# PREFEASIBILITY STUDY

## ON SETTING UP ICE CREAM PRODUCTION PLANT IN NIGERIA

**DEVELOPED BY**

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## DISCLAIMER



## ACKNOWLEDGMENT

Startup Business Foundation is thankful to all organizations and individuals who have helped in several ways in preparation of this prefeasibility study.

We also wish to extend our gratitude to all those who reviewed the content and provided valuable inputs for improving the quality, coherence, and content presentation of this prefeasibility study.

The implementation of this project will also impact positively on the economy of the immediate community where the project is located. This is in terms of employment-direct and indirect, skilled and unskilled. Government also stands to benefit from internal revenue from taxation.

In view of the result of the analysis using some economic indicators as stated in the proposed project, it is hereby recommended that the project is viable.

## ABOUT THIS REPORT

This prefeasibility study is designed to provide potential and startups entrepreneurs' valuable information on setting up Ice cream production business in the food processing industry of Nigeria's market; aimed at encouraging and facilitating industrial activities across the country. It is our realization that industrialization is at the heart of economic development and that every effort has to be made to bring about industrial growth and encourage our people to be part of it.

Ice cream production business shows over 80% local content in terms of availability of raw material, equipment and machinery, manpower and other requirements.

The key areas covered in this report include:

i) Technical and economic analysis of the production, marketing and profitability of the project.

ii) Recommendations in respect of procurement of equipments and associated problems.

iii) Recommendation on suitable agronomic management practices to ensure efficient running of the projects.

iv) Detailed financial analysis including project cash flows for the projects.

This prefeasibility report provides a comprehensive and detailed coverage of the above terms of reference and is designed to facilitate investment decisions.

The implementation of this project will also impact positively on the economy of the immediate community where the project is located. This is in terms of employment-direct and indirect, skilled and unskilled. Government also stands to benefit from internal revenue from taxation.

In view of the result of the analysis using some economic indicators as stated in the proposed project, it is hereby recommended that the project is viable.

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# PART I

## 1.0 EXECUTIVE SUMMARY

This prefeasibility study is for setting up of Ice cream plant proposed to be sited in the most suitable part of Nigeria.

Ice cream is a frozen dessert usually made from dairy products such as: milk and cream, which are often combined with other ingredients and flavours. Most varieties contain sugar although some are made with other sweetners. Alternatively, it can be made from milk from soya, rice and goat for those who are lactose intolerant or allergic to dairy products and would like to avoid them.

The market for this product is readily available as it is highly demanded on daily basis at different supermarkets, fast foods centres and local markets. The market is completely scattered and controlled by tiny or cottage units with few local established brands. In most of the cases, processing as well as handling is unhygienic and volumes are very small. Consequently, the factory should be operated in accordance with NAFDAC guidance and specifications.

The proposed production capacity is 38,376kg per year, at 60% capacity utilization with total investment capital at N15,026,000.

### 1.1 SUMMARY OF TOTAL PROJECT COST

| S/N | DESCRIPTION | COST INCURRED | COST TO BE INCURRED | TOTAL |
|---|---|---|---|---|
| 1 | Land and building | - | 600,000 | 600,000 |
| 2 | Machinery & equipment | - | 1,720,000 | 1,720,000 |
| 3 | Vehicle | - | 450,000 | 2,250,000 |
| 4 | Office equipment | - | 450,000 | 450,000 |
| | **Total capital cost** | - | **9,710,000** | **12,260,000** |
| 5 | Working capital | - | 1,400,000 | 1,400,000 |
| 6 | 10% contingencies & preliminary expenses | - | 1,111,000 | 1,366,000 |
| | **Total Cost of Project** | - | **12,221,000** | **15,026,000** |

### 1.2 FINANCIAL ACCOUNTING RATIOS ANALYSIS

**PERFORMANCE RATIOS AVERAGES**

(a) Return on Sales =14%
(b) Return on Equity =219%
(c) Return on Investment =20%
(d) Positive NPV = ₦22,763,375
(e) IRR =47%
(f) ARR =44%
(g) Payback Period = 3 year and 2 months.

