# PREFASIBILITY STUDY ON

# SETTING UP COCONUT CREAM MANUFACTURING UNIT IN NIGERIA

# DEVELOPED BY STARTUP BUSINESS FOUNDATION

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#### **ABOUT THIS REPORT**

This prefeasibility study is designed to provide potential and startups entrepreneurs' valuable information on setting up Coconut Cream manufacturing unit 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.

Coconut Cream manufacturing 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 EXECUTIVE SUUMMARY

The prefeasibility study embodied in this profile is for production & marketing of coconut cream.

Coconut is one of the important fruit having large uses starting from bakery, confectionery, pharmaceutical industries to beverage industry and many more industries. Several products from coconut kernel can be manufactured such as Coconut powder (desiccated), Coconut flour, Coconut Oil, Coconut Cream, Coconut milk, Coconut milk powder, Coconut water, Coconut water beverages etc.

The processed coconut has the potential to generate foreign exchange from promoting investment in the coconut sub-sector going by its fast growing local and international markets because there are huge export markets existing in the US, Europe and Asia.

This is a micro enterprise investment which can be setup in any part of the country with consideration to basic infrastructure such as power supply, road and proximity to source of raw materials.

The business idea is based on production of 74,984 kgs per month, which translates into 899,809 kg per annum.

#### 1.1 SUMMARY OF TOTAL PROJECT COST N

S/N	DESCRIPTION	COST	COST TO BE	TOTAL
		INCURRED	INCURRED	
1	Land & building	-	600,000	600,000
2	Machinery & equipments	-	5,496,000	6,708,000
3	Utility equipment	-	1,850,000	1,850,000
4	Office equipments	-	350,000	350,000
5	Vehicle	-	3,000,000	3,000,000
	Total capital cost	-	11,296,000	12,508,000
6	Working capital	-	1,800,000	1,800,000
7	Contingencies & preliminary	-	1,430,800	1,430,800
	Total Project cost	-	14,526,800	15,738,800

# 1.3 FINANCIAL ACCOUNTING RATIOS ANALYSIS PERFORMANCE RATIOS AVERAGES

(a) Return on Profit =70% (b) Return on Equity =555% (c) Return on Investment =132%

(d) Positive NPV =  $\frac{1}{2}$ 73,190,397

(e) IRR =46.5% (f) ARR =123 % (g) Payback period = 11 Months



## PART II MARKET ANALYSIS

#### 2.1 INTRODUCTION

All four components of the coconut fruit - the water, meat, shell and husk - can be used.

The hard shell surrounding the kernel is used for fuel, and is popular for vessels, containers, ornaments and for other domestic purposes. Charcoal and certain grades of activated carbon can be produced for industrial-use.

The fibres from the husk yield coir, which is widely used for cordage, mats, stuffing, nets and bags. Depending on the labour situation, coconuts can be picked from the tree when ripe, or collected from the ground as they fall. However, fallen nuts have usually started to germinate and the yield of copra may be reduced by 6 to 7%. Also, unless ground conditions are good, many nuts may not be found.

#### 2.2 DEMAND AND SUPPLY ANALYSIS

For decades, a highly nutritional produce with high investment value, coconut, is among the country's neglected gold mines, despite having the capacity to generate \$2.5 billion, create employment and reduce poverty in the country. With the huge potential, it is shameful that up to 75 per cent of coconuts in Nigeria market today are imported from Togo, Cameroon, Ghana and Benin Republic despite possessing 98,000 hectares of cultivable fertile lands.

Several products from coconut kernel can be manufactured such as Coconut powder (desiccated), Coconut flour, Coconut Oil, Coconut Cream, Coconut milk, Coconut milk powder, Coconut water, Coconut water beverages etc. Besides there are several By products can be processed like paring oil, Coconut Shell Powder, Activated Carbon, Coir dust, Rubberized Coir etc

#### 2.3 TARGET MARKET ANALYSIS

Coconut cream has a wide market structure because it can be used in many industries like the bakery/confectionary industry, chocolate industry and sweets. It can also be exported. Coconut is one of the important fruit having large uses starting from bakery, confectionery, pharmaceutical industries to beverage industry and many more industries.

