2018

A REPORT ON COMMODITIES TRADING ECOSYSTEM IN NIGERIA

BY THE TECHNICAL COMMITTEE ON COMMODITIES TRADING ECOSYSTEM

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EXECUTIVE SUMMARY

The Securities and Exchange Commission (SEC) as part of its implementation of the 10-year Capital Market Master Plan, constituted a Technical Committee on Commodities Trading Ecosystem. The mandate of the Committee was to identify challenges of the existing framework/infrastructure and develop a roadmap for a vibrant ecosystem.

An organized commodities market consists of multiple players that form the agricultural value chain. They include commodity exchanges, farmers, merchants, aggregators, processors/producers, commodity market operators, warehouse operators, collateral managers, banks, insurance companies, clearing houses, and logistic companies. It is important to organize this market to enhance its efficiency, growth and competitiveness which will better position it to play a strong enabling role in food security, employment generation and economic diversification. The Report identified about twenty benefits of promoting commodity exchanges and the ecosystem in general. In addition to some of the benefits highlighted above, they provide a transparent pricing mechanism, assist in moderating consumer prices, promote attractiveness of agribusiness, foster financial inclusion and improve industrial output and profitability as well as government revenue. They enhance the wellbeing of the farming community and help reduce rural - urban drift. Furthermore, they provide risk management tools and promote quality and standards for Agro-based export commodities. Finally, they create opportunity for investment in the commodities value chain with multiplier effect on socioeconomic development.

Attempt to establish a commodity exchange in Nigeria began in 1989 when an Inter-Ministerial Committee was established to examine the possibility of setting up a commodity exchange following the abolishment of the commodities marketing board. Although the Committee recommended the establishment of a commodities exchange, nothing came to fruition until August 8, 2001 when the Federal Government directed the conversion of the then Abuja Stock Exchange to a commodity exchange which is now called Nigeria Commodity Exchange (NCX). NCX was the only commodity exchange in Nigeria for more than a decade when in 2014, the Securities and Exchange Commission registered AFEX Commodities Exchange, the first private sector commodities exchange.

The public and private sectors need to work together in an unambiguous way to promote a viable commodities trading ecosystem in the country. The public sector should principally focus on providing the enabling environment such as physical infrastructure, legal and regulatory framework and the right policies including access to finance, that support the market. Government should not be involved in the ownership and operations of commodity exchange. It has not worked in Nigeria. The private sector on the other hand, should drive

commodity exchange development; investing in and operating the exchanges like commercial ventures.

For an organized commodities market to thrive, there must be large demand and liquidity, evidenced by good quality network of physical and market infrastructure such as an efficient standard and grading system, price transparency and effective risk management tools, collateral management system and logistics services etc. In order to build investors' confidence in the market, there must be an efficient trading and delivery system, clearing and settlement infrastructure and a good legal and regulatory environment to ensure equity and fairness in all dealings on the exchange.

The Committee came up with recommendations on how to develop a thriving ecosystem and assigned responsibilities to relevant stakeholders. The recommendations are grouped into four phases for effective implementation. In the first phase, the objective is to ensure food sufficiency and security, price discovery and market development while in the second phase, focus should include developing strong trades in export commodities. The third phase should see the introduction of solid minerals, energy and derivatives while the last phase should be geared towards ensuring strong international presence in the local exchanges.

As part of the committee's recommendations, there is a need to commence advocacy for macroeconomic stability and policies which will promote the commodity market (exchange rate, interest rate, inflation rate, infrastructure etc.); advocacy for amendment of existing legislations such as the Land Use Act and Bankruptcy Law which impede the development of the market; review SEC rules and regulations relating to commodity exchanges especially rules on the spot market, and make rules on collateral management.

One major impediment towards having a vibrant commodities market is the financial exclusion of farmers, especially smallholder farmers who produce most of the commodities traded, albeit in small individual units. These farmers should be organized into cooperatives to aggregate produce and be encouraged to become members of the exchange. Introduction of the Electronic Warehouse Receipts (EWRs) and the enactment of a warehouse receipt bill into law will go a long way in ensuring that farmers can access credit easily and affordably.

Deliberate efforts should be made to develop public enlightenment and education roadmaps for the commodities market to improve understanding and encourage participation. It is also vital to encourage investment in all the requisite supportive infrastructure such as warehouses and storage facilities by exchanges and the private sectors. Similarly, to enlarge the scope of participation, existing commodity merchants and other relevant stakeholders should be encouraged into the exchanges either as traders or investors.

On a final note, high value export commodities such as cocoa, sesame and ginger should be designated as flagship products and trading of such commodities through the exchange should be incentivised. Also exchanges should install traceability system for Nigeria's flagship and other export commodities that are traded through their platform.

1.0 INTRODUCTION

Background

One of the recommendations of the Nigerian Capital Market Master Plan 2015 – 2025 is the development of a thriving commodities trading ecosystem. This is necessary to deepen the capital market, increase the number of product offering, enhance agricultural and solid mineral production and spur economic development. As part of the implementation strategy therefore, the Securities and Exchange Commission (SEC) constituted a Technical Committee (TC) in June 2017 on the Commodities Trading Ecosystem in Nigeria with the following terms of reference:

1. undertake assessment of existing framework/infrastructure to identify challenges and gaps;
2. develop roadmap for the enhancement of the Commodities Trading Ecosystem; and
3. undertake any other activity that may be relevant to the achievement of this mandate

2.0 COMMODITY TRADING AND ITS IMPORTANCE

Commodity trading ecosystem can be defined as the environment within which commodities trading takes place and directly or indirectly, affects activities and development of the commodities market and the exchanges. The ecosystem is comprised of various elements, which are integral to the architecture of the market and vital to the smooth and efficient functioning of a commodity market or exchange. The ecosystem encompasses all spheres of the commodity trading environment such as its operations, products traded, infrastructure, logistics, traders/brokers, commodity merchants, farmers, miners, end users and other stakeholders. It also covers the legal and regulatory environment. If these elements are absent, inefficient or underdeveloped, the commodities trading ecosystem would not be well functioning and so maximum value may not be derived from it existence.

Figure 1: Commodity Trading Ecosystem

A commodities market is simply a market, a medium for connecting buyers and sellers of commodities. It may be formal (organised) or informal (unorganised), have physical location with central trading places or virtual without a specific trading location, in which case trading can be conducted remotely by participants. Our focus is however, primarily on promoting the formal or organized market such as commodity exchanges, which provide a formal and more structured mechanism for trading in designated commodities.

We believe that such markets provide significant value addition to economies; a reason why countries make concerted efforts to develop them. This view is buttressed by Chuck Kowalski who observed that *"it's unlikely that the US would have experienced as much economic growth in the last 100 years as it has without them (commodity exchanges)."* This observation by Chuck Kowalski is perhaps also true of many other countries. This importance has seen commodity exchanges sprang up all over the world, in developed and developing countries, trading all kinds of commodities from agriculture, to metals and precious stones.

While commodities exchanges have existed for more than a century in some developed countries, they are a more recent phenomenon in developing countries. In Africa, most exchanges, with the exception of the defunct Egyptian Commodities Exchange, which was established in the 19^{th} Century, are relatively very recent initiatives.

A commodity exchange is a market, which provides facilities (platform), regulations and standards for the orderly, efficient and transparent trading of designated (selected) commodities. Contracts are created with standardized features, which thereafter become tradable financial instruments. The commodities traded may or may not be for delivery and indeed in many exchanges, most trades are not for physical delivery. Commodity exchanges tend to gravitate from spot market to forward to the more complex derivatives market.

2.1 Benefits of Commodity Exchanges

There are several reasons why commodity exchanges are important to the economy. Many of these reasons have been well documented, some of which are listed below:

1. They promote economic growth by fostering the development of both soft and hard commodities by efficiently linking commodities to industry, which could improve industrial output and profitability. A thriving commodities trading ecosystem, can therefore, facilitate industrialization of the economy and improve tax revenue;
2. They create employment and raise the living standard of the farming community as opportunities are provided for better access to market, produce marketing, access to market price and other important information, which could lead to improved produce prices for farmers, among other benefits. Since small holder farmers are usually the rural poor, improvement in their living standards can have positive impact on rural development and mitigate rural - urban migration;
3. They can serve as a platform for small holder farmers to be brought into the financial sector as they get exposed to financial services such as bank deposit and credit facilities, thereby fostering the much needed financial inclusion;
4. They engender economic diversification. This is more so for an economy like Nigeria, which is heavily dependent on a single product for its foreign exchange earnings, namely crude oil. For an essentially agrarian economy like ours, with good solid mineral deposits, developing the commodities market remains a potent way to diversify the economy away from crude oil, as well as widen the national tax base. A diversified economy will potentially diversify the export base and improve government revenue;

5. They improve the attractiveness of agribusiness and foster agricultural production as farmers and end users benefit from the use of the exchange. As value is seen and derived from the exchange, more people are likely to be drawn to agribusiness. Increased production would reduce import dependence and encourage more private investment in the agricultural sector;
6. As a platform and transparent pricing mechanism is provided for trading solid minerals, activities in this sector could go up and more investment attracted with multiplier effect on the economy;
7. Through the provision of price and other information transparency as well as better access to market, they reduce the exploitation of smallholder farmers by intermediaries. This enhances value to farmers, improves their well-being and encourages farming activities;
8. They provide rules and regulations, which bring order to the market. This in turn forces and encourages producers, including farmers, and traders to meet the ethical and quality standards of the market;
9. By efficiently linking buyers and sellers in sufficient number, commodity exchanges create liquidity and facilitate price discovery, which further bolsters commodity trading. Market information such as price, quantity and quality are regularly made available to the public which aids decisions and trades;
10. They provide a ready market for the sale of commodities and incentivise the use of storage facilities (warehouses) which can help minimize post-harvest losses;
11. Through grading and standardization of commodities, commodity exchanges promote high standards of quality thereby boosting export as confidence is strengthened in the quality of commodities exported through the exchange;
12. Commodity exchanges provide risk management tools; enabling entities hedge against possible adverse development in the future prices of commodities. Such facilities help industries plan by providing price and supply certainties. Farmers can also use the market to hedge their commodities against adverse price fluctuation;
13. They promote agricultural produce financing and development of warehouse receipts which can enables farmers including small holder farmers borrow against the commodities in the warehouse;
14. Commodity exchanges provide reliable price benchmarks for non-exchange traded markets such as the Over – The – Counter (OTC) market;
15. Through the use of warehousing, they help to ensure continuous supply of commodities regardless of the season. This guarantees raw materials for the industry at all times, reducing risk of production disruption as well as storage and production cost;
16. Commodity exchanges can also assist in moderating consumer price because of their ability to drive up agricultural production;

17. They provide opportunity for securitization of commodities through the warehouse receipt system, which can also be used as collateral to unlock finance from financial institutions;
18. They provide opportunities for investment in the commodities value chain such as warehousing, assaying services, brokerage and logistics;
19. They promote the development of derivative markets as derivative instruments with commodities as the underlying instruments are developed with the attendant benefits such as permitting farmers and others to hedge their investments; and finally
20. A thriving commodity exchange can contribute to moderating and reducing illegal mining of solid mineral products as the exchange tracks and records the origin (source) of all commodities traded on its platform.

2.2 Direct and Catalytic Impacts of Commodity Exchanges

According to Gabre Eleni (2012), Commodity Exchanges have both direct and catalytic impact on the economy. The catalytic impacts are those that spur investment and increase economic activities in sectors outside of the commodity production and trading. In fact, the catalytic impact of a Commodity Exchange can outweigh the direct impacts, with a wide array of services that may emerge by the establishment of the Exchange.

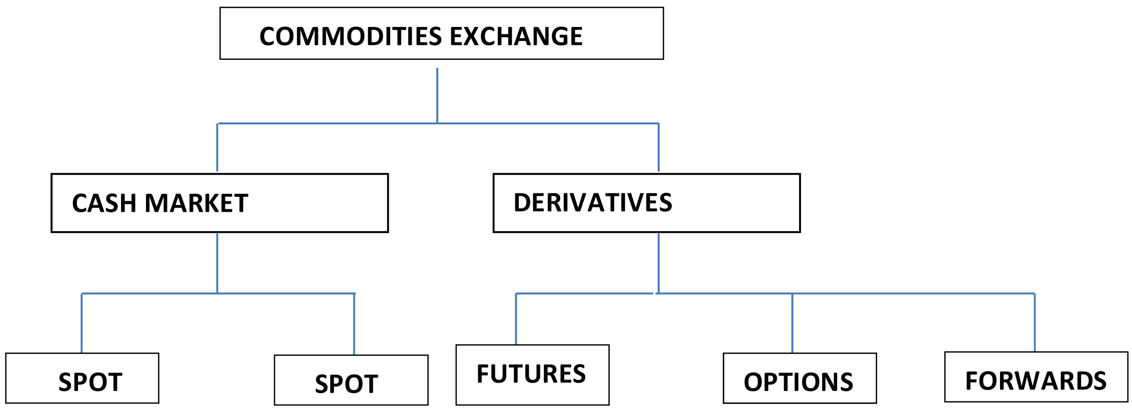
Table 1: Direct and Catalytic Impacts of Commodity Exchanges

Direct Impact of Commodity Exchanges	Catalytic Impacts of Commodity Exchanges
Higher farmers' share of final price due to reduced marketing margins	Increased investment in modern storage infrastructure and handling technology
Incentive for farmers to invest in inputs and produce more	Increased investment in quality testing services (modern laboratories)
Incentives for farmers to improve post-harvest management and improve quality of market output	Increased investment in quality management services (moisture drying, pest management, cleaning services)
Less risk of contract failure and lower costs of market access resulting in increased rate of commercialization of farm output	Increased investment in logistics services such as commodity delivery coordination services
Better alignment between local farmgate prices and national price due to information transparency	Increased investment in transport fleet, bulk trucking, and railway systems
Improved domestic food security with better response to price signals	Increased investment in high-quality packaging (sacks)
Smoothing of price volatility as goods flow faster across space and time and markets are more responsive to price signals	Increase in warehouse receipt financing products and offerings
Increase in export volumes and better price with quality premium	Increased investment in market intelligence (Bloomberg-type analysis) services
Increase in agro-industrial processing of commodities and domestic value addition	Increased investment in mobile telephony related market data, trading and payment services
Increased tax revenue from previously informal sector activities	Increased investment in training and education services
	Increased investment in data warehousing and data security services

Source – GabreEleni'sReport on Nigeria Commodity Exchange, 2012

Commodities market can be broadly classified into the Cash or Spot Market and the Derivatives Market (see figure 1). In the cash market, transactions are conducted for immediate delivery of physical commodities or securities while in the derivative market delivery is at a future date. The derivative market can be broadly categorized into the forward and futures markets. The forward market trades in contracts of commodities and financial instruments which are for future delivery but customized to the specifications of the transaction parties. They are traded over-the-counter and not on an exchange.

Figure 2: Types of Commodities Market



In other words, a derivatives commodities market deals in financial contract between parties, which is derived from ascertaining the value of an underlying commodity. Because the derivative market relies on the price of the underlying market, it is essential that a strong cash (spot) market exists prior to the introduction of derivatives.

In the futures market, buyers and sellers agree on the quality and quantity of a specified commodity to be delivered at an agreed price and date in future. In the options segment, parties enter into contract that confers the right, not the obligation, of a buyer to buy or sell a given commodity at a particular price for delivery on or before a given period.

A major distinction between the cash and derivatives commodities market is that transactions in the cash market are usually carried out by buyers who have immediate use for the commodity purchased while transactions in the derivatives market do not often result in physical delivery as they can be offset before the delivery date.

2.3 Nigeria Outputs and Exports of Commodities

This subsection further underscores the importance of commodities in Nigeria, focusing on output and exports.

Tables 2-4 give the structure of Nigerian agriculture and mineral resources in terms of production (Gross Domestic Product), relative contributions to the economy and real growth rates.

It is depicted that agriculture GDP rose from N19.64trn in 2015 to N21.52trn in 2016. The GDP of agriculture stood at N7.2trn in the third quarter of 2017. In terms of percentage contribution, table 3 shows that Nigeria's agriculture sector contributed 20.86% to the country's GDP in 2015, 21.21% in 2016 and this rose to 24.44% in Q3 of 2017. The crop production sub-section of agriculture is usually responsible for about 90% of agriculture production while other activities like livestock, forestry and fishing contribute relatively lower. Table 4 further shows that the growth rates of Nigeria's agriculture sector have been positive during the review period, ranging from 3.72% in 2015 to 4.11% in 2016 and 3.06% in Q3 of 2017.

Table 2: Gross Domestic Product Values of Agriculture and Mineral Resources (N'bn)

	2015	2016	2017Q1	2017Q2	2017Q3
1. Agriculture	19,636.97	21,523.51	4,686.22	5,210.15	7,198.21
2. Crop Production	17,189.97	18,883.08	3,969.52	4,530.13	6,536.58
3. Livestock	1,748.03	1,875.78	487.87	474.21	465.64
4. Forestry	222.83	236.25	58.24	66.98	60.62
5. Fishing	476.14	528.39	170.59	138.82	135.36
6. Mining and Quarrying	6,100.01	5,469.55	2,153.73	2,455.64	3,288.25
7. Crude Petroleum and Natural Gas	5,990.42	5,367.32	2,142	2,420.35	3,250.09
8. Coal Mining	7.98	8.49	3.11	3.00	0.67
9. Metal Ores	4.46	5.74	3.49	1.90	1.47
10. Quarrying and Other Minerals	97.15	87.99	5.16	30.39	36.03
11. GDP Current Basic Price	94,144.96	101,489.49	26,028.36	27,030.25	29,451.30

Source: NBS, CBN

Table 2 also depicts that mining and quarrying GDP fell from N6.1trn in 2015 to N5.47trn in 2016. The GDP of this sector stood at N3.29trn in the third quarter of 2017. In terms of percentage contribution, table 3 further shows that Nigeria's mining and quarrying sector contributed 6.48% to the country's GDP in 2015, 5.39% in 2016 and 11.17% in Q3 of 2017. Over 98% of the mining and Quarrying GDP come from the crude petroleum and nature gas subsector; however, the growth rates of the other components (solid minerals) appear less volatile.

