AFYA WHEAT FLOUR LIMITED

ESTABLISHING A WHEAT MILLING PLANT AT KURASINI, TEMEKE DISTRICT

DAR ES SALAAM

BUSINESS PLAN

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ABBREVIATIONS

FC	Foreign Currency
GDP	Gross Domestic Product
GM	General Manager
IRR	Internal Rate of Return
Kg	Kilogram
LC	Local Currency
Ltr	Litres
m	Metres
mt/MT	metric tonnes
NPV	Net Present Value
OD	Bank Overdraft
p.a	per annum
pm	per month
TBS	Tanzania Bureau Standards
TFDA	Tanzania Food and Drugs Authority
TIC	Tanzania Investment Centre
TZS/TShs	Tanzanian Shillings
SCE	Bins of Finished Goods Inside Silos
USD/US$	United States Dollars

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION AND BACKGROUND

Afya Wheat Flour Limited is a private limited company incorporated under the companies Act 2002 with registration certificate no.141936794 dated 18th June 2020. The company isbased in Dar es salaam, Kurasini, Temeke District. The company aims to specialise in wheat milling and other grain products for local and export market.

The company shall purchase local harvested wheat and imports large proportion of wheat grain. The plant capacity is of medium to large size and expects to cater also for the growing domestic and export market especially the DRC, Rwanda, Burundi and other Central Africa Countries.

1.2 THE WHEAT MILLING PLANT

Afya Wheat Flour Limited is in the process installing a wheat milling plant with a total capacity of 600 metric tons/day. The plant with Buhler machines from Germany willproduces high quality graded wheat flour with granted certification of Tanzania Bureau Standards (TBS).

For investing in this project, the company is expected to receive TIC Certificate of Incentive.
The plant is to be located at plot no P17120 Kurasini Temeke District, Dar es salaam Region. The company owns this land with Title Deed no. DSM 1028639 registered on 06 September 2022 with Right of Occupancy for 99 years and Registered Plan no. DSMS 0028411. The total area of the plot is 20,526 square metres which is very adequate and ideal for establishing a mill plant.
The area has all the necessary amenities such electricity, water and infrastructure. The Plant is well be fenced with office, milling factory buildings and has 8 silos each with capacity of 7,500 metric tons and the total capacity of silos is 60,000 tons.
The company's long-term plan is to construct additional grain storage facility and venture in milling of other grains.

1.3 SPONSORS/SHAREHOLDERS

The main sponsors and shareholders/directors of the Afya Wheat Flour Limited include the following:

SN	Shareholders	No. of Shares
1.	Ameir Munif Abdallah Nahdi	2500
2.	Said Edha Abdallah	2500
3.	Khalid Munif Abdallah	2500
4.	Milkcom Dairies Limited	1

As the company activities grow, more investors expected to be invited, with vision of raising equity capital.
The shareholders are the members of Board of Directors who have vast experience in project management, public administration, grain milling operations.

The authorized share capital of the company is TZS 1,000,000,000 (1.0 Billion) divided into 100,000 ordinary shares of TZS 10,000 each. The company shall have the power to increase and to divide the shares in in its capital for the time being into several classes of stock or shares and to attach thereto respectively such preferential deferred or in accordance with the Articles of the Association of the Company.

1.4 MARKETING

In Tanzania about one third of milling activities are carried out by large private companies and former NMC plants and the remaining two thirds by small scale private groups or individuals. The small-scale grain millers are located both in urban and rural areas, either owned by individuals or groups. About 25% of the 8000 villages in Tanzania now have either one or more maize, wheat or wheat mills.

Wheat in Tanzania is mainly produced in the northern highlands (Arusha and Kilimanjaro regions) and in the southern highlands (Iringa, Mbeya, and Rukwa regions). While wheat production in the southern highlands is predominantly small scale, production in the northern highlands is mainly in large scale farms. The prevailing mode of wheat production in Tanzania include large-scale mechanized, small- to medium-scale mechanized, and hand-tool production.

Wheat consumption in Tanzania is higher in urban areas (83%) than in rural areas (17%). Wheat demand is essentially in the form of wheat flour, which is both an intermediate product and final product.

Tanzania is a net importer of wheat and wheat prices might be influenced by changes in the world market and exchange rates.

Wheat is imported all year round-even when domestic production is high; since Dar-es-salaam is the biggest import port and a major supplier of imported wheat in the country.

1.5 INVESTMENT AND FINANCING

As summarized in Table 1.0 the total investment is about TZS 326.00 billion (US$ 138,721,605) including initial working capital of TZS 26.07 billion. Afya Wheat Flour Limited will finance this project from shareholders equity contributions.

Table: 1A Summary Breakdown of investment costs.

ITEM	In US$	TZS'000'	Total TZS'000
Fixed Assets			
Civil Works and Buildings	20,000,000	47,000,000	47,000,000
Milling +Machinery and Equipment	21,288,102	51,527,850	51,527,850
Motor vehicles	85,440,000	200,784,000	200,784,000
Furniture Fittings and Equipment	250,000	587,500	587,500
Pre-Operational Expenses	11,064	26,000	26,000
		0	
Sub-total	**126,989,166**	**299,925,350**	299,925,350
Add: Working Capital	11,732,439	26,070,422	26,070,422
TOTAL INITIAL INVESTMENT	**138,721,605**	**325,995,772**	**325,995,772**

Table: 1B **A Summary of Proposed Financing Arrangements**

Value in TZS '000'

Item/Source of Funds	TOTAL		GRAND TOTAL
	Equity	Loan/OD	
Land & Buildings	47,000,000	0	47,000,000
Plant and Machinery	51,527,850	0	51,527,850
Motor Vehicles	200,784,000	0	200,784,000
Furniture & Fixtures	587,500	0	587,500
Pre-operational Expenses	26,000	0	26,000
TOTAL	**299,925,350**	**0**	**299,925,350**
Initial Working Capital	26,070,422	0	26,070,422
TOTAL INITIAL CAPITAL	**325,995,772**	**0**	**325,995,772**

1.6 REQUIREMENT OF INITIAL WORKING CAPITAL

Initially, all wheat as the main essential ingredient for the plant is expected to be imported.This is due to the fact at the start our company have no firm arrangements for procurementof wheat from farmers and cooperative unions. We have so far carried out informal research and are confident of making adequate arrangements within a short time after acquiring the plant.

The initial working capital will be based on processing 3000 tons/day.

Table 2.0 Wheat Processing capacity and Extraction rates

Item	Rate	At 70%
Plant Capacity (600tons/day) 300 days; MT/24 hr.	600	126,000
Wheat Input at Achievable Capacity		88,200
Wheat Flour (76% Extraction Rate) MT	76%	67,032
Pollard (10% extraction rate)	10%	8,820
Wheat Bran (12% Extraction Rate) MT	12%	10,584
Waste Output (2% of Paddy Output) MT	2%	1,764

The initial working capital requirement is about TZS 26.07 billion (US$ 11.094 million).

The shareholders will cover up the margin fund and raise the balance through the commercial banks.

The subsequent higher levels of working capital requirements will depend on increased milling capacity, expected to be financed through internal cash generation operations.

2.0 INTRODUCTION

2.1 BACKGROUND

Wheat is grown entirely under rain fed conditions. Production falls short of requirements and the country relies heavily on wheat import, which ranged between 85,000 and 95,000 tons.

Wheat is the preferred food grain in towns, while the rural population lives mainly on other cereals. As people move into the towns, consumption of wheat in the coming years is expected to grow faster than that of all other cereals. Evidently, unless a determined effort is undertaken in the research and development of wheat, Tanzania's wheat production will remain inadequate for a long time.

Most of the wheat growing in the country villages have at least a grain milling plant to suit the demand within that area. In the urban areas, the number or density of these milling plants are higher, especially in wheat producing areas.

Under the present conducive investment environment and the ever-rising population, the private sector is striving to install adequate milling capacity to meet the demand of commercial grain milling for the local population. Wheat is in high demand in urban areas in Tanzania as in other countries in the world.
Tanzania has a potential to produce 4,903,400 tons of maize, paddy 1,012,400 tons and 164,800 tons of wheat annually.