Recently, it was discovered that Nigeria could make brake pads, paving bricks and clutch discs and others from coconut shell, which are already in use in some parts of the world. The shell of the coconut that was hitherto thrown away was also known to have good economic value and could earn foreign exchange. This is an added market channel. Therefore, the entrepreneur should target these markets which are readily available in different part of the country.



# PART III TECHNICAL ANALYSIS

#### 3.1 PRODUCTION DESCRIPTION

The coconut palm is characterized by wide variety of use which is made of all parts of the plant. The most valuable part of the meat is its oil content (approximately 30%). The oil can be obtained directly from the fresh 'wet' meat; it is usually extracted from dried meat - copra. An important by-product of oil extraction from copra is the cake which contains 19-22% protein and is used for animal feeds. Although crude coconut cream can be consumed as such, refining is required for its major commercial uses: soap making, baking, confectionery, cooking oils and margarines.

#### 3.2 LOCATION STRATEGY

The location of the factory should take into consideration the accessibility to raw material sources, the availability of cheap labour, lower cost of operations and easy access to market for the products.

### 3.3 RAW MATERIAL

## **Typical Yields**

Planting density for coconut palms is 75 to 150 trees per hectare and each tree yields approximately 40 fruit per year. Typical oil content of copra is 63 to 68%.

Copra cake contains approximately 19 to 22% protein. Oil content of the cake varies between 0.5% (solvent extracted) and 17%-(traditional methods).

Coconut oil belongs to the Lauric acid group and contains approximately 90% saturated acids. 35 to 45% of the fruit is husk; the percentage available for coir extraction declines with maturity.

#### **Approximate Conversion Factors**

5000 coconuts yield 1 metric ton copra.

8000 coconuts yield 1 metric ton of crude oil.

1000 coconuts yield 140 litres coconut water.

1000 coconuts yield 127 to 182 kg desiccated coconut.

1000 husks yield 130 kg coir fibre.

1 metric ton copra yields 610 kg oil and 370 kg copra cake.

#### 3.4 PRODUCTION PROCESS

The first step is breaking the dehisced nuts into halves. The split nuts are deshelled to separate the kernel. These two operations are usually done manually. Kernel is washed and then blanched by immersing it in hot water at 80°C for 10 minutes. The next step is



comminuting of kernel into small gratings using a hammer mill. The gratings are subjected to pressing using continuous screw press to extract the milk.

The coconut milk obtained is filtered by passing through a vibratory screen. Food additives such as emulsifiers and stabilizers are to be added to the milk to obtain a stable consistency and texture. For this purpose, permitted emulsifiers and stabilizers are mixed with hot water separately and mixed thoroughly. This is added to the coconut milk and then subjected to emulsification using a mechanical impeller emulsifier. The cans are then cooled in running water.

### 3.5 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**

#### 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 has estimated capacity of ... metric tonnes per annum.
- 4. The proposed capacity utilization are 60% in the first year of commercial production, 70%, 80% in the 2<sup>nd</sup> and 3<sup>rd</sup> year respectively and 90% in the 4<sup>th</sup> and 5<sup>th</sup> 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 used 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 73,190,397