Table 3: Contributions of Agriculture and Mineral Resources to GDP (%)

	2015	2016	2017Q1	2017Q2	2017Q3
Agriculture	20.86	21.21	18.00	19.28	24.44
1. Crop Production	18.26	18.61	15.25	16.76	22.19
2.Livestock	1.86	1.85	1.87	1.75	1.58
3.Forestry	0.24	0.23	0.22	0.25	0.21
4.Fishing	0.51	0.52	0.66	0.51	0.46
Mining and Quarrying	6.48	5.39	8.27	9.08	11.17
5.Crude Petroleum and Natural Gas	6.36	5.29	8.23	8.95	11.04
6.Coal Mining	0.01	0.01	0.01	0.01	0.00
7.Metal Ores	0.00	0.01	0.01	0.01	0.00
8.Quarrying and Other Minerals	0.10	0.09	0.02	0.11	0.12

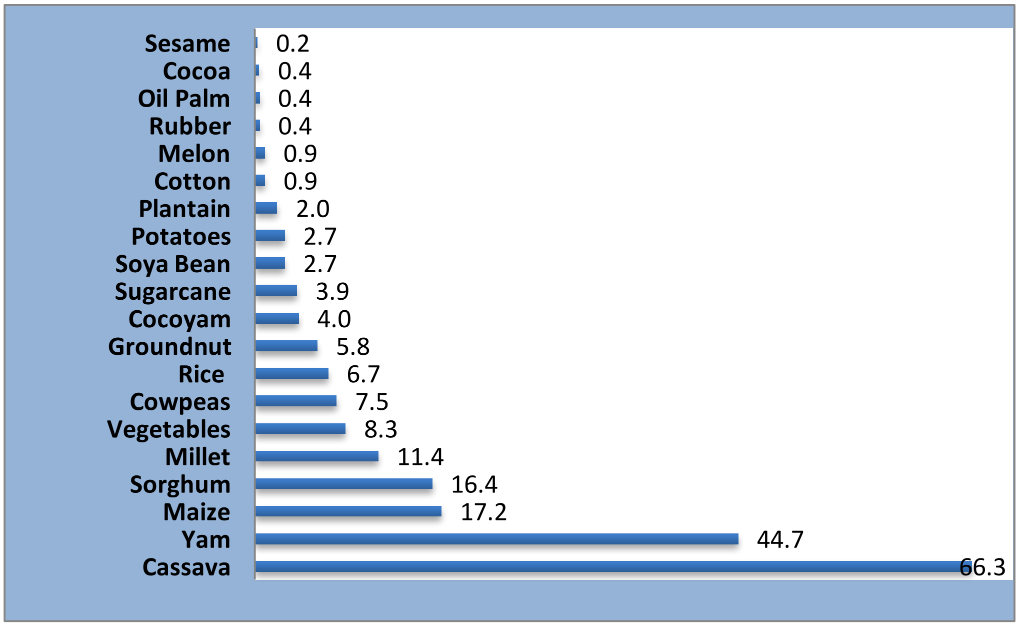
Source: NBS, CBN

Table 4: Growth Rates of Agriculture and Mineral Recourses (%)

Source: NBS, CBN

	2015	2016	2017Q1	2017Q2	2017Q3
Agriculture	3.72	4.11	3.39	3.01	3.06
1.Crop Production	3.49	4.34	3.50	3.21	3.19
2.Livestock	5.93	2.94	1.72	2.28	2.52
3.Forestry	3.67	2.62	2.59	3.89	3.95
4.Fishing	5.89	(0.72)	5.49	(2.72)	(2.84)
Mining and Quarrying	(5.27)	(14.45)	(15.40)	3.51	25.44
5.Crude Petroleum and Natural Gas	(5.45)	(14.45)	(15.60)	3.53	25.89
6.Coal Mining	10.39	1.00	2.03	4.92	(38.49)
7.Metal Ores	7.27	20.74	40.79	(1.09)	10.70
8.Quarrying and Other Minerals	7.51	(17.42)	52.54	2.24	1.86
GDP Current Basic Price	2.79	(1.58)	(0.91)	0.72	1.40

Figure 3: Output of Top 20 Commodities, 2015 (MMT)



Source: CBN Annual Report, 2015

Figure 3 shows the top 20 agricultural products in Nigeria for 2015. It was observed that Nigeria produced 66.3million metric tonnes of cassava followed by 44.7mmt yam, 17.2mmt of maize, 16.4mmt of sorghum and 11.4mmt of millet. The outputs of other commodities are equally depicted in the figure. In addition, government is currently promoting and developing the solid mineral sector with special focus on gold, coal, limestone, bitumen, led/zinc, iron ore and barites.

Table 5 presents information on the top exporters of non-oil commodities in Nigeria. It is shown that about 80% of these are exporters of agriculture commodities. The leading exporters include Olam with export value of $143.9mn, Bolawale at $91.0mn, AIS at $40.8mn, Saro at $40.8mn and Wacot at $38.1mn. The commodities exported range between cocoa, beans, sesame, cashew nuts, hibiscus flowers and leather. Export destinations range from Asia, Europe, Americas and other African countries.

Table 5: Nigeria's top 20 Non-oil Exporters

Exporters	Exports ($m)	Exported Products	Destination
Olam Nigeria Limited	143.9	Cocoa, Beans, Sesame seeds	Japan, China, Spain, Israel
Bolawale Enterprises Nig. Limited	91.0	Good fermented Nigerian cocoa beans	Netherlands, Canada
British American Tobacco Nigeria Limited	80.6	Benson and Hedges Liberia cigarettes	Liberia, Cote'dvoire
AIS Trades and Industries Limited	40.8	Nigerian raw cashew nuts, dried hibiscus flower	Guinea, Mexico
Saro Agro Allied Limited	40.8	Nigerian cocoa beans	Netherlands
Wacot Limited	38.1	Premium quality hulled sesame seeds, cashew nuts	Canada, Netherlands
Fata Tanning Limited	37.8	Crust/ finished goat and sheep leather A-54	India
Starlink Global and Ideal Limited	37.1	Nigerian raw cocoa beans	Netherlands
ETC Agro Company Nigeria Limited	35.7	Premium quality coloursortexed sesame seeds	India, Turkey
Notore Chemical Industries Limited	33.1	Fully refrigerated anhydrous ammonia	Morocco
Rubber Estates Nigeria Limited	32.4	Nigerian Sesame seeds	Benin, Japan
Mamuda Industries (Nig) Limited	31.5	Nigerian dried cocoa beans, finished leather	Netherlands, Italy
Emilola Investment Limited	31.5	UTC certified Nigerian raw cocoa beans	Netherlands
Atlantic Shrimpers Limited	30.3	Sea frozen shrimp	Netherlands
Sfurna Global Limited	29.5	Aluminum Alloy, Dried ginger	Japan, Egypt
Guinness Nigeria Plc	29.3	Malta Guinness (330ML Can)	Cameroon
Metal Africa Steel Production	28.0	Remelted lead ingots	India
Agro Traders Limited	27.0	Technically specified natural processed rubber	Italy
Olatunde International Limited	27.0	Nigerian cleaned sesame seeds	Japan

The Okomu Oil Palm Company Plc	26.6	Processed hibiscus flowers (HPS quality), rubber	Turkey, Italy

Source: CBN Annual Report, 2015

The foregoing table shows that crop production is a major sector of the Nigerian economy with the growth rate often higher than that of the general economy. The country produces many types of agriculture commodities such as cassava, yam, maize, sorghum, millet, cowpeas, rice, groundnut, sugarcane, cocoa etc. Further, the country's non-oil exports are largely agriculture commodities and there are already large players who are earning millions of dollars in foreign exchange for the country.

Given that all these activities employ the bulk of Nigerian population, any initiative that raises productivity and increases the value addition of agriculture is expected to have positive multiplier effect on the economy. As state previously, a commodity exchange can aid price discovery, lower risk, and engender productivity and export in agriculture. All of these can help to increase production and market efficiency. It is therefore natural for commodity exchanges in Nigeria to commence from trading agricultural produce and later in the future consider diversifying into metals and crude petroleum.

This future diversification will be necessary given that the solid mineral sub-sector is currently receiving government attention and is on a positive growth trajectory. Equally, the country's foreign exchange earnings and government's revenue are currently, largely dependent on crude petroleum and needs to be diversified. Although the activities of commodities exchange in the country are still basic, the foregoing shows there the market has huge growth potential.

2.4 Relative Performance of Commodity Exchanges operating in Nigeria

Of the two exchanges in Nigeria, AFEX Commodity Exchange is fully operational while the Nigerian Commodity Exchange (NCX) is not fully operational due to funding challenges occasioned by governments' inaction, amidst several other challenges. These challenges none the less, the Exchange launched its warehouse receipts in 2013.

Table 6 shows the volume and value traded on AFEX between Q2 2016 and November 2017. The table depicts that volume traded on the platform ranged from 2,500mt in Q2 2016 to 1,943mt in Q4 2017 with a value of N213m and N235m respectively. Volume and value traded peaked between Q4 2016 and Q1 2017, leading to the expectation of a much higher value by Q1 2018. The table also shows maize (especially white) as the most traded commodity, followed by soya beans, paddy rice, ginger and others (i.e. cowpea, wheat, yellow sorghum).

Table 6: Transactions on the AFEX Commodity Exchange

	Volume (MT)						Total Value (N'm)
	Ginger	Paddy Rice	Soya Beans	Maize	Others	Total Volume (MT)	
2016'Q2			153	2,348		2,500	213
2016'Q3	25	123	568	2,288		3,005	348
2016'Q4	11	747	2,359	9,299		12,416	1,489
2017Q1	155	75	61	20,209	9	20,508	3,112
2017'Q2	104	522	66	2,530	417	3,639	545
2017'Q3	192	112	27	1,777	40	2,149	347
2017'Q4 (Oct-Nov)		1,910	9	24		1,943	235

Source: AFEX filings with SEC

That some activities are already occurring on this platform is an indication of the potential available in commodity trading. Further, given that the level of transaction is still far less than the total production in the economy, there is ample room for growth in commodity trading in Nigeria.

3.0 EVOLUTION OF COMMODITY TRADING MARKETS

Commodity trading history can be traced to the agricultural revolution of 8500BC during which farmers and traders fashioned a means to secure prices of commodities against price fluctuation caused by weather, conflict, and supply and demand gap. Trading evolution, excess supply and the quest of merchants to raise money while commodity was in storage formed the basis for futures agreement. The first recorded commodity futures trades occurred in the 17^{th} century in Japan, although there is some evidence that rice may have been traded some 6,000 years ago in China.

The first contract for a future price was created in the early 1800s in the US. This forward contract allowed a buyer to pay for the commodity in advance of taking delivery of it. The Chicago Board of Trade (CBOT) was set up in 1848; trading in contracts that were standardized in terms of quantity, quality and delivery. The CBOT added soybeans contract in 1936 and has since merged with the Chicago Mercantile Exchange to form the CME Group.

Exchanges added cotton and lard contracts in the 1940s while livestock was added in the 1950s. Contracts for precious metals such as silver started trading during the 1960s. By the 1970s, when global currencies were delinked from gold prices, currency value fluctuated based on supply and demand, and financial futures became a tradable "commodity". With that, it became possible for cash settlements of trades instead of the traditional physical "delivery" of commodities. In the 1980s and 90s, stock indices such as the S&P 500 and government debt instruments were introduced.

Technology brought considerable innovation to the market including online trading which has heightened interest in commodities and futures trading as buyers and sellers could from the comfort of their homes and offices, place trade orders through electronic trading systems and online brokerage houses.

Apart from providing hedging instruments for commodities, the futures market has become an important hedging mechanism against possible losses in financial instruments such as stocks and bonds. However, it is important to state that interest in futures trading is not only to hedge the price of a commodity against an adverse price movement but it can also be used as a speculative instrument to profit from a desired price movement which could be up or down.

3.1 Commodity Exchanges in Africa

In 1861, the Egyptian Cotton Exchange was established in Alexandra and became one of the earliest commodity exchanges in the world. It played a key role in global trade, attracting users from the international community including Africa, Asia and the Americas. The exchange closed 100 years later in 1961 with the entry of the government as a player in the cotton trade.

African governments' quest to deregulate their economies and open up the financial markets in the 1990s triggered their withdrawal from commodity trading and led to the establishment of commodity exchanges in a number of African countries with varying degree of success. Uganda, Zambia, Zimbabwe, South Africa, Kenya all established commodities exchange in the 1990s. The African Union Abuja Treaty of 1991, identified the need for an African Commodity Exchange and might have provided some awareness and push for the set - up of commodity exchanges in the continent, at the time. The concept of an African Commodity Exchange became one of the "instruments of integration" of the African Union (AU). In West Africa, there was also an attempt to create a regional exchange for food products following the adoption of the UEMOA Agricultural Policy paper by UEMOA heads of state in December 2001.

The South African Futures Exchange has been one of the most successful Exchanges in Africa and remains operational to this day. Established in 1995 it was acquired by the Johannesburg Stock Exchange (JSE) in 2001 and now is its subsidiary. The Zambian and Zimbabwe exchanges initially thrived but successive government intervention and commodities price volatility led to their failure. The Kenyan and Ugandan Commodity Exchanges experienced similar fate as both exchanges could not garner sufficient trade volume to survive. The Uganda Exchange subsequently transformed to the government regulator of warehouses while Kenya Exchange became a prices data disseminator.

A new wave to establish functional Commodity Exchanges arose in the 2000s and saw Nigeria set up the Abuja Securities and Commodities Exchange (ASCE), now known as the Nigerian Commodity Exchange (NCX), the African Commodities Exchange (ACE) in Malawi as well as the East African Exchange in Rwanda. Another attempt to set up a commodity exchange was made by Zambia through its Agricultural Commodity Exchange (ZAMACE). The Ethiopian Commodities Exchange (ECX) that was established in 2008 is today often seen as a model for other African countries as it is considered as one of the most successful in Africa. Based on a model of standardized warehouse receipts, it initially experienced low trade volumes as trading was then limited to maize, beans and wheat. However, its operations soured when the exchange introduced export commodities in December 2008. Furthermore, trading volume significantly rose on the back of government policies that mandated export trades such as coffee be carried only through the Exchange.

The success of ECX has been attributed largely to the support of the Ethiopian government. Coffee export in Ethiopia is said to have increased from $529 million in 2007/2008 to $797 million in 2011/2012. More recently, it has been recognized that this success has come at a price. The main beneficiaries of the exchange have been the traders and not the coffee farmers as hoped. Further, again because of Government intervention in standardization, the marvelous specialist varieties of coffee had all to be sold as 'Robusta'. This did away with any hope of a premium price for quality. Within the last 18 months, this has been recognized in Ethiopia and the policies are changing in the hope of reducing the large black market in specialist coffees which has arisen as a result of simplistic policies of standardization

In Ghana, the Cocoa Board ensures transparency and guarantees prices to farmers directly, which negates the need for such intermediaries. Today, the Ghana Commodity Exchange is in an advanced stage of becoming operational. Tanzania and Kenya coffee auctions also provide efficient differentiation and traceability. Ghana is currently in the process of setting up a commodity exchange.

It is important that to build a thriving commodity exchanges in Africa, the experience of other countries needs to be taken cognizance of in order to avoid pitfalls and gain maximum advantage.

3.2 History of Commodities Trading in Nigeria

Some of the modern day agricultural marketing challenges such as access to market and produce funding were also present in the colonial era and responsible for the setting up of the Produce Marketing Boards by the colonial administration. The boards were to link the peasant farmers to market at stable prices. The Marketing Boards were set up in the three existing regions between 1947 and 1963 before the Western Region was spilt into Western and Mid-Western Regions. Cocoa Marketing Board was established in 1947 in the Western Region while Cotton and Groundnut Marketing Boards were set up in the Northern Region and Palm Produce Marketing Board in the Eastern Region in 1949 (Iweze, 2014).

The Boards were set up not only for price stabilization but also to serve as a source of funds for the economic development of the regions as well as to carry out research and development principally in cocoa, cotton, groundnuts, palm products and rubber.

The commodity boards subsequently set up "gazetted markets" across the country where the commodities were subjected to quality checks before they were bought from the Licensed Buying Agents (LBAs). The LBAs had produce buyers accredited to buy on their behalf. The produce buyers in the process went to different villages and farmsteads to buy the produce based on weight, physical appearance of the produce and allowance for possible quality defects from the farmers. They paid the farmers on the spot or sometimes at a later date depending on the relationship between them and the farmers. This arrangement largely promoted quality assurance right from the farm gates where the produce were inspected for quality prior to payment of farmers.

It was this quality assurance and the adherence to best agronomic practices by farmers that enhanced agricultural production and exports, and financed development projects in the regions. For storage of their produce, the regional governments built warehouses, many of which were large warehouses around the port area for their export commodities.

Warehouses start usually as storage device set up by commodity owners during seasons when harvest exceeds consumption. It is therefore reasonable to assume that in Nigeria, farmers started storage facilities to keep seasonal harvest of the crops. With increased communal interactions in the early years, trading activities also increased, eliciting different forms of storage arrangement. By the time the European traders came into the scene, the first set of structured warehouses or stores were built. These were essentially owner-operated or subsidiary warehouses as they were operated by the owners or by subsidiary companies, which were wholly owned and controlled by their parent companies based locally or overseas.

Colonial trading giants like John Holt, GB Ollivant and United African Company (UAC) owned the oldest of warehouses in Nigeria. The warehouses were used to store mainly export produce and imports from their parent companies.

The companies simply establish their own warehouse standards, which were adopted from their parent company or home country. There were no national standards or agencies until the introduction of the Federal Produce Inspection Service (FPIS) and State Produce Inspection Service (SPIS) in 1954.

The developmental impact of the marketing boards cannot be overemphasized as that period witnessed the establishment by the regional governments of some academic citadels such as the University College Ibadan (now University of Ibadan), University of Ife, University of Nigeria and Ahmadu Bello University. Funding of these institutions came from revenue from commodity exports. Besides these institutions, other landmark projects and policies were executed/implemented through revenue from the activities of the marketing boards. They included the establishment of the first television station in Africa, the Cocoa House, which was the tallest building in Nigeria at that time and the free primary education programme by the Western Regional Government, which was funded by proceeds from cocoa.

The Eastern Regional government did the same by implementing free primary education programme in 1957 from Palm Produce and Rubber exports while the Northern Region also undertook development projects from such export proceeds. The surplus that accrued to the regional governments from commodity exports arose from the difference between producer prices as fixed by the government of each of the regions and the prices at which the produce were sold overseas by the Nigerian Marketing Company established for this purpose by the Federal Government. The marketing boards later became Commodity Boards with the creation of states in 1967.

Under the marketing board arrangement, the farmers gradually felt short changed by what they received and formed a pressure group to protect their interest. One remedy they sought was an increase in producer prices approved by the boards. There are arguments today, as to the success of the marketing boards. For instance, Iweze argued that the marketing boards only succeeded to some extent in stabilizing seasonal producers' price, but achieved little in stabilizing producers' income.

The commodity boards were scrapped following the liberalization of the economy under the Structural Adjustment Programme (SAP) in 1986. Ironically, commodity exporters to date, still buy cash crops on the basis of the framework developed by the commodity boards.

However, unlike the era of commodity boards when farmers knew the buying price of all commodities under each board's control, farmers nowadays suffer from price information asymmetry as they don't know what the price of what they are selling goes for in the next village or the next rural market. It is these and other challenges that reinforce the need for the establishment of commodities exchanges as alternative marketing platform for commodities.

