



# Wheat-based Consumer Foods in Nigeria

August 2016

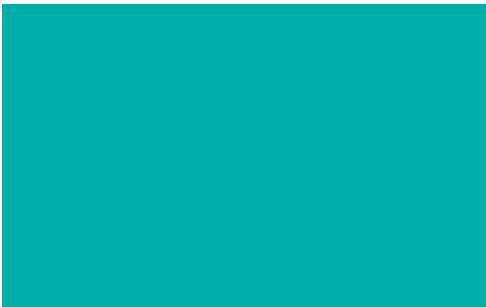
KPMG Nigeria



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# Introduction

Increasing urbanisation and population growth have boosted the growth in Nigeria's fast moving consumer goods (FMCG) sector. Food and beverages, personal care and home care are the primary segments of the sector. The outlook across the segments appear stable and positive, despite Nigeria's challenging economic environment (0.36% GDP decline in Q1 2016<sup>1</sup>).

The food segment is expected to witness strong growth driven by the growing middle class and the expansion of mass grocery retail channels in the urban areas. Food sales cumulative annual growth rate (CAGR) is forecast at 10.4% from 2015 to 2020, according to BMI Research. As the country grapples with the slow down in the economy and weakening local currency amidst low global oil prices, the government is seeking to diversify the economy. With increasing demand for wheat products (flour and flour-based foods), wheat has arguably become one of the most important agricultural commodities in need of accelerated local production. As at 2015, Nigeria imported about 4.3 million metric tonnes of wheat (MMT)<sup>2</sup>, at a cost in excess of \$3 billion. However, given the restrictions on the access to foreign currency, 12-month importation of wheat as at May 2016 declined by 5% to 4.1 MMT<sup>2</sup>, while local production remains low at 60,000 tonnes<sup>2</sup>.

The wheat industry, primarily comprising flour milling companies is an integral part of the country's food chain, producing flour for low cost convenient staple and baked foods.

Wheat milling capacity was estimated at about 8 million tons in 2012/2013, up from 6.6 million tons a year earlier,

with average capacity utilisation at 50%<sup>3</sup>. The industry is highly competitive, with the top players controlling over 70% of the market, reflecting an oligopolistic market structure. From a deals and investment perspective, the sector is expected to remain vibrant, as industry players implement various strategies aimed at maintaining competitiveness amidst declining margins. The various foreign exchange and import restrictions imposed by the Central Bank of Nigeria (CBN) in recent times, including the expected modalities of the proposed flexible exchange rate regime, continue to be a key consideration for the next course of action for the industry.

The previous administration under the Agricultural Transformation Agenda (ATA) by the Ministry of Agriculture, developed the country's Wheat Transformation Agenda (WTA). Amongst other initiatives, the WTA adopted a range of policies, aimed at reducing local wheat consumption. These consisted of the inclusion of cassava in bread flour, implementation of 15% levy on wheat importation as well as agricultural incentives aimed at spurring local wheat farming. The WTA target for local production of wheat is 1.5 MMT production by 2017. The Government also expects to reduce wheat importation by 50% by 2017<sup>4</sup>. Annual growth rate from 2017 onwards is projected at 20%.

The aim of the report is to provide the analysis of the wheat-based consumer foods segment, including size of the market, value chain and key players. In subsequent sections, we explore the outlook for the segment, including capacity, production and M&A and end with the overview of the major wheat-based products (biscuits and bread).



<sup>1</sup> GDP Q1 2016 Report

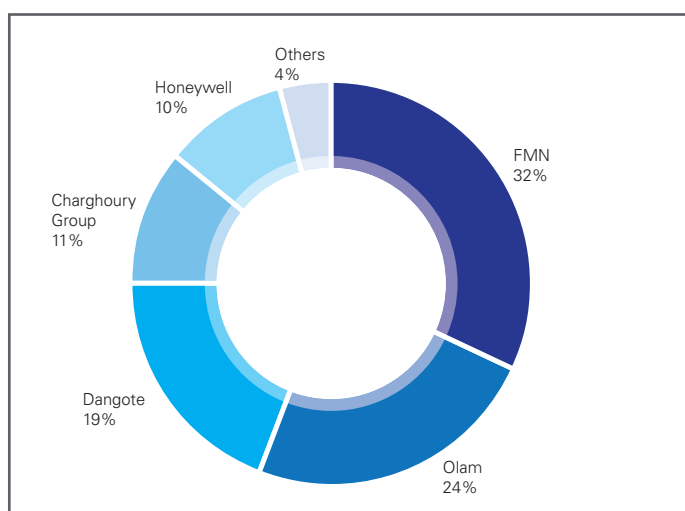
<sup>2</sup> Grain and Feed Annual Lagos Nigeria 4-21-2016 <http://apps.fas.usda.gov/psdonline/circulars/grain.pdf>

<sup>3</sup> Grain and Feed Annual Update 3-13-2014 [http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual%20Lagos%20Nigeria\\_3-13-2014.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Annual%20Lagos%20Nigeria_3-13-2014.pdf)

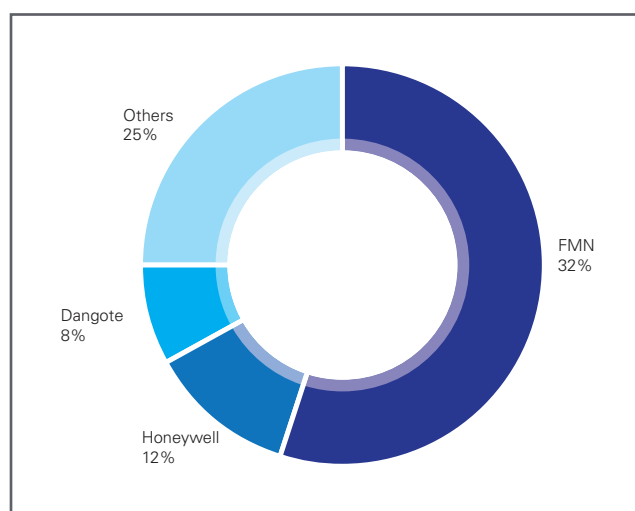
<sup>4</sup> Prospects of the Nigerian wheat transformation agenda [http://www.ijesit.com/Volume%203/Issue%205/IJESIT201405\\_15.pdf](http://www.ijesit.com/Volume%203/Issue%205/IJESIT201405_15.pdf)

# Market Size

Market size by capacity



Market size by revenue



Source: Companies' websites and financial statements, KPMG estimates

The Foreign Agricultural Service of the United States Department for Agriculture (USDA) estimated Nigeria's wheat milling capacity, at about 8 million tons<sup>5</sup> in 2012/2013. The USDA also estimates Nigeria's annual wheat consumption of 4.1 MMT<sup>6</sup>, as at July 2015, accounts for about 14% of Sub-Saharan Africa's consumption of 28.3 MMT.

The flour milling sector is the third link in the supply chain that connects farmers to consumers. Flour Mills Nigeria Plc (FMN), one of the largest single site mills in the world, is the industry leader in Nigeria, with a combined annual capacity of 3 million tonnes across all its milling facilities; about 40% of the country's total capacity. It also accounts for about half of Nigeria's total annual sector turnover of approximately \$3 billion<sup>7</sup>.

Annual imports are estimated at 4 MMT on average, at a cost of about \$3.2 billion. Domestic wheat production

was estimated at 70,000 metric tonnes<sup>7</sup> in 2013 (60,000 metric tonnes in 2015).

Although agriculture accounts for about a fifth of the country's Gross Domestic Product (GDP), the sector's opportunities have remained largely untapped. Nigeria has large swathes of arable land, but there has been significant lack of investment in the sector as well as specific challenges such as the low yielding variety of wheat available in Nigeria. As at 2013, prior to the global oil price decline and associated impact on foreign exchange supply in Nigeria, wheat imports were expected to grow at 5% annually prompting the Federal Government of Nigeria (FGN) through the Ministry of Agriculture to embark on a transformational agenda for the sector. The target is to raise domestic wheat production to 1.5 MMT by 2017, cut importation by half and significantly reduce foreign exchange spent on wheat importation<sup>8</sup>.

<sup>5</sup> USDA Grain and Feed Update 10-24-2013 [http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Update\\_Lagos\\_Nigeria\\_10-24-2013.pdf](http://gain.fas.usda.gov/Recent%20GAIN%20Publications/Grain%20and%20Feed%20Update_Lagos_Nigeria_10-24-2013.pdf)

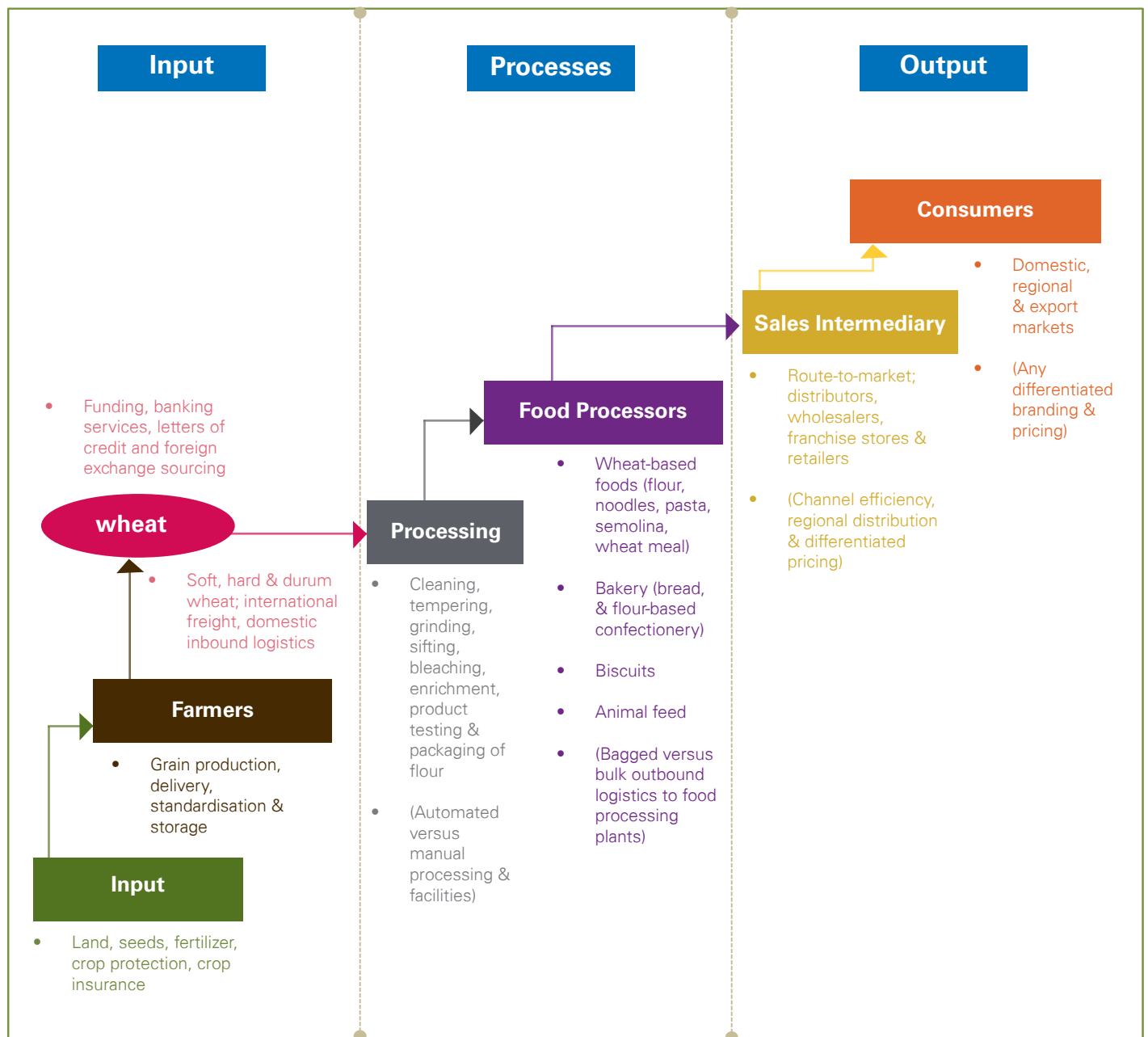
<sup>6</sup> Grain and Feed Annual Lagos Nigeria 4-21-2016 <http://apps.fas.usda.gov/psdonline/circulars/grain.pdf>