# PART II
# MARKET ANALYSIS

## 2.1 INTRODUCTION

Nigeria has a large population of youths (individuals aged between 15 and 34) and children. In fact, it was estimated that this age group constituted about half the country's population. Ice cream, being the favourite food of this age group, is a key factor responsible for its high demand across the nation. These products are marketed at schools, colleges, supermarkets and other public places in Nigeria.

## 2.2 MARKET AREA ANALYSIS

In 2020, sales of ice cream and frozen desserts continue to be dominated by frozen yoghurt. This can be attributed to its only manufacturer in Nigeria, Fan Ice Plc, that makes its products widely available, through mobile vendors, and being available in affordable pack sizes. More also, high investment by other market players in the country also supported the growth of ice cream in the nation. For instance, UAC Foods invested more than $6 million over its ice cream production facility between 2010 and 2015, which resulted in easy availability of different flavours in the market.

However, the demand for ice cream in different cities and semi urban areas far outstrips it supply given the ever growing population in Nigeria. Consequently, this feasibility study promote and exposes investment opportunities in the manufacturing and marketing of quality ice cream as there is readily market for it in different part of the country.

## 2.3 DEMAND ANALYSIS

There are two types of ice-cream, soft and hard available on the market. Ice cream is readily marketable as it is consumed widely.

The demand potential for this product is likely to have some kind of association with a few economic indicators. A change in one particular or some economic indicators may take place simultaneously or lead or lap. Some of the important economic indicators includes gross domestics product, per capital income, in some disparity, rate of urbanization, population growth rate, literacy rate, government spending and money supply.

The major influencing factor of Ice cream is festivities. The reason is because a lot of parties are held during this period, as the likelihood of rain disrupting outdoors events is much lower. Festive occasions are referred to as mass sales periods. These typically occur in the early part of the year. The month of April/may are the peak season with December accounting for highest sales.

## 2.4 TARGET MARKET ANALYSIS

Ice cream is consumed by every category of persons being it old or young, male or female, families etc. Therefore, nobody is left out this market chain. However, it is advisable that the entrepreneur should targets a particular segment of the society and should be captured in the production plan.

# PART III

# TECHNICAL ANALYSIS

## 3.1 PRODUCT DESCRIPTION

Ice cream contains sugar, fats, protein and minerals etc. It is usually made from dairy products, such as milk and cream, and often combined with fruits or other ingredients and flavours. There are different flavours and varieties of ice cream. This includes Vanilla flavor, Banana, Chocolate, Blackberry, Strawberry, Mint cream, Lavender, Raspberry, Red velvet.

## 3.2 SUITABLE LOCATION

The ice cream store will be located in a strategic place like a mall, offices, schools, markets or a commercial area where you will sell your ice cream products to potential clients.

The ice cream producer has the option of selling off large quantities to distributors or wholesalers who distribute to retailers, who are in charge of selling it to the final consumers.

## 3.3 RAW MATERIAL REQUIREMENT

Basic raw material in the production of ice cream is water, sugar, milk and flavor depending of the product types. In this case, flavor such as Vanilla, Banana, Chocolate, Blackberry, Strawberry, Mint cream, Lavender, Raspberry, Red velvet are included among other ingredients.

## 3.4 PRODUCTION AND TECHNOLOGY

The basic steps involved in the manufacturing of ice cream are: Blending of the mixed ingredients, pasteurization, and homogenization, ageing the mixture, freezing, packaging and hardening. Ice-cream represents a congealed dairy product produced by freezing a pasteurized mixture of milk, cream, and milk solids other than fat, sugars, emulsifier and stabilizers.

## 3.5 SPECIFICATION AND QUALIITY STANDARD

The raw materials as well as the machines used in the production must meet quality norms so that the machines can operate at its best rating to reach its expected life's span. In order to achieve these goals, the entrepreneur is to set their own standard with detailed specifications.

## 3.6 PRODUCTION CAPACITY

The production capacity is 38,376kg per year at 60% capacity utilization working 312 days annually.

## 3.7 SOURCES OF FUNDS

The project can be funded through a number of sources which include but not limited to the following; Agric-Business, Small & Medium Scale Investment Scheme (AGSMEIS), Bank of Industry, Bank of Agriculture (BOA), Nigeria Export-Import (NEXIM) Bank, International Finance Corporation (IFC), grants etc., though the conditions and criteria for accessing the loans and grants varies.