Commodity Exchanges help farmers to keep aware of the market prices of their produce across a wide geographical area and throughout the year

The Central Bank of Nigeria noticed the vacuum created by the abolition of Commodity Boards in 1986 and advised the Federal government to establish a Commodities Exchange. There was no gainsaying that the abolition of the commodity boards affected the standards and quality of commodities particularly, export produce, as there was no strong quality control and grading agency to ensure standards of the commodities. The private sector perhaps saw a business opportunity in the newly liberalized commodities business and paid little attention to quality. As a result, substandard commodities became wide spread. This defect was to impact negatively on the reputation of Nigeria's export commodities.

The intervention by the Central Bank was therefore, an attempt to address the resultant effect of scrapping the marketing boards. The thinking was

The rules and regulations of Commodity Exchange can ensure consistent that a commodities exchange would provide standards and grading and assume that function of the commodities board and invariably promote produce quality, particularly of exports. Obviously, while this was a major concern for the CBN, it also recognized the wider benefits of having a thriving commodity exchange in the country.

An Inter-Ministerial Technical Committee was consequently set-up in 1989 to examine the possibility of setting up a commodities exchange in the country. The committee submitted its report a year later supporting the establishment of a commodity exchange. However, there was no evidence that concrete action was taken by government to do so. Nonetheless, an unsuccessful attempt was made by FALCOMEX, a private sector initiative, to establish a commodity exchange. Other than these efforts, no other attempt either by government or the private sector is known to have been made until August 8, 2001 when the Federal Government directed the conversion of the then Abuja Stock Exchange to a Commodities Exchange vesting the Ministry of Finance with the responsibility of midwifing the conversion process.

The SEC was part of the Inter-ministerial Committee constituted to examine the gap that arose after abolition of the marketing boards. Following the conversion of Abuja Stock Exchange to a commodities exchange, the SEC developed regulatory framework for supervision of the commodities exchange and engaged both the Bureau of Public Enterprises (BPE) and the Exchange to kick-start trading.

In 2014, SEC developed a 10-year capital market master plan to transform the Nigerian capital market. Mindful of the need to have an organized commodities market, one of the recommendations of the master plan is to develop a thriving commodities trading ecosystem. To achieve this mandate, the SEC set up a committee consisting of major stakeholders to review and come up with recommendations and road map for implementation. These efforts are key to the development of the commodities market.

3.3 The Nigerian Commodity Exchange (NCX)

As stated earlier, the Federal Government in 2001 directed that the Abuja Stock Exchange be converted to a commodities exchange. The conversion process however, started 3 years later in 2004 when an Inter-Ministerial Committee was constituted by the Federal Ministry of Commerce and Industry for that purpose. The report of this committee gave rise to another committee, a Steering Committee that was chaired by the Deputy Governor (FSS), Central

Bank of Nigeria. The Steering Committee concluded its work in 2005 and trading commenced on the Exchange in June 2006.

It was a challenge to convert the exchange, which had operated solely as a stock exchange to be suddenly re-calibrated in all respect to a commodity exchange. The sudden transformation meant that the trading platform had to changed, operations had to be modified, new membership types had to be created, new products admitted for trading and new capacity developed, amongst others challenges. These changes required funds, capacity, products and new participants.

Unfortunately, the exchange lacked proper funding to carry out its functions and could not even mobilize sufficient funds to enable it enter into technical collaboration for capacity building and knowledge transfer which it needed badly with established commodity exchanges. In addition to these challenges, the exchange faced weak supply, lack of interest by operators in the securities market to open commodities trading subsidiaries, low understanding of the workings of the Exchange and the absence of supportive infrastructure and institutional arrangements that could strengthen the supply side of the market.

There was also the non - existence of vibrant farmers' co-operatives that could bulk the produce of their members for wholesale marketing on the floor of the Exchange. Equally lacking were commodity grades and standards as well as farmers' credit system based on Warehouse Receipts.

At the time, it was thought that giving the exchange a dual license to trade both commodities and securities, and thereafter privatising it would solve some of the challenges it was facing. Thus in 2003, in preparation for privatization, which unfortunately never materialised, the Bureau of Public Enterprises (BPE) directed the Exchange to change its name from Abuja Commodity Exchange (ACE) to Abuja Securities and Commodity Exchange (ASCE). This was to enable it acquire a composite trading license that would allow it trade commodities as well as securities such as stocks and bonds.

The perceived advantage of a dual license then was to attract enterprises for privatization. In the bid to spur activities, the exchange organized sensitization programmes for various stakeholder groups and pursued the introduction of a Warehouse Receipt System (WRS) in Nigeria. This has yielded some result with an executive bill on the subject matter sent to the National Assembly in 2017. The bill, as at the time of preparing this report, had been passed by the Senate and awaiting the concurrence of the lower house.

Believing that the enactment of a law on commodities exchange in Nigeria was necessary to get adequate funding from government and legal support for its operations, the Exchange in 2010 sponsored a Bill for an Act to establish Nigeria Commodity Exchange and Other Allied Matters, which is yet to be passed into law by the National Assembly. The Bill is said to be at the Committee stage of the House of Assembly. The NCX has also been involved in an initiative to develop the Market Information System (MIS) and a National Grading System (NGS) for agricultural produce in the country that is yet to be exposed to commodity market participants for comments by the Standards Organisation of Nigeria.

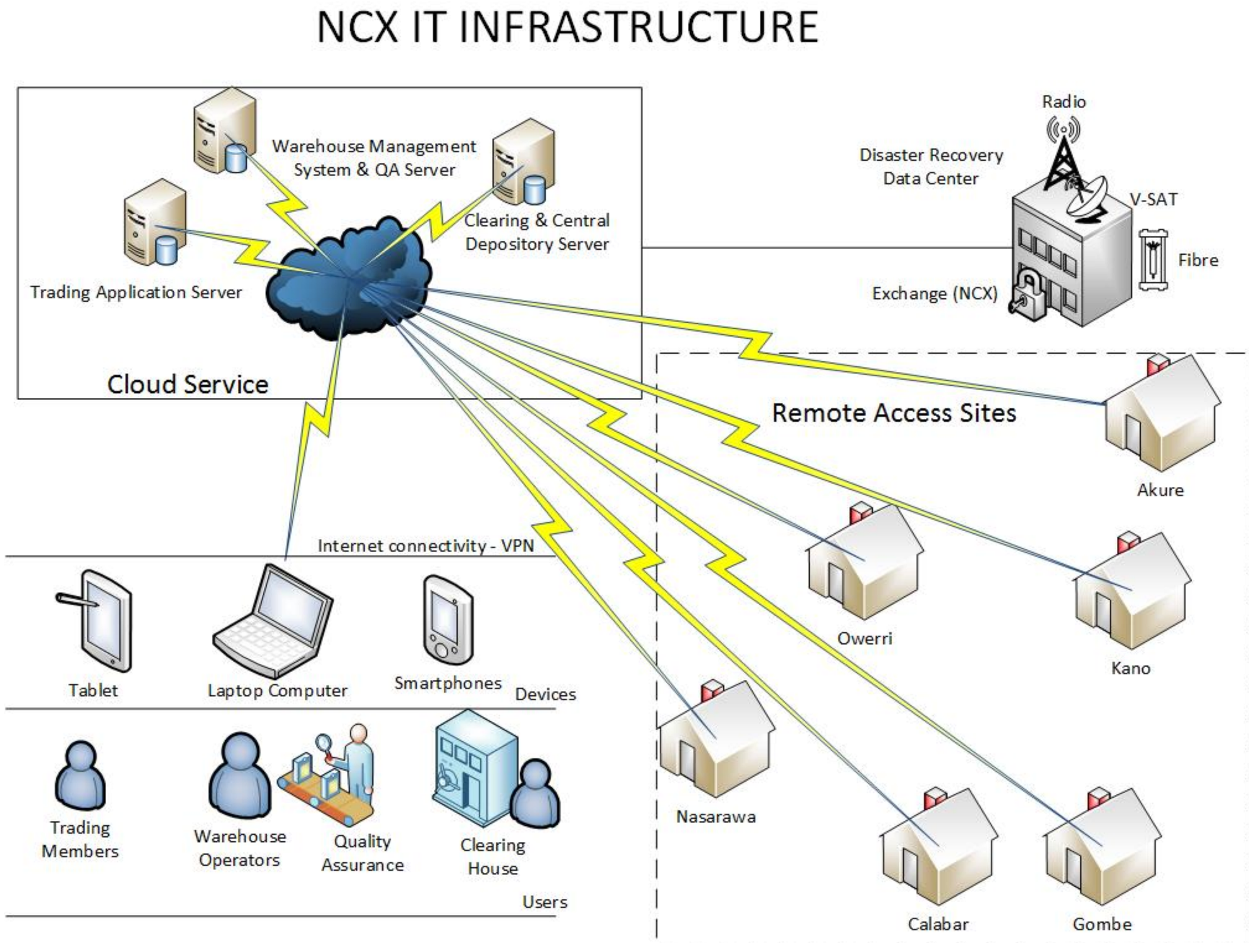
In terms of improving its operational efficiency, the NCX plans to acquire and install a non-proprietary electronic trading system to provide a trading platform for Warehouse Receipts. Based on the size of Nigeria and the relative robustness of its telecommunications and financial system, the Exchange intends to deploy a decentralized electronic trading system for standardized spot contracts that would facilitate a T+1 trading cycle with **s**ix (6) Remote Access Sites (RAS) one in each geo-political zone.

The RAS, which it said will be located in areas where particular commodities are grown, will provide facilities for electronic floor-based trading and would be electronically linked to the Exchange's central trading engine at head office for the clearing and settlement of all trades. The sites are to be located in; **Kano** (North West), Gombe (North East), **Jos** (North Central), **Akure** (South-West), **Abakaliki** (South East) and **Calaba**r (South South).

Each RAS shall be linked to NCX head office for effective management and service delivery. The Exchange stated that all commodity warehouses under its purview will be linked to the central depository to facilitate trading in electronic warehouse receipts WR issued by the Depository.

NCX hopes to develop a robust and efficient real-time ***Market Information System (MIS)*** that will provide producers, processors, industrialists and traders with objective up-to-date market information analysis, market outlook, and other references to assist in marketing decisions. As a result, the Exchange intends to set up three Market Information Centres (MICs) in each geo political zone of the country. The information provided by the MICs is expected to play a key role in effective pricing and help in eliminating artificial trade barriers that may be created by middlemen in the value chain. The market information centres will engender perfect knowledge of the markets among various players in the agricultural produce markets. It is important to point out that the privatization of NCX is still in progress with the planned investment of the Nigerian Sovereign Investment Authority (NSIA). Of course, any new investor may review the aforementioned planned initiatives of the Exchange.

Figure 4: A diagrammatic presentation of the proposed trading system as presented by the NCX



3.4 AFEX Commodities Exchange Limited

AFEX Commodities Exchange Limited (AFEX), a sister company of East Africa Exchange (EAX), was established in Nigeria in 2014 through a Public Private Partnership with the Federal Ministry of Agriculture and Rural Development (FMARD) to establish a Warehouse Receipt System (WRS) and Commodities Exchange in Nigeria. AFEX Nigeria secured its license as a Commodities Exchange in compliance with the Investments & Securities Act (ISA), 2007 and the Securities & Exchange Commission's (SEC) Rules & Regulations in March 2015. AFEX is also the first private sector led and funded Commodities Exchange in Nigeria and across West and Central Africa.

Adopting lessons learned and challenges met during the establishment of EAX, AFEX Nigeria has built on existing logistics systems by providing warehouses across major grain-producing states in North-West, North-Central & North-East Nigeria. This has led to the creation of trading terminals where processors, traders and farmers exchange value.

Table 7. List of AFEX warehouses

AFEX Warehouses	
Kaduna	Saminaka
	Pambegua
	Jengre
	Panyam
	DokaLere
	Makarfi
	Zaria
	Soba
	Anchau
	Pampaida
	Kachia
	Kubacha
	Kwoi
Katsina	Funtua
	Dandume
	Bakori
Taraba	Jalingo
	Mutumbiu
	Bali
	Garbachede
	Gombe
	Kumo
Benue	Gboko
	Asukunya
	Buruku
	Aliade
	Akpagher
Kano	Dawanau
	Kura
	Hadejia
Kebbi	Suru
	Argungu
	Jega
Zamfara	Talata Mafara

AFEX's warehouses serve as storage and aggregation points for farmers, hence securing year-round supply to livestock farms, processors, industries, neighbouring countries as well as the broader export market. Beyond AFEX's warehouses, it will also license accredited warehouse operators and collateral managers who will help deepen the market and provide these services across the country under the regulation of the SEC.

AFEX seeks to:

- Establish a commercially viable model for crop storage and standardization in Nigeria;
- Reduce price volatility by facilitating the creation of buffer stocks and encouraging staggered supply through the provision of collateral management services and stock financing;
- Support smallholder farmers' access to credit through the electronic Warehouse Receipt System – eWRS;
- Reduce post-harvest losses and champion increase in high yield crops;
- Create access to new (and high value) markets through transparent and efficient trade on the Exchange; and
- Increase transparency of commodity markets and share of value appropriated by smallholder farmers for their crop.

Creating Value to Smallholder Farmers – The AFEX Model

AFEX's overarching strategy is to create a national trading platform and supply chain network in carefully identified value chains (staple and export crops), through which farmers and commodity merchants can access commodity and financial markets. Integral in the strategy is the inclusive approach of not only developing a trading platform, but also supporting the ancillary infrastructure critical to the success of an exchange and the development of agriculture at large by operating four core services:

i. Outreach

The AFEX approach is focused on education, capacity building and partnership with commodity market stakeholders in a way that elevates the local economy, and provides increased employment and wealth creation for farmers. With a robust outreach program which organizes farmers in groups and clusters, trains and certifies Outreach Officers[1] who coordinate the activities of the farmers and provides access to financing and agricultural inputs at the right time to guarantee quality produce, farmers have the potential to earn a fair share of created value.

[1] These outreach officers are locals in farming communities, trained to reach out and engage farmers, enlightening them on AFEX's operations

ii. Aggregation

Two major barriers that limit the ability of farmers to trade directly with commercial players are: low volume of commodity cultivated and absence of financial service providers in rural areas. AFEX mitigates these barriers through the warehouses, and combine several small transactions to match large purchase orders from the processors. This increases the income earned by the farmer.

Typically, when supplying in smaller quantities, you are paid less. However, AFEX delivers value by offering farmers access to the same price as traders i.e. irrespective of the quantity being delivered to the warehouse, the same value is being paid. This has encouraged farmers to transact more with the exchange whilst simultaneously increasing their income.

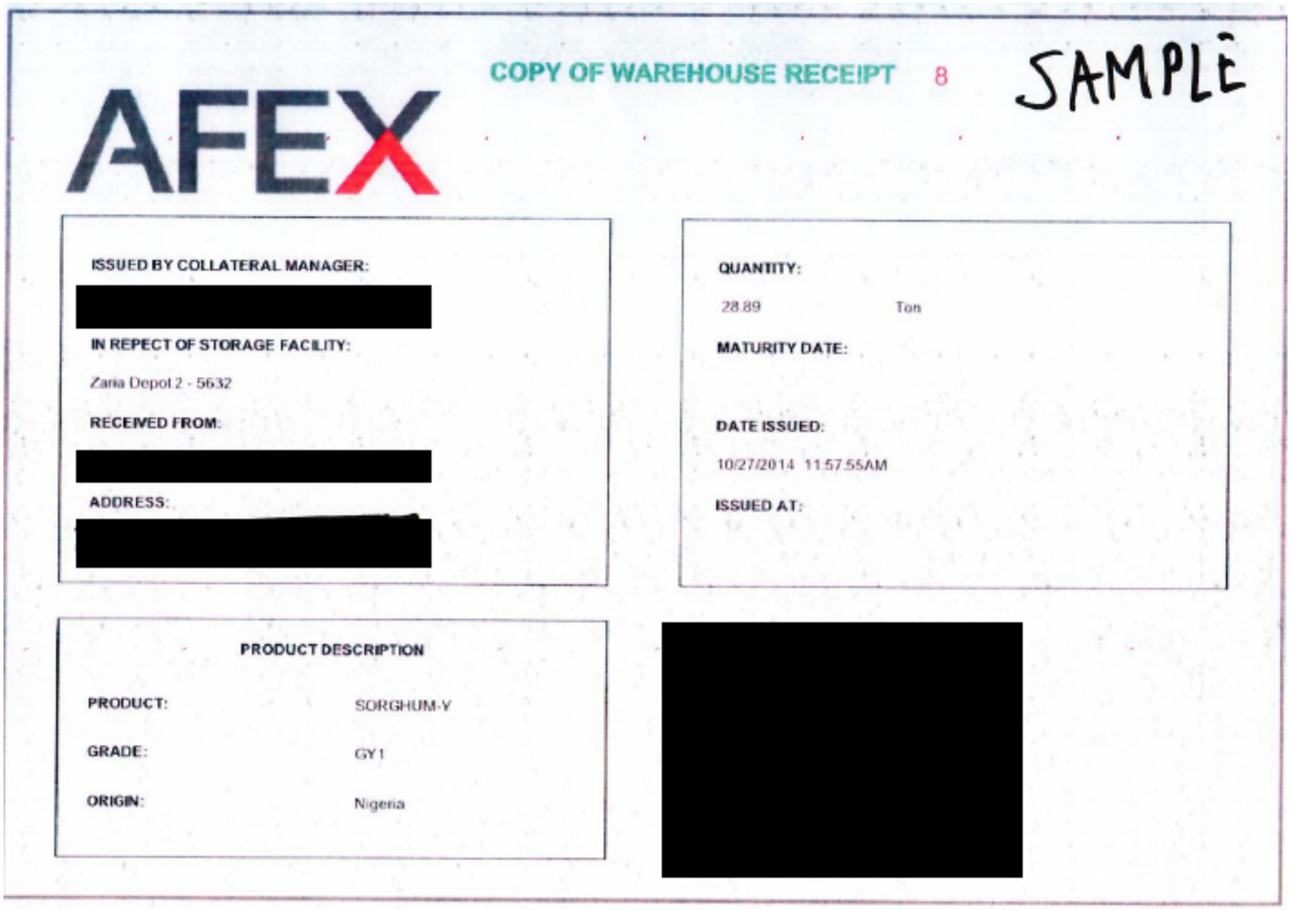
iii. Storage and Warehouse Receipt Financing

Farmers could potentially earn significant incremental income through access to storage, which provides flexibility on the timing of produce sales. Creating the opportunity for farmers to store harvested crops at harvest and leverage on the stored products to access financing increases their income significantly. AFEX runs a hub and spoke model for the warehouses to ensure efficiency, inclusiveness and reach to farming communities. By operating a network of warehouses and silo complexes designed to store the tons of crops produced each season that would otherwise go to waste, AFEX warehouse facilities allow farmers to safely store their harvest at a fee without worrying about loss of value until market prices are favorable.