Currently S.S. Bakhresa is one of the largest wheat milling company with combined milling capacity of 2800 MT/day with a storage capacity of 220,000 metric tons of wheat grain making the biggest in East and Central Africa. However, despite of this capacity the company has been unable to meet the vast demand of wheat products in the country.

It is on realizing this role that Ms. Afya Wheat Flour Limited has acquired a wheat mill plant to cater for the urban population in the country and beyond. Currently, the plant requires working capital for purchase of grain wheat, raw materials and packaging materials. Other important project components required include power connection, vehicles running costs and working capital requirement.

This study has been commissioned for the purpose of establishing the project viability in our endeavour to solicit part of funds from banks while the part will be shareholders equity contribution

The current market survey indicates that there is a substantial market for wheat flour and other byproducts both locally and abroad for the milling industry and therefore the company competitive edge will depend on the quality and the broad-based product lines thecompany envisage to produce.

2.2 BUSINESS OBJECTIVE

The overall objective is to purchase wheat grains as the main raw material. This includes milling of wheat grain and later marketing of quality wheat flour and the associated byproducts.
The specific objectives of the company include the following:

(a) Operate the plant so that it runs as a viable business entity.

(ii) Produce quality wheat flour pollard, maize flour and other grain products for the domestic and export market.

(iii) To create backward and forward linkages with farmers, cooperative domestic consumers and industries requiring these products.

(iv) To enhance commercial/business relationship with viable grain producers, farmers groups, traders, primary societies and cooperative unions.

2.3 M/S AFYA WHEAT FLOUR LIMITED

Ms. Afya Wheat Flour Limited established in 2020, is a private local company based in Dares salaam with operating plant based in Kurasini -Temeke, Dar es salaam. The company requires working capital to purchase wheat grain as the main input. Also purchase of other raw materials, packaging materials as well as transportation cost and utility costs in order to optimize production, in terms of quality and quantity.

A large proportion of wheat grain is expected to be imported and this will be supplemented with local produced wheat.

Ms. Afya Wheat Flour Limited shareholders have considerable experience in trading inwheat as well as grain milling and transportation of its products both locally and exports especially to the neighbouring countries.

3.0 MARKET ANALYSIS

3.1 INTRODUCTION

From the mid-1980s, the entire marketing and distribution of both wheat products in the country has been liberalized. Private traders, cooperative unions and individuals are allowed to procure market and distribute wheat as well as its products.

The above reforms made in the production, milling, marketing and distribution channel of grain and grain products in Tanzania's are fundamental especially considering the price structure of the grains and grain products in this country vis-a-vis defunct National Milling Corporation (NMC) role in the milling industry after privatization of milling plants.

Agricultural GDP has grown at 3.3 percent per year since 1985, the main food crops at 3.5 percent and export crops at 5.4 percent per year. Considering that the overall GDP growth target for halving abject poverty by 2025 is in the range of 6-7 percent, this performance falls short of the needed growth.

The macro-economic reforms have and continue to have had significant impact on the agriculture sector. The economic reforms have led to the opening up of the sector to private investment in production and processing, input importation and distribution and agricultural marketing. Most of production and processing and marketing functions have been assigned to the private sector. The Government has retained regulatory and public Support functions or facilitation role.

Farmers are free to sell their crops to cooperatives or private traders. Due to competition, normal producer prices for food & export crops have increased as such farmers can now sell their produce much faster. Farmers are no longer confined to a single source for their essential inputs for crops and livestock

The response from the private sector to opportunities offered by the liberalization and privatization has been strong. The shares of the private sector in the various crop markets have grown increasingly larger.

Trade in food crop is presently entirely private, except the trading operations of the Strategic Grain Reserve. More than 95 percent of the milling of grain is now in private hands.

3.2 DEMAND AND SUPPLY

Wheat is Tanzania's fourth most consumed crop after corn, cassava, and wheat. More than 90 percent of wheat produced in Tanzania comes from either large-scale commercial farms inthe northern highlands (Arusha, Kilimanjaro, and Manyara regions) or small and medium- sized family farms in the southern highlands (Iringa, Mbeya and Rukwa regions. Wheat production in the year 2021/22 is expected to decrease by 22.2 percent to 70,000 MT, largelydue to high post-harvest loss, below-average rainfall, and desert locust invasions in Northern Tanzania.

Tanzania imports Wheat and meslin from Ukraine. Wheat and meslin imports into Tanzania amounted to some 170 million U.S. dollars in 2020. The value was far higher than the one registered in the two previous years, when wheat imports remained below 10 million U.S. dollars. During the year 2021 about US$41.07 Million worth of wheat was imported according to the United Nations Comtrade database on international trade. As of 2020, Russia constituted the main wheat supplying market to Tanzania

Wheat Local Production

Smallholders planting wheat have on average 1 to 2 acres and the yield varies between 6 and 10 bags of 100 – 140 kg1 per bag assuming fertilizer is applied. Those smallholders who achieve 1 mt per acre (close to 2.5 mt per hectare) are doing comparatively well.

As shown in the table below, in 2020, wheat production for United Republic of Tanzania was 65 thousand tonnes. Though United Republic of Tanzania wheat production fluctuated substantially in recent years, it tended to increase through 1971 - 2020 period ending at 70 thousand tonnes in 2020.

Consumption

Wheat consumption is higher in urban areas where population growth rates are above 5 percent as compared to fewer than 2 percent in rural areas. Domestic consumption is estimated to be more than one million metric tons per year, requiring Tanzania to import about 90 percent of its wheat. Wheat milling industries, dominated by companies based in Dar es Salaam, supply wheat products to consumers in all regions of Tanzania. Post forecast an increase of 2.1 percent of total wheat consumption in MY 2021/2022 due to population growth and urbanization.

Trade:

Tanzania commercially imports wheat from Russia, Australia, Canada, Germany, and Brazil. Wheat imports from the United States are primarily for food aid programs. There was no monetized wheat from the United States in MY 2022/2023. Post forecasts a 25 percent increase in exports due to cross border trade, enhanced by high demand for wheat flour in neighboring countries. Wheat imports are expected to remain at 1.1 million MT due to low domestic production and increasing local consumption

Table 3: Tanzania Wheat Production, Imports, Exports, Consumption

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Metric Tons'000

Year	Local Production	Imports	Consumption	Exports	Ending stocks	Trade balance	Human Consumption per capita	Yield
2016	100.0	800.0	840	40.0	300	-760.0	14.94	1.00
2017	108.7	798.46	873.26	40.08	293.94	-758.39	15.07	1.13
2018	110.37	943.37	909.44	37.94	300.20	-805.45	15.23	1.15
2019	112.55	876.35	944.16	36.52	308.42	-819.83	15.34	1.16
2020	114.8	908.73	978.63	35.21	318.10	-873.52	15.44	1.18
2021	117.26	940.44	1014.36	34.03	327.42	-906.42	15.54	1.20
2022	119.89	978.14	1091.46	32.71	340.85	-945.48	15.66	1.22
2023	122.34	1016	1132.34	41.48	356.62	-998.88	15.78	1.24
2024*	124.78	1054.44	1176.07	30.35	373.00	-1074.09	15.91	1.26
2025*	126.78	1096.49	1176.07	29.18	391.01	-1067.31	16.07	1.26
2026*	128.68	1137.96	1221.12	28.12	408.42	-1109.84	16.22	1.30

Source OECD -FAO Agricultural Outlook for 2017-2026

Note: * Are estimates

In terms value in 2021, Tanzania imported $216M in Wheat, mainly from Russia ($100M), Australia ($50.8M), Ukraine ($38.7M), Argentina ($15.4M), and Canada ($8.25M)

Urbanization and the growth of major cities like Dar es Salaam, Mwanza, and Arusha are expected to increase demand for wheat products as 80 percent of wheat is consumed in urban areas. In 2021/22 wheat imports are expected to remain at 1.1 million MT due to low domestic production and increasing local consumption.