## 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 **123%.** 

## 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 10 months.



# APPENDIX I TOTAL PROJECT COST

S/N	DESCRIPTION	QTY	UNIT COST	TOTAL
	LAND & BUILDING	•		
	Factory rentage	1	600,000	600,000
	Sub total	1	600,000	600,000
	MACHINERY & EQUIPMENTS			
1	Hammer mill	1	500,000	500,000
2	Elevator	1	480,000	480,000
3	Screw Press	1	100,000	100,000
4	Coconut milk storage tanks	2	300,000	600,000
5	Vibrating sieving machine	1	220,000	220,000
6	Coconut residue mixer	1	1,000,000	1,000,000
7	Additive mixing tank	1	920,000	920,000
8	Emulsifier	1	200,000	200,000
9	Homogenizer	1	560,000	560,000
10	Pasteurizer	1	192,000	192,000
11	Volumetric filling machine	1	320,000	320,000
12	Exhaust box	4	24,000	96,000
13	Can sealing machine	1	200,000	200,000
14	Agro waste Vertical boiler	4	120,000	480,000
15	Sterilization tank	1	200,000	200,000
16	Coconut residue storage bins	4	160,000	640,000
	Sub total		5,496,000	6,708,000
	UTILITY EQUIPMENT			
17	Generator	1	1,250,000	1,250,000
18	Borehole & other utility accessories	1	600,000	600,000
	Sub total	2	1,850,000	1,850,000
	OFFICE EQUIPMENTS			
19	Computer & printer	1	200,000	200,000
20	Furniture & fittings	1	150,000	150,000
	Sub total	2	350,000	350,000
	VEHICLE			
21	Delivery van	1	3,000,000	3,000,000
	Sub total	1	3,000,000	3,000,000
	Total capital cost		11,296,000	12,508,000
22	Working capital		1,800,000	1,800,000
23	Contingencies & preliminary		1,430,800	1,430,800
	Total Project cost		14,526,800	15,738,800



# APPENDIX II ESTIMATION OF WORKING CAPITAL REQUIREMENT

N'

Year of Commercial Operation	2 Months
% Capacity Utilization (Inventory)	60%
1 week stock of raw material	896,000
1 Day stock of finished products	554,000
Work in Progress	240,000
Bank/ Cash (preoperational expenses)	110,000
Working capital	1,800,000

## APPENDIX III FINANCING PLAN

N

DESCRIPTION	EXISTING	PROPOSED	TOTAL
Equity	3,738,800		3,738,800
Term loan from	-	12,000,000	12,000,000
Total project cost	3,738,800	12,000,000	15,738,800
% Contribution	15%	75%	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	REPAYMENT	INTEREST	TOTAL YEAR
	BALANCE		DUE	INTEREST
1	12,000,000	2,400,000	1,440,000	3,840,000
2	10,600,000	2,400,000	1,272,000	3,672,000
3	8,2000,000	2,400,000	984,000	3,384,000
4	6,800,000	2,400,000	816,000	3,216,000
5	2,400,000	2,400,000	288,000	2,688,000
Total		12,000,000	4,800,000	16,800,000



# APPENDIX V FORECAST STAFFING SCHEDULE (1<sup>ST</sup> OPERATIONAL YEAR) N'000

POSITION	No	Unit Scale	Scale/ Month	Scale / Year
DIRECT LABOUR				
Factory Manager	1	80	80	960
Production Manager	1	60	60	720
Unskilled labour	8	30	240	2,880
Sub total	10	90	120	4,560
INDIRECT LABOUR				
Accounts/ Admin	1	50	50	600
Marketing Officer	2	40	80	960
Driver	1	40	40	480
Sub total	4	130	170	2,040
Total on staff (1 <sup>st</sup> year)	14	220	290	6,600

# APPENDIX VI ESTIMATE OF ANNUAL DEPRECIATION ALLOWANCE N'

ITEMS	INITIAL VALUE	DEPRECIATION (20%)
Machinery and Equipments	6,708,000	1,341,600
Utility Equipments	1,850,000	370,000
Office Equipments	350,000	70,000
Vehicle	3,000,000	600,000
TOTAL	11,908,000	2,381,600

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

COST ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5		
Selling and Distribution	3,800	4,180	4,560	5,016	5,016		
Fuel / Diesel	8,800	9,680	10,560	11,616	11,616		
Repairs & Servicing	1,800	1,980	2,160	2,376	2,376		
Utilities (Power & water)	2,800	3,080	3,360	3,696	3,696		
TOTAL	17,200	18,920	20,640	22,704	22,704		