<sup>7</sup> KPMG's estimates based on educational journal <http://www.world-grain.com/Departments/Country-Focus/Country-Focus-Home/Focus-on-Nigeria-2015.aspx>

<sup>8</sup> Prospects of the Nigerian wheat transformation agenda [http://www.ijesit.com/Volume%203/Issue%205/IJESIT201405\\_15.pdf](http://www.ijesit.com/Volume%203/Issue%205/IJESIT201405_15.pdf)

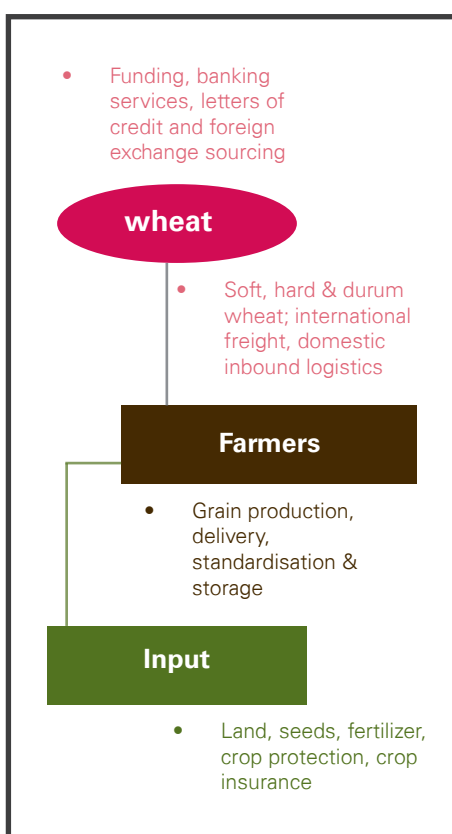
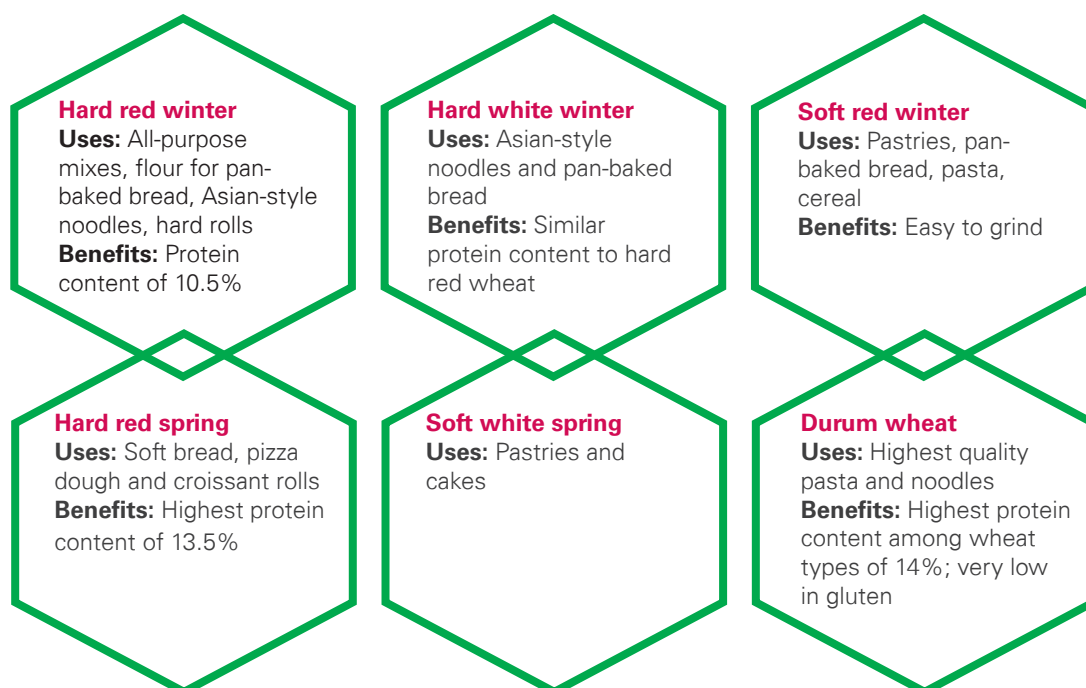


# Sector Value Chain



## Sector Value Chain – Input

# Wheat Types



Wheat is categorised into spring, winter and facultative types. According to research, the growth habit reflects the need to survive in different climates and affects productivity by timing crop stages to more favourable conditions. Spring wheat will not survive if exposed to temperatures below -10°C for more than 12 hours. Winter wheat, on the other hand, needs exposure to cold temperature (5°C - 10°C) of up to six weeks after germination to produce viable grains. Facultative wheat does not require extended exposure to cold temperatures to reproduce.

As the country seeks to increase its wheat production, the wheat types and species adaptable to Nigeria's climate will be key to achieving sustainable increase in local production levels and hence a primary and important research focus.

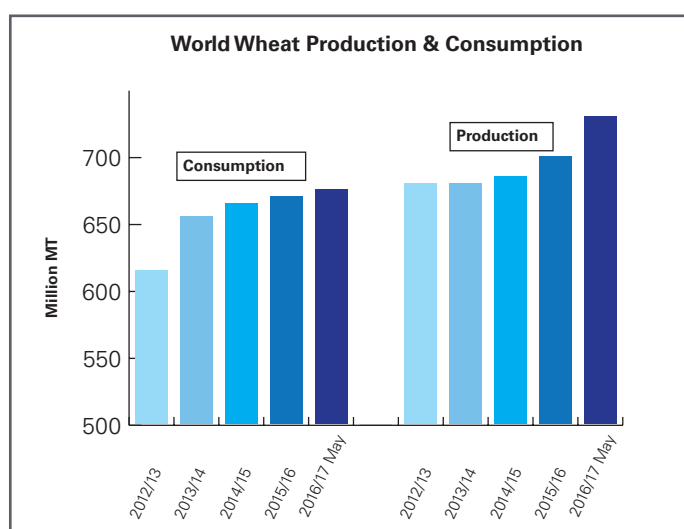


## Sector Value Chain – Input

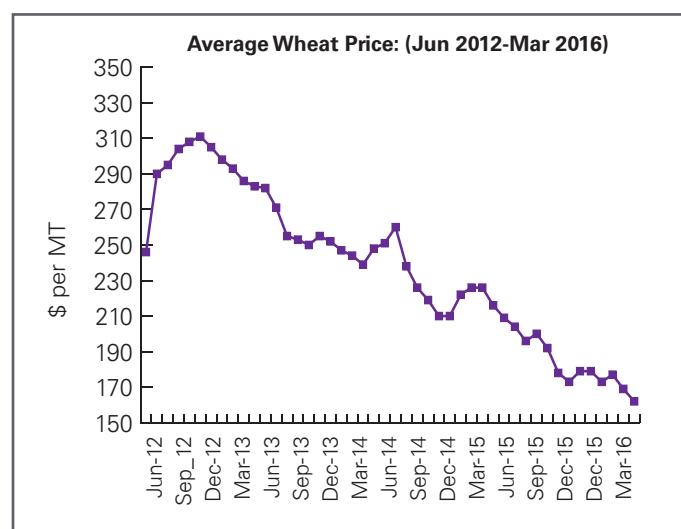
# Global Wheat Production

Global wheat consumption in the period presented in the chart was on average 94% of production. While production grew at a CAGR of 3% over the period, consumption increased at a CAGR of 1%. Global production is expected to increase by 1% to 787 MMT by 2024<sup>9</sup>, while consumption is expected to increase by 2% over the same period.

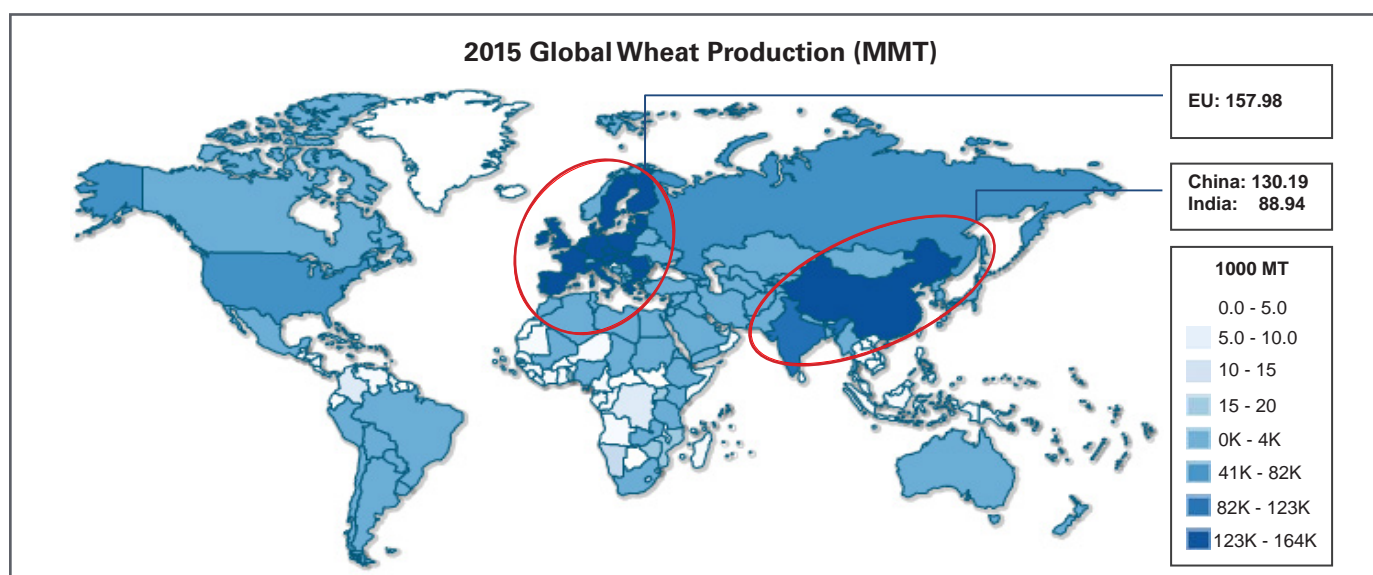
Given the outlook of healthy supplies and strong global export competition, average wheat prices across all wheat types in the 2016/2017 season are projected to fall between \$3.70 and \$4.50/bushel (approximately \$145.66 and \$177.16/metric ton), from \$4.90 (\$192.90/metric ton)<sup>10</sup> in the preceding season.