3.3 SUPPLY

The supply pattern of wheat in Dar es Salaam is estimated at 2,530 tons per day respectively. Comparatively the following is analysis of the capacity of each major player in this industry per tonnage output.

Table 4: Tanzania Companies Producing Wheat Flour

Name of a Company	Installed Mill Capacity (tons/day)
S.S. Bakhresa	**2,800**
Azania	**200**
Coast Millers	**120**
Pembe	**180**
AP& AP	**280**
Basic Element	**140**
Sunkist	**30**
Jumbo	**50**
Singida Super Wheat Flour Ltd	**30**
Other small/medium wheat millers	**15**
Total	**3,845**

3.4 DEMAND AND SUPPLY COMPARISON

This section highlights the demand and supply gap. Currently wheat imports stand above 800,000 tonnes annually. The demand for wheat is estimated at 1.2 million tons of wheat grains per annum. This leaves about 400,000 tons deficit of current need. In simplicity this means the need for wheat flour is greater than the existing supply capacity which in turn ensures certainty of total consumption on our production.

In light of these realties, we are strongly convinced that wheat milling is operating in a highly demanded product. And this gives us positioning leverage to provide quality products and create wealth.

We are convinced that the milling industry is quite lucrative. The demand is still increasing despite the presence of big mills, as well as the recent installed wheat mills from private investors and the numerous small-scale hammer mills spread all over the country. Most of these mills do not offer quality nor adequately packaged products to meet acceptable international standards.

Though presently the market is still restricted to Tanzania, our short- and long-term strategy is that targeted market to include exporting to neighbouring countries and possibly overseas.

Emphasis on marketing strategy will be to produce quality and convenience to customers in order to command premium price over other existing mills.

3.5 TARGETED MARKETS

The company has established various unique market opportunities by segment. Typical segments include the following:

- Military Centre's,
- Schools;
- Hospitals;
- International Relief agencies including refugee camps;
- Non-governmental organizations (NGOs);
- Selected reputable private traders dealing in wholesale trading of grain.

Initially, we intend to start with the largest market like Dar es Salaam Region. Progressively we will then extend to the regional outlets.

For the Dar es Salaam outlet our marketing strategy will be emphasized on product differentiation in terms of quality and convenience. In this case a fully-fledged delivery network would be established.

The company has a fully-fledged delivery system already established by using its own existing fleet of trucks.

During the first five years of operation an aggressive advertisements and promotion campaign would be undertaken for awareness and convince consumers that the quality and convenience of its wheat mill product is worth the price differential i.e., to pay a premium price for its high-quality wheat.

Due to an increase in middle class income families, there is increasing demand, especially in the urban areas for high quality wheat products. The company's vision is to strive and supply according to this requirement to this ever-growing demand.

3.6 MARKETING STRATEGY

Private traders, cooperative unions or any individual are allowed to procure wheat from any source especially from main surplus regions.

3.6.1 Marketing Strategies

Afya Wheat Flour Limited will set several marketing strategies which incorporate among other things, the market information, distribution, pricing policy segmentation, product development, and consumer awareness.

The aim of the company is to produce highly refined wheat flour products of superior quality. Therefore, our marketing strategy will put emphasis on product differentiation in terms of quality and convenience.

The market for wheat and maize are among the largest as compared to their grains with that in mind the company intends to:

- Institute a best marketing mix to satisfy the consumers i.e., produced wheat flour according to market segments.
- Employ qualified and competent technical personnel to operate the mills.
- Produce maintain high quality products using modern technologies that will give products which will compete both locally and internationally.
- Initially we have concentrated our marketing strategy in the urban areas and then expand to other market areas after segmenting according to transport cost and marketing margin as well as preference in end-products.
- Identify reliable suppliers and distributors who will assist in ensuring that the products are delivered timely and are of the highest quality. We will also rely on these stakeholders for relevant information on the market situation (trends, consumer tastes, feelings and comments amongst other things).
- Development of relationships with suppliers, distributors and retailers to support our business. Regular visits will be undertaken to these areas so as to ensure that we are meeting their expectations

3.6.2 Credit Provision

In a fragmented and dynamic market like grain and its products, there is need to establish long term relationship with those who have knowledge and capabilities to market the products but lack financial resources to acquire or stock big volume turnover.

In this respect, the Afya Wheat Flour Limited would device ways of minimizing tying up stocks at its godowns to such bulk buyers. This is aimed to achieve high turnover while reducing the mill plant distribution costs.

3.6.3 Product Development

Initially the company will concentrate in producing i.e., wheat flour, pollard and bran

The Afya Wheat Flour Limited long-term strategies are to explore into demands of the local and foreign markets as far as wheat products are concerned. This includes among other products like pollard, bran for animals feed plants, etc.

4.0 WHEAT MACHINERY AND PRODUCTION PROCESSES

4.1 MACHINERY AND EQUIPMENT

The company is importing the following wheat milling machinery and equipment to be installed based on modern wheat milling technology. The total cost is US$ 13,082,602.73

Table 5: List of Machinery and Equipment

Value in US$

Item	No units	Value in US$
Buhler Mill Machines	2 units	8,213,792
Starlinger Packing machine	1 set	2,065,433.00
Frames Silo 8*7,500Mt storage capacity-total 60,000mt	sets	2,437,543.21
Symaga Flat bottom Silo	3 units	562,247.92
Morililon	3units	443,165.83
SCE-Bins of Finished Goods Inside Silos	1 unit	2,165,920.00
Automatic Loading Machine	16 Units	500,000.00
Weighing Bridges	16 units	1,600,000.00
Sub Total Machinery and equipment		**17,988,101.96**
Other Equipment		
Transformers	10 units	2,000,000.00
Generators	10 units	1,000,000.00
Workshop Equipment	Set	300,000.00
Subtotal other equipment		**3,300,000.00**
Total Machinery and Equipment Costs		**21,288,102.00**

This includes pre-cleaning unit, scalperator, flat sieve, suction type stoner, rubber roller wheat huller machines, compartment separator, iron roller, jet type peeler, wheat grader and auxiliary machines including the magnetic separation, dust and muck removing systems. Other units include the grading machines and wheat refinery unit.

4.2 WHEAT MILLING PROCESS

Step 1: Grain Receiving and Storage

Wheat is received at our mill mainly by trucks delivery year-round with the July wheat harvest being our busiest. The majority of wheat is being imported. The remaining wheat comes locally comes from the northern part of Tanzania. Each incoming load of wheat coming by, is individually sampled and quality tested for moisture, test weight, foreign material, insect infestation and sprout damage. Any load not meeting our quality standards is immediately rejected.

After testing is completed and the quality is acceptable, the wheat is then unloaded in one of our four grain unloading pits. During harvest time any wet wheat (moisture exceeding

13.5%) is transferred to our continuous flow gas drier where it is dried to less than 13.5% moisture for long term storage

Wheat is then transferred to one of our Four Silos each which has 5000 tons capacity where it is fumigated and then cooled to maintain quality while in long term storage

Step 2: Cleaning House

Once the wheat is properly aged and cooled it is transferred out of long-term storage and into our mill wheat silo. From here it enters the important process of grain cleaning (see below), where all foreign materials are removed.

After the wheat is thoroughly cleaned and destones it is automatically tempered to a uniform moisture level for milling

Step 4: Wheat Milling /Grinding Operations

After spending four hours in the mill tempering bins the wheat is scoured and aspirated one final time before being metered into the 1st Break roller mill by our electronic wheat scale.

Once in the mill the wheat is transformed into high quality soft wheat flour through a continuous process of grinding, conveying, sifting, and dusting. Flour quality is maintained throughout the milling process by constant break checks on all the grinding and reduction

After fine pick, water and temperature condition, the wheat grain can be made bran, endosperm and malt separated to grinding operation. Because the endosperm and bran combined very close, the separation of them should be careful to scrape clean and minimize the damage in avoid of waste.