With this solution, producers and processors can store products at various locations or other accredited warehouses, and manage the entire storage chain, including all intake procedures, product grading, and fumigation. This eliminates the extra cost of moving grains between states, before sending to the final market, creating efficiencies and minimizing post-harvest losses.

The following illustration is a sample of an AFEX electronic warehouse receipt:

Figure 5: Sample of AFEX electronic warehouse receipt



AFEX

COPY OF WAREHOUSE RECEIPT 8

SAMPLE

ISSUED BY COLLATERAL MANAGER:

[redacted]

IN REPECT OF STORAGE FACILITY:

Zaria Depot 2 - 5632

RECEIVED FROM:

[redacted]

ADDRESS:

[redacted]

QUANTITY:

28.89 Ton

MATURITY DATE:

DATE ISSUED:

10/27/2014 11:57:55AM

ISSUED AT:

PRODUCT DESCRIPTION

PRODUCT:	SORGHUM-Y
GRADE:	GY1
ORIGIN:	Nigeria

[redacted]

iv. Commodity Trading

In addition to providing secure storage and linking players across the value chain to credit sources, AFEX links commodity buyers (domestic and international) and sellers, and facilitates the cash and product settlement.

AFEX operates an electronic market which enables small-holder farmers to trade through the warehouses. The company recently launched a Nasdaq-OMX trading platform that allows participants buy and sell products from the convenience of their offices, or trade from trading terminals provided by the Exchange. The new trading platform can also facilitate auctions, spot trading as well as forwards and futures contract trading. The Nasdaq –OMX trading platform is the same platform used by the NSE.

AFEX creates a marketplace that trades across a broad range of agricultural products including maize, soybean and rice. The approach is to ultimately act as the central counter party for the trade of spot, forward and future contracts, and provide international and Nigerian market participants with a new and more efficient method for price discovery as well as the ability to carry out trades.

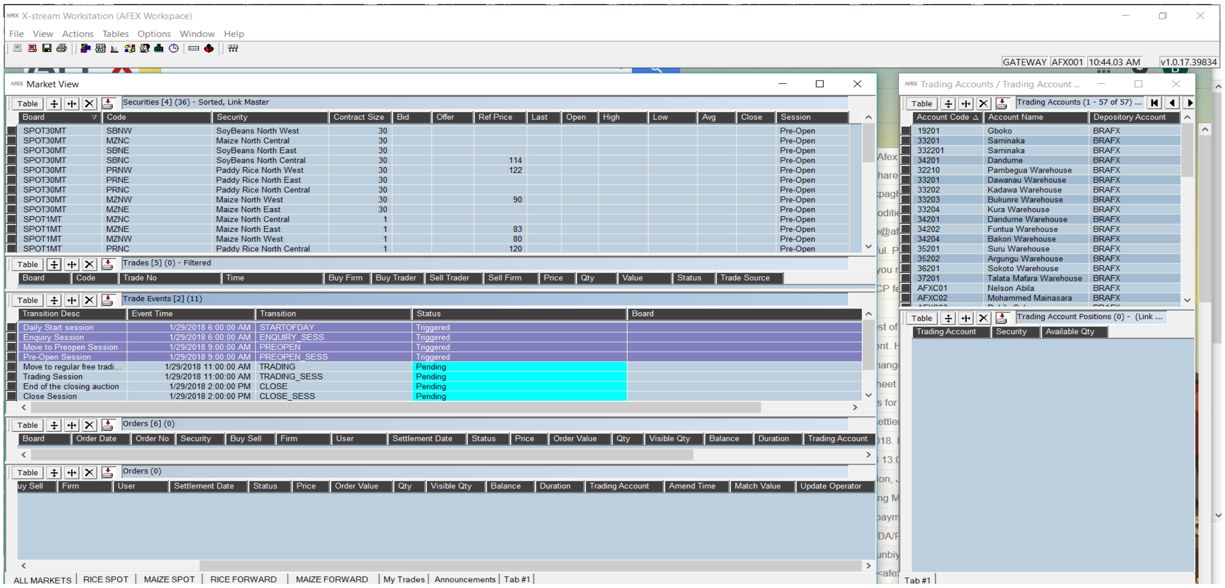
By tapping into the opportunity to have standardized and graded products, reduced post-harvest losses, transact with large industrial buyers without passing through chains of middlemen, as well as the ability to delay sales of products until later in the season, additional value for smallholder farmer is created.

AFEX Nigeria has spent the last three (3) years building a supply chain network to ensure efficient delivery and settlement of transactions. Prior to the launch of the trading platform, trades on the exchange were settled via negotiated transactions over the counter (OTC). For instance, if a buyer or processor issues an LPO[2] for 10,000 metric tonnes of commodity at a maximum price, the bid is matched manually by a trading officer in the exchange with offers at the same price or less, until the entire volume is met. Similar to the open outcry system of transacting on exchange trading floors, this model of operation is susceptible to a number of errors, such as, transcription, transposition errors and the likes. In addition, the buyer does not have full control and viewership on his transactions. All these and more is what led to the deployment of the Nasdaq Trading System.

The launch of the trading system revolutionized the way trades are carried out on the exchange. The trading system brings with it transparency and full control on transactions for both the buyer and the seller as well as ease of transacting at the convenience of either party.

Figure 6.1: Screenshots of the AFEX electronic trading platform

[2] Local Purchase Order


X-stream Workstation (AFEX Workspace)
File View Actions Tables Options Window Help
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Market View
Securities [4] (36) - Sorted, Link Master
Trades [5] (0) - Filtered
Trade Events [2] (11)
Orders [6] (0)
Orders (0)
ALL MARKETS RICE SPOT MAIZE SPOT RICE FORWARD MAIZE FORWARD My Trades Announcements Tab #1
Trading Accounts / Trading Account ...
Trading Accounts (1 - 57 of 57) ...
Trading Account Positions (0) - (Link ...
Tab #1

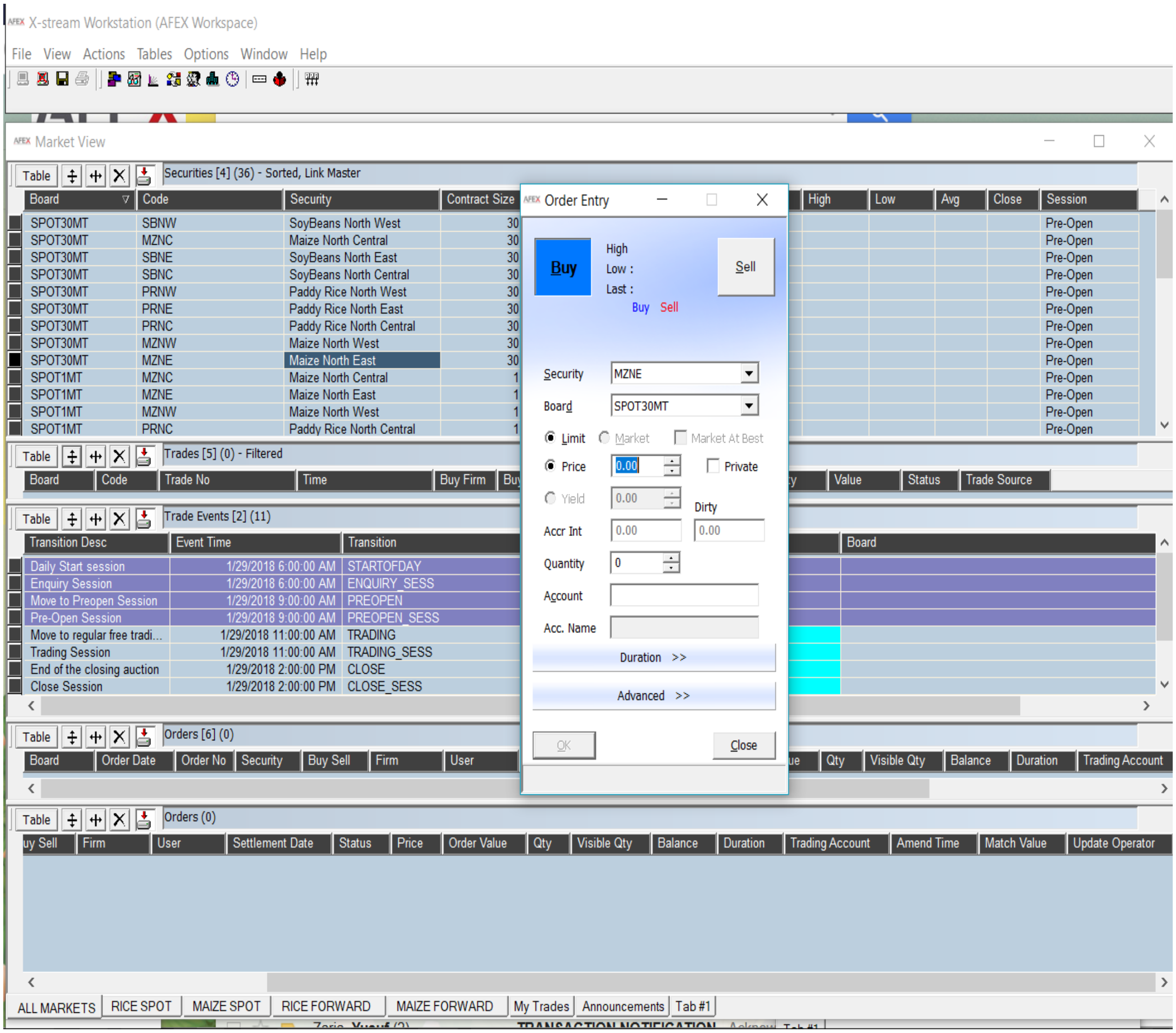


Figure 6.2: Screenshots of the AFEX electronic trading platform

The deployment of the trading system has necessitated the need to operationalize its membership structure as brokers, dealers and clients play an integral part in the system. Currently, AFEX has members who are licenced and have access to the trading platform for executing their transactions. Such members put their positions online and the trading platform automatically matches them with corresponding positions.

The exchange currently views the electronic trading market as being in its developmental stage as key players required to drive the full operationalization of the trading system are yet to integrate it in their processes. AFEX is currently engaging players in the capital and financial markets on participation on the platform. Also, in this developmental stage of the commodities market, it is necessary to permit flexibility of requirements for registration and participation on the exchange to encourage operators to participate in the commodities markets.

A noteworthy case study is the **Nasarawa Women Cooperative.**

The relationship between AFEX and the Nasarawa Women Cooperative started in 2015 when the cooperative planned to access financing from a commercial bank for collective input purchase, but could not access the loan on time and AFEX had to step-in to facilitate the provision of the loan by a micro-finance bank.

In 2017, the number of members who could access the facility had increased to 31 cooperatives of 10 women each, and the value of input which they received increased by up to 50%. In addition to the facility for input, AFEX also helped the women group procure a yield index insurance product.

AFEX sees a need to extend this practice to some of the male groups and expand the learning from these groups across other women groups in cultivation, as well as other service provider groups across the value chain (typically women and youths).

AFEX has so far been able to offer the women cooperative storage facilities, access to new markets as well as continuity in input financing.

AFEX created a special input financing program different from what was generally offered, but tailored to suit their abilities. The association pays a 30% equity contribution out of the amount they require. This group of women are AFEX model farmers and are currently in the 3rd year of engagement with them.

v. Market Data

Below is a sample of market data from the AFEX Commodities Exchange sourced from various local markets across Nigeria for the period 19th January – 25th January 2017.

Figure 7: Sample of AFEX Market data for Commodities across Nigeria

AFEX
AFEX COMMODITIES EXCHANGE LTD

Kainosedge

AGRICULTURAL COMMODITIES PRICE REPORT

JANUARY 19TH – JANUARY 25TH, 2018

Maize

Description (₦/kg)	North West[i]	North East[ii]	North Central[iii]
Maximum Price	108.25	90.00	95.83
Minimum Price	86.54	82.98	87.23
Average Price	96.21	86.79	94.11
Average % Δ Week on Week	-0.35	-1.48	2.70

Description of Tables:

- Maximum Price in the North West was recorded for Maize Hadejia Market in Jigawa State. The Minimum price was recorded for Maize in Ancheau Market, Kaduna State.
- Maximum Price in the North East was recorded for Maize in Biliri, Kumo and Leggal Market in Gombe State and the Minimum price was recorded for Maize in Mutum Biyu Market, Taraba State.
- Maximum Price in the North Central was recorded in Daudu and Gbajimba Markets, Benue State, the Minimum price was recorded in Jengre Markets, Plateau State

Soybean

Description (₦/kg)	North West	North East	North Central
Maximum Price	144.33	132.65	131.58
Minimum Price	128.87	118.28	108.70
Average Price	137.10	127.78	113.50
Average % Δ Week on Week	0.44	2.84	1.18

Description of Tables:

- Maximum Price in the North West was recorded in Kwana and Markafi Markets in Kaduna State and Minimum Price in Pambegua Market, Kaduna State
- Maximum Price in the North East was recorded in Kumo and Biliri Markets, Gombe State and Minimum Price in Sunkani Market in Taraba State
- Maximum Price in the North Central was recorded in Jengre Market in Plateau State and Minimum price was recorded in Taraku Markets in Benue State.

Paddy Rice

Description (₦/kg)	North West	North East	North Central
Maximum Price	154.93	107.14	109.09
Minimum Price	136.81	107.14	95.65
Average Price	140.57	107.14	103.73
Average % Δ Week on Week	2.15	-4.78	1.16

Description of Tables:

- Maximum Price in the North West was recorded in Rini Market, Zamfara State and Minimum Price in Sara Markets in Jigawa State
- Maximum Price in the North East was recorded in Mutum Biyu Market, Taraba State and Minimum Price in Mutum Biyu Market, Taraba State.
- Maximum Price in the North Central was recorded in Aliade Markets in Benue State and Minimum Price was recorded in Ikyumbor and Jour-Kumdav Market Benue State
-

Contact

marketdata@afexnigeria.com +234 803 308 0391 AFEX Nigeria @AFEXNigeria @afexnigeria

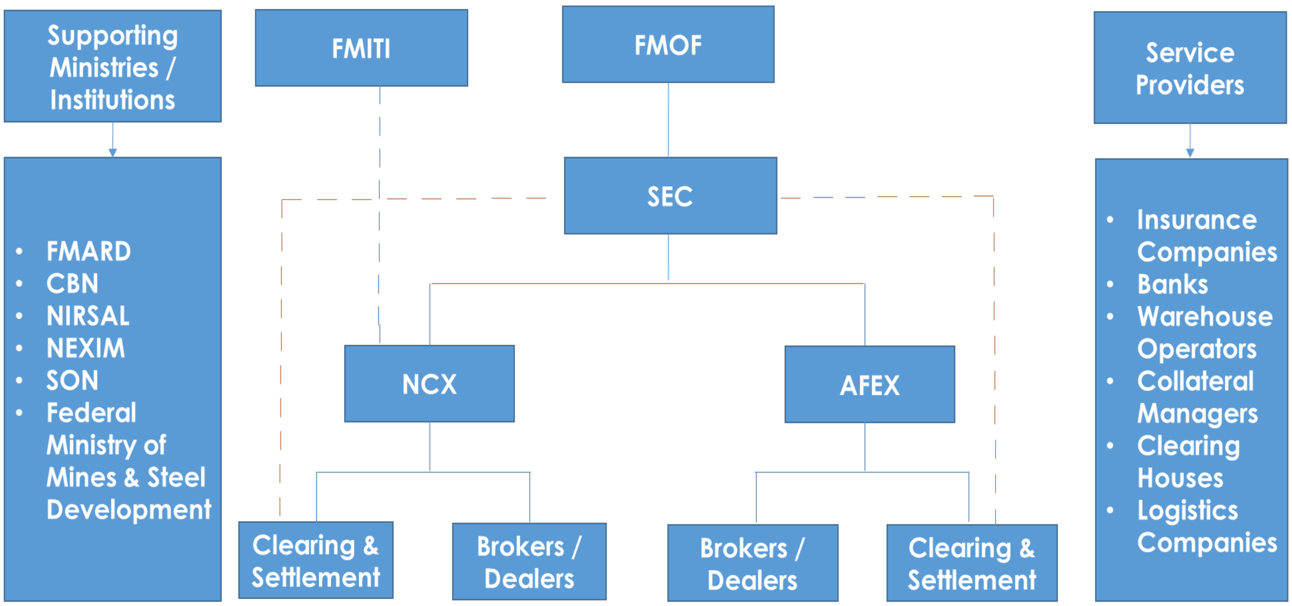
[i] North West – Kebbi, Zamfara, Katsina, Kano, Jigawa, Kaduna and Sokoto
[ii] North East – Gombe, Taraba
[iii] North Central – Benue,

These values are from price surveys and should not constitute any basis for transacting

4.0 CURRENT STRUCTURE OF THE COMMODITY MARKET

The current structure and key institutions in the market are shown below

Figure 8: Key Institutions in the market



The current market structure shows the active involvement of key Federal Ministries such as Federal Ministry of Agriculture and Rural Development (FMARD); Federal Ministry of Mines and Steel Development (FMMSD); Federal Ministry of Industry, Trade and Investment (FMITI) as well as Federal Ministry of Finance (FMOF) in the ecosystem.

Their roles are primarily policy setting, policy implementation, and oversight of their respective sectors. FMARD and FMMSD oversee the development of soft and hard commodities respectively. The Ministry of Finance is the supervisory Ministry for the Securities and Exchange Commission (SEC) which regulates the capital market including the commodity exchanges. However, the NCX as a Federal Government owned and funded institution reports to FMITI. The Bureau of Public Enterprises (BPE) holds the ownership interest in NCX on behalf of the Federal Government and has occasionally exerted influence on the NCX.

The CBN had in the past, made financial contributions towards the operations of the NCX. It is clear that the NCX is currently under the supervision of two ministries, directly by FMITI and indirectly by FMF through its supervision of SEC. This arrangement, no doubt, sometimes creates ambiguity and conflict on matters of the exchange and does not augur well for the exchange and regulation by the SEC. It is expected that the reporting line of NCX will be streamlined when the proposed divestment of the NCX is concluded. With the divestment, FMITI should cease to supervise NCX.

There are other government agencies, which have been very prominent in the commodities ecosystem. The CBN stands out given its strong developmental role, particularly in de-risking the agricultural sector. The Bank of Agriculture (BOA), Bank of Industry (BOI) and Nigerian Export – Import Bank (NEXIM) also play some role especially in the provision of credit and capacity development to agriculture and agribusinesses.

Clear and straightforward regulation is required for the effective operation of a commodity exchange

Commodity exchanges are regulated by the SEC, which derives the power to do so from the Investments and Securities Act (ISA) 2007. Section 13 (b) of the Act specifically gave powers to SEC to:

" register and regulate securities exchanges, capital trade points, futures, options, and derivative exchanges, commodity exchanges and any other recognized investment exchanges."

Section 13(f) requires the SEC to ***"prepare adequate guidelines and organize training programs and disseminate information necessary for the establishment of securities exchanges and capital trade points***.

