected" clients. Where the bank has to use the financials alone for decision making (debt service ability), the bank should take only minimal collateral security since it must have satisfied itself that the project can conveniently service the debt. It is further recommended that the bank incorporates some elements of risk analysis in its appraisal techniques so as to discourage the heavy reliance on collateral security in lending. The bank should understand that no client will like to put his equity capital in a project that is outrightly bound to fail; the bank should therefore have a project monitaring unit to

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supervise the execution of projects.

Project promoters should on their own side present projects for bank financing with the actual data obtained, rather than window dressing projects to catch the bank's patronage. Projects known to be "cooked" for the purpose of attracting the bank's financing are usually appraised under very harsh/stringent assumptions that cannot make them acceptable. Pre-operating expenses presented for new project need to be realistic as such expenses should normally be incurred on incorporation and related expenses only. Social connections/extra curricular relationships should never be brought to bear on project appraisal as this has the effect of reducing the competitiveness of the project. More research works need tobe done in the area of forecasting as it relates to project appraisal.

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APPENDIX A

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Pre-operation Exepenses (₦340,000.00) (BENCO Project)

	1984	1983	1982	1981	1980
Balance B/F.	318,806	274,177	112,948	43,000	-
Preliminary Studies	-	-	-	-	10,000
Starting Cost	-	-	-	-	10,000
Promotion Cost	-	-	-	-	10,000
Stamp Duties	-	-	-	-	4,500
Incorporation Expenses	-	-	-	-	5,500
Rent	21,194	20,417	17,961	15,500	-
Management Fees	-	42,703	60,273	30,000	-
Salaries & Wages	-	4,160	3,575	3,250	-
Office Repairs	-	592	-	-	-
Vehicle Licence	-	69	64	64	-
Vehicle Maintenance	-	736	688	612	-
House & Generator Maintenance	-	1,348	842	719	-
Printing & Stationery	-	1,196	183	406	-
Electricity Water & Gas	-	3,625	1,684	1,825	-
Geophysical Investigation Cost	-	-	5,800	7,320	-
Secretarial Fees	-	2,750	2,750	2,750	-
Transport & Travelling	-	2,753	2,280	4,347	3,000
Telephone, Telegrams & Postage	-	75	60	80	-
Board Meeting Expenses	-	-	52	90	-
Bank Charges	-	229	303	485	-
Accountancy Fees	-	7,017	1,500	2,500	-
Other Costs	-	6,959	14,214	-	-
	340,000	318,806	225,177	112,948	43,000
Less over provision for Accountancy fee in 1981	-	-	1,000	-	-
	340,000	318,806	224,177	112,948	43,000

APPENDIX B

(₦000's) Projected Profit and Loss Account (BENCO Project)

Year	1	2	3	4	5
Capacity	60	60	60	60	60
Capacity Utilization(%)	28	75	80	90	90
Production (Tons)	17	45	48	54	54
	₦'000	₦'000	₦'000	₦'000	₦'000
Sales (₦200/ton)	3,400	9,000	9,600	10,810	10,810
Expenses:					
Raw materials	2,441	6,519	6,954	7,833	7,823
Salaries & Wages	138	138	145	145	152
Power & Fuel	134	311	311	342	342
Insurance	14	17	17	18	18
Maintenance	21	21	23	25	25
Technical Fees (3% of Sales)	102	270	288	324	324
General Expenses	93	93	93	93	93
Depreciation & Amortization of Interest During Contruction	122	122	122	122	122
	3,065	7,491	7,953	8,892	8,899
Contingency	153	375	398	445	445
	3,218	7,866	8,351	9,337	9,344
Profit Before Interest and Tax	182	1,134	1,249	1,473	1,466
Less Bank Interest	169	148	127	107	86
Profit Before Tax	13	986	1,122	1,366	1,380
Tax at 45% adjusted Profit	-	457	522	635	645
Profit After Tax	13	529	600	731	735
		34	34	34	34

See Appendix F for the underlying assumptions in computing the projected financials.

APPENDIX C

(₦000's) Projected Cashflow (BENCO Project)

Year	0	1	2	3	4	5
Cash Inflow (A)						
Equity	800	-	-	-	-	-
Profit Before Tax	-	13	986	1122	1366	1380
Depreciation & Amortization	-	122	122	122	122	122
Term Loan	800	-	-	-	-	-
	1600	135	1108	1244	1488	1502
Cash Out-Flow (B)						
Fixed Assets	1077	-	-	-	-	-
Preliminary Expenses	340	-	-	-	-	-
Interest During Construction	75	-	-	-	-	-
Loan Repayment	-	-	160	160	160	160
Tax Paid	-	-	-	457	522	635
* Change in Current Assets	500	(165)	568	59	119	-
Contingencies	108	-	-	-	-	-
	2100	(165)	728	676	801	795
Cash Surplus (Deficit) (A-B)	(500)	300	380	568	687	707
Balance Carried Forward	-	(500)	(200)	180	748	1435
Net Cash Flow	(500)	(200)	180	748	1435	2142

* See schedule of working capital - Appendix E.

APPENDIX D

(₦000's) Project Balance Sheet of the BENCO Project

Year	0	1	2	3	4	5
Fixed Assets	1077	1077	1077	1077	1077	1077
Less Cummulative Depreciation	-	107	214	321	428	535
	1077	970	863	756	649	542
Preliminary Expenses	340	340	306	272	238	204
Interest During Construction	75	60	45	30	15	-
Contingency	108	108	108	108	108	108
Current Assets						
Inventory	500	193	528	562	630	630
Receivables	-	142	375	400	451	451
Cash	-	-	180	748	1435	2142
Total Current Assets	500	335	1083	1710	2516	3223
Total Assets	2100	1813	2405	2876	3526	4077
Current Liabilities						
Bank Overdraft	500	200	-	-	-	-
Taxation	-	-	457	522	635	645
Total Current Liabilities	500	200	457	522	635	645
Financed By:						
Share Capital	800	300	800	800	800	800
Term Loan	800	800	640	480	320	160
Retained Earnings	-	13	508	1074	1771	2472
Total Liabilites and Net Worth	2100	1813	2405	2876	3526	4077

APPENDIX E

Appendix E: Working Capital Schedule of the BENCO Project

Year	- 0	₦'000 1	₦'000 2	₦'000 3	₦'000 4	₦'000 5
Raw Materials						
Bitumen (2weeks)	-	86	257	274	308	308
Emulsifiers (4months)	-	44	118	126	142	142
Fuel (2weeks)	-	4	9	9	9	9
Finished Goods (1 week)	-	134	384	409	459	459
Receivables (2 weeks)		59	144	153	171	171
		142	375	400	451	451
Annual Requirements	500	335	903	962	1081	1081
Change in Current Assets	500	(165)	568	59	119	-

APPENDIX F

A S S U M P T I O N S

In computing the projected financial statements of the BENCO project, the following assumptions have been made and applied, they are:

a) A 25% decline on the originally projected sales figures.

b) a 5% increase in salaries/wages every other year.

c) a 10% increase in maintenance costs every other year.

d) a contingency expense provision of 4.5% of sales

e) Bank interest charges of 13% per annum.

f) a 45% company tax rate.

g) annual straight-line depreciation charge rates of 4% for buildings, 15% for machinery and equipments, 20% for electric generator, 9% for utilities and 12½% for office equipments.

h) Interest during construction to be amortized over a period of five years.

i) Pre-operating expenses to be written off over a period of ten years.

j) The ₦500,000 bank overdraft will be renewed and fully used annually, throughout the tenure of the term loan.

k) The term loan to be repaid over a period of seven years including a two year grace period/moratorium.