The whole process is divided into coarse grinding, purification and reduction. Coarse grinding is by using two serrated steel roller shafts rotating running in opposite direction at different speeds, with upper roller faster than downside roller 2.5 times. Split the scarfskin ofwheat gently and get out of coarse granule and bran in flat and big flaky shape.

Through purification and keep the pure endosperm granule by fine separator according to different proportions. The light bran will float with injected wind power, the remaining heavier endosperm powder go to the reduction stage. After crushing the endosperm by smooth roller flour mill, ground into powder. The crushed flat malt gets out after germ separator (The process is what stone grinder cannot work). Fine powder can be classified into different grade of flour by multi-storey rotary plansifter. The coarse granule sent to grind again (or use as bran). The fine particles can be cheap flour. The coarse debris sent to further processing to remove malt and fine debris; the fine debris can be fine ground into topquality flour.

In addition to flour, three other products are produced from the milling process: wheat bran, wheat middling and wheat germ, all used in the livestock feed industry.

Step 5: Finished Wheat Flour

Finished flour is constantly collected from the sifters during the milling process. All flour is blended together before entering the rebolt sifter where the finished flour is given one final sifting to eliminate any impurities. Once finished, the flour is automatically weighed and sterilized on its way to either bulk storage or packing.

Throughout the day several finished flour samples are drawn off the mill for testing in our house laboratory. Every sample is visually checked and then tested for protein, moisture and ash content and that they conform with required quality standards.

Step 6: Products Packaging

The wheat products are then packed through using high tech machines ensuring quality and maintaining our brand. The products are packed in nylon bag measuring 5kg, 10kg and 50kg and paper bags measuring 1kg and 2kgs. The company uses high quality bags meant for packing food materials that meets TBS and TFDA standards as well as international standards.

Step 7: Products Distribution Pattern

Wheat flour follows a systematic chain of distribution. The company has established the following channels for distributions these include;

- selling through factory outlet and selling through agents and
- Selling through vendors who buy our products in the city by distributing through their shops by using our trucks which is more of random selling per day to increase positioning and competition in the market

5.0 RAW MATERIAL AND OTHER PROJECT INPUTS

The single major raw materials required for milling is wheat. Secondary inputs include packing materials and utilities mainly power and water.

5.1 WHEAT

Wheat is the only raw materials to be used in milling. The rated capacity of the plant is 600 tons of wheat per day (24 hours). Annual Wheat needs (300 working days) amount to 180,000 tons per annum.
Wheat will be largely imported with few quantities to be procured locally.

5.2 PACKING MATERIALS

The project will turn out two products, polished flour and bran, both of which will need packing. Both can be packed in a variety of materials depending on the sizes to be packed. Jute, bags, plastic and paper bags and sacks are normally used. All of them are made locally although raw materials for making jute and plastic sacks are imported.

The bags can be used for packing wheat in 2kg, 5kg, 25 kg and 50 kg. Lower weights are economically packed in paper bags. Taking these factors into consideration the number of sacks/bags required at the anticipated production capacity have been calculated accordingly. The packing of bran and husks is most conveniently done in 90 kg jute sacks.

5.3 UTILITIES

5.3.1 Water

The daily water needs are about 10,000 litres, and about 250m^3 per month.
To avoid plant closures due to water shortages, it is recommended construct a water reservoir for a week's production and a shallow borehole for emergencies.

5.3.2 Electricity

The Wheat milling plant will require an installed electric power of about 300 kVA, equivalent to 240 kW. This will be tapped from TANESCO an electric supply line passing nearby the site. A site transformer unit will be needed.
A standby generator of 250 kVA power to be installed in case of TANESCO power cut off.

5.3.3 Compressed Air

Compressed air is also required for the operations of the mill. A compressor unit complete with piping and a pneumatic conveying system has been provided in the cost estimates.

6. ORGANISATION AND MANAGEMENT

The success of our Business Plan covering investment, production, processing, financial management, marketing and distribution of Wheat Products depends on the organization and management that we are going to put in place, particularly the human resource aspects. It is the quality of the human resources; the commitment and dedication, being visionary and able to manage the change will facilitate the turning around of the ailed operations.

Human resource aspect has been given greater priority as a major resource for performing the operations of Afya Wheat Flour Limited. It starts with a structure that will guide the management and staff as described in the following sections.

6.1 ORGANISATION

The company has Board of Directors. The Board of Directors are responsible in formulating policies, rules, regulations and planning aspects to ensure that silos operations and especially the marketing aspects and the related activities meet the requirements of the company and that it is operating on profitable basis.

The Company Directors have vast experience in project management, grain milling operations, engineering, procurement and public administration.

The company has a General Manager appointed by the Board of Directors. The General Manager (GM) is the chief executive of the company and responsible in management and administration of the company, as well as overseeing the financial aspects of the company

The GM is the overall in charge of day-to-day operations of the company. He is assisted by the departmental heads – Marketing and Production/Operations.

Marketing /Procurement department is responsible for the marketing and distribution of processed and graded wheat mad maize flour and other products as well as procurement of wheat and maize grains, raw materials and packaging, spare parts and equipment. This department is also be responsible for the receipt, storage and issue of the purchased materials.

6.2. COMPANY STATUS

The proposed venture is a private company limited by shares as prescribed in the Memorandum and Articles of Association

6.3 MANPOWER REQUIREMENT

At full scale operations the plant will employ a total of 18 people. All the workers are expected to have some knowledge of grain milling operations.

The different categories of manpower and their enumerations are shown in the Table :8 below:

Table 6: Manpower Requirements and their enumerations

Value in TZS '000

Designation	Strength	Salary p.m	Salary p.a.
I; Management			
General Manager	1	5,200	62,400
Administration Manager	1	3,000	36,000
Secretary	2	500	12,000
Accountant/Cashiers	2	2,000	48,000
Office Attendant	5	300	18,000
Security Guards	10	200	24,000
Sub total	21		**200,400**
Add:20% Social benefits NHIF, WCF, PSSSF			**40,080**
Sub total	**21**		**240,480**
II: Production Department			
Operations/Mill Managers	4	3,500	168,000
Mill Operators	120	900	1,296,000
Technicians	5	2,500	150,000
Skilled and Unskilled workers	150	300	540,000
Sub total	**279**		**2,154,000**
Add:20% Social benefits NHIF, WCF, PSSSF			**430,800**
Total Production Department	**279**		**2,584,800**
III: Marketing/Supplies			
Distribution/ Procurement Manager	4	2,500	120,000
Store keeper	4	500	24,000
Sales Officers/ Purchases	10	500	60,000
Sub total	18		**204,000**
Add:20% Social benefits-NHIF, WCF, PSSSF,			**40,800**
Subtotal Marketing/Supplies	**18**		**244,800**
Number/TOTAL WAGE BILL	**318**		**3,070,080**

6.4 SOURCE OF MANPOWER AND TRAINING

Manpower for the proposed project will be employed from local sources. The staff will need minor on-the-job training to familiarize them with the proposed machinery and equipment.

7.0 CAPITAL INVESTMENT AND FINANCING

7.1 ASSUMPTIONS

In carrying out the financial analysis, the following assumptions have been used:

- The operating period under which the evaluation has been considered is 10 years.
- The capital expenditure costs are assumed to be financed through shareholders equity capital and bank term loan.
- The price of inputs is assumed to remain constant for the first 10 years i.e., the projects economic life. However, in case of changes in the price of inputs appropriate changes should be made in the price of the product selling prices so as to maintain the same profit margin.
- Implementation of the project is immediate and procurement of milling machinery and equipment will be installed before end of this year.
- The currency exchange rate adopted by the study in USD 1 = TZS 2350.

7.2 INVESTMENT STRUCTURE

The total initial investment cost is estimated at TZS 326.00 billion (US$ 138,721,605)out of which US$ 106,978,102 million will be in foreign currency for importing milling machines, vehicles and equipment.

The balance is local funds for locally made/available items and services. The initial working capital requirement is TZS 26.07 billion.