# PART IV

## 4.0 FINANCIAL ANALYSIS

Basically, the financial section of this prefeasibility study consists of three financial statements: Income statement, Balance sheet, Cash flow projection. This section determines whether or not the project is viable using some economic indicators such as Net Present Value (NPV), Internal Rate of Return (IRR), and payback period as are detailed in the appendices below.

## 4.1 ASSUMPTIONS

1. Assuming that the project will last for the period of five years and the salvage value at the end of the project life ignored.
2. The Machineries, Equipments and Utility Equipment have uniform depreciation of 20%.
3. The installed capacity daily production capacity is 123Kgs, working 26 days per month.
4. The proposed capacity utilization are 60% in the first year of commercial production, 70%, 80% in the 2nd and 3rd year respectively and 90% in the 4th and 5th years.
5. Raw materials will be sourced locally and Market for the product is readily available.
6. Staff and labour cost will increase by 10% yearly.
7. Prices and unit costs are assumed unchanged in the five years of projection.
8. The valuation currency is Naira.

## 4.2 ACCOUNTING /FINANCIAL ANALYSIS

### 4.2.1 NET PROFIT

The projected Annual Trading Profit and Loss Account is proposed to make the following Net Profit after tax during the corresponding projected periods – all things being equal.

### 4.2.2 NET PRESENT VALUE (NPV)

NPV is one of the four methods of discounted cash flows techniques which state that money that is immediately available for use, has a greater value than same amount receivables in future date.

Using this method however, all net cash inflows will be discounted to present value using the estimated interest rate of 60% discount factor. At **12%** discount factor the project produced a positive **NPV NGN 22,763,375**

### 4.2.3 INTERNAL RATE OF RETURN (IRR)

This is the discount rate which gives zero NPV or the rate which equates the present value of cash inflows with present value of cash outflows of the project.

The cash flow of this project was discounted systematically until the NPV of the project finally become zero. The project produces the **IRR** of **47%.** Thus, the project accepted as being viable. This is because **IRR** is more than the cost of capital.

### 4.2.4 ACCOUNTING RATE OF RETURN (ARR)

ARR uses accounting information as revealed by financial statements (Income Statement) to measure profitability of the project under consideration. The forecast **ARR** of the project is **44%.**

### 4.2.5 PROFITABILITY INDEX (PI)

This is the present value of future cash flows over the present value of cash outlays. The project PI further confirm the viability of the project , because as the rules of the accepting and rejecting hold, a project should be accepted if the PI is equal or greater than one (1). Consequently, the PI of this project is **1.72** and thus recommended as being viable to be accepted for financing.

### 4.2.6 PAYBACK PERIOD

The payback period of any project is the length of time it would take the business investors to recover the capital invested in a project in spite of asset replacement. For this particular project the capital investment is expected to be fully recovered in about 3 years and 2 months.

## APPENDIX
## TOTAL PROJECT COST

| S/N | DESCRIPTION | QTY | COST | TOTAL |
|---|---|---|---|---|
| | **LAND AND BUILDING** | | | |
| 1 | Factory rent | 1 | 600,000 | 600,000 |
| | **Sub total** | | **600,000** | **600,000** |
| | **MACHINERY & EQUIPMENT** | | | |
| 2 | Mixing / blending machine | 1 | 1,320,000 | 1,320,000 |
| 3 | Homogenization machine | 1 | 1,120,000 | 1,120,000 |
| 4 | Ageing % storage vat | 1 | 1,000,000 | 1,000,000 |
| 5 | Batch Freezers | 2 | 300,000 | 600,000 |
| 6 | Pasteurization machine | 1 | 1,200,000 | 1,200,000 |
| 7 | Hardening machine | 1 | 1,000,000 | 1,000,000 |
| 8 | Storage (Refrigerated) | 1 | 1,000,000 | 1,000,000 |
| | **Sub total** | | **6,940,000** | **7,240,000** |
| | **UTILITY EQUIPMENT** | | | |
| 9 | Industrial borehole with overhead tanks | | 600,000 | 600,000 |
| 10 | Generating set | | 1,120,000 | 1,120,000 |
| | **Sub total** | | **1,720,000** | **1,720,000** |
| | **VEHICLE** | | | |
| 11 | Sales/ Delivery Motorcycle (s) | 5 | 450,000 | 2,250,000 |
| | **Sub total** | **5** | **450,000** | **2,250,000** |
| | **OFFICE EQUIPMENT** | | | |
| 12 | Computer system | | 200,000 | 200,000 |
| 13 | Furniture & fittings | | 250,000 | 250,000 |
| | **Sub total** | | **450,000** | **450,000** |
| | **Total capital cost** | | **9,710,000** | **12,260,000** |
| | | | | |
| 14 | Working capital | | 1,400,000 | 1,400,000 |
| 15 | 10% contingencies | | 1,111,000 | 1,366,000 |
| | **Total Cost of Project** | | **12,221,000** | **15,026,000** |