Under Interpretation and Citation, a securities exchange is defined as:

"***an exchange or approved trading facility such as a commodity exchange, metal exchange, petroleum exchange, options, futures exchange, over-the-counter market, and other derivatives exchanges"***

It also defines securities to include ***"commodities futures, contracts, options and other derivatives …."***

Part V of the ISA made extensive provisions for the registration and regulations of securities exchange, capital trade point and other self- regulatory organizations. Several provisions of the Act made reference to securities exchanges which are also applicable to commodity exchanges. In addition to registering the exchanges, the SEC is required to register commodity brokers and other operators in the commodity exchanges while they are required to be licensed by the exchange before commencing trading on any such platform.

Currently, there are no registered commodity brokers or other commodity operators trading on both exchanges, although SEC has rules for the registration of commodity exchange operators. The NCX has not been trading for about a decade. In its early years (as Abuja Securities and Commodity Exchange) it had a few licensed commodity brokers who also had stockbroking licenses and were active on the Nigerian Stock Exchange (NSE). AFEX, on the other hand, provides trading access to its platform to some institutions, which are yet to be registered with the SEC. These institutions do not trade for clients but do so for their own account and essentially play the role of commodity traders (dealers).

It is important that these institutions are registered by the SEC as not registering violates the provision of Section 38(1) of the ISA, whether or not such trading is for own account. Section 38(1) (b) state that "no person shall carry on investment or securities business unless the person is registered in accordance with this Act and the rules and regulations made there under". Section 13(g) also gives powers to the SEC "*to register and regulate corporate and individual capital market operators as defined in the act*". The Act defines a market operator as "*any person (individual or corporate) duly registered by the Commission to perform specific functions in the capital market*". AFEX is currently making efforts to get operators on its platform registered by SEC.

However, the question to ask is why there has been little interest to operate in the commodity market as there are currently no registered commodity operators? We think that there is lack of understanding of the potential benefits and workings of the market. More needs to be done in this regard by the SEC and the exchanges. The stockbroking community and other stakeholders who showed early interest in participating became disillusioned with the operations/development in ASCE now NCX. As trading in the exchange went moribund, they effectively withdrew. With recent efforts to revamp the market, interest of the stockbroking community is being rekindled as they are said to be contemplating the establishment of a commodity exchange in Lagos under the aegis of the Association of Stockbroking Houses of Nigeria (ASHON).

Commodity brokers/dealers should be encouraged to trade and not penalized by excessively high capital requirements

In addition, the current minimum capital requirement for broker/dealer is now N300million while it is N200Million and N100Million for broker and dealer respectively. There is no clarity whether these capital requirements are applicable to both stock and commodity brokers and dealers. At this developmental stage, a high capital base will discourage participation and is perhaps one of

the reasons for no recorded registration by the
SEC presently.

We recommend that the capital base for commodity brokers/traders who buy and sell just physical commodities and do not trade financial instruments such as futures and options contracts as is presently the case, should not to be burdened with high minimum capital base. They trade in physical commodities, which are for immediate (e.g. one to three days) payment against delivery. The counter party risk is therefore, not as high as in derivatives contracts.

In many other commodity markets, spot market brokers trading only physical contracts do not carry any mandatory capital base. A review of the SEC Rules and Regulations on Commodity and Futures Exchanges shows a heavy concentration on regulation of futures market with little focus on spot trading which the platforms of the exchanges presently support. It is thus necessary for the SEC to introduce clear-cut requirements that would also support the spots market. As derivatives are introduced, the rules should necessarily be made much more robust. The regulation of brokers/traders and other operators in the spot commodities market should be delegated to the exchanges by the SEC. The SEC has powers under Sec. 13(o) to delegate responsibilities to the exchanges. This is common practice in other well-regulated and tightly controlled jurisdictions including London.

However, the Exchanges must be under obligation to submit periodic report to the SEC on the activities of their brokers. In SEC rules and regulations, the following participants are mentioned:

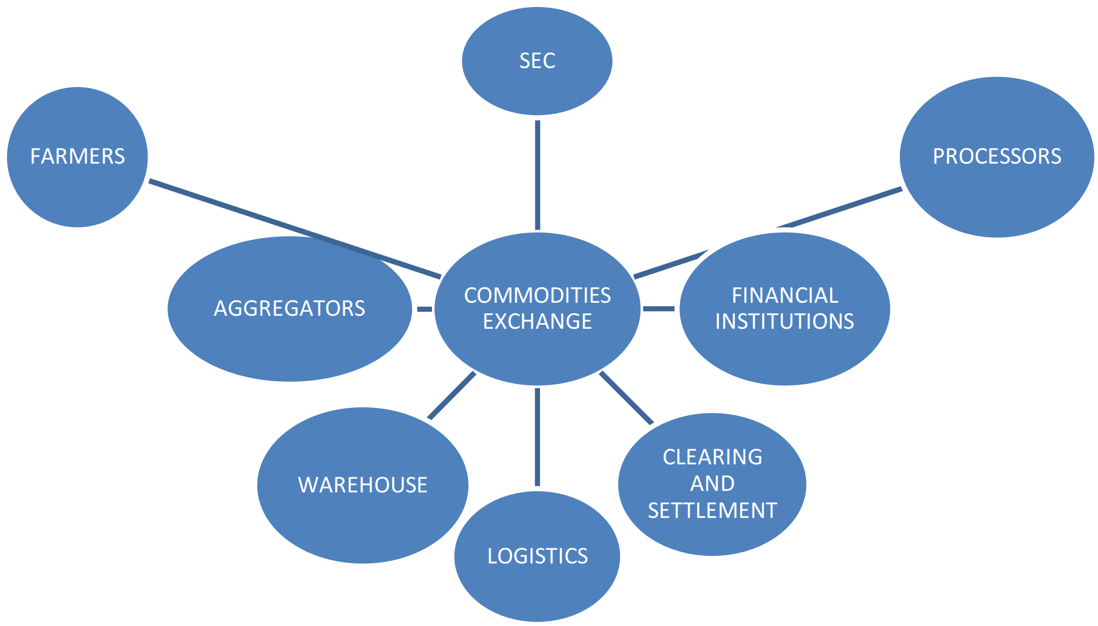
- Future Commission Merchants;
- Introducing Broker;
- Commodity Pool Operator/fund manager;
- Commodity Trading Advisor;
- Leverage Transaction Merchant;
- Floor Broker and;
- Floor Trader.

Regulation of the spot markets should be devolved from the SEC to the Commodity Exchanges

Technology has now made remote trading commonplace in exchange. Therefore, a broker or trader does not necessarily have to be stationed on a floor or in a pit to execute transactions. It can be done remotely.

Nigeria currently operates a spot market for commodities. Derivatives are yet to be traded in the Nigerian commodities market. The players in the spot market are shown below. The exchanges play a vital developmental role interfacing and working with the various stakeholders from the farmers to the processors to strengthen their participation on the exchanges.

Figure 9: Players in the spot market



For instance, AFEX has made efforts to organize farmers in different locations appointing outreach officers within the localities to interface and coordinate the farmers. On its part, the NCX has in the past utilized the existing cooperatives and attempted to structure forward contracts with off takers. Although the efforts have not led to consummation of transaction on the exchange, the strengthening of farmer cooperatives as should be the ultimate objective, is a step in the right direction.

We believe that organizing smallholder farmers into blocks through strong cooperatives will not only improve their economic circumstances, but will boost liquidity in the commodities markets. Part of the developmental work of the exchanges has been the acquisition of warehouses, which have also served as aggregation venues for farm produce. The point is that at this nascent stage of the market, the exchanges have devoted significant energy and resources to developmental activities which mature exchanges will bother less about. A major issue is how do we make the exchange a place of choice for farmers who are sometimes paid by commodity merchant/processors in advance of harvest even though they may be short changed; selling at below market price in the process. Smallholder farmers are discussed in a later section.

Trading spot on a commodity exchange should just be a starting point in the process of building a thriving commodities market and should never be the comfort zone. In other words, it should be a means to an end and not an end in itself. It should be a means to achieving a bigger objective, which should be to create financial instruments whose value would be derived from the value of the physical commodities. It should be a means of creating significant volume and activities in the physical market. Introducing derivatives should be aimed at supporting industries and other entities to hedge their risks, improve liquidity, grow the physical market, deepen the capital market, and foster economic growth.

We are of the view that with relevant actions taken including implementation of the recommendations of this report the process for introducing derivatives in the commodities market can commence within the next two years. The process will require training and capacity building, developing relevant derivative market infrastructure such as a CCP or using existing facility, developing strong risk management framework, designing the contracts and determining the commodities on which contracts would be based, reviewing existing rules and regulations to bring them up to speed on derivative trading and technology to support derivatives.

Obviously, the exchanges would determine when they are ready to introduce futures and options but a timeline as contained in the recommendations (roadmap) should be a guide. Given the efforts of the NSE and FMDQ in developing derivatives based on stocks and fixed income securities as well as FX, there would be lessons learnt to facilitate the introduction of commodity-based derivatives.

However, to be clear, we believe that derivative product should only be introduced on the foundation of a strong spot market in the commodity, providing real time information on the commodities. Without this, the derivative market would not be well grounded and risks being detached from the underlying market for the commodity or worse, may simply become a venue for price speculation.

5.0 BUILDING BLOCKS FOR THE DEVELOPMENT OF THE COMMODITIES MARKET

5.1 Large demand and Liquidity

One of the most important factors in improving the attractiveness of a commodity exchange or indeed a stock exchange and consequently, encouraging participation is liquidity. Liquidity is the ability of a participant or investor to buy or sell a commodity or financial instrument with ease and without significant price change. Liquidity in commodity exchanges can improve when there is a large number of competing buyers and sellers, large volumes of trades and timely release of market information such as price information to aid decisions. The participation of many buyers and sellers can lower transaction costs and promote effective price discovery. In other words, liquidity is fundamental to the determination of the fair price of commodities, which is one of the hallmarks of an efficient market.

When there is significantly more supply of commodities than there is demand, prices will naturally fall, which in turn, could discourage participation of farmers who may see no benefits in using the market. Similarly, if significantly more demand than supply exit, prices would rise undesirably and discourage the use of the exchange by processors and other end users. This is particularly so, when such imbalances in supply and demand arise from operational inefficiencies of the exchange or abuse by market participants.

It is a truism that market prices typically, never remain static but fluctuates over time due to different factors including demand and supply. The factors can be external to the exchange such as weather and seasonal fluctuations in supply or demand but can also be internal to the exchange such as operational inefficiencies, which can discourage use of its platform. While fluctuations are inevitable, significant imbalances in demand and supply can negatively affect price and the growth of the market. This is why it is essential to ensure that the market has adequate participation on both sides. Derivative markets are developed to hedge the risk of commodity price uncertainty but they should not be used to hedge the inefficient operation of the underlying physical market. Indeed, derivatives market can promote the efficiency in the underlying market and liquidity in the commodities market as a whole.

The presence of different types of participants in the commodities market with different objectives such as hedging, speculating and arbitraging is important to liquidity creation. For instance, speculators help liquidity by taking the risk, which hedgers try to avoid. These different participants bring their interest to bear on the market and collectively create liquidity. Nonetheless, excessive speculation can lead to excessive volatility, which is not good for markets and why speculative position limits are required by commodity and future exchanges to moderate excessive speculation. A commodity exchange should thus, operate in a manner, which would be attractive to both buyers and sellers in sufficient number, as this would help reduce significant imbalance in the market.

Furthermore, the existence of an active physical market helps liquidity by ensuring the availability of commodities for trading at all times and delivery of commodities on delivery date. Consequently, it will have a positive effect on prices and is a sine qua non to the development of commodity exchanges. The existence of a professional class, active and dynamic in the commodities market would be useful in creating awareness, promoting innovation and engender best practices in the market.

The commodity exchanges in Nigeria are presently beset by weak supply and demand. As we saw previously, only AFEX trades, and has continued to develop innovative means to create some liquidity. At this nascent stage of the development of the commodities market, concerted efforts and bold measures are necessary to nurture the market into a thriving one.

To improve liquidity, bringing on board smallholder farmers through well-organized cooperatives is required. The passage of the warehouse receipt bill into law should make it possible for exchanges to develop standardize warehouse receipts for trading and which should create some liquidity. Structured enlightenment of stakeholders on the benefits of the use of the exchange as well as the introduction of credible and transparent trading platform to provide timely price information would also be vital for liquidity enhancement.

The warehouses can be useful information centers to farmers and participants in various locations. Given that many of the warehouses are within farming vicinity, the exchanges should as a matter policy, designate the warehouses as price information centers; displaying price and other information electronically, on blackboards or other means. The SEC and the exchanges should also engage relevant agencies such as the Ministry of Agriculture, Nigerian Telecommunications Commission (NCC) and the Telcos on disseminating key market information via text messages to farmers by the exchanges. This has been successful in Ethiopia where the ECX disseminates daily information through text to farmers and others. This initiative according to the IFC, has led to 70% of small scale farmers receiving final price information (see EMCompass, April 2017). This same approach has also been successfully used by ACE exchange in Malawi.

If smallholder farmers are availed of daily price and other information it would sharpen their knowledge of the market and bargaining position with commodity merchant who often buy off the produce from such farmers at below market price. It would also enlighten them

Commodity Exchanges can help farmers to keep aware of the market prices of their produce across a wide geographical area and throughout the year.

about of the commodity exchange and hopefully
draw them into it.

The committee is of the opinion that the commodities exchange can serve as a vehicle for promoting the much needed quality and standards for Nigeria's export commodities some of which are presently not allowed into some countries. By adopting a policy that encourages prime export commodities like cocoa to be traded through the exchange, both quality of exports and liquidity of the market could improve. This will not be novel as Ethiopia was able to attract volumes into the Ethiopian Commodities Exchange (ECX) through government mandatory policy in 2008, that trades in coffee exports be conducted though the ECX. This singular act was one of the game changers for coffee exports in Ethiopia. The ECX now provides the platform for 98% of coffee export in Ethiopia (Collaborative Coffee Source, June 10, 2016).

More importantly, coffee is today the main flagship commodity of the country as it has become a major source of global supply and main producer in Africa. According to the International Food Policy Research Institute and Ethiopian Development Research Institute, coffee trading value on the ECX rose from $381million in 2009 to $800million in 2014 while volume increased from 171,990 Mt to 244,230 Mt during the same period.

However, it's been argued that the risks of such an approach need to be considered so as to avoid the pitfalls of a restricted market (over-restrictive standardization and a large black-market in specialist coffee) which the Ethiopian Government is seeking to address.

5.2 Existence of commodities to form nucleus of trading

Markets must have products to trade. To have a thriving market it is essential to identify and select commodities that are available in relatively good quantity that would form the nucleus of trading. It makes no sense introducing commodities that are quite low in supply, as this would adversely affect liquidity, price and delivery and could in fact, lead to eventual collapse of the exchange.

For success, an exchange should have relatively high volume commodities and gradually introduced more commodities as expertise is developed, and need arises. Many markets start with agricultural products such as cocoa, coffee, cotton and grains with long shelf life and later add on metals and precious stones.

Nigeria has many commodities, food and export crops as well as solid minerals. The agricultural commodities include maize, millet, sorghum, wheat, beans, ginger, sesame seed, rice, soya beans cassava, groundnut, Shea nut, palm oil, rubber, cotton, timber and cocoa. The country also boasts of several untapped solid minerals such as gold, granite, uranium, copper, kaolin, coal, limestone, columbite, iron ore, bitumen and all types of precious stones. This wide array of commodities notwithstanding, AFEX, the only functional commodities exchange, currently provides trading only for ginger, soya beans, maize and paddy rice with no major export commodity like cocoa or cotton on board.

Maize is the most active of the commodities as per tables V and VI. Trading on the exchange is still low, although we acknowledge the various measures taken by AFEX to improve trading activities. However, to do so meaningfully, government support of commodity exchanges is necessary. What the Ethiopian government did for the ECX is instructive. Maize is one of the commodities with highest volume and demand and therefore one of the tradable commodities.

There has been some revolution around rice production, which could also form the nucleus of commodities on the exchange. AFEX already trades paddy rice, which in fact recorded the highest traded volume of 1910 MT in October/ November 2017. Clearly, there is opportunity for a thriving commodity exchange to contribute in breaching the supply – demand gap and bolster the growth of many of the commodities listed below. The state of these crops even makes it more urgent to develop thriving commodity exchanges, which will not only promote commodities for local consumption but also transform export of key commodities.

Table 8: Gaps in Nigeria Demand and Supply Across Key Crops and Activities (2016 estimates)

Crop	Demand (tons)	Supply (tons)	Observation
Rice	6.3 million	2.3 million	Insufficient supply chain integration remains issue
Wheat	4.7 million	0.06 million	Driven by demand for various types of wheat (white, hard, durum) etc. for bread, biscuit and semovita.
Maize/corn	7.5 million	7.0 million	Limited import required but can shift due to feed demand
Soya Beans	0.75 million	0.6 million	Animal feed and protection cost Alt. driving demand
Chicken	200 million birds	140 million	Gap filled by illegal imports that enter market at lower price points than domestic producers; gap also a moving target based on fast food QSR demand
Fish	2.7 million	0.8 million	Fall off in ocean cast and weakness in aquaculture yields due to cost of fish feed a constraint on growth.
Milk/Diary	2.0 million	0.6 million	Driven by insufficient milking cows and low yields (15-25 liters/day versus norm of 35-40 liters NZ/US).
Tomatoes	2.2 million	0.8 million	Actual production is 1.5 million tons but 0.7 million tons is lost post-production.
Yams	39 million	37 million	Limited gap today but volume expected to rise in planning period.
Oil palm	8.0 million	4.5 million	Refers to fresh fruit bunch (FFB) from which oil is extracted at

			a 10% - 20% efficiency rate.
Cocoa	3.6 million	0.25 million	Demand is a global demand which will rise to 4.5 million in 2020
Cotton	0.7 million	0.2 million	Demand is for seed cotton, which could rise to 1.0 million – 1.5 million tons subject to textile sector revival.
Sorghum	7.0 million	6.2 million	Demand will rise further as use in feed grows in 2016 – 2020. Import of malt extract and glucose syrup is currently used to manage gap, hence a commercial threat for Nigerian farmers.

Source "FMARD" Agriculture Promotion Policy (2016- 2020)

5.3 Price Transparency

The commodities market should be fed with real time information on price, volume and quality of trade by the exchange. Such information would aid decision making by stakeholders, reduce uncertainty and price volatility. Price transparency is an important function of commodities exchange and encourages participation.

At the spot level, which is physical trading of commodities on delivery vs. payment settlement bases, very extensive disclosure requirements, similar to the stock market, may be unnecessary and made available to participants. At this stage of the market, price, quality and delivery information are most important. Moreover, the integrity of the delivery mechanism would be of interest to participant and should therefore be of regulatory focus.