Details for the investment structure are summarized as follows:

Table 7: Project Investment Costs

ITEM	In US$	TZS'000'	Total TZS'000
Fixed Assets			
Civil Works and Buildings	20,000,000	47,000,000	47,000,000
Milling +Machinery and Equipment	21,288,102	51,527,850	51,527,850
Motor vehicles	85,440,000	200,784,000	200,784,000
Furniture Fittings and Equipment	250,000	587,500	587,500
Pre-Operational Expenses	11,064	26,000	26,000
Sub-total	**126,989,166**	**299,925,350**	299,925,350
Add: Working Capital	11,732,439	26,070,422	26,070,422
TOTAL INITIAL INVESTMENT	**138,721,605**	**325,995,772**	**325,995,772**

The details of each of the above investment costs are as given in the following sections:

7.2.1 Civil Works and Buildings

In order to establish the milling plant and start milling operations, the following facilities are required:

- Mill house,
- storage godowns for raw wheat and wheat products and
- sheds, parking and servicing area.

The total costs of civil works and building is estimated at TZS 47.0 billion (US$20.0 million).

7.2.2 Wheat Mill Machinery and Equipment

All necessary equipment and machinery to enable the milling project be operational include the following:

Table 8: Wheat Mill Machinery and Equipment

Item	Units	Value in US$	Value in TZS'000
Buhler Mill Machines	2units	8,213,792	19,302,411
Starlinger Packing machine	1 set	2,065,433	4,853,768
Frames Silo 11*7 500Mt	8 units	2,437,543	5,728,227
Symaga Flat Silo	3	562,248	1,321,283
Morililon	3	443,166	1,041,440
SCE Bins of Finished Goods Inside Silos	1	2,165,920	5,089,912
Automatic Loading Machine	16 units	500,000	1,175,000
Weighing Bridges	16 Units	1,600,000	3,760,000
Sub Total MACHINERY		**17,988,102**	**42,272,039**
OTHER EQUIPMENT			
Transformers 10	10 units	2,000,000	4,700,000
Generators 10 units	10 units	1,000,000	2,350,000
Workshop Equipment	Set	300,000	705,000
Sub Total Equipment		**3,300,000**	**7,755,000**
***Add*: Local cost Clearing and Port charges**			**1,500,811**
TOTAL MACHINERY AMD EQUIPMENT COSTS		**21,288,102**	**51,527,850**

7.2.3 Furniture and Fittings

The offices and factory will be fitted with various furniture, equipment, computer facilities, telecommunication equipment and other necessary office fittings. All these will be of a high standard and might need to be imported.

Table 9: Furniture and Fittings

Item	US$'	TZS'000
Furniture, Computers, internet, etc.	250,000	587,500
Other equipment	0	0
Total	**250,000**	**587,500**

7.2.4 Office, Factory Vehicles and Tractors

For office use and trips outside Dar es Salaam, few vehicles are needed. Further heavy and light trucks will be needed for collection of raw wheat from the port and factory operations. Others will mainly be used for distribution of wheat products. The breakdown of these is as shown below:

Table 10: Motor Vehicles and Tractors

Type of Vehicle	No of units	In US$	In TZS'000
Horse Tractors with Trailers (500Horse+500 trailers)	1000	57,500,000	135,125,000
7 Ton Trucks 500 units	500	12,750,000	29,962,500
10 ton Trucks 500 units	500	14,250,000	33,487,500
Utility Vehicles 4 units	4	520,000	1,222,000
Pickups single Cabin	10	420,000	987,000
TOTAL VEHICLES		**85,440,000**	**200,784,000**

The transport vehicles are expected to be replaced after every four years.

7.2.5 Pre-operational expenses

The activities prior to the start of operation are expected to cost about TZS 26.0 million. These will include expenses like purchase of raw materials, hire of temporary offices and of vehicles, recruitment of workers, cost of studies, registration and license fees, overseas travelling and other sundry expenses during project implementation prior to start of operations. Breakdown of preoperational expenses are as follows:

Table 11: Pre operational Expenses

Cost item	Value in TZS'000
Preliminary costs and investigation fees	10,000
Personnel Recruitment & Training	10,000
Financial charges	3,000
Project Consultancy Services	3,000
Subtotal Preoperational expenses	**26,000**

7.2.6 Initial Working Capital

The initial working capital requirements have been carried out on the basis of the assumptions as presented in Table: 12 below. In view of this a total of TZS 55.191 billion will be required as an initial working capital.

Table 12: Working Capital Requirement

Value in TZS '000'

Item/Year	Assumptions	1	2	3	4	5-10
A: CURRENT ASSETS						
A: STOCKS						
Raw/Packaging materials Cost	19,336,575	28,509,575	31,961,779	31,961,779	31,961,779	19,336,575
Marketing and Distribution expenses	94,962	100,263	102,258	102,258	102,258	94,962
Fuel & Lubricants	1,950	1,950	1,950	1,950	1,950	1,950
Spares & Parts	1,594,874	1,594,874	1,594,874	1,594,874	1,594,874	1,594,874
TOTAL STOCKS	21,028,361	30,206,662	33,660,861	33,660,861	33,660,861	21,028,361
B: DEBTORS						
Trade debtors	1 month	13,340,250	19,670,063	22,052,250	22,052,250	22,052,250
TOTAL CURRENT ASSETS		34,368,611	49,876,724	55,713,111	55,713,111	55,713,111
CURRENT LIABILITIES						
Creditors		8,042,349	11,100,016	12,250,750	12,250,750	12,250,750
Salaries	One month	255,840	255,840	255,840	255,840	255,840
Sub total		8,298,189	11,355,856	12,506,590	12,506,590	12,506,590
Working Capital		26,070,422	38,520,869	43,206,521	43,206,521	43,206,521
Change in W/Capital		26,070,422	12,450,447	4,685,652	0	0

7.3 PROPOSED FINANCING ARRANGEMENT

The sponsors of this project envisaged to raise the money needed for financing the above investment from shareholders equity contributions as outlined below:

Table13: Proposed Financing Arrangements

Value in TZS'000

Item/Source of Funds	TOTAL		GRAND TOTAL
	Equity	Loan/OD	
Land & Buildings	47,000,000	0	47,000,000
Plant and Machinery	51,527,850	0	51,527,850
Motor Vehicles	200,784,000	0	200,784,000
Furniture & Fixtures	587,500	0	587,500
Pre-operational Expenses	26,000	0	26,000
TOTAL	**299,925,350**	**0**	**299,925,350**
Initial Working Capital	26,070,422	0	26,070,422
TOTAL INITIAL CAPITAL	**325,995,772**	**0**	**325,995,772**

7.3.1 Equity and Long-Term Loan

The sponsors are prepared to finance this project from equity shareholders contributions. This includes all local and foreign components on investment cost (for fixed assets and pre-operational costs) amounting to TZS 299.925 billion (approx. TZS 300.00 billion). No funds are expected from the banks.

7.3.2 Bank Overdraft

It is also proposed that the initial working capital of TZS 26.07 billion under item 7.2.6, Table: 12 to be financed through shareholders equity contribution.

8.0 OPERATING COSTS

8.1 DIRECT OPERATING COSTS

Table 14 below summarizes the direct annual operating costs of the project for the first ten operational years.

Table: 14 Direct Operating Costs

Value in TZS'000

Item/Year	Per Ton	1	2	3	4	5-10
Cost of Sales	**US$**					
Purchase of Wheat CIF Dar US$ 0.360/kg	846.0	74,617,200	110,022,300	123,346,800	123,346,800	123,346,800
Port Charges 1.5%	0.035	2,630,256	3,878,286	4,347,975	4,347,975	4,347,975
Import Duty 2%	0.047	4,145	6,112	6,853	6,853	6,853
Transport cost 0.3%	0.005	415	611	685	685	685
Sub total		**77,252,016**	**113,907,310**	**127,702,313**	**127,702,313**	**127,702,313**
Other Direct Costs	**TZS**					
PP Bags Packing Bags	250	16,758	16,758	16,758	16,758	16,758
Packing Threads	50	3,352	4,942	5,540	5,540	5,540
PP Bags Packing Bags X50kg	200	2,681	3,954	4,432	4,432	4,432
Fumigation expenses	800	70,560	104,040	116,640	116,640	116,640
Other packing materials:1% of total costs		934	1,297	1,434	1,434	1,434
Sub total		**94,284**	**130,990**	**144,804**	**144,804**	**144,804**
TOTAL DIRECT COSTS		**77,346,301**	**114,038,300**	**127,847,117**	**127,847,117**	**127,847,117**

8.2 WHEAT

The raw material for the mill plant will be wheat. A large proportion of Wheat will be imported. The rest of wheat may either come from large-scale commercial farms in the northern highlands (Arusha, Kilimanjaro, and Manyara regions) or small and medium-sized family farms in the southern highlands (Iringa, Mbeya and Rukwa regions. Wheat prices in these areas fluctuate being cheapest immediately after harvesting and prices increase to a peak level at the time of next planting.