Source: USDA, Grain: World Markets and Trade August 2016



Source: USDA



Source: Index Mundi

<sup>9</sup> OECD-FAO Agricultural Outlook 2015-2024 <http://www.fao.org/3/a-i4738e.pdf>

<sup>10</sup> United States Department of Agriculture, Global Grain Trade, May 2016 <http://apps.fas.usda.gov/psdonline/circulars/grain.pdf>

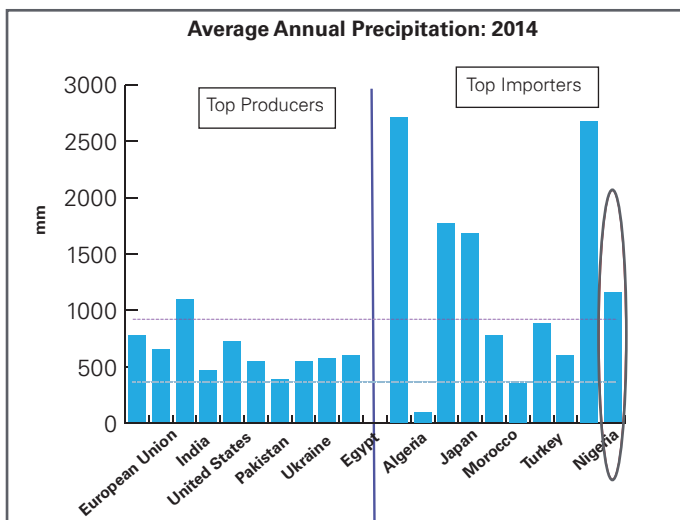
## Sector Value Chain – Input

# Global Wheat Trends

The European Union (EU), China, India, Russia and the U.S have consistently, in the last three years, featured in the top five wheat producers' list. According to the Food and Agriculture Organisation (FAO), optimal wheat growing latitudes lie between 30° and 60°N, and 27° and 40°S, on which all top five wheat producers, except India, lie.

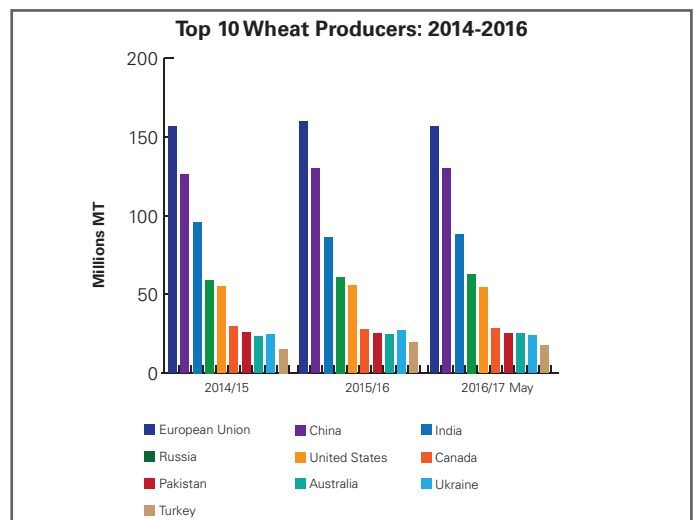
Top wheat producers in the world have an average annual precipitation in the range of 375 and 875mm, which has been discovered to be ideal for wheat growing.

Precipitation in top importing countries, on the other hand, is typically above or below the stated maximum and minimum levels, respectively. However, India with average annual precipitation of 1,083mm remains an exception to this rule, being the world's third highest producer of wheat, behind EU and China as at May 2016. India's top wheat producing country status was achieved over the years, through consistent government policies, as the country's wheat production was far below demand as at independence in 1947, resulting in significant importation.

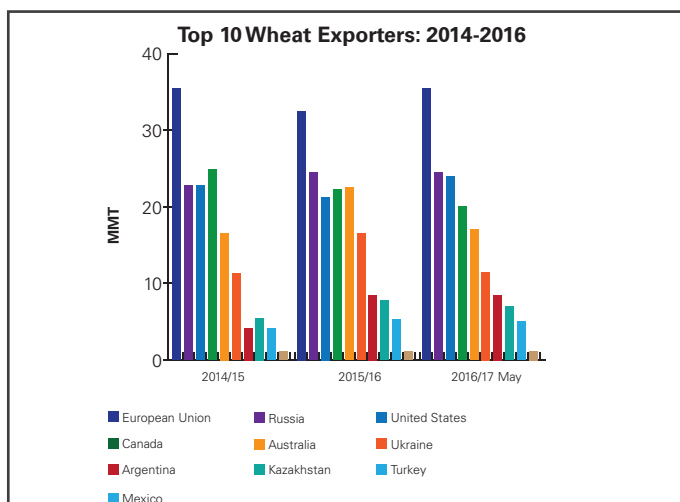


Source: World Bank

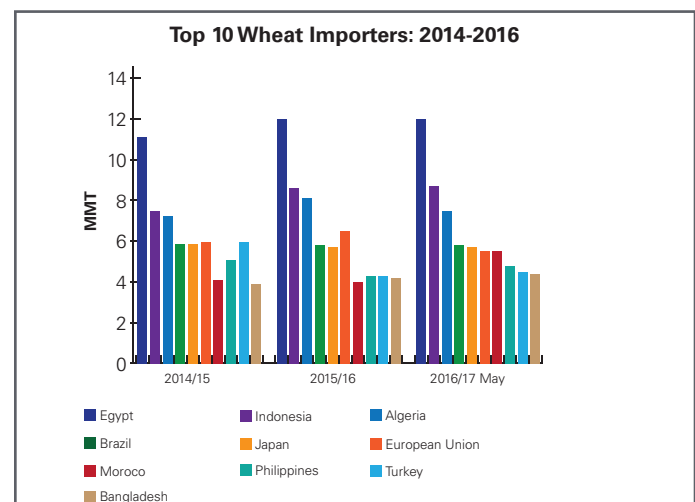
As a result of the recent challenges in accessing foreign exchange, Nigeria is currently no longer listed among the top 10 global importers of wheat, down from its 9th position as at 2014.



Source: USDA, Grain: World Markets and Trade May 2016



Source: USDA, Grain: World Markets and Trade May 2016



Source: USDA, Grain: World Markets and Trade May 2016

## Sector Value Chain – Input

# Local Wheat Environment

Value Chain Link	Challenge	Description	Current Government Initiatives	Comments
Input	Climate / Wheat varieties	Latitude 10°N; average precipitation of 1,150mm  Poor quality seeds with average yield of 1 MT/ha	Two varieties, Norman Borlaug and Reyna-28, deemed to produce an average yield of 4-5 MT/ha have been distributed to farmers under WTA	Continuous and consistent research and development into the suitable varieties of wheat for Nigeria's ecological conditions
	Land utilisation & irrigation	Rain-fed highlands, such as Mambilla Plateau in Taraba State, Jos in Plateau State, and Obudu in Cross River State, have about 80,000 hectares of land suitable for wheat production. Total land available for wheat production is estimated at 600,000 hectares, with only 10% being utilised and irrigated currently	Current initiatives under the government's WTA are expected to encourage local wheat farming and increase land utilisation	Improved wheat varieties, and irrigation, increasing yield per hectare and other government policies are expected to increase land utilisation
	Credit availability	Limited access to required funds	N237 billion (US\$1.2 billion) disbursed by the CBN via the Commercial Agriculture Credit Scheme (CACS) since inception, for over 300 agriculture-related projects	Improved and more effective supervision of ongoing grants is necessary, to ensure that disbursements are utilised for the intended purpose. A more holistic policy framework to funding agriculture-related projects at various stages of the value chain should also be considered by government
	Lack of mechanised farming / fertilizer	Low levels of mechanised farming amongst local farmers and poor access to fertilizer	Government's Growth Enhancement Support Scheme (GESS), within the Fertilizer Market Stabilisation Programme. This programme provides incentives to improve access to subsidised fertilizers by farmers	Proper implementation of GESS and government support to improve the use of mechanised farming among local farmers
	Research & development	Low but improving research & development	Partnerships with research institutes and agriculture centres	Increased focus by government on global benchmarking and increased private sector involvement
Demand/ market access	Poorly developed infrastructure	Poor transportation and power supply	Nationwide focus on infrastructure development	Transparency and effective monitoring
	Storage	Inadequate storage facilities and post-harvest losses	The Nigerian Stored Products Research Institute (NSPRI); a research institute under the Federal Ministry of Agriculture	Public-private partnerships in storage improvement

## Sector Value Chain – Input

# Local Wheat Environment

## Nigeria Vs. BRICS / MINT Countries

Nigeria's wheat consumption per capita remains the lowest amongst the BRICS and MINT countries

### Brazil

Prod: 5.5M  
Cons: 10.2M  
Imports: 5.8M  
CPC: 0.05  
AAP: 1,146mm  
Yield: 2

### Russia

Prod: 61.0M  
Cons: 37.0M  
Imports: 0.4M  
CPC: 0.26  
AAP: 460mm  
Yield: 2

### India

Prod: 86.5M  
Cons: 88.7M  
Imports: 0.5M  
CPC: 0.07  
AAP: 1,083mm  
Yield: 3

### China

Prod: 130.2M  
Cons: 112.0M  
Imports: 3.0M  
CPC: 0.08  
AAP: 645mm  
Yield: 5

Country	Nigeria
Species planted	Rain-fed wheat
Species consumed	Hard red winter, Soft red winter, Durum
Wheat cultivable land	600,000 hectares
Current land utilisation	c.10 %
Yield	1 to 2 MT/ha
Government interventions	WTA; GESS
Average annual precipitation (AAP)	1,150mm

Country	Nigeria
Annual production (Prod)	60,000 MT (2015)
Annual consumption (Cons)	4.06 MMT (2015)
Annual import	4.4 MMT (2015)
Consumption per capita (CPC)	0.023 MT/person