As the market gravitates into trading financial instruments such as futures and options, the SEC and the exchanges should develop and require more extensive information/disclosure. In fact, it makes sense to review the current disclosure requirements now to upscale them to international standards in view of the present move by the NSE and FMDQ to introduce derivative products. The pricing process should be market determined and never be based on any non-market means, otherwise confidence would be lost.

Technology would help achieve price transparency and speed in trading. Technology should therefore be a must for all exchanges in the country. Indeed, the committee believes it should be a requirement for exchanges in the country to have a minimum level of technology. AFEX as was stated earlier recently introduced the Nasdaq-OMQ trading system to improve its operations.

Prices should always be determined by the market and never be set artificially

5.4 Efficient Delivery System

Delivery is a vital aspect of the commodity market and indeed, the emergence of commodity exchanges was influenced in part, by the desire of users to lock in price and quantity for future delivery. The delivery mechanism is also an integral part of the settlement system. For instance, when a party enters a contract for delivery of a commodity at a future date, it will expect that the commodity, in the quality and quantity specified in the contract, will be truly available for delivery on the date stated.

The seller will also expect that payment will be effected on the due date. In other words, as the commodity is supplied payment is required to be made. That assurance (delivery versus payment) is fundamental to the integrity of a commodities exchange as it engenders trust, confidence and participation. The efficiency of the delivery arrangements is thus, very important to the commodity trading system.

How then can the exchange ensure that parties meet their contractual obligations and mitigate default risk? In a physical market, a strong rule-based settlement system will be sufficient. On the other hand, for a derivatives market, the clearinghouse provides this assurance. It is part of the commodity exchange ecosystem specifically established to guarantee performance of obligations by parties. The clearinghouse system is most important when the exchange trades derivatives such as forwards, futures and options.

A clearing house must be established when derivatives are to be traded

There are different models of clearinghouse ownership. It can be a part of the exchange, a subsidiary of the exchange or a completely independent entity. The clearinghouse can be a central counter party clearinghouse (CCP) which is best practice for exchange-traded derivatives, or it can just be a central clearinghouse (CCH) without the counterparty function. A CCH can eventually convert to a CCP. In a CCP, the clearinghouse acts as counterparty to all trades, standing as the buyer to the seller and the seller to the buyer with licensed clearing members serving as intermediaries between buyers and sellers.

Irrespective of the model, the clearinghouse must have an extensive risk management mechanism to prevent counter party risk and protect the integrity of the exchange. In addition, as the commodity exchange adds derivative products, most trades may not result in physical delivery of commodities but may end up cash settled. When commodity exchanges trade only physicals, they must also clear and settle trades and usually design an efficient and credible mechanism to do so but not necessarily through a full-blown clearinghouse such as a CCP as described earlier.

The NCX for instance, had once used the CSCS to clear its failed warehouse receipts at time of launch. However, when futures and other derivatives are introduced a clearinghouse will be inevitable. The settlement system usually provides for settlement banks, which are responsible for settling cleared transactions. The delivery arrangements or mechanism should be well known to market participants and should be included in the rules of the exchange. It is important to note that failure of the delivery system could trigger the failure of the exchange itself.

5.5 Standards and Grading

One of the unique features of a commodities exchange is the standardization of to the commodities traded on its platform. Each commodity traded on the exchange is graded by quality, size, weight and other criteria. The grades and standards are determined by the exchange but should take into cognizance international standards and grading on such commodities in setting the local standards. Imbibing international standards for export commodities should not be compromised if the exchanges have to play important role in export promotion.

Unfortunately, the quality of some of the country's agricultural produce has not been in tandem with global benchmarks given the recent ban by the European Union. A thriving commodity exchange could help bring quality and reverse the situation. After all, commodity exchanges are known for setting quality standards. The standardisation process would require collaboration with the Standards Organisation of Nigeria (SON).

A commodity exchange enforcing strong quality standards can improve the reputation of Nigerian exports

One of the activities, which the commodities exchanges can assume in order to strengthen global acceptance of Nigeria's export commodities is the tracking of the country's export commodities including input sources from farm gate all the way to the importer outside its shores. Traceability of food and agricultural commodities, which is required for health and safety purposes, has become a major requirement by many developed countries for commodities being imported into their countries.

The OECD, EU and United States in particular, require traceability of such import commodities. The country stands to lose from such exports if it is perceived to lack a credible traceability mechanism. Given the activities of commodity exchanges as credible trading

A commodity exchange can help to ensure the high standards of tracing and sourcing records now required by USA. EU and UK platforms as well as being regulated entities, they should be required to incorporate tracking system for exports commodities through the exchanges. In Ethiopia, the ECX does so, and few years ago introduced a cloud based IBM enabled national traceability system for export commodities (EM Compass, April 2017). Like ECX, donor funding can be sought for funding the traceability system in Nigeria.

5.6 Efficient Trading System

An efficient and modern trading ecosystem is required to ensure that trading operations are smooth, fair, and transparent and promote price discovery. The trading system can be electronic or open outcry. With technological advancements, trading platforms are now largely automated enabling speedy execution of trades, real time information, lower transaction cost and improved market access. Most platforms also provide online surveillance facilities that provide real time price dissemination and monitoring of market operations by exchanges. The exchanges should ensure that the trading system incorporates all of these. Technology should be a requirement for the exchanges.

The exchange should however, bear in mind that not all commodities need to be traded in a continuous trading system, as some commodities may not have sufficient volume for continuous trading. It may therefore be more effective to adopt an auction rather than continues trading system in such situations. This has been used for many years by tobacco exchanges. In the auction system, trades can be conducted hourly, daily or whenever there is sufficient volume to trade but it should be on a regular basis to ensure that potential participants know when the auction is to occur. A good electronic trading system will be able to facilitate auction and continuous trading market models

5.7 Legal and Regulatory Environment

A broad objective of commodity exchange regulation is to foster the smooth, efficient and transparent operations of the market, preventing abusive practices and systemic risk. Regulation instills order and market discipline and promotes professionalism and fairness, all of which are vital to market integrity. The legal framework for commodity exchanges varies from country to country. For instance, while some countries have specific legislation to regulate commodities market, others combine commodities and securities regulation in one law. In some cases, specialized government agencies are set up with oversight responsibilities of the market, while some other markets vest this responsibility on a government ministry.

Although there may be statutory regulation, commodity exchanges trading spot/physical commodities are usually self-regulating with rules and regulations to guide the market and standards for contracts. Regardless of the model, the regulatory environment should promote confidence, integrity and efficiency. Trust attracts participation, which in turn bolsters growth. If participants do not have confidence in the integrity of the market, be it the trading platform, the clearing and settlement mechanism or the regulatory environment, they will just not participate and the desired outcome for setting up a commodity exchange may not be realized. Regulation is therefore important to the development of commodity markets.

Given the complexities and risk associated with derivative trading, the regulatory framework for trading derivatives should be much stronger and more robust than that for spot commodities trading. Regulatory oversight is usually vested in a government regulator, which has powers to make rules and regulations, sanction and monitor the activities of registrants. However, over regulation of the market should be avoided as this can stifle the development of markets; drowning participation and innovation. In other words, there should be a balance between market development and market regulation. Apart from laws and regulations specific to the market, the efficiency of the judicial system in resolving disputes, efficiency of contract enforcement as well as issues around property right, land ownership laws/ system, among others, can affect the efficient operation and development of the commodities markets. Some countries have warehouse receipts laws regulating warehouse receipts while no such laws are necessary in other countries. In Nigeria, both the commodity and stock markets are regulated the same agency, the SEC, under the ISA. However, the provisions of the ISA are more concentrated on stocks and bonds. This is not necessarily a defect, as the SEC should fill the gap by way of detailed rules and regulation on commodities trading. Regulations provide flexibility, as changes can be more easily effected, particularly as derivatives are introduced.

Nigeria can benefit from the experience of other exchanges in Africa. For example, Malawi has recently reviewed its laws for the regulation of warehouses; a model which was said to have been influenced by the ACE exchange.

5.8 Risk Management System

Managing risk is at the heart of commodities and derivative exchanges. Therefore, without proper risk management framework/mechanism an exchange would not function properly. For these reasons an exchange should naturally have strong risk management mechanism to cover all aspects of its activities. It should be capable of mitigating potential risk to the exchange and promote liquidity and operational efficiency. Some risks associated with commodity exchange are highlighted below:

- **Pre-Licensing Risk Management**

Risks on a commodity exchange can be triggered by the activities of trading members, clients of the trading members, warehouse operators, assaying companies and logistic companies, among others. To this end, an exchange has to take necessary precautions before licensing operators in its ecosystem. Exchanges must have requirements for licensing each category of operators and ensure that each prospective registrant meets all the necessary preconditions before granting license. Where derivatives such as futures are traded, a precondition should be the existence of a central clearinghouse. It is very important that there are adequate risk policies, including initial and variation margins for post trade activities.

- **Post-Licensing Risk Management**

Post-Licensing risk management guidelines should include:

(i) Periodic on and off -site inspections of licensed market participants
(ii) Surveillance of trading activities
(iii) Setting price limit (price band)
(iv) Trading authorization code for brokers
(v) Periodic inspection of warehouses to ascertain continuous compliance with minimum standards
(vi) Ensuring that all delivery warehouses are insured against theft, flood, fire etc.
(vii) Ensuring that all delivery warehouses possess valid performance guarantee of a fixed sum from reputable insurance companies
(viii) Ensuring Standard Operating Procedures for quality assaying companies licensed to conduct quality checks on commodities traded on the exchange meet the minimum requirements set by the exchange.
(ix) Introducing a framework to prevent issuance of air warrants (i.e. issuing warehouse receipt on commodities that are nonexistent)
(x) Getting the clearing house to set margin requirements and position limits
(xi) Marking to market the margin account for derivative trading (when introduced)
(xii) Introduce a Settlement Guarantee Fund (SGF) for Clearing Members
(xiii) Putting in place trade alerts for trading transactions
(xiv) Ensuring that trading accounts are adequately funded prior to trading activities. .
(xv) Ensuring effective enforcement of the rules

5.9 Clearing and Settlement

The clearing system plays an important role in managing counterparty risk and upholding the integrity of the exchange by ensuring that the risk of default is remote. The exchange can choose to have an in-house clearing and settlement system or outsource such function to licensed third parties such as the CSCS. Outsourcing the function of clearing and settlement will reduce set up cost as well as the cost of soft and hardware maintenance. However, the choice would be that of the exchange.

The trading architecture should be designed in a way that the trading system can speak to the depository and the warehouses. Before trading takes place, the trading system should confirm commodity availability from the depository and confirm the funding position of the buying broker from the settlement bank.

The depository should be linked directly to all the delivery warehouses, which in turn should electronically issue warehouse receipts to depositors. That means all depositors will have accounts with the depository and the Settlement banks for direct settlement after transactions. With this trading architecture, delivery and payment default will be minimal as the selling brokers have what they are selling and the buying brokers have adequate funds in their trading accounts to cover their purchases.

The transaction cycle should not be more than T+3 where T is the trading day, and the next two days allow the depository to determine the net obligations of all parties (clearing) and communicate same to delivery warehouses and the settlement banks to enable settlement (payment) on the last day.

5.10 Derived value in using the market

Producers and processors/end users will not use the exchange if they do not see the value in doing so. For instance, farmers can sell directly to manufacturers and other users and will be willing to use the exchange only if they see value in doing so. Manufactures too will only patronize the market if there is a clear benefit to them in doing so. Developing a thriving commodity ecosystem will therefore, require introducing policies and measures, which will ensure the attractiveness and competitiveness of the commodity exchange.

5.11 Physical infrastructure

Commodities are moved from farm gates to warehouses and sometimes from one warehouse to another (for example in the case of export produce, from one warehouse in one location to the port warehouse). Where there is poor infrastructure such as roads, in quality and network, it would adversely affect the transportation of commodities from one location to another, as a longer time is spent freighting at a higher cost. It is also likely to affect quality and price of the commodities as they get to destination.

In addition to poor infrastructure, in some markets, highway insecurity, illegal and multiple levies are major concerns in shipment of commodities. In many African countries, rail transportation is inefficient with practically no freight trains and virtual reliance on road freight services. The quality of the haulage vehicles often falls short of expectations with frequent breakdowns along the way, owing in part, to poor infrastructure and quality of vehicles used. A good network of roads and efficient transportation system, would better facilitate the movement and delivery of commodities, reduce cost to participants and help maintain quality from one location to another. Good quality infrastructure can reduce post-harvest losses and improve income and living standard of farmers.

Furthermore, good infrastructure will ease access to market and the commodity exchange by the farming community and strengthen participation. An efficient infrastructure can also attract investment into the haulage business, consequently improving both quality and cost of freighting. Information and communications infrastructure is important for connectivity of the market; linking participants such as farmers, traders/brokers, merchants, and producers/end users while fostering speedy and transparent trades. ICT service in the market should be efficient for the market to derive the desired benefit.

In discussing physical infrastructure, the importance of warehouses cannot be over-estimated. Warehouses should be well managed, secure and of reasonable quality. If carefully thought-out, warehouses can become an important center for local communities, as they are likely to have electric power and access to the internet. They can therefore, become the source of crop prices and a center where farmers go for education and reliable input such as fertilizers.

5.12 Collateral Management

Collateral Management services are specialized control mechanisms designed to ensure the quality of commodities stored in exchange accredited warehouses and assure lenders the necessary security (collateral) in the structuring of transactional finance. As a service, collateral management also offers lenders the opportunity of monitoring the utilization of loans on real time basis.

A Collateral Manager acts as a third party holder of inventories deposited by a supplier who is financed by a lending institution or for commodities to be traded on a recognized exchange, in a storage facility (e.g. warehouse) owned or controlled by the Collateral manager.

The Legal and physical control of such a warehouse (where it is not owned and operated by the Collateral Manager) is retained by the Collateral Manager who is given such by the original owner/operator of the facility under an enabling Lease Agreement as required in the Collateral Management agreement. Collateral management activities are further discussed under the section captioned “Commodity Exchange Participants”.

5.13 Logistics

A vital element in the commodity exchange architecture is warehousing. Warehouses are acceptable storage facilities for commodities particularly, agricultural products. Commodities are stored to preserve quality, give assurance on quantity, for safe keeping, to ensure delivery and facilitate trading in warehouse receipts, among others. The warehouses must meet standards set by the Exchange and should exist in sufficient number and in different locations for the smooth delivery and overall operation of the commodities market. The warehousing system fosters access to credit and financial inclusion, as farmers are able to borrow against commodities in the warehouses. Warehouses are not homogenous, as they have to suit the characteristics of commodities for storage.

The warehouses should be licensed by the exchange and periodically audited to ensure that the commodities are actually present in the right quality and quantity specified. It is not necessary for the exchange to own the warehouses but it must be able to rely on the quality and quantity of goods in them. There are several models for warehouse ownership and management but the franchise model (as operated in parts of Kenya) has its attractions.

5.14 Organizing Small Holder Farmers to Improve Supply Side

The Nigeria agricultural produce space is dominated by smallholder farmers whose per capita production is very low and marginally above subsistence. This brings to the fore, the need for these farmers to be organized into cooperatives, which would build a critical mass needed to promote trading activities on the exchange and improve their living standards. However, organizing farmers into cooperatives in Nigeria sometimes requires incentives such as credit facilities, farm inputs and access to markets to get them on - board. The CBN has been successful in organizing farmers into cooperative in order to participate in the Anchor Borrowers Scheme partly because the scheme provides farmers operating under it with inputs, extension services, capacity building, loan facilities in cash and kind etc. Commodity exchanges are not likely to be able to provide such incentives in order to organize cooperatives and are indeed not set up to do so. However, the commodity exchanges and the SEC can facilitate these services to farmers by playing an advocacy role to get relevant government agencies, banks and other institutions to assist with such services. They can also elicit the state governments to back them up through bank guarantee to farmers.

5.15 Capacity Building and Public Awareness

A commodity exchange is a new concept in Nigeria. If we consider the low level of literacy in Nigeria and the age-long practice of unorganized spot and rudimentary commodities trading in the agricultural sector, the SEC and Exchanges will have to do a lot to create awareness among farmers and the uninformed Nigerian Public. A structured public enlightenment blueprint should be jointly developed by the SEC, the Exchanges a selected operator.

The programme should include workshops, seminars, road shows, town hall meetings, production of pamphlets, media briefing etc. with specific timelines for implementation. It should also cover all stakeholder groups including farmers, commodity merchants and operators, processors, financial institutions, warehouse operators, commodity grading and inspection agencies and other stakeholders. CAMMIC should engage the government on the implementation of the recommendations affecting the government and generally to enlighten government on the importance of the exchange in national development. A starting point should be a stakeholder forum.

6.0 COMMODITY EXCHANGE PARTICIPANTS

Participants in a commodity exchange include brokers, dealers, broker- dealers, and clearing members. These classes of participants may be licensed to trade on their own accounts and/or on behalf of their clients (farmers, cooperatives, commodity merchants, exporters, agro processing companies, etc.) depending on their membership category. The clearing members are responsible for clearing all trades on the exchange. Apart from the participants that are registered by the Exchange and the regulatory authority such as SEC in Nigeria, there are participants that are not members of the exchange but render very important ancillary services such as Warehouse Operators and Collateral Management Companies, Banks, logistic companies, etc.

In view of the low production per capita in the agricultural sector, building a critical mass for trading on the exchange may be a challenge if efforts are not made to organize farmers into cooperatives. As said earlier in this report, farmers' cooperative development is still very weak in Nigeria and farmers are mostly attracted to form cooperatives if it is a precondition for them to gain access to particular benefits such as inputs, loan facilities, extension services, linkage to the market (off-takers) etc.

Cooperatives have other benefits for exchange. They can be used to gather KYC information on smallholder farmers who may not have bank accounts or other forms of identification. Cooperatives could also be used to aggregate trade volume that individual farmers may not be able to provide

6.1 Roles and Responsibilities of Participants

Securities and Exchange Commission

1. Registers and regulates commodity exchanges;
2. Registers and regulates intermediaries in the commodities exchanges;
3. Registers all contracts traded on commodity exchanges;
4. Conducts surveillance on commodities trading to ensure orderly trading and prevent market abuse;
5. Investigates and sanctions all market malpractice;
6. Ensures a level playing field for market participants;
7. Spearheads the development of commodities market;
8. Protects market participants; and
9. Develops adequate regulatory framework for regulation of commodities market

Proposed Warehouse Regulator

Based on the bill before the National Assembly, if passed into law, the proposed warehouse regulator will perform the following functions:

1. Register and regulate all warehouses and warehouse operators/collateral managers;
2. Establish minimum standards for warehouses;
3. Inspect warehouses to ensure compliance with standards; and
4. Maintain a database of all warehouses in Nigeria

However, for exchange related warehouses, both the SEC and the exchanges should retain oversight of their activities. In other words, they should remain under the purview of the SEC and the exchanges and not the proposed warehouse regulator. This is because the activities of such warehouses are related to the commodity exchanges that are regulated by the SEC.