Prevailing average import price of wheat so far is US$ 0.360/kg may however go up to US$ 0.400/kg.

8.3 PACKAGINGS

Wheat will be packed in polyethylene bags with inner film lining. According to recommendations for packing the 80% flour will be packed in 50kgs bags, and 20% of wheat in 5kgs paper bags. Polished wheat will be marketed in 90kgs polyethylene bags.

At the anticipated production levels of 70% in year 1, 85% in year 2, and 90% in year 3 onwards, the expenditure of packaging will range from TZS 94.28 million to TZS 127.85 million.

8.4 VEHICLE RUNNING EXPENSES

The cost of running motor vehicles includes fuel, spares and tyres. The estimated annual cost for the whole fleet is put at TZS 18.32 billion.

8.5 REPAIRS AND MAINTENANCE

The estimated annual cost of repairs and maintenance for machinery and equipment is estimated at 4% of total machinery costs and are put at TZS 2.78 billion, whereas that of civil works and buildings is estimated 2% which is TZS 940 million while for furniture and fittings, repair costs are at 8% of value or TZS 47.0 million per annum.

The total annual repair and maintenance costs works out at TZS 3.72 billion excluding the vehicle running and maintenance costs.

8.6 ELECTRICITY

Installed power will be about 400kVA = 250kW. Working on 3 shifts/day for 300 d/a, 75% the annual consumption of electricity is estimated at 125 million. The cost of electricity is computed on the basis of prevailing rates and estimate TZS 14.0 million per annum

There will also be charges on diesel for the generators (consumption 10l/hour) estimated to be about 25% of time or 75 days/year. Cost for fuel will be about TZS 4.0 million.
The total costs for electricity consumption work at TZS 18.0 million per annum.

8.7 WATER

The estimated annual water consumption is 1.0 million litres. At the rate of TZS 1600/= per 1.0m3, the total annual water bill is computed at TZS 5.4 million.

8.8 SALARIES AND WAGES

As detailed in Table: 6 above, it is estimated that the wheat milling plant will employ a total of 318 people. The total wage bill, including social welfare benefits amounts to TZS 3.07 billion per annum.

8.9 ADMINISTRATIVE OVERHEADS

At sustainable capacity utilization a total of TZS 2.985 billion has been allowed for administrative overheads which include telephones/internet, postage, insurance, legal fees, stationery, advertisements, etc. as outlined below:

Table 15: Administrative Overheads

Value in TZS '000

Item/Year	1	2	3	4	5-10
Insurance	2,998,994	2,998,994	2,998,994	2,998,994	2,998,994
Telephone, internet, etc.	5,000	6,000	8,000	8,000	8,000
Printing, Stationery & postage	5,000	6,000	7,200	7,200	7,200
Business Promotion and Advertising	20,000	20,000	15,000	15,000	15,000
Directors Fees/Board Meetings	15,000	15,000	15,000	15,000	15,000
SDL	5,000	5,000	5,000	5,000	5,000
Bank financial charges	15,000	15,000	20,000	20,000	20,000
Auditors & Accountants Fees	10,000	10,000	10,000	10,000	10,000
Staff Uniforms	42,000	42,000	42,000	42,000	42,000
Miscellaneous Expenses	5,000	5,000	5,000	5,000	5,000
TOTAL GENERAL OPER. EXPENSES.	3,120,994	3,122,994	3,126,194	3,126,194	3,126,194

8.10 DEPRECIATION

The depreciation rates adopted in this study are as follows:

- Civil works: 4% straight line
- Machinery and Equipment: 12.5% diminishing Value
- Vehicles: 25% straight line
- Furniture and Fittings: 10% diminishing value
- Pre-operational expenses: 20% straight line.

Annual Depreciation expense range between TZS 58.60 billion and TZS 54.64 billion over a ten-year period.

8.11 FINANCIAL CHARGES

The study has adopted the following financial charges:

- 30% corporate tax on net profits
- 16% interest on long term loan
- 19% interest on bank overdrafts.

9.0 FINANCIAL ANALYSIS

The financial viability and economic contribution of the project is based on the assumptions and findings of investments, sales and operating costs as discussed in previous two chapters.

9.1 PROJECTED INCOME AND EXPENDITURE STATEMENT

The summary of income and expenditure for the first 10 years of operation is summarized in **below in Table 16.** It has been assumed the capacity utilization of the plant will be 70%,85% 90% in the first year, second year and third year respectively.

Table 16: Projected income and expenditure statement

Value in TZS'000

Item/Year	1	2	3	4	5	6	7	8	9	10
Sales Revenue	160,083,000	236,040,750	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000
TOTAL SALES REVENUE	160,083,000	236,040,750	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000	264,627,000
COST OF SALES										
Direct Costs	77,346,301	114,038,300	127,847,117	127,847,117	127,847,117	127,847,117	127,847,117	127,847,117	127,847,117	127,847,117
Utilities Expenses	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400
Production Salaries	2,584,800	2,584,800	2,584,800	2,584,800	2,584,800	2,584,800	2,584,800	2,584,800	2,584,800	2,584,800
TOTAL COST OF SALES	**79,954,501**	**116,646,500**	**130,455,317**	**130,455,317**	**130,455,317**	**130,455,317**	**130,455,317**	**130,455,317**	**130,455,317**	**130,455,317**
GROSS PROFIT	80,128,499	119,394,250	134,171,683	134,171,683	134,171,683	134,171,683	134,171,683	134,171,683	134,171,683	134,171,683
OPERATING EXPENSES										
General Operating Expenses	22,259,481	22,259,481	22,259,481	22,259,481	22,259,481	22,259,481	22,259,481	22,259,481	22,259,481	22,259,481
Admin.& Marketing Salaries	485,280	485,280	485,280	485,280	485,280	485,280	485,280	485,280	485,280	485,280
Total Operating expenses	22,744,761	22,744,761	22,744,761	22,744,761	22,744,761	22,744,761	22,744,761	22,744,761	22,744,761	22,744,761
OPERATING PROFIT	**57,383,738**	**96,649,489**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**
CAPITAL & FINANCE CHARGES										
Depreciation	58,595,619	57,781,316	57,068,802	56,466,602	55,918,426	55,433,573	55,013,876	54,646,642	54,325,312	54,044,148
Bank Loan interest charges	0	0	0	0	0	0	0	0	0	0
Interest on Bank overdraft	0	0	0	0	0	0	0	0	0	0
Total Charges	**58,595,619**	**57,781,316**	**57,068,802**	**56,466,602**	**55,918,426**	**55,433,573**	**55,013,876**	**54,646,642**	**54,325,312**	**54,044,148**
TOTAL EXPENDITURE	161,294,880	197,172,577	210,268,880	209,666,680	209,118,504	208,633,651	208,213,954	207,846,720	207,525,390	207,244,226
PROFIT BEFORE TAX	**(1,211,880)**	**38,868,173**	**54,358,120**	**54,960,320**	**55,508,496**	**55,993,349**	**56,413,046**	**56,780,280**	**57,101,610**	**57,382,774**
Taxable Income	(1,211,880)	38,868,173	54,358,120	54,960,320	55,508,496	55,993,349	56,413,046	56,780,280	57,101,610	57,382,774
Corporation Tax at 30 %	0	13,603,860	19,025,342	19,236,112	19,427,973	19,597,672	19,744,566	19,873,098	19,985,564	20,083,971
PROFIT AFTER TAX	**(1,211,880)**	**25,264,312**	**35,332,778**	**35,724,208**	**36,080,522**	**36,395,677**	**36,668,480**	**36,907,182**	**37,116,047**	**37,298,803**
PROFIT BROUGHT FORWARD	0	(1,211,880)	24,052,432	29,392,675	35,124,348	41,212,335	47,615,477	54,291,421	61,206,068	68,329,580
PROFIT FOR APPROPRIATION	(1,211,880)	24,052,432	59,385,210	65,116,883	71,204,870	77,608,012	84,283,956	91,198,603	98,322,115	105,628,383
APPROPRIATION ACCOUNT										
Dividends Rate	0%	0%	10%	10%	10%	10%	10%	10%	10%	10%
Amount	0	0	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535
REVENUE RESERVES	(1,211,880)	24,052,432	29,392,675	35,124,348	41,212,335	47,615,477	54,291,421	61,206,068	68,329,580	75,635,848
ACCUM. RETAINED EARNINGS	**(1,211,880)**	**24,052,432**	**59,385,210**	**65,116,883**	**71,204,870**	**77,608,012**	**84,283,956**	**91,198,603**	**98,322,115**	**105,628,383**