### Mexico

Prod: 3.8M  
Cons: 7.0M  
Imports: 4.4M  
CPC: 0.06  
AAP: 758mm  
Yield: 5

### Indonesia

Prod: NIL  
Cons: 8.2M  
Imports: 8.6M  
CPC: 0.03  
AAP: 2,702mm  
Yield: NIL

### Turkey

Prod: 19.5M  
Cons: 18.0M  
Imports: 4.3M  
CPC: 0.23  
AAP: 593mm  
Yield: 2

### South Africa

Prod: 1.5M  
Cons: 3.2M  
Imports: 2.0M  
CPC: 0.06  
AAP: 495mm  
Yield: 3

Source: USDA Grain and Feed Annual Reports, World Bank

CPC is based on 2015 Population

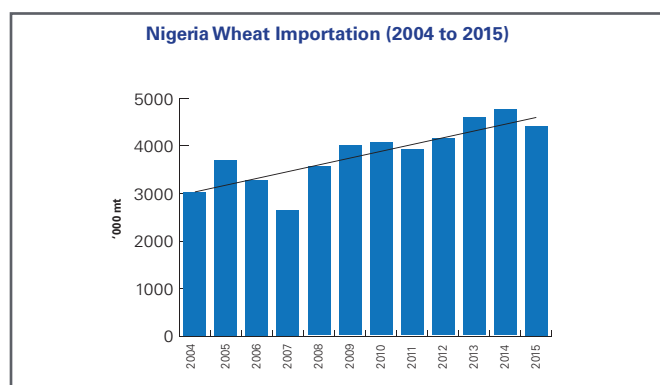
## Sector Value Chain – Input

# Local Wheat Environment

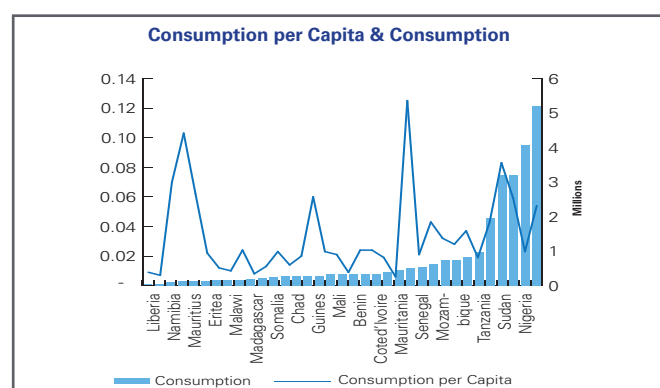
## Wheat Importation in Nigeria

Nigeria, with total consumption of 4.1 MMT<sup>11</sup> in 2015, is one of the highest consumers of wheat in Africa, lagging behind only Ethiopia in Sub-Saharan Africa. Nigeria's wheat consumption per capita of 0.023 MT/person<sup>11</sup>, however, is currently 16th among its Sub-Saharan peers. This trend is indicative of potential increase in consumer demand, driven by the exponential growth in population, an emerging middle class, rapid urbanisation, resulting in increased demand in staple foods. According to ICARDA, Nigeria's wheat importation is projected to reach 10 MMT by 2030.

Given the abysmally low production levels, Nigeria's wheat consumption to import ratio is only slightly below 100%. According to the USDA, Nigeria is currently the thirteenth largest importer of wheat in the world. Local importation in 2014 increased to a record 4.75 MMT, at CAGR of 4.7%, between 2004-2014. However, as a result of the challenges in foreign exchange sourcing, wheat imports declined to 4.4 MMT in 2015<sup>10</sup>. The majority of wheat imported into Nigeria, is the Soft red winter, Hard red winter, Hard white and Durum wheat types.



Source: Index Mundi, US Department of Agriculture



Source: USDA Grain and Feed Annual Reports, World Bank

The FGN introduced a 15% levy on wheat importation effective July 2012, increasing the effective duty on the grain from 5% to 20%. The levy introduction together with the cassava inclusion policy are the core of the Federal Government's wheat import substitution drive, aimed at significantly reducing wheat importation and conserving foreign exchange.

However, with average annual growth rate of 1% (2012-2015) of imported wheat, the introduction of the levy does not appear to be a disincentive to wheat importation by industry stakeholders.

However, operations have been negatively affected by the increased costs associated with the tight foreign exchange controls introduced by the CBN and the devaluation of the Naira in 2014.

Industry players have their additional exposure to the volatility in the commodities market due to the uncertainty associated with accessing foreign exchange to settle hedged positions. However, with the current floating exchange rate regime, we expect a change in the market dynamics.

<sup>11</sup> Grain and Feed Annual Lagos Nigeria 4-21-2016 <http://apps.fas.usda.gov/psdonline/circulars/grain.pdf>

## Sector Value Chain – Input

# Government Intervention

### Wheat Transformation Agenda (WTA)

WTA, an aspect of the Agricultural Transformation Agenda (ATA) of the FGN, was established to improve local production of wheat, thereby reducing wheat importation. The program is aimed at increasing

domestic wheat production from the current level of 70,000 MT (pre-2015 level) to 1.5 MMT per annum by 2017. It is also expected to concurrently generate one million jobs over four years especially in the rural areas, and over N42 billion in income per annum for farmers and millers.

The distribution of improved seedling at no cost and subsidised fertilizer and farming equipment to farmers is one of the key policy thrusts of WTA. Under the program, two high-yielding improved wheat varieties have been released, Norman Borlaug and Reyna-28, produced by International



Maize and Wheat Improvement Center (CIMMYT) and International Center for Agricultural Research in the Dry Areas (ICARDA) in collaboration with Lake Chad Research Institute (LCRI). These varieties have good milling and bread making quality with average yield of 4 to 5 MT/ha. The Ministry has begun the distribution of these varieties to farmers through the Growth Enhancement Support Scheme (GESS).

### **Cassava Inclusion Policy**

Other than the inclusion of tariff on wheat importation, another key policy of the FGN aimed at significantly decreasing the volume of wheat imports into Nigeria is the cassava inclusion policy. This policy requires flour millers to include between 10-20% of cassava flour in the production of bread. This proportion is currently at 10%, though Government had a 40% target inclusion by 2015. The policy, however, is beset with challenges, such as the change in quality and taste of baked goods, increased costs associated with infusion of enzymes in the bread making process to ensure consistent bread quality and limited availability of high quality cassava.

In a bid to encourage the implementation of the cassava inclusion policy, the Government removed the 10% import duty on gluten enzymes to minimise overall cost of production arising from the inclusion of cassava flour in bread. The lower protein content in cassava compared to wheat is also a key consideration for stakeholders as the policy gets implemented.

Overall, this policy is expected to contribute minimally to the objective of nearly halving Nigeria's wheat imports in the near term. A more holistic approach by Government in collaboration with key industry players within a realistic timeline will be key to achieving expected objectives.

### **Growth Enhancement Support Scheme (GESS)**

GESS aims to support resource-constrained farmers by providing various incentives required to improve productivity, household food security and income for the farmers. The scheme provides access to agricultural inputs, especially fertilizers to farmers across the country. According to the Federal Ministry of Agriculture and Rural Development, 6,111 farmers had registered under the scheme as at 2013 dry season.

Also under the scheme, a total of 3,646 wheat inputs and 7,172 NPK fertilizers had been disbursed. The scheme appears viable and if appropriately monitored and implemented, could contribute to the achievement of the Government's WTA objectives following the successes recorded by India's government from a similar initiative.

### **Government Funding Interventions**

One of the most prominent issues affecting local farmers is poor access to cheap sources of funds for farming inputs and equipment, especially in the Northern region of the country where food production thrives.

The CBN noted in August 2014 that the FGN had disbursed about N237 billion (US\$1.2 billion) for agriculture-related projects, under various agro-funding schemes. These include Commercial Agriculture Credit Scheme (CACS), Agricultural Credit Guarantee Scheme Fund (ACGSF), Nigeria Incentive-based Risk-sharing System for Agricultural Lending (NIRSAL) and the Agricultural Credit Support Scheme (ACSS).

However, a 2014 study published in the Global Journal of Science Frontier Research, on the effect of ACGSF on production efficiency of rural farmers in Benue State, Nigeria, concluded that ACGSF loans were not adequate for farmers to increase

**" GESS aims to support resource-constrained farmers by providing various incentives required to improve productivity"**

output in the area, while noting that farming systems and practices were still characterised by the use of crude implements.

### **Agriculture Produce and Finished Products Storage**

Storage is also a critical aspect of the agricultural value chain that needs to be considered in the drive to increase the production of wheat and other agricultural produce. NSPRI was established in 1954 as a Government initiative aimed at improving the handling of agricultural products post-harvest.

In the light of the recent initiatives of the Government, a restructuring of NSPRI may be necessary to align with recent developments in the sector. With the huge prevalent storage gap in Nigeria, Government's policies could also be directed towards encouraging private sector investment in the provision of competitive storage facilities as an imperative addition to the wheat production value chain.

The major wheat importers and users in the country (flour milling companies) are located in close proximity to the sea ports, which facilitates the movement of grains from vessels to milling facilities. However, storage remains a major challenge, as these companies are limited to holding grain inventory that can sustain only a month's milling cycle according to a USDA report.

In view of the expected increase in both local wheat production and consumption, the provision of grain storage and logistic services appears a viable investment option for both the public and private sectors, particularly considering the expected cost savings from economies of scale from importation and the improved efficiency of local farmers. In spite of Government's efforts at spurring local production of wheat, ICARDA projects that Nigeria would import approximately 10 MMT of wheat by 2030, in view of the current growth of demand for wheat-based products.

### Lessons from India & Others

The challenges which have dragged production in Nigeria, including unfavourable climate, relatively high precipitation resulting in yield losses from disease and root problems, and poor quality of wheat varieties cultivated, were also some of the major challenges affecting India's production of wheat.

India's wheat production for 2015-2016 was 88.9 MMT, and is estimated to reach 92.0 MMT for 2016-2017<sup>12</sup>. However, production post-independence in 1950-51 was only 6.5 MMT, with large quantities of wheat imported from many countries, including the U.S., to bridge the gap. The key reasons for low production in India at the time were (a) tall growing plant habit resulting in lodging, when grown under fertile soils with conditions of high moisture and nitrogen fertility, (b) poor tillering and low sink capacity of the varieties used, (c) high susceptibility to diseases, (d) high sensitivity to thermo & photo variations, etc., resulting in poor adaptability, and (e) longer crop duration resulting in long exposure of plants to climatic variations and insect/pest diseases and attacks.

To become self-sufficient in the production of wheat, the Government of India appointed a

commission in 1961. The mandate of the commission was to assess the feasibility of increasing wheat productivity under prevailing Indian ecological conditions.

Key government interventions in this regard included:

- research and development involving introduction and massive importation of suitable wheat varieties;
- partnerships with other countries to test compatible disease resistant wheat varieties;
- declaration of minimum support price to encourage local farmers;
- construction of large grain handling facilities;
- establishment of seed production chains, fertilizer factories and farm machinery units;
- increased public investment in irrigation and agricultural research; amongst others.