Commodities Exchanges

1. Provide organized market place for trading in commodities;
2. Develop criteria for admission of members of an exchange;
3. Supervise activities of members and other participants licensed by the exchange;
4. License warehouses whose receipts are traded on the exchange;
5. Supervise the operation of an electronic WRS in order to track available stocks of commodities;
6. Consider the operation of a Warehouse Receipts Guarantee scheme to provide immediate funding (loans) to farmers who deposit their produce in registered warehouses;
7. Ensure adequate arrangement for logistics, clearing and settlement;
8. Develop a robust risk management framework which will ensure that contracts are honored and settled;
9. Ensure transparency and equal access to market information;
10. Maintain a fund to compensate investors who suffered loss from the failure of a commodity operator; and
11. Engage in market development activities such as creating awareness and investor education.

Trade Groups (Associations, Cooperatives etc.)

1. Develop code of conduct for members;
2. Sanction members for violations;
3. Promote the interest of their members; and
4. Engage with regulators and other stakeholders to develop and deepen their activities and the market;

Clearing and Settlement Institutions

1. Provide infrastructure for efficient clearing and settlement;
2. Keep record of electronic warehouse receipts;
3. Ensure seamless and efficient settlement; and
4. Develop efficient and effective risk management mechanisms

Hedgers, Speculators and Arbitrageurs

1. Foster liquidity in the market;
2. Provide stability to the market;
3. Promote price discovery;
4. Hedgers avoid risk by using derivative contracts to mitigate price volatility;
5. Speculators take risk by speculating on commodity prices;
6. Arbitrageurs take advantage of different prices of the same commodity in two different markets to profit.

Farmers

No agricultural commodity exchange can operate without a strong and productive farming population. Farmers are major market participants in that they help to strengthen the supply side for continuous trading activities on an exchange. Apart from working with input providers either individually or as a group in the commodity value chain, farmers work closely with commodity warehouse operators (collateral mangers) and commodity brokers to guarantee effective storage of their produce. They can also take position on the commodity exchange to profit.

Farmers no longer play a passive role in the commodity value chain particularly in countries with huge commercial farming populations such as like China, India, Malaysia, Singapore and South Africa. Their importance is further buttressed by the fact that in some countries, farmers and financial institutions jointly promoted commodity exchanges. There are also countries where farmers own commodity warehouses (field warehouses). These warehouses are sometimes leased to commodity exchange accredited collateral mangers for use.

Processors

Agro-processing and other commodity processing companies are usually the end-users of commodities traded on the exchange. These companies rely on the structure of the exchange to source their commodity requirements without having to go through the rigors of buying from farmers directly or through agents and commodity merchants. In the absence of an active commodity exchange some processing companies engage in contract farming through the out-growers' scheme in which quantity and price are mutually agreed in advance (at the time of signing the contract) of harvest. Although this guarantees market and price for farmers and the commodity for processors, a virile and active commodity exchange, provides a more efficient, transparent and reliable platform for both buyers and sellers.

Commodity Merchants

Merchants seek and receive orders for trades on the exchange. This is however is different in Nigeria, perhaps due to the nascent nature of the market, as traders and merchants operate by playing the role of aggregators and arbitrageurs. They buy from multiple smallholder farmers in periods of low prices, storing and eventually selling to large institutional buyers at higher prices in times of relative scarcity. The traders and merchants, depending on the time that the commodities are sold to off-takers, usually incur storage costs. The activities of traders and merchants in the market help to mitigate the risk of farmers holding commodities for long period. This means that farmers can get immediate value for their produce at farm gate without necessarily having to bear the cost of transportation or storage.

In this system, the middle-man (trader/merchants) get the potentially reward of a higher prices in return for taking the risk of holding on to the commodity (storing) over a period. While the merchant can take advantage of seasonal fluctuations in price, smallholder farmers often cannot. Besides, smallholder farmers usually receive low price and get no additional money if the price rises substantially. As descried by FinComEco, modern commodities exchanges can help the individual smallholder farmers/cooperatives by:

- Publishing crop prices widely so that farmers become much more aware of price/time opportunities; and
- Implementing a warehouse receipts guarantee scheme which means that the farmers/cooperatives can get the majority of their cash when produce is deposited and the warehouse and also, potentially, an additional amount if the price rises.

The ideal role of traders and merchants is to buy or sell commodities through an exchange without necessarily taking positions on the commodities itself. In other words, traders and merchants will ideally be members of the exchange, taking advantage of mis-pricing in the market to maximize their returns. Also, through their being members of the exchange, they would have direct access to the trading platform and be able to transact trades. The AFEX is moving towards this direction as it now under its new platform permit institutions to have direct access to it trading platform for proprietary trades only.

Commodity Brokers

The term broker is used to describe a licensed agent who represents clients to sell or buy commodities on the exchange. He is the face of the market being the one who interfaces between the Exchange and the investing public. Commodity brokers have access to the trading platform, thus they serve as point of entry into the market for prospective investors. Many of these investors do not have sufficient knowledge of the workings of the market or possess the requisite training for transacting on the exchange.

A broker acts as an intermediary between buyers and sellers in the commodity exchange. He does not act as principal and so do not take position on the commodities being bought or sold. As a middleman between buyers and sellers, the broker plays a vital role in enhancing liquidity and disseminating market information.

A commodity broker has a fiduciary responsibility to protect the interest of his clients and as such cannot engage in trades or offer financial advice that benefits him financially at the detriment of his clients. Commodity brokers are integral to the structure of the commodity exchange as they form the bridge between users and the exchange. They enable clients to maximize their returns through the various services they offer such as research and advisory services. A broker handles trades on behalf of his clients; he receives an order from his client and passes it through his brokerage firms' network to the floor of the exchange for execution. However, through the use of technology, transactions can be off floor through remote trading.

Qualities of a good broker include;

- Availability and accessibility to clients at all times;
- Perfect knowledge of financial markets;
- Good understanding of clients' needs and objectives;
- Respect for the confidentiality of their clients' transactions.
- Efficiency of operations and high value added services; and
- Strict adherence to guidelines and regulation.

Commodity Dealers

Dealers are licensed commodity operators who buy and sell commodities for their own account. Unlike the broker who is an agent of the client, the dealer represents himself, trading for himself. A dealer is in other words, a proprietary trader and can stabilize or upset the market through his activities.

In the Nigerian commodities trading context, dealers can be large institutions such as investment houses that have the capacity to hold large volumes of commodities and can fulfill own orders in the market in order to keep the market liquid.

The roles of dealers in a commodities market include;

- Participates in the market as a principal;
- Creates liquidity in the market; and
- Creates investment opportunities for investors in the market

Market Makers

Market makers are licensed participants in the commodities market who stands ready to buy and sell tradable instruments on the exchange and by so doing provide liquidity for the instruments and invariably the market as a whole. They profit from the spread between the bid and ask price. The Investments and Securities Acts (ISA) 2007 defines a market maker as:

"any specialist permitted to act as a dealer, any dealer acting in the capacity of block positioner, and any dealer who with respect to a security, holds himself out (by entering quotations in an inter-dealer communications system or otherwise) as being willing to buy and sell such security for his own account or a regular continuous basis"

Collateral Managers

Collateral managers are integral to the operations of a robust commodity exchange as they provide the facility for the storage of the commodities being traded on the exchange. They also serve as a proxy for the guarantee of quality and quantity of commodities. A licensed collateral manager provides warehousing services for clients who wish to store their commodities for a period.

Normally, collateral managers carry out grading and weighing of commodities at the warehouse based on globally acceptable standards. In the commodity exchange context, collateral managers contract to adhere to the standard of quality set up by the exchange as they wish their stored produce to be traded. They ensure that standards are met and issue certificates for goods received at the warehouse.

By providing this service, they help to mitigate post-harvest losses and promote food security. Warehousing is the backbone of commodities trading since the goods have to be in conditions specified in the contract for delivery.

Warehousing is key to the successful operation of a commodities exchange

The roles of a collateral manager include but are not limited to the following;

- Provide storage services for clients who wish to store their commodities at the warehouse;
- Ensure the quality and quantity of commodities deposited into the warehouse;
- Administer any warehouse receipts guarantee scheme which may be in force;
- Maintain accurate and proper records of commodities deposited in the warehouse such as the name and address of the depositor, the date of receipt of the commodities, the quantity and quality deposited. This may include entering and updating records on a WRS
- Keep the warehouse and its environs in an excellent state that meet regulatory and global standards and;

- Adhere and comply with strict guidelines and regulations including those set by the Exchange.

Banks

Banks play an integral part in the commodity trade business. They fulfil a number of essential roles on which the commodity market depends. These activities include trading in commodities, serving as counterparty in derivative transactions and creating tradable instruments. For instance, banks play a major role in the supply of foreign exchange contracts, which are use as hedging instruments by producers and processors.

Banks are needed and important in financing farmers and small and medium entrepreneurs although this is still a challenge in Nigeria as they tilt more to the financing of large agribusinesses. Banks can generally play an important role in the financing of inputs (such as seeds and fertilizers), production (such as machinery and equipment) and marketing (such as processing, packaging and transportation).

Banks are also essential in providing finance to entities like logistics companies, warehouse developers, assayers, marketers and exporters along the commodities value chain. Agriculture entails a sequence of interlinked activities in a chain that starts from land clearing and supply of seeds and fertilizers to household dining tables and requires bank funding along the way.

Logistic Companies

Logistics companies play an important role in the movement of commodities from one location to another for instance from farm gate to the warehouse or from one warehouse to another or to market. It could also from one warehouse to processor or exporter. The haulage and shipping services they provide, must meet standards set by the commodity exchange. Apart from haulage services, logistics services also involve warehousing and distribution services.

Insurance Companies

Risks are an inevitable part of the commodities business. Companies, merchants, banks, commodities exchange operators, logistics companies, warehouse operators etc all have to deal with a wide range of risks which have to be managed. Risk can arise from counter parties default, theft, loss due to fire, flood, and accidents among others. One of the ways of mitigating risk is by taking insurance cover. Insurance companies therefore play an important role in the commodities ecosystem.

7.0 ORGANIZING SMALL HOLDER FARMERS INTO COOPERATIVES

Farmer cooperatives contribute to vibrant rural economies, and offer opportunity for a farmer-focused and competitive agricultural business. Farmer cooperatives are owned and controlled by farmers for the mutual benefit of members. In many economies, smallholder farmers constitute the bulk of the farming population. Cooperatives give farmers the opportunities to collectively enhance their income, strengthen their bargaining power and gain access to credit and farm inputs. Through cooperatives, they are able to take advantage of current market opportunities, including value-added processing, risk mitigation systems, technical assistance and other services.

Membership requirements to join cooperatives are usually not stringent to ensure that any interested persons or groups with similar objectives is able to join and benefit from the services provided by the cooperatives.

A co-operative society is run on the principle of '*one man one vote'*. All members have a say in the affairs of the enterprise thus, affluent members cannot dominate the management. The liability of the members in a cooperative society is limited to the extent of their capital contribution and cannot be personally held liable for the debts of the cooperative. The cooperative is also a separate legal entity distinct from its members while its operations are not affected by the death, insanity or insolvency of its members.

Co-operative societies are formed on the basis of self and mutual help. Therefore, members contribute their efforts to promote the common welfare. They operate in a limited geographical area and thus tend to exhibit strong attachment to and interest in the cooperative.

Warehouse receipt system was successfully developed in some African countries including Kenya, Rwanda, Ethiopia and Malawi because of the existence of strong cooperative structures, which are supported by government. Banks can improve lending to smallholder farmers, by requiring that such borrowers do so through cooperatives they belong to as the cooperative can attest to certain fact about them. Indeed, the cooperative can be used to verify some Know – your – Customer (KYC) information. The produce of the farmers can be subsequently sold on the commodity exchanges, which would provide transparent price information. By requiring membership of a cooperative to be eligible for loan, default risks can reduce while farming activities can increase.

One of the ways in which commodity exchanges can thrive in Nigeria and meaningfully address the in agro-produce marketing, is for the exchanges and SEC to collaborate with relevant government agencies to effectively organize farmers into cooperatives. This will require a clear strategy to be developed. Part of this strategy should include enlightenment and the provision of some incentives to encourage farmers to form the cooperatives. The incentives can be in form of input provision at a discount and access to free advisory services, which can be organized by the exchanges and other stakeholders. Additionally, mentoring services can be developed between cooperatives and industry participants. The present intervention by government and donor agencies such as GiZ, UK-DFID, USAID, IITA in organizing farmers into cooperatives, if sustained, will go a long way in building a strong pillar of support for commodity exchanges and strengthen the supply side. The Exchanges and the SEC should reach out to these agencies.

7.1 Advantages of farmer cooperative Society

Co-operative societies can boost agricultural production and improve the welfare of rural communities. As representatives of farmers, they can serve as a link between them government and other third parties. To enhance the cooperative system, government and the private sector could grant various incentives such as improved seeds, fertilizers, etc. to smallholder farmers.

1. **Elimination of middlemen**

Cooperative societies ensure that farmers get true value for their produce by reducing the excessive profit earned by intermediaries in the supply of commodities by strengthening their bargaining power based on increased volumes and access to information. The exchange can support this move by making available prices widely, particularly as text messages to mobile phones. Co-operative societies have contributed significantly by providing farmers with a more viable alternative to moneylenders.

2. **Reduces operational cost**

As cooperative societies are run by their members, who often are not paid for their services, as a result the cost of operation is reduced to a minimum. Cooperative societies encourage savings and thrift habit among their members. They provide loans only for productive purposes and serve as a mechanism for conflict resolution and advocacy for their members. Cooperative societies benefit from economies of scale by pooling volumes from their members.

3. **Employment opportunities.**

Cooperatives help to create employment opportunities by enhancing the well-being of their members, which leads to growth and expansion and demand for additional farm labour.

4. **Social benefit**

The cooperative society creates among its members a spirit of sacrifice, tolerance and self-help. The environment created by the cooperatives can thus, be very helpful for the social and economic progress of the society. The benefits include education as members of cooperatives often share knowledge and education with the attendant multiplier effect.

8.0 RECOMMENDATIONS FOR THE DEVELOPMENT OF A THRIVING COMMODITY TRADING ECOSYSTEM IN NIGERIA

Our recommendations are:

8.1 Good enabling business environment

The business environment in the agricultural and solid mineral sectors should be attractive enough to encourage participation across the value chain. This means that constraints to the development of the sectors should be regularly assessed by relevant Government agencies and efforts made to remove identified constraints. In addition to removing existing impediments, new policies with potential to facilitate agricultural and solid mineral development should be periodically introduced.

Without a viable agricultural sector, the potential of the commodity exchange would be limited. While agricultural commodities are more feasible to introduce for trading on the exchanges at this stage of market development due to the available volume and relative development of the sector, solid mineral should also be brought into the Exchanges as the sector develops and tradable volume is created.

> *Recommendation:*
>
> *Introduce agricultural commodities to Exchange trading first followed gradually by mineral trading.*

Introduction of the solid minerals should be in the medium to long term. In readiness for that, we recommend that SEC and the exchanges should engage the Federal Ministry of Mines and Steel Development to be part of the efforts and road map to revive the sector. Periodic engagement of the Ministry and Stakeholders is fundamental. Such collaborative efforts will also help identify which commodities would be more practical and make business sense to form the nucleus of initial solid minerals to be brought in. It could also help to better organize the sector.

The private sector, for purposes of operational efficiency and being better in managing business, should drive the development of the commodity exchanges in Nigeria while the government should provide the enabling environment in form of policies and infrastructure, for the exchanges to operate and thrive.

> *Recommendation:*
>
> *Commodity exchange development should be driven by the private sector as a commercial venture*

Government direct ownership of exchanges should not be encouraged, as it has not been of benefit to the NCX more than ten years after its operation. For instance, the NCX, which is government owned and the older of the two commodity exchanges in the country, has been inactive with no trades currently. On the other hand, AFEX, which is private sector owned, conducts trades, is more dynamic and business oriented. The inactivity of NCX despite its potential, no doubt, informed the planned investment by the Nigerian Sovereign Investment Authority (NSIA) in the exchange. The NSIA, a government agency, is expected to restructure the exchange for growth and competitiveness. Hopefully, the NSIA would divest its holdings to the private sector at some point in the future, when the desired objectives have been achieved.

We acknowledge that in a number of African countries, such as Ethiopia and Uganda, government was central to the set- up of commodity exchanges with significant investment. However, many commodity exchanges have been private sector promoted with government non-ownership support. Development partners can and have indeed played major supporting roles in the establishment and growth of commodity exchanges and their technical assistance could be solicited on specific needs of the exchanges. The enabling environment should include the following:

a. **Macroeconomic policy –** Government should ensure that its macroeconomic policies are good and stable; promoting private sector investment. The policies should be consistently favourable to the development of the agricultural and solid mineral sectors. While a commodities exchange can promote the growth of the agricultural sector, if appropriate agricultural policies are non-existent, it would stunt the development of the sector and the commodity exchanges, as well. For instance, a high interest rate regime will impede agriculture financing particularly by smallholder farmers who would be unable to access credit. Similarly, instability in the foreign exchange market and high foreign exchange rates will impact the ability to import vital farm implements and even if such implements are imported, they would be out of reach to farmers, and so too would be the impact of high import duties on such implements.

Similarly, a high rate of inflation could discourage new private investment as cost of production increases and industries, including agribusinesses, take a cautious view on expansion. Inflation affects cost, including input cost to industry, and corporate planning. Sound agribusiness and agricultural policies and stable investment climate could accelerate the growth of the sector and increase the demand and supply for agro-commodities.