9.1.1 Projected Revenue

Revenue accruing to the project promoters will consist of sales of Wheat, pollard and Wheat bran from milling operations.

Wheat will be sold at TZS 2100 per kg while the bran will be sold at TZS 1200 per kg.

Total revenue is expected to increase from TZS 160.83 billion in year 1 to TZS 264.63 billion from year 3 onwards.

Table 17: Projected Mill Production and Revenue

Value in TZS'000

Item/Year		1	2	3	4	5
ACHIEVABLE CAPACITY		**70%**	**85%**	**90%**	**90%**	**90%**
A: WHEAT MILL PRODUCTION						
Plant Capacity (600tons/day) 300 days;MT	600	126,000	153,000	162,000	162,000	162,000
Wheat Input at Achievable Capacity		88,200	130,050	145,800	145,800	145,800
Wheat Flour (76% Extraction Rate) MT	76%	67,032	98,838	110,808	110,808	110,808
Pollard (10% extraction rate)	10%	8,820	13,005	14,580	14,580	14,580
Wheat Bran (12% Extraction Rate) MT	12%	10,584	15,606	17,496	17,496	17,496
Waste Output (2% of Paddy Output) MT	2%	1,764	2,601	2,916	2,916	2,916
B: SALES REVENUE						
Wheat Flour Tshs /MT	2,100	140,767,200	207,559,800	232,696,800	232,696,800	232,696,800
Pollard	750	6,615,000	9,753,750	10,935,000	10,935,000	10,935,000
Bran:Tshs /kg	1,200	12,700,800	18,727,200	20,995,200	20,995,200	20,995,200
GRAND TOTAL SALES REVENUE		**160,083,000**	**236,040,750**	**264,627,000**	**264,627,000**	**264,627,000**

9.1.2 Production Costs

Expenditure items have been discussed in detail in Chapter 9. Total production costs including capital charges are expected to increase from TZS 161.30 billion in year 1 to TZS 210.27 billion in year 3 and then in the following years decreases reaching TZS 207.86 billion in year ten.

9.1.3 Projected Profits

After making allowances for capital charges and tax payments, the project makes a loss of TZS 1.21 billion in the initial year. However, from year 2 it is expected to register net profit after tax of TZS 25.264 billion in year 2, increasing to TZS 35.33 billion in year three and further rising to TZS 37.298 billion in year ten. After a provision of dividends, the project will accumulate profits amounting to TZS 105.63 billion during the 10 years under review.

9.2 PROJECTED CASHFLOW

The assumptions made on the projected cashflow (sources and uses of funds) during the evaluation period show the ability of the project to meet long term loans and capital expenditure requirements. Details of annual projected cashflow are presented in **Table 18 below.**

Once the wheat mill operations start, the project will realize positive cashflow in the first year of TZS 11.785 million. Net cash generation is satisfactory and the project can afford refinancing especially replacement of vehicles in year 4 and 8 of TZS 200.784 billion and TZS100.392 billion respectively. The cumulated net cash flow increases steadily up from TZS 31.325 billion in year 2 to rising to TZS 340.64 billion in year 10.

It is therefore, considered that the long-term liquidity of the project is healthy and warrant credibility with financiers.

Table 18: Projected Cashflow Statement Value in TZS'000

ITEM/YEAR	0	1	2	3	4	5	6	7	8	9	10
CAPITAL INFLOW											
Owner's Equity Contribution	299,925,350										
Bank loan	0										
TOTAL CAPITAL INFLOW	**299,925,350**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
OPERATING INFLOW											
Profit before tax		(1,211,880)	38,868,173	54,358,120	54,960,320	55,508,496	55,993,349	56,413,046	56,780,280	57,101,610	57,382,774
Depreciation		58,595,619	57,781,316	57,068,802	56,466,602	55,918,426	55,433,573	55,013,876	54,646,642	54,325,312	54,044,148
TOTAL OPERATING INFLOW		**57,383,738**	**96,649,489**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**
TOTAL INFLOW	**299,925,350**	**57,383,738**	**96,649,489**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**
CAPITAL OUTFLOW											
Investment	299,925,350										
Re-investment					200,784,000				100,392,000		
Term Loan Repayment		0	0	0	0	0					0
Bank Overdraft repayment			0								
TOTAL CAPITAL OUTFLOW	**299,925,350**	**0**	**0**	**0**	**200,784,000**	**0**	**0**	**0**	**100,392,000**	**0**	**0**
OPERATING OUTFLOW											
Taxation		0	0	13,603,860	19,025,342	19,236,112	19,427,973	19,597,672	19,744,566	19,873,098	19,985,564
Dividends		0	0	0	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535
Change in W/Capital		26,070,422	12,450,447	4,685,652	0	0	0	0	0	0	0
TOTAL OPERATING OUTFLOW		**26,070,422**	**12,450,447**	**18,289,512**	**49,017,877**	**49,228,647**	**49,420,508**	**49,590,207**	**49,737,101**	**49,865,633**	**49,978,099**
TOTAL OUTFLOW	**299,925,350**	**26,070,422**	**12,450,447**	**18,289,512**	**249,801,877**	**49,228,647**	**49,420,508**	**49,590,207**	**150,129,101**	**49,865,633**	**49,978,099**
NET CASHFLOW	11,785	31,313,316	84,199,042	93,137,410	(138,374,955)	62,198,275	62,006,414	61,836,715	(38,702,179)	61,561,289	61,448,823
OPENING BALANCE		**11,785**	**31,325,101**	**115,524,143**	**208,661,553**	**70,286,598**	**132,484,873**	**194,491,286**	**256,328,001**	**217,625,822**	**279,187,111**
CLOSING BALANCE	**11,785**	**31,325,101**	**115,524,143**	**208,661,553**	**70,286,598**	**132,484,873**	**194,491,286**	**256,328,001**	**217,625,822**	**279,187,111**	**340,635,935**

9.3 DEBT SERVICES

The whole project will be financed from shareholders equity contribution. Initially the company does not expect to seek any term loan from the local banks. This includes also, the initial working capital requirement.

9.4 PROJECTED BALANCE SHEET

The projected balance sheet showing the financial position of the project at any one time is shown in **Table: 19.** At the end of year ten net assets stand 134.450 billion.
On the other hand, the project's net worth rises from TZS 337.565 billion in the first year of operation to TZS 982.562 billion in the tenth year.

The net worth of the project increases by 25% from the first year of implementation to the tenth year of operation, indicating a very healthy financial operation.