## APPENDIX II
## ESTIMATION OF WORKING CAPITAL REQUIREMENT

N'

| | |
|---|---|
| **Year of Commercial Operation** | **1 month** |
| **% Capacity Utilization (Inventory)** | **60%** |
| 2 week stock of raw material | 350,000 |
| 1 Day stock of finished products | 90,000 |
| Work in Progress | 40,000 |
| Bank/ Cash (5% sales of the products) | 79,000 |
| **Working capital** | **559,000** |

## APPENDIX III
## FINANCING PLAN

₦

| DESCRIPTION | EXISTING | PROPOSED | TOTAL |
|---|---|---|---|
| Equity | 3,026,000 | - | 3,026,000 |
| Term loan from | - | 12,000,000 | 12,000,000 |
| **Total project cost** | **3,026,000** | **12,000,000** | **15,026,000** |
| **% Contribution** | **20.5%** | **79.5%** | **100%** |

## APPENDIX IV
## TERM LOAN REPAYMENT SCHEDULE

LOAN AMOUNT: 12,000,000 (Twelve Million Naira)
TYPE : ANY LOCAL AVAILABLE SME FUND
INTEREST RATE USED: 12%
REPAYMENT: 5 YEARS EQUAL INSTALLMENT (Annually)

| YEAR | OPENING BALANCE | REPAYMENT | INTEREST DUE | TOTAL YEAR INTEREST |
|---|---|---|---|---|
| 1 | 12,000,000 | 2,400,000 | 1,440,000 | 3,840,000 |
| 2 | 9,600,000 | 2,400,000 | 1,152,000 | 3,552,000 |
| 3 | 7,200,000 | 2,400,000 | 864,000 | 3,264,000 |
| 4 | 4,800,000 | 2,400,000 | 576,000 | 2,976,000 |
| 5 | 2,400,000 | 2,400,000 | 288,000 | 2,688,000 |
| **Total** | | **12,000,000** | **4,320,000** | **16,320,000** |

## APPENDIX V
## FORECAST STAFFING SCHEDULE (1ST OPERATIONAL YEAR)
N'000

| POSITION | No | Unit Scale | Scale/ Month | Scale / Year |
|---|---|---|---|---|
| **DIRECT LABOUR** | | | | |
| Factory Manager | 1 | 60 | 60 | 720 |
| Food Specialist | 1 | 60 | 60 | 720 |
| Semi skilled labour | 6 | 30 | 180 | 3,120 |
| **Sub total** | **8** | **150** | **300** | **4,560** |
| **INDIRECT LABOUR** | | | | |
| Accounts/ Admin | 1 | 50 | 50 | 600 |
| Marketing Officer | 6 | 40 | 240 | 2,880 |
| **Sub total** | **7** | **90** | **290** | **3,480** |
| **Total on staff (1st year)** | **15** | **240** | **590** | **8,040** |

## APPENDIX VI
## ESTIMATE OF ANNUAL DEPRECIATION ALLOWANCE
N'

| ITEMS | INITIAL VALUE | DEPRECIATION (20%) |
|---|---|---|
| Machinery and Equipments | 7,240,000 | 1,448,000 |
| Utility Equipments | 1,720,000 | 344,000 |
| Vehicle | 2,250,000 | 450,000 |
| Office equipment | 450,000 | 90,000 |
| **TOTAL** | **11,660,000** | **2,332,000** |