APPENDIX IX ESTIMATION OF RAW MATERIAL/PRODUCTION COST

Cost Item	Units	@	Qty/	Pdn cost/	Pdn cost/	Pdn cost/ year
			day	day	month	
Direct Costs						
Coconuts	No	282	11,538	10,846	3,253,800	1,015,159,500
Flavor	kg	300	200	200	60,000	1,8720,000
Fat	kg	186	150	93	27,900	8,704,800
Protein	kg	210	50	35	10,500	3,276,000
Sugars	kg	300	70	70	21,000	6,552,000
Water	ltrs	1.2	2,000	8	2,400	748,800
Pack materials	No	57	3,000	570	171,000	53,352,000
Sub-total			17,008	11,822	3,546,600	1,106,513,100

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					
Coconuts	899,808	989,789	1,079,770	1,187,747	1,187,747
Total output	899,808	989,789	1,079,770	1,187,747	1,187,747
2. Cost of Production	N'	N'	N'	N'	N'
Coconuts cream @ N216.8 (kg)	195,078,374	214,586,255	234,094,136	257,503,549	257,503,550
Total cost of production	195,078,374	214,586,255	234,094,136	257,503,549	257,503,550
3. SALES					
Coconuts cream @ N285 (kg)	305,934,720	336,528,260	367,121,800	403,833,980	403,833,980
TOTAL SALES/ TURNOVER	305,934,720	336,528,260	367,121,800	403,833,980	403,833,980



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. <u>SALES</u>	N'	N' N'		N'	N'
Gross Sales	256,445,280	282,089,865	307,734,450	338,507,895	338,507,895
VAT @ 5%	12,822,264	14,104,493	15,386,723	16,925,395	16,925,395
Net Revenue	243,623,016	267,985,372	292,347,728	321,582,500	321,582,500
2. OPERATION COST					
Cost of Raw materials					
consumed	195,078,374	214,586,255	234,094,136	257,503,549	257,503,550
Staff and labour	6,600,000	7,260,000	7,986,000	8,785,000	8,785,000
Admin. & Overhead Expenses	17,200,000	18,920,000	20,640,000	22,704,000	22,704,000
Depreciation	2,381,600	2,381,600	2,381,600	2,381,600	2,381,600
<b>Total Operating Cost</b>	221,259,974	243,147,855	265,101,736	291,374,149	291,374,150
3. OTHER COSTS					
Interest on Term Loan (12%)	1,440,000	1,272,000	984,000	816,000	288,000
Loan Repayment	2,400,000	2,400,000	2,400,000	2,400,000	2,400,000
Total (Other Costs)	225,099,974	246,819,855	268,485,736	294,590,149	294,062,150
Profit Before Tax	18,523,042	21,165,517	23,861,992	26,992,351	27,520,350
Corporate Tax @ 30%	2,222,765	2,539,862	2,863,438	3,239,082	3,302,442
Profit after tax (NET PROFIT)	16,300,277	18,625,655	20,998,553	23,753,269	24,217,908
% Return on Sales	0.066	0.069	0.072	0.074	0.075
% Return on Equity	4.36	4.98	5.62	6.35	6.48
% Return on Investment	1.04	1.18	1.33	1.51	1.54



### **APPENDIX XI**

## FORECAST HIGH RATE AND LOW RATE COMPUTATION

Year	C/F	DF 12%	NPV	
	N'		N'	
0	(15,738,800)	1	(15,738,800)	
1	16,300,277	0.893	14,556,147.4	
2	18,625,655	0.797	14,844,647	
3	20,998,553	0.712	14,950,969.7	
4	23,753,269	0.636	15,107,079.1	
5	24,217,908	0.567	13,731,553.8	
<b>Total Profit</b>	103,895,662		73,190,397	
Average Profit	20,779,132.4			

Year	C/F	DF 60%	NPV	
	N'		N'	
0	(15,738,800)	1	(15,738,800)	
1	16,300,277	0.625	10,187,673.1	
2	18,625,655	0.3906	7,275,180.84	
3	20,998,553	0.2441	5,125,746.79	
4	23,753,269	0.1526	3,624,748.85	
5	24,217,908	0.0954	2,310,388.42	
Total Profit	103,895,662		28,523,738	
Average Profit	20,779,132.4			