In spite of the significant improvement in India's wheat production, the country remained unrelenting in its support for wheat production. The National Development Council, in 2007, introduced a centrally sponsored scheme "National Food Security Mission", which provides assistance in the form of monetary aids to local producers of wheat, rice and pulses.

These aids were targeted towards developmental projects such as:

- technological improvement;
- distribution of High Yielding Varieties Seeds (HYVs);
- plant/soil protection management;
- energy management;
- efficient water application tools;
- cropping system based trainings; amongst others.

The successes of these interventions are evident in the growth seen in India's wheat production since the establishment of the mission. Local wheat production grew by 3.4%

between 2007-2014, relative to 0.1% decline from 2000-2007. Brazil, a country with similar ecological factors to Nigeria, has also been one of the major importers of wheat. However, government support, in the form of aggressive wheat planting, minimum support prices, among others, had contributed to active growth and

**" In spite of the significant improvement in India's wheat production, the country remained unrelenting in its support for wheat production"**

development in the country's wheat growing sector. Consequently, Brazil's wheat production grew by a CAGR of 16%, from 4.4 MMT in 2012 (the inception of active government intervention) to 5.9 MMT in 2014, with a modest decline to 5.5 MMT in 2015.

In June 2016, the Wheat Farmers Association of Nigeria signed a memorandum of understanding (MOU) with the Flour Millers Association of Nigeria, fixing the minimum price of wheat at N140,000 per tonne. This, in addition to the WTA initiative of the FGN, if effectively implemented, is expected to be a step in the right direction involving research and development by the relevant research institutes.

<sup>12</sup> Grain and Feed Annual Lagos Nigeria 4-21-2016 <http://apps.fas.usda.gov/psdonline/circulars/grain.pdf>

## Sector Value Chain – Processing

# Flour processing

## Grain Delivery/Storage

The milling process turns wheat into flour and is the major step in the sector value chain. Different species of wheat are used to make different types of flour. Each variety of wheat is more suitable for a specific purpose according to specific traits. The wheat grains used in flour production process in Nigeria are primarily imported.

Location in close proximity to the port facilitates the transfer of the grains via conveyors, directly from the ship to the grain silos used for storage prior to the milling process. Wheat is stored according to variety, depending on protein level and other quality considerations.

## Cleaning Process

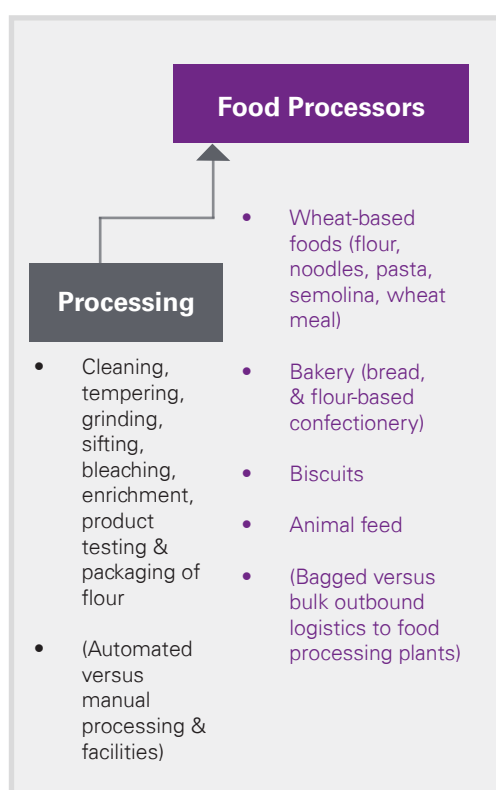
The cleaning process involves various steps and begins with the removal of foreign materials, a process called separation via the use of magnetic and other separators. Magnetic separators remove metal particles from the wheat grains while disc, colour and other separators remove other particles based on shape, colour and nature of items different from the wheat grains. The de-stoner uses gravity to separate heavy and light materials to remove stones from the grains.

The scourer removes other impurities with an intense scouring action. At the end of the cleaning process, the wheat is conditioned for milling, a process called tempering. This involves adding water to the grains to get the right moisture level. The tempering time and temperature are dependent on the type of wheat and desired moisture level. At the end of the tempering process, the wheat grains are finally ready to be milled into flour.

## Milling

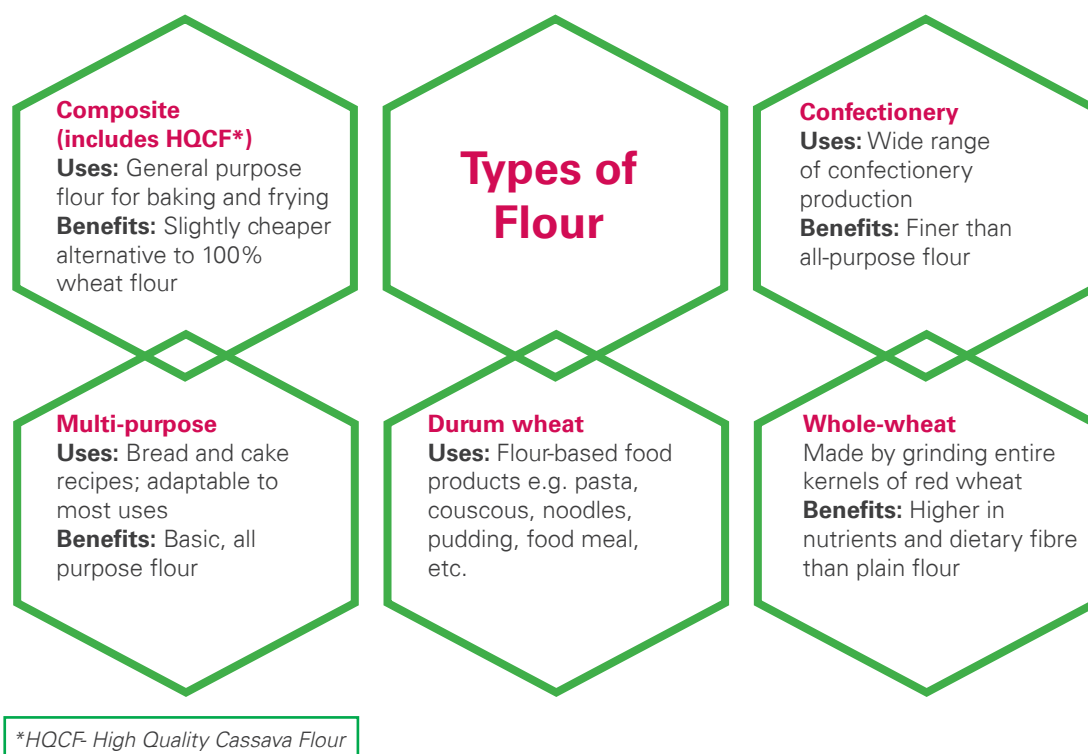
Milling begins with grinding the wheat. The process involves repeated grinding and sifting to achieve consistent end products. Various rolling systems are used in the grinding process to obtain different desired results. A purifier is used to remove any bran particles from the flour, while the by-products of the grain that do not break down into flour are used as livestock feed.

Based on our discussions with leading domestic industry players, the use of advanced technology and modern equipment enables the production of stable and high quality flour products. This is critical to meet the different consumer needs to sustain market share.



## Sector Value Chain – Processing

### Finishing Process



At the completion of milling process, the flour if required, is bleached. The bleaching process chemically whitens the flour and improves the baking qualities. The process speeds up the natural lightening and maturing of flour, without changing the flour's nutritional value or leaving any harmful chemical residues. The processed flour can also be enriched as part of the finishing process. Enriched flour is supplemented with iron and four B-vitamins (thiamin, niacin, riboflavin and folic acid). At the end of the process, the finished product is tested for quality specifications and assurance and subsequently packaged.

The by-product of the finishing process is used for the production of livestock feed.

According to a World Health Organisation (WHO) report, U.S, Canada and Chile have recorded decreases of 26%, 42% and 40%, respectively, in the rate of neural tube defects after births, following the implementation of national regulations mandating wheat flour fortification with folic acid. Currently, there is no similar legislation in Nigeria and no real data on the proportion of flour in Nigeria that is fortified with added vitamins.

## Automation is Crucial...

As in other manufacturing sectors, automation and energy efficiency are increasingly important in the wheat milling sector. Leading players globally are installing automated systems and utilising more energy efficient equipment of leading global manufacturers of flour milling equipment.

improve production efficiency. More automated systems are being deployed in areas such as wheat receiving and unloading, flour bag packing and stacking. A leading local flour milling company has deployed an automated state-of-the-art facility, with only ten workers required for operations.

Through the use of automated facilities, the companies are able to minimise workforce and

# Distribution



## Sector Value Chain – Distribution

# Route-to-Market



**R**oute-to-market processes for major flour milling companies in Nigeria largely comprise transporting flour from the production site to the companies' own distribution centres or major distributors, large supermarkets, and/or dealers.

The mode of distribution depends largely on the end users. For artisanal producers of flour-based products, flour is packaged and distributed in bags of various sizes, the most popular size being the 50 kilogram bag. For larger users of flour, such as major bakeries and biscuit

manufacturers, sales are made directly using large specialised tanks. Other wheat-based products, such as pasta, semolina and noodles, are sold in standard packages across operators through major distributors and wholesalers.

However, the joint ventures between Tolaram and other FMCG companies, such as Arla Foods, a Danish manufacturer of dairy foods, and Kellogg's, a major breakfast cereal and snacks manufacturer in the USA, are expected to drive changes in the future route-to-market models of similar companies.

Multi Pro was founded in 1997 as a member of the Tolaram Group, with head office in Lagos. The core business of the company is the sales and distribution of Indomie instant noodles. The company provides access to approximately 1,000 exclusive distributors, 2,600 employees and operates 19 warehouses, across six locations, including Ghana. It is also establishing similar networks in other key African countries including Democratic Republic of Congo, Ivory Coast, Cameroon and Ethiopia.

With the acquisition of 50% of the shares of Multi Pro for US\$450 million and a right to acquire a stake in Tolaram in the future, Kellogg's in September 2015, announced a long-term partnership with the company. The key deal rationale was to enable Kellogg's to significantly advance its emerging market strategies to drive

future growth. Kellogg's is expected to achieve this by leveraging Tolaram's extensive marketing, supply chain and distribution network. Kellogg's is also expected to commence the local manufacture of its products in Nigeria in the future, leveraging Tolaram's manufacturing facilities.

Following the Tolaram/Kellogg's strategic alliance, we expect that the route-to-market model of other medium to large FMCG companies will evolve over time. This will be necessitated by the need to optimise cost, obtain access to a wider market and remain competitive in the light of entry by global players into the Nigerian market.

As competition intensifies in the sector with price wars among leading players, industry players are expected to improve the efficiency of their value chain, from inbound logistics (grain handling and storage) to distribution and, to a large extent, marketing and export of products. This model is already being adopted in other countries, including Australia and South Africa.