## APPENDIX VII
## ESTIMATION OF ADMINISTRATIVE / OVERHEAD EXPENSES
N'000

| COST ITEM | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 |
|---|---|---|---|---|---|
| Selling and Distribution | 480 | 504 | 528 | 554 | 554 |
| Utilities | 312 | 327.6 | 343.2 | 360 | 360 |
| Miscellaneous | 40 | 44 | 48.4 | 53.2 | 53.2 |
| Diesel | 1,780 | 1,869 | 1,958 | 2,056 | 2,056 |
| **TOTAL** | **2,596** | **2,725.8** | **2,855.6** | **2,998.38** | **2,998.38** |

## APPENDIX VIII
## ESTIMATION OF PRODUCTION AND OPERATION COSTS

| Cost Item | Units | @ | Qty/ day | Pdn cost/day | Pdn cost/ month | Pdn cost/ year |
|---|---|---|---|---|---|---|
| Direct Costs of materials and supplies | | | | | | |
| Milk (solid/ fat) | Kgs | 900 | 38 | 34,200 | 889,200 | 10,670,400 |
| Sugar | Kgs | 400 | 10 | 4,000 | 104,00 | 1,248,000 |
| Flavourings, Candies & fruits | Kgs | 1,200 | 2 | 2,400 | 62,400 | 748,800 |
| Stabilizers / emulsifiers | Kgs | 800 | 0.16 | 128 | 3,200 | 40,000 |
| Eggs | Trays | 800 | 2 | 1,600 | 41,600 | 499,200 |
| **Sub-total** | | | | | **1,100,400** | **13,206,400** |

## APPENDIX IX
## ESTIMATION OF RAW MATERIAL/PRODUCTION COST AND SALES

| **Year of Commercial Production** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
|---|---|---|---|---|---|
| **% Capacity Utilization** | **60%** | **70%** | **80%** | **90%** | **90%** |
| **1. Output** | | | | | |
| Supper Ice Cream (kg) | 38,376 | 42,214 | 46,051 | 50,656 | 50,656 |
| **Total output** | **38,376** | **42,214** | **46,051** | **50,656** | **50,656** |
| | | | | | |
| **2. Cost of Production** | **N'** | **N'** | **N'** | **N'** | **N'** |
| Supper Ice Cream @ N512/ kg | 19,648,512 | 21,613,568 | 23,578,112 | 25,935,872 | 25,935,872 |
| **Total cost of production** | **19,648,512** | **21,613,568** | **23,578,112** | **25,935,872** | **25,935,872** |
| | | | | | |
| **3. SALES** | | | | | |
| Supper Ice Cream @ N1,120/ kg | 42,981,120 | 47,279,232 | 51,577,344 | 56,735,078 | 56,735,078 |
| **TOTAL SALES/ TURNOVER** | **42,981,120** | **47,279,232** | **51,577,344** | **56,735,078** | **56,735,078** |

## APPENDIX X
## FORECAST INCOME STATEMENT (PROFIT & LOSS ACCOUNT)

| Year of commercial operation | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| % Capacity Utilization | 60% | 70% | 80% | 90% | 90% |
| 1. SALES | N' | N' | N' | N' | N' |
| Gross Sales | 42,981,120 | 47,279,232 | 51,577,344 | 56,735,078 | 56,735,078 |
| VAT @ 5% | 2,149,056 | 2,363,962 | 2,578,867.2 | 2,836,753 | 2,836,753.9 |
| **Net Revenue** | **40,832,064** | **44,915,270** | **48,998,477** | **53,898,324** | **53,898,324** |
| | | | | | |
| 2. OPERATION COST | | | | | |
| Cost of Raw materials consumed | 19,648,512 | 21,613,568 | 23,578,112 | 25,935,872 | 25,935,872 |
| Staff and labour | 8,040,000 | 8,844,000 | 9,648,000 | 9,744,480 | 9,744,480 |
| Admin. & Overhead Expenses | 2,596,000 | 2,725,800 | 2,855,600 | 2,998,380 | 2,998,380 |
| Depreciation | 2,332,000 | 2,332,000 | 2,332,000 | 2,332,000 | 2,332,000 |
| **Total Operating Cost** | **32,616,512** | **35,515,368** | **38,413,712** | **41,010,732** | **41,010,732** |
| | | | | | |
| 3. OTHER COSTS | | | | | |
| Interest on Term Loan (12%) | 1,440,000 | 1,152,000 | 864,000 | 576,000 | 288,000 |
| Loan Repayment | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 |
| **Total (Other Costs)** | **36,456,512** | **39,067,368** | **41,677,712** | **43,986,732** | **43,698,732** |
| | | | | | |
| Profit Before Tax | 4,375,552 | 5,847,902 | 7,320,765 | 9,911,592 | 10,199,592 |
| Tax @ 12% | 525,066 | 701,748 | 878,492 | 1,189,391 | 1,223,951 |
| **Profit after tax (NET PROFIT)** | **3,850,486** | **5,146,154** | **6,442,273** | **8,722,201** | **8,975,641** |
| | | | | | |
| % Return on Sales | 0.094 | 0.115 | 0.131 | 0.162 | 0.167 |
| % Return on Equity | 1.273 | 1.701 | 2.129 | 2.882 | 2.967 |
| % Return on Investment | 0.201 | 0.202 | 0.202 | 0.202 | 0.202 |