# APPENDIX XII FORECAST IRR AND ARR COMPUTATION

$$IRR = a + (A)*(b-a)$$

A+B

Where

$$a = 12\%$$

47%

ARR = <u>Estimated Average Profit</u> x 100

Estimated initial investment

$$ARR = 20,779,132.4x100$$

15,738,800

123%



# APPENDIX XIII CASH FLOW PROJECTION

Year of Comm. Production	Year o	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	3,738,800	-	-	-	-	-
Term Loan	12,000,000	-	-	-	-	-
Gross Revenue		243,623,016	267,985,372	292,347,728	321,582,500	321,582,500
Total Receipts	15,738,800	243,623,016	267,985,372	292,347,728	321,582,500	321,582,500
B) CASH PAYMENTS						
Capital Payment						
Machinery & Equipments	6,708,000	-	-	-	-	-
Utility Equipment	1,850,000					
Office equipments	350,000					
Vehicle	3,000,000	-	-	-	-	-
TOTAL	11,908,000	-	-	-	-	-
(ii) Operating Expenses						
Depreciation	-	2,381,600	2,381,600	2,381,600	2,381,600	2,381,600
Change in working capital	3,830,800	218,878,374	240,766,255	262,720,136	288,992,549	288,992,550
Sub total	3,830,800	221,259,974	243,147,855	265,101,736	291,374,149	291,374,150
(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	1,272,000	984,000	816,000	288,000
Value Added Tax	-	12,822,264	14,104,493	15,386,723	16,925,395	16,925,395
Corporate Tax	-	2,222,765	2,539,862	2,863,438	3,239,082	3,302,442
Sub total	-	18,885,029	20,316,355	21,634,161	23,380,477	22,915,837
Total cash payment (ii)-(iii)	3,830,800	202,374,945	222,831,500	243,467,575	267,993,672	268,458,313
Net cash flow c/f	3,830,800	202,374,945	222,831,500	243,467,575	267,993,672	268,458,313



# APPENDIX XIV BALANCE SHEET PROJECTION

Year of comm. Operation	Year o	Year 1	Year 2	Year 3	Year 4	Year 5
<u>ASSETS</u>	N'000	N'000	N'000	N'000	N'000	N'000
(i) Fixed assets						
Machinery and Equipments	6,708,000	-	-	-	-	-
Utility equipment	1,850,000					
Office Equipment	350,000					
Vehicle	3,000,000	-	-	-	-	-
Value at Acquisition		11,908,000	11,908,000	11,908,000	11,908,000	11,908,000
Less Cumulated Depreciation	-	2,381,600	4,763,200	7,144,800	9,526,400	11,908,000
Net fixed assets	11,908,000	9,526,400	7,144,800	4,763,200	2,381,600	0
(ii)Current Assets/ liability						
Stock of Raw Materials	1,800,000	21,324,645	40,355,091	45,847,658	51,312,698	55,771,586
Debtors /prepayment	-	1,453,000	2,098,000	3,308,000	4,139,000	5,653,000
Bank and Cash Balances	2,030,800	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	-	(340,992)	(454,190)	(579,389)	(710,350)	(710,350)
Net current assets	3,830,800	22,512,677	41,119,932	45,799,808	50,909,022	54,109,977
TOTAL NET ASSETS	15,738,800	32,039,077	48,264,732	50,563,008	53,290,622	54,109,977
(ii) <u>FINANCED BY</u>						
Equity Capital	3,738,800	3,738,800	3,738,800	3,738,800	3,738,800	3,738,800
P&L	-	16,300,277	18,625,655	20,998,553	23,753,269	24,217,908
Retained Profit	-	-	16,300,277	18,625,655	20,998,553	23,753,269
SHAREHOLDERS FUND	3,738,800	20,039,077	38,664,732	43,363,008	48,490,622	51,709,977
Long Term Loan	12,000,000	12,000,000	9,600,000	7,200,000	4,800,000	2,400,000
TOTAL EQUITY & LIABILITY	15,738,800	32,039,077	48,264,732	50,563,008	53,290,622	54,109,977