A South African company similar to the leading local flour manufacturers, operates a business model along the entire wheat milling value chain (including milling and bakery), while seeking to add value and reduce inefficiencies where possible. We have analysed below the route-to-market model of the South African flour manufacturer versus that of a Nigerian flour manufacturer.

## Sector Value Chain – Distribution

	Nigeria's Leading Players	Comparable Company in South Africa (SA)	Comments
<b>Packaging</b>	Categorised by consumer type: B2B (large tanks for large users); bags for small to medium users	Categorised by consumer type: large trucks or trains for large users; bags for small to medium users	Flour is packaged in varying sizes, depending on customers' requirements. Flour Mills of Nigeria (FMN)'s subsidiary, Bagco, undertakes all of the company's packaging. The company also recently entered into the flexible packaging business.
<b>Warehousing</b>	1. Centralised on-site; 2. Depots/ distribution centres	Outsourced; provided by a subsidiary	While FMN has a distribution centre in Shagamu in addition to its on-site warehousing, Honeywell Flour Mills (HFM) currently operates a centralised warehouse. However, HFM is also developing an industrial complex in Shagamu.
<b>Distribution</b>	Distribution via independent wholesalers & sometimes supported by the companies' sales force	Outsourced; provided by a subsidiary	The distribution of the products of Nigeria's leading players is largely undertaken by independent wholesalers across the regions, mostly on a non-exclusivity basis. Volume rebate is primarily the incentive for distributors. The companies concentrate on marketing to create products and brand awareness and for the most part, bear all associated logistics costs to wholesalers.
<b>Channels/ Reach /Pricing</b>	All 36 states across Nigeria and FCT; minimal or no exports. Pricing is homogenous	All nine provinces across South Africa; exports to other African countries	Nigeria's leading players have a nation-wide geographical reach. Product transportation is undertaken by third party logistics companies. The players adopt a homogenous branding and pricing strategy across the country.

# Key Players

## Profile

Key Players				
Metrics	FMN	Olam*	DFM	HFM
CIC (MT/day)	8,000	6,140	4,800	2,610
Turnover (N'bn)	230	N/A	36	49
GPM (%)	10.9	N/A	8.3	15.3
OPM (%)	3.0	N/A	-27.5	4.5
NPM (%)	1.1	N/A	-39.0	2.3

Source: Companies' Annual Reports

\*Olam comprises BUA and Crown Flour Mills

Performance metrics are based on the respective companies' rather than group accounts

CIC: Current Installed Capacity  
GPM: Gross Profit Margin  
OPM: Operating Profit Margin  
NPM: Net Profit Margin

The three largest players in the market account for approximately 75% of total revenues. FMN is the largest and most diversified player in the sector, built around food, agro-allied and support services. Management attributes the company's success to clear strategic direction, which focuses on the consistent availability and aggressive marketing of high quality

products, underpinned by the understanding of customers' needs.

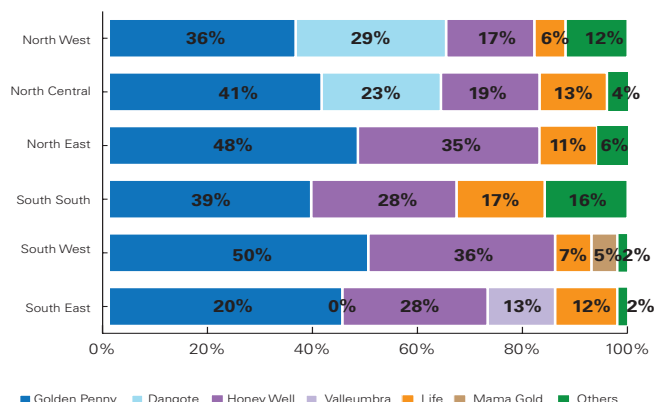
While other companies in the industry operate at an average capacity utilisation of 50% or less, FMN's capacity utilisation is estimated at about 70%, enabling the company to maintain market dominance across the different regions of the country.

DFM's market share is concentrated in the Northern region, while two marginal players, Valleumbra Flour Mill and Life Flour Mill have retained a share of the South East market and all regional markets respectively.

Crown Flour Mills (CFM), a member of the Olam Group, has a 5% share of the South West market, through its Mama Gold brand, as it primarily manufactures flour as an input for the group's packaged foods subsidiaries.

While FMN currently has the largest market share by revenue, HFM is the most profitable. DFM, however, has sustained losses since the time Tiger Brands acquired a 70% stake in the company in 2012. Impairment of assets not in use and finance costs have been a drag on the company's profitability, contributing about 12% of total costs as at December 2015. The persistent losses resulted in the Dangote Group Limited, buying the company back at a fraction of what it sold it to Tiger Brands.

Sector Market Share by Region (2014)



Source: Issues in Business Management and Economics (Vol. 2)



## Key Players

# FMN & HFM

### FMN

FMN has a range of food products, marketed under the Golden Penny brand, which has the strongest brand recognition in the segment. Products include wheat-based foods; flour, pasta, semovita, noodles and wheatmeal.

FMN also produces a variety of snacks, sugar, breakfast cereal, vegetable and soy oil and margarine.

Through a strategic backward integration, the company has invested in the agro-allied industry with maize, rice, soya bean, cassava, palm and sugarcane farms. Also, FMN's agri-inputs business takes advantage of the company's extensive distribution network to supply fertilizers and seeds to farmers across the country.

The company's packaging division, Bagco, and Apapa Bulk Terminal subsidiary continue to support its business operations. The Terminal facilitates FMN's inbound raw material logistics to the company's milling facility in Apapa. This significantly minimises logistics challenges which plague a number of companies in Nigeria.

In order to focus on its core businesses and streamline operations, FMN recently divested its cement operations and commenced a group restructuring exercise. The restructuring merged five of its subsidiaries into the holding company, under a scheme of arrangement. The exercise is expected to improve efficiency and operational synergies and reduce administrative costs. Earnings pressure, arising from increased finance costs was also expected to abate, following the completion of a rights issue. However, FMN has subsequently suspended the rights issue process in the light of the current economic environment.

In the light of the above, we expect FMN to maintain its sector leadership in the short to medium term, amidst a highly competitive landscape.

### HFM

HFM, on the other hand, has the highest profitability indices in the sector, though its 2015 financial results indicate an 11% decline in top line revenue. The decline is attributable primarily to the Naira devaluation, price war amongst the leading players, unrest in Northern Nigeria and the perennial gridlock in Apapa, which has negatively impacted the company's logistics. The company, similar to FMN, manufactures a range of wheat-based products, including flour, pasta, semolina, wheatmeal and noodles, with flour accounting for 58% of revenue in 2014. The company's food business is marketed under the Superfine brand through a wholly-owned subsidiary; Honeywell Superfine Foods Limited.

Management's efforts to improve efficiency in operations through a well-organised backward integration plan, has resulted in the diversification into agro-allied business, to produce maize, sorghum, cassava, soya bean and palm oil. The company has also commenced the construction of an animal feed mill plant and is ramping up efforts towards the completion of its foods and agro-allied industrial complex in Shagamu. The foods and agro-allied complex spans over 60 hectares of land, with a goal to produce and process a range of food and agro-allied products.

Amidst the price war amongst the big players, the development of a facility in Shagamu, should improve efficiency of the company's distribution and logistics and alleviate the decline in stock turnover posed by the Apapa gridlock. It also presents an opportunity to expand into other wheat-based foods segment, such as biscuits and snacks. This would potentially diversify and increase the company's revenue base.

## Key Players

# Olam, DFM & Others

Through its recent acquisition of the wheat milling and pasta assets of BUA Group for US\$275 million, Olam has become the second largest flour producer in Nigeria with respect to capacity. The key rationale for the acquisition, according to Olam, was to provide the company the opportunity to scale up its wheat milling operations and extract significant synergies by combining the acquired assets with CFM.

Tiger Brands' entry into the flour milling sector, following its acquisition of a 63% stake in DFM

in 2012 and subsequent increase to 70% stake, has been beset with operational issues, resulting in losses and asset write down. In view of the company's multi-faceted challenges, Tiger Brands subsequently exited the loss making business and sold it to Dangote Industries Limited in 2016 for \$1 and also wrote off R700 million in shareholder loans.

DFM's key products include flour, pasta and noodles. The company was said to be operating at approximately 35% flour production capacity. However, following the reopening of its Kano factory, the

capacity utilisation of the company is expected to increase.

The new DFM expects to strategically re-position itself in the North, where it has historically maintained market dominance. Additional cash of N10 billion has been injected into the business, with the aim of increasing productivity. In the near to medium term, DFM also expects to backward integrate, with plans to commence wheat growing in the country, a plan which it believes will contribute positively to the re-opened Kano plant.

# Chagoury, Valleumbra & Others...

Name	Location	Installed Capacity (MT)	Ownership
Valleumbra Flour Mills	Aba	900	Valleumbra Group
Ideal Flour Mills	Lagos	850	Chagoury Group
Port Harcourt Flour Mills	Port Harcourt	650	Chagoury Group
Jos Flour Mills	Jos	450	N/A
Niger Delta Flour Mills	Onitsha	400	Chagoury Group
Pure Flour Mills	Port Harcourt	N/A	Tolaram Group
Life Flour Mills	Lagos	N/A	N/A

Source: Companies' websites and Annual Reports; Meetings with Management



## Outlook

# Production

The objectives of the ATA have been received as a welcome development, spurring financial support of over US\$750 million from the World Bank, African Development Bank (AFDB), International Fund for Agricultural Development (IFAD), Ford Foundation and Tony Elumelu Foundation. Other unverified investors and donors include China EXIM, Overseas Private Investment Corporation (OPIC), Department for International Development (DFID), Bill and Melinda Gates Foundation, with a total commitment of approximately US\$1.25 billion. However, minimal progress has been made, thus far, and achievement of the stated objectives appears remote, especially in view of the change in government. The new Government has stated its endorsement of the transformation agenda by its predecessor. With the renewed focus on agriculture for the diversification of the economy, we expect significant growth in the sector under the present administration.

The agenda is potentially a step in the right direction towards a sustainable solution to the challenges affecting local wheat production. The current targets of WTA appear optimistic and unaligned, given the current state of the sector. The new Government should seek a more holistic and inclusive approach with key industry players to develop a more realistic blueprint.

1. current state assessment of wheat farming in Nigeria, including all accomplishments of the previous administration regarding wheat production;
2. assessment of local research institutes, with a view to improving capacity possibly through partnerships with more established research institutes in countries with empirical evidence of results such as India, in areas such as high wheat yield varieties testing and deployment;

3. private sector participation, from consultation to joint execution and implementation of strategic initiatives to drive results, including the deployment of requisite infrastructure such as irrigation, storage facilities and road access network.
4. improved education of farmers and proper monitoring of agricultural grants and credit, including subsidies to ensure that the funds are properly utilised for improved results.

Benchmarking against countries with similar ecological factors, such as India, the recently introduced varieties, with origin from India, are unlikely to produce the expected yield of 5 MT/ha, necessitating the need for the Government to undertake a holistic review of the current WTA objectives and timeline.