## APPENDIX XI

### FORECAST HIGH RATE AND LOW RATE COMPUTATION

| Year | C/F | DF 12% | NPV |
|---|---|---|---|
| | N' | | N' |
| 0 | (15,026,000) | 1 | |
| 1 | 3,850,486 | 0.893 | 3,438,483.998 |
| 2 | 5,146,154 | 0.797 | 4,101,484.738 |
| 3 | 6,442,273 | 0.712 | 4,586,898.376 |
| 4 | 8,722,201 | 0.636 | 5,547,319.836 |
| 5 | 8,975,641 | 0.567 | 5,089,188.447 |
| **Total Profit** | **33,136,755** | | **22,763,375** |
| **Average Profit** | **6,627,351** | | |

| Year | C/F | DF 60% | NPV |
|---|---|---|---|
| | N' | | N' |
| 0 | (15,026,000) | 1 | |
| 1 | 3,850,486 | 0.6250 | 2,406,553.75 |
| 2 | 5,146,154 | 0.3906 | 2,010,087.752 |
| 3 | 6,442,273 | 0.2441 | 1,572,558.839 |
| 4 | 8,722,201 | 0.1526 | 1,331,007.873 |
| 5 | 8,975,641 | 0.0954 | 856,276.1514 |
| **Total Profit** | **33,136,755** | | **8,176,484** |
| **Average Profit** | **6,627,351** | | |

## APPENDIX XII
## FORECAST IRR AND ARR COMPUTATION

$$IRR = a + \frac{(A)}{A+B} * (b-a)$$

Where

a = 12%

b= 60%

A = 22,763,375

B= 8,176,484

$$12\% + \frac{22,763,375}{22,763,375 + 8,176,484} (60-12)$$

12%+ 35.3

47%

$$ARR = \frac{\text{Estimated Average Profit}}{\text{Estimated initial investment}} \times 100$$