Table 19: Projected Balance Sheet Value in TZS'000

ITEM/YEAR	1	2	3	4	5	6	7	8	9	10
GROSS FIXED ASSETS										
Land and Buildings	47,000,000	47,000,000	47,000,000	47,000,000	47,000,000	47,000,000	47,000,000	47,000,000	47,000,000	47,000,000
Plant and Machinery	51,527,850	51,527,850	51,527,850	51,527,850	51,527,850	51,527,850	51,527,850	51,527,850	51,527,850	51,527,850
Vehicles	200,784,000	200,784,000	200,784,000	401,568,000	401,568,000	401,568,000	401,568,000	501,960,000	501,960,000	501,960,000
Office Equipment & Furniture	587,500	587,500	587,500	587,500	587,500	587,500	587,500	587,500	587,500	587,500
Pre operational expenses	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000	26,000
Working capital	26,070,422	0	0	0	0	0	0	0	0	0
TOTAL FIXED ASSETS	299,925,350	299,925,350	299,925,350	500,709,350	500,709,350	500,709,350	500,709,350	601,101,350	601,101,350	601,101,350
LESS: ACCUM.DEPREC.	58,595,619	116,376,935	173,445,737	229,912,339	285,830,765	341,264,338	396,278,215	450,924,857	505,250,168	559,282,531
NET FIXED ASSETS	**241,329,731**	**183,548,415**	**126,479,613**	**270,797,012**	**214,878,585**	**159,445,012**	**104,431,135**	**150,176,494**	**95,851,182**	**41,818,819**
CURRENT ASSETS										
Stocks	21,028,361	30,206,662	33,660,861	33,660,861	33,660,861	33,660,861	33,660,861	33,660,861	33,660,861	33,660,861
Debtors	13,340,250	19,670,063	22,052,250	22,052,250	22,052,250	22,052,250	22,052,250	22,052,250	22,052,250	22,052,250
Cash & bank balance	31,313,316	115,512,358	208,649,768	70,274,813	132,473,088	194,479,501	256,316,216	217,614,037	279,175,326	340,612,365
TOTAL CURRENT ASSETS	**65,681,927**	**165,389,083**	**264,362,879**	**125,987,924**	**188,186,199**	**250,192,613**	**312,029,327**	**273,327,149**	**334,888,437**	**396,325,476**
CURRENT LIABILITIES										
Creditors	8,298,189	11,355,856	12,506,590	12,506,590	12,506,590	12,506,590	12,506,590	12,506,590	12,506,590	12,506,590
Tax payable	0	13,603,860	19,025,342	19,236,112	19,427,973	19,597,672	19,744,566	19,873,098	19,985,564	20,083,971
Dividends payable	0	0	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535	29,992,535
TOTAL CURRENT LIABILITIES	**8,298,189**	**24,959,716**	**61,524,467**	**61,735,238**	**61,927,099**	**62,096,798**	**62,243,691**	**62,372,223**	**62,484,689**	**62,583,096**
NET CURRENT ASSETS	**57,383,738**	**140,429,367**	**202,838,412**	**64,252,687**	**126,259,100**	**188,095,815**	**249,785,636**	**210,954,925**	**272,403,748**	**333,742,379**
TOTAL NET ASSETS	**298,713,470**	**323,977,782**	**329,318,025**	**335,049,698**	**341,137,685**	**347,540,827**	**354,216,772**	**361,131,419**	**368,254,930**	**375,561,199**
FINANCED BY:										
Share capital	299,925,350	299,925,350	299,925,350	299,925,350	299,925,350	299,925,350	299,925,350	299,925,350	299,925,350	299,925,350
Revenue reserves	-1,211,880	24,052,432	29,392,675	35,124,348	41,212,335	47,615,477	54,291,421	61,206,068	68,329,580	75,635,848
NET WORTH	**298,713,470**	**323,977,782**	**329,318,025**	**335,049,698**	**341,137,685**	**347,540,827**	**354,216,772**	**361,131,419**	**368,254,930**	**375,561,199**
Bank Loan	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL CAPITAL	**298,713,470**	**323,977,782**	**329,318,025**	**335,049,698**	**341,137,685**	**347,540,827**	**354,216,772**	**361,131,419**	**368,254,930**	**375,561,199**

9.5 PAYBACK PERIOD

During the operation period the project is expected to recover its initial fixed capital and pre-operational expenses in 3 years and 3 months

9.6 BREAKEVEN ANALYSIS

Break-even point shows the point at which costs and sales intersect at the various levels of output at any one year.

The projects break-even point with respect to the third year of full operational performance has shown that break-even sales are TZS 152.201billion which is attainable at a capacity of 58%.

9.7 PROFITABILITY

The Internal Rate of Return (IRR) after tax as shown in Table :20 below. Despite the heavy initial capital outlay the IRR **is** 20.0% above the prevailing lending rates, indicating a highly financially viable project. The rate is even higher than the highest cost of finance in the market, which is 16-19% per annum.

IRR will generally reflect the cost of borrowing money and other factors like inflation. This project's IRR quite reasonably covers these two variables.

Internal Rate of Return After Tax (IRR) is 20%
Net Present Value estimated at TZS 10.61 billion.

Table 20: Profitability Analysis Value in TZS'000

Item/Year	0	1	2	3	4	5	6	7	8	9	10
INFLOWS											
Profit Before Tax		57,383,738	96,649,489	111,426,922	111,426,922	111,426,922	111,426,922	111,426,922	111,426,922	111,426,922	111,426,922
Residual value											493,956,664
Recoupment of W/Capital										0	43,206,521
TOTAL INFLOWS		**57,383,738**	**96,649,489**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**111,426,922**	**648,590,107**
OUTFLOWS											
Investment	299,925,350				200,784,000	0	0	0	100,392,000	0	0
Taxation		0	0	13,603,860	19,025,342	19,236,112	19,427,973	19,597,672	19,744,566	19,873,098	19,985,564
Change in W/capital		26,070,422	12,450,447	4,685,652	0	0	0	0	0	0	0
TOTAL OUTFLOWS	**299,925,350**	**26,070,422**	**12,450,447**	**18,289,512**	**219,809,342**	**19,236,112**	**19,427,973**	**19,597,672**	**120,136,566**	**19,873,098**	**19,985,564**
NET CASHFLOWS	**(299,925,350)**	**31,313,316**	**84,199,042**	**93,137,410**	**(108,382,420)**	**92,190,810**	**91,998,949**	**91,829,250**	**(8,709,644)**	**91,553,824**	**628,604,543**

Internal Rate of Return After Tax (IRR) is 20%
Net Present Value estimated at TZS 10.61 billion

9.8 SENSITIVITY ANALYSIS

Sensitivity analysis was carried out on selling prices. Reducing selling prices by 10%, the IRR becomes 18% while reducing the capacity utilization to 50%throughout the project period,IRR becomes 12%. Initial investment cost can be increased by 10% and the project is still financially viable.

Project is most sensitive to sales prices which should not drop by more than 10% to have an IRR of above lending rate.

10. SOCIO ECONOMIC BENEFITS

Operations of Afya Wheat Flour Limited has a number of economic opportunities will be realized which include but not limited to the following:

- ***Revenue effect***: The Wheat Mill operations shall contribute substantial long-term revenue to the government through direct and indirect taxes
- ***Employment opportunities***: The Mill plant is expected to generate direct employment opportunities of various categories and skills in rural areas.
- ***Wheat production***: Increase in wheat production from small holder famers which will partly assist in conserving foreign exchange in importing wheat to fill the country's deficit.
- ***Small holder farmers 'facilitation***: Facilitate small holder farmers to utilize apart of the farmer more efficient and more profitable and thus increase their income and standard of leaving
- ***Infrastructure improvement***: As a long-term measure, the company shall improve the rural infrastructure of the district including rural roads and wheat marketing or collection centres.
- ***Added Value:*** The project will also go a long way in adding value to wheat production and marketing aspects.

Annex :1

1. Certificate of Incorporation No 14193794 of 18 June 2020

2. Title Deed No. DS MT1028639 of 6 th September 2020

   Location Kurasini Temeke Plot No.PI 120 with a total of 20,526 square metres