## Agricultural Support Grants

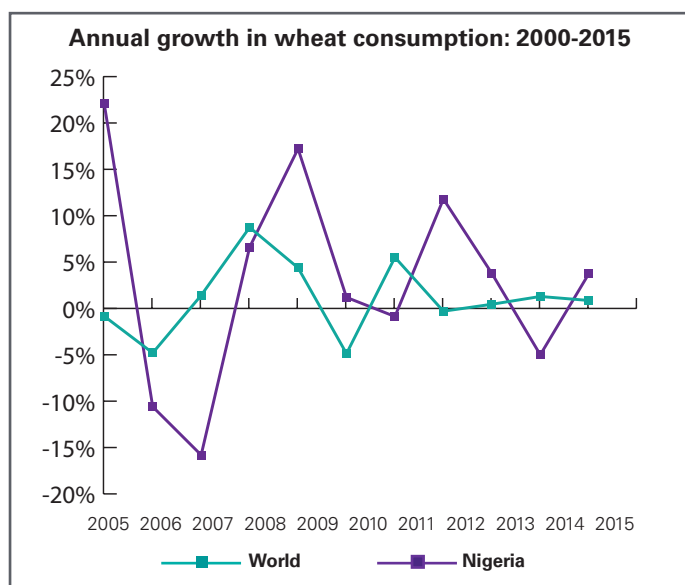
Donor	Amount(US\$ M)	Date	Purpose
The World Bank	495.30	June 2014	Farmers' irrigation improvement credit
AFDB	170.43	October 2013	Support - ATA
IFAD	88.50	May 2013	Support - ATA
JNDP	2.50	December 2012	Support to FMARD - ATA
Ford Foundation	N/A	N/A	Technical support
UNDP	N/A	N/A	Technical support
Tony Elumelu Foundation	N/A	N/A	Technical support
<b>Total</b>	<b>756.73</b>		

Source: Respective agencies' websites, Thisday newspaper: 06 May 2013



## Outlook

# Consumption



Source: Index Mundi, USDA

Average Price ( 50KG Bag of Flour)			
Year	Golden Penny	Superfine	Dangote
2009	5,100	5,090	4,940
2010	5,450	5,440	4,950
2011	5,950	6,060	5,850
2012	6,900	6,900	6,550
2013	6,900	6,900	6,400
2014	6,900	6,900	6,400
2015	9,100	9,100	8,500

Source: Flour Sector Report 2014, KPMG Market study

In spite of the introduction of 15% levy on imported wheat, the price of flour across the three major players in the sector remained relatively stable between 2012 and 2014, amidst a competitive landscape. However, the naira devaluation has resulted in significant higher cost of raw materials, translating to higher prices.

Global and Nigerian wheat consumption has historically been at odds. However, the pace of growth has generally been relatively lower in the last two years. Global consumption of wheat grew by 0.9% between 2014 and 2015, while Nigeria's consumption increased by 3.7% during the same period.

Global consumption is expected to grow by 0.8% per annum into 2019/20. This would be driven by increased food usage in developing countries in Africa and Asia. Being one of the major developing countries in the region, its demographics and low wheat consumption per capita, Nigeria's wheat consumption is expected to surpass the projected global growth in the period. This is expected to improve the sector activity and attractiveness to potential strategic and private equity investors into Nigeria's FMCG sector. Growth in revenue and profitability in recent times have been stifled by the intense competition, rising costs in the industry, due to

exchange rate challenges. These have resulted in margin erosion, as key players evolve their respective strategies to maintain market share.

With current capacity utilisation at 50%, the industry's installed capacity is expected to remain stable in the short to medium term. Increase in installed capacity, generally, takes between 24 and 36 months from conception to installation, and is considered by most players, when current installed capacity utilisation is closer to 90%.

However, in view of the competitive landscape and the relative ease of switching brands by distributors, major players have been forward integrating into the manufacture of other flour-based foods, such as baked goods, bread and biscuits; which could potentially facilitate growth and improve profitability margins.

## Market Opportunities & Deals

# Backward & Forward Integration

As key industry players continue to implement various strategies to increase volumes and market share & improve profitability, backward and forward integration could potentially be a key strategy to achieving sustainable growth in the long term.

As competition continues to erode margins on flour, leading industry players could potentially seek to innovate and forward integrate into the manufacture of other flour-based foods, including bread, bread pre-mixes, biscuits, breakfast cereal etc., aligning closely with the business model of other global players. Nisshin Seifun Group, an Asian conglomerate with global presence, has a flour milling and foods subsidiary. In addition to the production of flour and other related foods, such as pasta, the foods business manufactures and distributes bread pre-mixes across China. General Mills, a leading U.S flour milling company, has forward integrated into the manufacture of breakfast cereal, dough/pastries, snacks and pizza crust.

Tiger Brands tried to replicate its integrated flour and foods business in South Africa in Nigeria. The Company in 2011, acquired 100% of Deli Foods, which has a 9% share of the local biscuit market, and 49% stake in UAC Foods, which also has a 9% share of the local baked foods market, according to Euromonitor. Following these two deals, Tiger Brands subsequently acquired a cumulative of 70% stake in DFM in 2012. Though the company sold its stake in DFM in 2016, it retained the ownership of its other packaged foods businesses in Nigeria.

Also, Olam appears to have achieved forward integration in 2012 through its acquisition of the entire equity stake in Titanium Holding Company, the parent company of OK Foods. OK Foods as at 2014 had a 20% share of the Nigerian biscuit market. Olam has also expanded its reach by investing in the flour segment of BUA Group, which will support its agricultural background.

This trend is expected to continue in the near term, creating opportunities for the larger players to either acquire existing players in the flour-based foods segment,

or undertake a greenfield investment that will include additional production lines, such as baking pre-mixes, dough, snacks and, more remotely, breakfast cereal.

However, as the interest in Nigeria as a strong emerging market continues to grow globally, there is the possibility of other large foreign players entering the market via similar acquisitions for a significant share of the market. Kellogg's deal with Tolaram grants the company the right to a future investment in the Tolaram Group, with the opportunity for local manufacture of breakfast cereal.

FMN has also sought to improve procurement and manage input costs, by backward integrating into agriculture, through the acquisition of farms which produce key raw materials, such as cassava and maize. The company acquired Thai Farms Limited in 2012, as part of its backward integration strategy for local input (cassava) and also owns Sunti Farms (sugarcane and rice) and Kaboji Farms (maize, soya beans, rice and cassava). HFM, on the other hand, is currently exploring viable backward integration options, while DFM has started plans to backward integrate into wheat production in the near term.

We anticipate that backward integration into wheat growing will also accompany the expected success of the Government, following its intervention in the sector. If successfully achieved, this could potentially reduce input costs (currently at about 85% of the cost of flour millers), increase foreign exchange savings and ultimately improve profitability.

The objective of the MOU between the Wheat Farmers Association of Nigeria and the Flour Millers Association of Nigeria, is to accelerate self-sufficiency in local production by fixing the minimum price of wheat at N140,000 per tonne. The terms of the MOU will be reviewed after a period of 12 months.

## Market Opportunities & Deals

# Capacity Utilisation

Though initial supply increase is expected to come from improved capacity utilisation, however, existing players could potentially seek to expand capacity via acquisitions of existing milling assets, following the example of Olam's acquisition of BUAs assets. Based on discussions with industry players, the construction of new milling facilities, generally, takes between

24 and 36 months. Therefore, existing flour milling companies may seek to acquire marginal players to increase capacity and achieve market penetration into desired regions.

The location of milling facilities will be a major factor in determining the attractiveness of marginal players as potential targets. If the country is able to attain local wheat production

targets of the WTA, flour milling companies in the Northern part of Nigeria will potentially be attractive targets. However, if wheat is still imported, considering that Nigeria's major port is located in Lagos, the marginal players in the Southern part of Nigeria will be more attractive targets, in view of the huge cost of transportation of wheat grains from the port to milling facilities.

# Input Strategic Sourcing

As companies continue to seek various strategies to streamline processes, improve efficiency and optimise costs, we expect increased focus on the value chain of players in the sector, including strategic sourcing of input raw materials and route-to-market, specifically distribution and sales and marketing.

Global commodity traders with focus on grains, such as Australia's Graincorp, Louis Dreyfus and ADM, have established track records in grain merchandising, which can be leveraged upon by key players in the market to optimise cost and supply chain efficiencies.

These companies operate in all of the world's major grain producing regions, such as the U.S, South America, Australia and countries of the Black Sea. They manage large import and distribution networks in key consumption regions, such as Africa and the Middle East, Europe and Asia. We believe that players in this market can collaboratively benefit from the breadth, depth, scalability and risk management, offered by the global network, of processing, storage and distribution assets of the commodity traders.

With the exception of Olam, also a global commodity trader, wheat

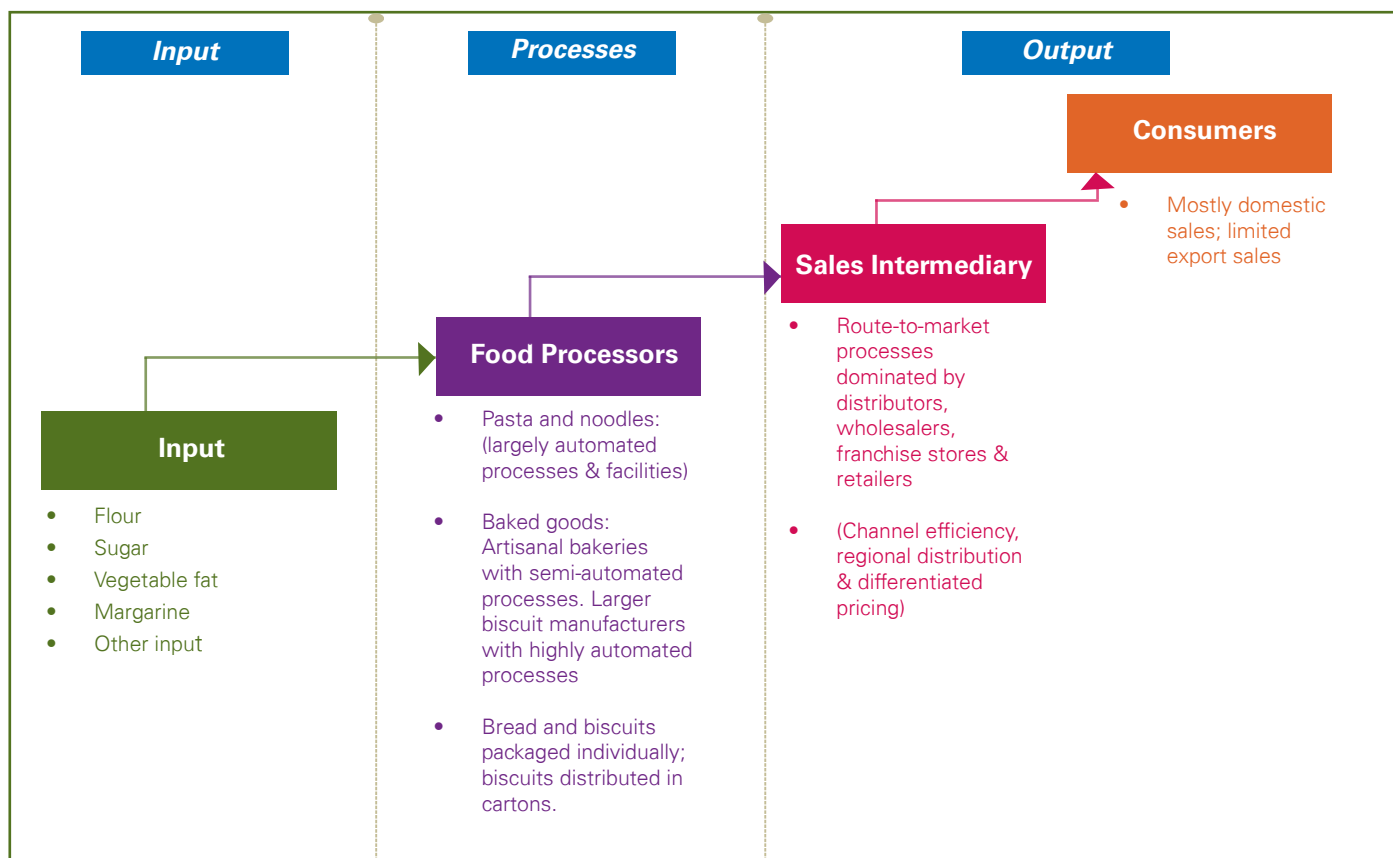
sourcing remains an internal function for the other large players in the flour milling sector, especially as most companies require a particular blend of different types of wheat from different sources to achieve the desired flour quality. However, for both the smaller players, which mostly source their wheat from the larger players due to the absence of scale, and the larger players, to a great extent, the potential entry of specialised grain/wheat merchandisers into the local flour milling value chain, could facilitate raw material sourcing cost optimisation in the long term.