$$ARR = \frac{6,627,351 \times 100}{15,026,000}$$

44%

## APPENDIX XIII
## CASH FLOW PROJECTION

| Year of Comm. Production | Year 0 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|---|
| % Capacity Utilization | | 60% | 70% | 80% | 90% | 90% |
| **A) CASH RECEIPTS** | **N'** | **N'** | **N'** | **N'** | **N'** | **N'** |
| Equity Capital | 3,026,000 | - | - | - | - | - |
| Term Loan | 12,000,000 | - | - | - | - | - |
| Gross Revenue | - | 40,832,064 | 44,915,270 | 48,998,477 | 53,898,324 | 53,898,324 |
| **Total Receipts** | **15,026,000** | **40,832,064** | **44,915,270** | **48,998,477** | **53,898,324** | **53,898,324** |
| **B) CASH PAYMENTS** | | | | | | |
| **Capital Payment** | | | | | | |
| Machinery & Equipments | 7,240,000 | - | - | - | - | - |
| Utility Equipment | 1,720,000 | | | | | |
| Office equipments | 2,250,000 | | | | | |
| Vehicle | 450,000 | - | - | - | - | - |
| **TOTAL** | **11,660,000** | - | - | - | - | - |
| **(ii) Operating Expenses** | | | | | | |
| Depreciation | - | 1,511,600 | 1,511,600 | 1,511,600 | 1,511,600 | 1,511,600 |
| Change in working capital | 3,366,000 | 58,294,800 | 64,064,280 | 69,733,760 | 76,651,020 | 76,651,020 |
| **Sub total** | **3,366,000** | **59,806,400** | **65,575,880** | **71,245,360** | **78,162,620** | **78,162,620** |
| **(iii) Financial Expenses** | | | | | | |
| Repayment of Term Loan | - | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 |
| Interest on Term Loan | - | 1,440,000 | 1,152,000 | 864,000 | 576,000 | 288,000 |
| Value Added Tax | - | 2,149,056 | 2,363,962 | 2,578,867.2 | 2,836,753 | 2,836,753.9 |
| Corporate Tax | - | 525,066 | 701,748 | 878,492 | 1,189,391 | 1,223,951 |
| **Sub total** | - | 6,514,122 | 6,617,710 | 6,721,359 | 7,002,144 | 6,748,705 |
| **Total cash payment (ii)-(iii)** | 3,366,000 | **53,292,278** | **58,958,170** | **64,524,001** | **71,160,476** | **71,413,915** |
| Net cash flow c/f | **3,366,000** | 53,292,278 | 58,958,170 | 64,524,001 | 71,160,476 | 71,413,915 |

## APPENDIX XIV
## BALANCE SHEET PROJECTION

| Year of comm. Operation | Year 0 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|---|
| **ASSETS** | **N'000** | **N'000** | **N'000** | **N'000** | **N'000** | **N'000** |
| (i) Fixed assets | | | | | | |
| Machinery and Equipments | 7,240,000 | - | - | - | - | - |
| Utility equipment | 1,720,000 | | | | | |
| Office Equipment | 2,250,000 | | | | | |
| Vehicle | 450,000 | - | - | - | - | - |
| Value at Acquisition | - | 11,660,000 | 11,660,000 | 11,660,000 | 11,660,000 | 11,660,000 |
| Less Cumulated Depreciation | - | 2,332,000 | 4,664,000 | 6,996,000 | 9,328,000 | 11,660,000 |
| **Net fixed assets** | **11,660,000** | **9,328,000** | **6,996,000** | **4,664,000** | **2,332,000** | **0** |
| **(ii)Current Assets/ liability** | | | | | | |
| Stock of Raw Materials | 2,163,800 | 1,890,450 | 9,639,855 | 12,184,334 | 14,530,598 | 16,715,470 |
| Debtors /prepayment | - | 1,453,000 | 2,098,000 | 3,308,000 | 4,139,000 | 5,653,000 |
| Bank and Cash Balances | - | 4,150,024 | 5,160,031 | 6,170,539 | 7,180,674 | 7,180,741 |
| Creditor / accruals | - | (4,074,000) | (6,039,000) | (8,947,000) | (11,013,000) | (13,785,000) |
| Company Tax | - | (525,066) | (701,748) | (878,492) | (1,189,391) | (1,223,951) |
| **Net current assets** | **2,163,800** | **2,894,408** | **10,157,138** | **11,837,381** | **13,647,881** | **14,540,260** |
| **TOTAL NET ASSETS** | **9,721,800** | **12,222,408** | **17,153,138** | **16,501,381** | **15,979,881** | **14,540,260** |
| (ii) FINANCED BY | | | | | | |
| Equity Capital | 1,721,800 | 1,721,800 | 1,721,800 | 1,721,800 | 1,721,800 | 1,721,800 |
| P&L | - | 2,500,608 | 3,330,730 | 4,248,851 | 5,209,230 | 5,209,230 |
| Retained Profit | - | - | 2,500,608 | 3,330,730 | 4,248,851 | 5,209,230 |
| **SHAREHOLDERS FUND** | **1,721,800** | **4,222,408** | **7,553,138** | **9,301,381** | **11,179,881** | **12,140,260** |
| Long Term Loan | 8,000,000 | 8,000,000 | 9,600,000 | 7,200,000 | 4,800,000 | 2,400,000 |
| **TOTAL EQUITY & LIABILITY** | **9,721,800** | **12,222,408** | **17,153,138** | **16,501,381** | **15,979,881** | **14,540,260** |