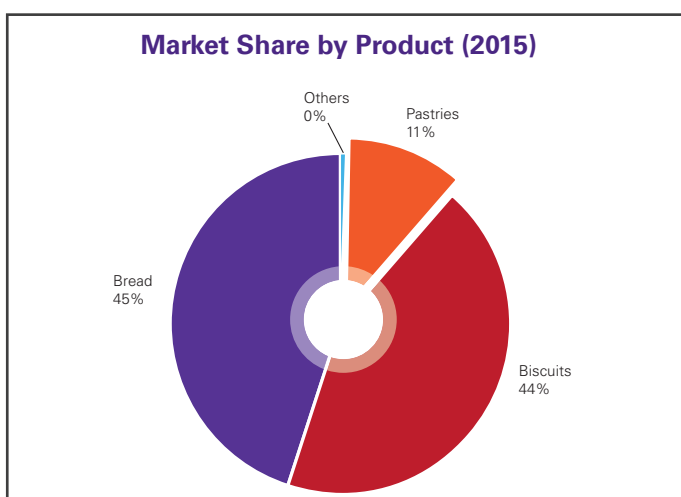
# Flour-based Food

## Flour-based Food

# Segment Value Chain



# Market Share



Bread and biscuits dominate the “Biscuits & Flour-based Goods” segment, accounting for 89% of the market share. Bread leads the baked goods market, with 80% share of the segment, excluding biscuits. The flour-based foods segment is highly fragmented and volume driven with low margins. A large number of players exist in the segment, with each controlling a small share of the market.

## Flour-based Food

# Biscuits

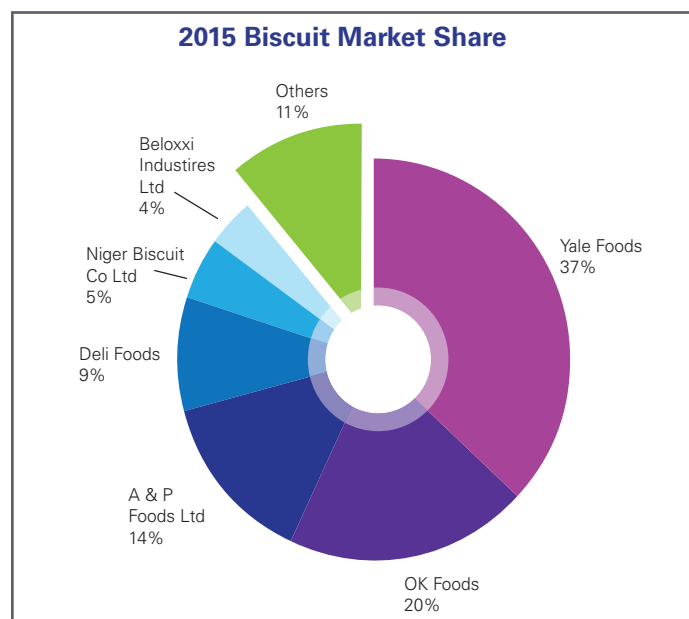
The size of the Nigerian biscuit segment, has been estimated at N121 billion (US\$617 million), having grown at a CAGR of 16% in the past five years<sup>13</sup>. Annual production is estimated at 152,490 tonnes. The five major players control almost 90% of the market share, with small players making up the balance.

The segment remains attractive to foreign players with a pan-African expansion strategy, with major deals completed in the segment in the last few years. Deals include the United Biscuits acquisition of A&P Foods in 2014, Olam acquisition of Titanium Holding Company SA (owners of OK Foods) in 2012 and Tiger Brands acquisition of Deli Foods in 2010. We expect the segment to remain attractive to both local and foreign investors, in view of the potential growth of 6% CAGR from 2015 to 2019.

Operating margins in the segment remain thin, given the volume-driven nature of the business. Price elasticity of demand is also high, owing to the wide availability of substitute products, and aggressive competition among market participants. Hence, biscuit manufacturers are unable to pass on significant increases in cost of production to the final consumers.

Infrastructure challenges, specifically power, Naira devaluation and the current foreign exchange restrictions, are also negatively impacting the operations and squeezing the margins of companies in the segment. The cost of power generation for operations was estimated by a key industry player at approximately 40% of its total operating costs in 2014.

Prior to the introduction of new foreign exchange restrictions, hydrogenated vegetable fat, a key raw



Source: Euromonitor: Biscuits in Nigeria January 2015

material in biscuit manufacturing, was sourced from overseas, primarily Indonesia. However, post-inclusion of the raw material on the foreign exchange import restriction list by the CBN, the product is now locally sourced. Based on our discussions with a key player, the cost of sourcing this key raw material locally is significantly higher than importation and of lower quality.

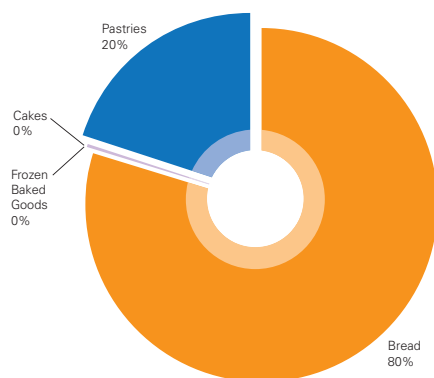
In spite of the current challenges, the outlook for the segment is positive, driven by product affordability, ease of purchase and Nigeria's large and growing population.

<sup>13</sup> Biscuit and snack bars in Nigeria Euromonitor October 2015

## Flour-based Food

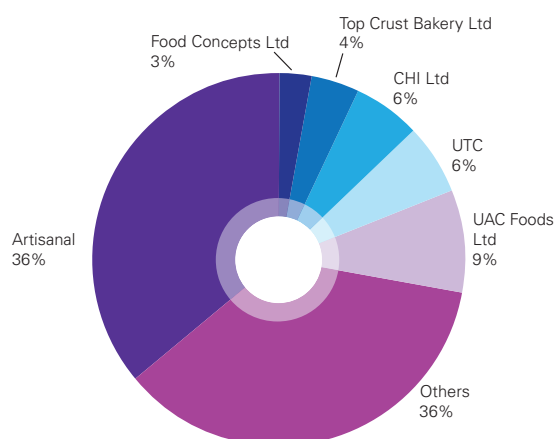
# Baked Goods - Bread

**Baked Goods Market Share by Product (2015)**



Source: Euromonitor: Baked Goods in Nigeria October 2015

**Baked Goods Market Share by Player (2015)**



Source: Euromonitor: Baked Goods in Nigeria October 2015

The size of the Nigerian bread segment, is estimated at N122.1 billion (US\$621 million), representing 80% of the baked goods sector<sup>14</sup>. The bread segment has grown at a CAGR of 14% in the past five years. Annual production is estimated at 554,270 tonnes, with a CAGR of 3% over the corresponding five-year period. Growth in volumes till 2019 is forecast at a CAGR of 3%<sup>14</sup>.

Bread production in the country, both artisanal and packaged, is dominated by local players. This is because players service target markets within specific localities, driven by the mass market demand for freshly produced bread. Product differentiation is key in a highly competitive market through varieties: whole wheat marketed as a healthier alternative; cassava; whole meal; white bread; whole grain; etc.; or via packaging and branding, aimed at appealing to different target markets.

The Nigerian bread and other baked goods segment is also highly fragmented. 72% of the market, as at 2015, was controlled by artisanal and other relatively small to medium regional players. UAC Foods, makers of Gala led the market in 2015, with 9% share of the market. Most bakeries operate either a retail or wholesale model with minimal scale requisite for industrial production. The segment is also evolving into a franchise inclusive model, where distributors are encouraged to own their bakeries.

Consumption dynamics in the segment has gradually changed, as packaged bread grew at a faster rate of 3.4%<sup>14</sup>, relative to the 2.3% growth in unpackaged/artisanal bread<sup>14</sup>, owing to the general perception of higher quality of the packaged products. However, growth in the artisanal segment remains fairly stable, and the share of the market remains significant at 36%<sup>14</sup>, primarily due to price.

There is still no real organised distribution model for bread, within the informal sector in Nigeria, which according to industry players, accounts for approximately 80% of volumes distributed. This is primarily done through a network of distributors and sub-distributors, including hawkers and street vendors. Formal distribution is done through supermarkets and neighbourhood retail stores. Food Concepts Plc, owners of Butterfield Bakery with 3,000 loaves per day capacity, also operates an inclusive model. The model offers an alternative route-to-market, designed to ensure products are baked in close proximity to its consumers. This is achieved by offering distributors the opportunity to become franchisees, to own their small bakeries and sell directly to sub-distributors. The model provides franchise funding, marketing support, training and premix (flour, packaging support, etc.) to ensure quality and higher yields.

<sup>14</sup> Baked Goods in Nigeria Euromonitor October 2015

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There is still no real organised distribution model for bread in Nigeria, within the informal sector, which according to industry players accounts for approximately 80% of volumes distributed

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