Although some efforts have been made towards improving the macroeconomic environment, Nigeria still lags behind countries like Ethiopia, Malaysia and South Africa as shown in the figure below;

Figure 10. Global Competitiveness of Nigeria: Selected Indicators

GLOBAL COMPETITIVENESS OF NIGERIA: SELECTED INDICATORS. RANKING OUT OF 137 COUNTRIES

COUNTRY	OVERALL INFR-ASTRUCTURE	QUALITY OF ROADS	RAILWAY INFRA-STRUCTURE	ELECTRICITY SUPPLY	PORT INFRA-STRUCTURE	MACRO-ECONOMIC ENVIRONMENT	STRENGHT INVENTORS PROTECTION	PROPERTY RIGHTS	EFFICIENCY OF LEGAL FRAMEWORK IN SETTLING DISPUTE
BRAZIL	108	103	88	84	106	124	31	69	110
CHINA	47	42	17	65	49	17	102	53	45
ETHIOPIA	94	97	61	109	119	57	133	75	57
KENYA	56	60	56	94	55	120	79	52	50
INDIA	46	55	28	80	47	80	13	65	35
NIGERIA	131	127	97	136	116	122	31	104	99
MALAYSIA	21	23	14	36	20	34	3	30	18
POLAND	61	65	45	48	64	41	41	83	106
RWANDA	40	32	NOT AVAILABLE NOT ASSESSED	89	115	92	87	25	13
SAUDI ARABIA	30	34	53	30	42	58	61	35	22
SOUTH AFRICA	72	50	47	97	37	22	21	56	31
HONGKONG	3	4	3	4	3	6	3	8	4

COUNTRY	AGRICULTURE POLICY COST	AVAILABILITY OF FINANCIAL SERVICES	AFFORDABILITY OF FINANCIAL SERVICES	EASE OF ACCESS TO LOANS	LEGAL RIGHTS INDEX	REGULATIONS OF SECURITY EXCHANGE	TECHNICAL ILLOGICAL READINESS	INNOVATION	CAPACITY FOR INNOVATION	MOBILE CELLULAR TELEPHONE SUBSCRIPTION
BRAZIL	36	98	130	87	106	44	55	85	73	65
CHINA	22	54	30	34	85	60	73	28	44	102
ETHIOPIA	51	103	79	95	95	92	130	86	118	113
KENYA	49	58	96	58	30	55	88	37	38	118
INDIA	34	43	34	35	49	64	107	29	42	110
NIGERIA	72	102	129	130	30	57	112	112	82	117
MALAYSIA	7	14	16	21	30	32	46	22	14	28
POLAND	77	45	59	43	30	104	47	59	72	25
RWANDA	5	72	84	55	4	43	101	44	50	126
SAUDI ARABIA	32	52	42	64	108	34	44	40	64	15
SOUTH AFRICA	78	32	48	62	69	46	54	39	30	27
HONGKONG	33	7	6	13	22	5	9	26	28	1

SOURCE: WEF- GLOBAL COMPETITIVENESS REPORT 2017-2018

The government budgetary policy should also give adequate focus to the development of the agricultural sector, more so as the country seeks to diversify the economy away from the oil sector. Public expenditure in agriculture is still low, as the percentage of annual budgetary allocation to agriculture was less than 2%in the 5-years ended 2016. This figure falls much below the 10 percent recommended by the African Union (AU) Malabo declaration, which expects member countries to allocate at least 10% of their budget to agriculture.

Without strong state governments' involvement in agricultural development, Federal Governments' efforts will come to naught. Every state is rich in agriculture and states should also commit to the Malabo declaration given the potential of the sector to reduce the high youth unemployment and spur growth. Youth unemployment rate was given as 33.1% for ages 15-24 and 20.2% for those aged 25-34 in third quarter 2017, according to National Bureau of Statistics (NBS). We recognized that some states have made impressive progress in agriculture but all the states need to truly commit to the development of the sector.

Every state should develop a ten - year agriculture master plan, which should set the road map for agricultural development or indeed agricultural revolution, and should take cognizance of the National Agriculture roadmap in doing so. Appropriate incentives framework and initiatives for agricultural sector growth are also desirable for the growth of the sector as well as for commodity exchanges.

There have been several agricultural sector initiatives in Nigeria, many of which have been led by the Central Bank and the Federal Ministry of Agriculture and Rural Development (FMARD). Notable initiatives include the CBN Anchor Borrowers' Programme, launched in 2015, the Nigeria Incentive – Based Risk Sharing Agricultural lending (NIRSAL) and the Micro, Small and Medium Enterprise(MSME) Fund. Others are the Commercial Agricultural Credit Scheme (CACS) and Fund for Agricultural Finance in Nigeria (FAFIN).

These schemes have recorded various levels of success although challenges still exist. The Nigerian Agricultural Promotion Policy (2016-2020) sets the road map for the development of the sector. Besides, one of the strategic priorities of the Nigerian Economic Recovery and Growth Plan (ERGP) is to achieve agriculture and food security through the transformation of the agricultural sector.

If these programmes are implemented effectively, the agricultural sector will play the desired role in the economy and promote a thriving commodities market and exchange.

Unlike the agricultural sector, which has over the years received some government attention, the solid mineral sector has been largely neglected and had only received some prominence since 1999; yet the country is rich in solid minerals of all types and with agriculture has the potential to diversify the economy away from oil. The government has also launched a road map for the development of the mining industry.

b. **Improved infrastructure**– Infrastructural development as highlighted earlier is very important in agricultural and solid mineral development and a well-functioning commodities market. Improvement of existing roads and development of new roads are important to the investment and development of the agricultural value chain as they link farmers to the markets. In addition, they reduce post-harvest losses and facilitate the movement of people and goods including agricultural input at lower transportation cost. Improved rural infrastructure can potentially expose rural farmers to fertilizers and better farming technology thereby raising productivity.

   Transportation is an important component of the ecosystem as goods are moved from one location to another as per the commodity contract. The current inefficient transportation system sometimes results in deterioration of quality of commodities in transit. Extra efforts have been taken by the exchanges to mitigate the effect of poor transportation system, which increases the cost of transactions. Such efforts include establishing personal relationships with logistics companies and sometimes owning trucks. Other infrastructure such as well-functioning irrigation facilities, water supply, power and warehouses are vital to the development of the commodity trading ecosystem.

The solid mineral sector is also heavily dependent on infrastructure. Efforts should thus, be invigorated by both the federal and state governments to prioritize infrastructure development and the provision of security on roads and highways as these are very important to the movement of people and goods including agricultural produce. The provision of efficient and good network of infrastructure can have significant multiplier effect on the economy and the commodity exchanges.

Unfortunately, the country still lags far behind other countries in the state of infrastructure. For instance, of the 137 countries in the World Economic Forum (WEF) Competitiveness Report, Nigeria ranked 131in overall infrastructure. Comparatively, Kenya was 56 and India 46 while South Africa was 72 and Malaysia 21. On the state of roads and electricity, Nigeria ranked127 and 136 respectively. These figures buttress the urgency for the improvement of the nation's infrastructure to drive growth, support the agricultural and commodities market to become globally competitive. On the improvement of logistical services for the commodities market, we recommend that the SEC and the exchanges should engage key transporters with the view to educating them on the opportunities in commodities transportation services.

c. **Review of Land Use Act**–The Nigerian Land Use Act1978 has continued to be seen as an obstacle to the development of the agricultural sector. This is because the Act places on state governors, the authority over all land in their states with the exception of land owned by the Federal government and its agencies. A state governor by inference has the prerogative to allocate land as he desires. Therefore, land registration and ownership, evidenced by Certificate of Occupancy (C of O) is subject to the consent of state governors. This requirement vests too much power on one person, which can be abused.

The process of obtaining a C of O is cumbersome, long and costly in most states and can be subject to political considerations and cancellation even when a C of O is properly obtained. Besides, states governors are often busy on matters of state and may not devote adequate time to land matters, which may lead to delays. For these reasons, land is not easily transferable from one party to another under the Land Use Act and therefore acquiring land for agriculture, including by smallholder farmers, is met with unnecessary challenges. Stakeholders have long raised concern about the effect of the Land Use Act on the ease of doing business in the country and development of the industrial sector. Efforts should therefore, be vigorously made to amend the Act, which is a part of the Constitution and which, has perhaps made its amendment difficult. For expediency, we recommend that state governors delegate this function (issuance of C of O's) and receive periodic feedbacks from the relevant office or department.

CAMMIC should engage governors through the Governors Forum to discuss on how best this can be achieved. We also suggest that FSS 2020 should be co-opted to join CAMMIC given the discussions it is having with some governors on the Land Use Act.

d. Access to finance– Improving agricultural production requires funds to acquire farm inputs/implements, increase the capacity of farmers and capacity across the value chain. Improved access to finance will also ensure that farmers undertake post-harvest activities more efficiently, access markets, and improve agricultural practices, among others. Unfortunately, it is a big challenge for farmers, in particular, smallholder farmers, to access capital for increased output. This is in spite of the fact that agriculture contributes almost 30% to real GDP and is a major employer of labour in the country. There is supply gap for some commodities necessitating import of such commodities to help bridge the gap. The country's population is large, further giving credence to significant investment needs in the agricultural sector.

The point is that there is inherent business opportunity, whether on a small or large scale, in agriculture. A population of about 182 million according to the National Population Commission comprising mostly youth, further gives credence to the urgency for private investment and credit to the agricultural sector. However, as long as access to finance, despite various efforts remains a challenge, the opportunity which agriculture provides, may not be fully realized.

It is well known that banks are reluctant to grant credit to farmers based on the perception that their repayment ability is too low. Furthermore, many smallholder farmers may be unable to secure third party acceptable guarantees /guarantor. The lack of adequate information on borrowers and their activities could also be a militating factor against access to finance. Similarly, the loan requirements, procedure and documentation may be challenging for smallholder farmers, many of whom may be uneducated. Many commercial banks are also not focused on smallholder farmers who are seen as small and rural, with no assets to be used as collateral. Many banks do not bother to build agriculture related capacity or desk having little interest in the sector owing to the risk perception. Banks are preponderantly urban players with more subdued presence in the rural areas. The relative unfamiliarity with the rural area perhaps accounts for the lack of interest in agricultural financing.

Other organizations and individual exchanges in Africa are making strenuous efforts to improve the ease of supply of sensible warehouse deposits loan guarantee schemes. ACE exchange in Malawi has implemented schemes which are simple and effective but which currently require donor support.

The efforts by the CBN to de-risk the agricultural sector which is in line with its developmental role are in response to the poor financing of agriculture by banks. The micro finance banks are designed to be better positioned to finance smallholder farmers than commercial banks because of the less rigorous requirements by these institutions and the focus on provision of credit to the under banked and MSMEs.

At double digit interest rates, it will be impossible for the farming community to borrow. The various initiatives of the CBN cannot cover everyone in the community. Therefore, the ability of the farming community to also seek and receive funding from banks at low interest rates is crucial.

As at the end of the 4th Quarter 2016 only about 3% of banks' loans and advances went to agriculture as against 39% each to services and industry. Again, looking at the WEF Competitiveness Report, Nigeria ranked 130 in ease of access to loan compared to 58 in Kenya and 35 in India and 21 in Malaysia. On affordability of financial services Nigeria was129 out of 137 countries.

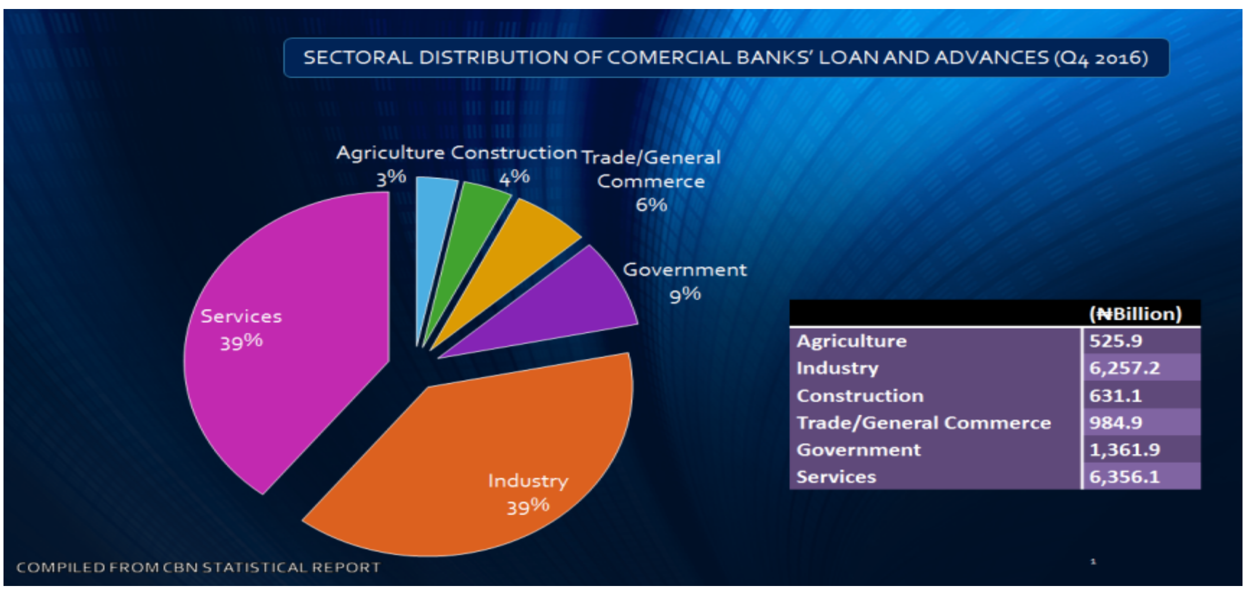


Figure 11 – Sectoral Distribution of Commercial Banks Loans and Advances (Q4 2016)

It will be impossible to grow the agriculture sector and MSMEs without the ability to access finance. Government agencies such as the Bank of Agriculture (BOA) should be restructured to be more effective in executing its core mandate. The restructuring should include recapitalization and if possible, the private sector should be given some equity holdings in the bank for the purpose of promoting efficiency. It is jointly owned by the CBN and FMF but supervised by FMARD. This complex ownership/ oversight may impact on its operations.

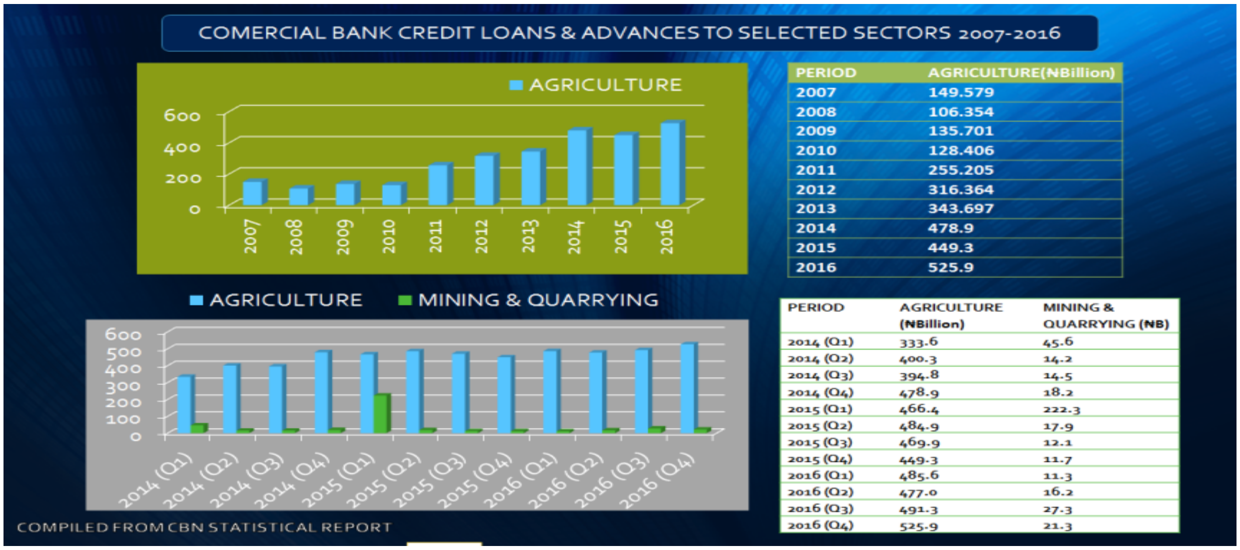
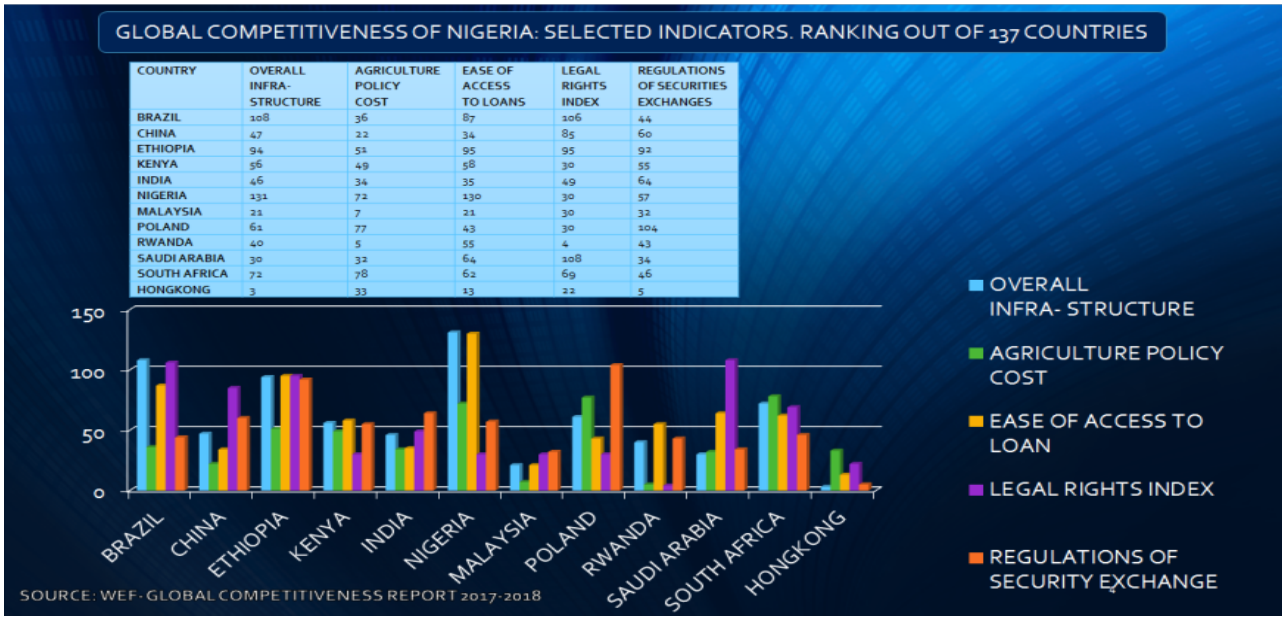


Figure 12 - Commercial Banks Credit Loans and Advances to selected sectors (2007 2016)

Figure 13. Global Competitiveness of Nigeria: Selected Indicators



COUNTRY	OVERALL INFRA-STRUCTURE	AGRICULTURE POLICY COST	EASE OF ACCESS TO LOANS	LEGAL RIGHTS INDEX	REGULATIONS OF SECURITIES EXCHANGES
BRAZIL	108	36	87	106	44
CHINA	47	22	34	85	60
ETHIOPIA	94	51	95	95	92
KENYA	56	49	58	30	55
INDIA	46	34	35	49	64
NIGERIA	131	72	130	30	57
MALAYSIA	21	7	21	30	32
POLAND	61	77	43	30	104
RWANDA	40	5	55	4	43
SAUDI ARABIA	30	32	64	108	34
SOUTH AFRICA	72	78	62	69	46
HONGKONG	3	33	13	22	5

8.2 Development of Warehouses

An investor will be willing to trade commodity on the exchange if he is assured that the commodity will be available whenever he wishes to exercise his secured right. An important requirement in giving such assurance is the dependability of the warehouse[3] in which the commodity is held. To ensure dependability, warehouses for storing exchange traded commodities must satisfy standard conditions to hold and keep the quality of specified commodities and be licensed by the Exchanges, registered by the SEC and controlled[4] by a party(collateral manager) independent of either the seller or buyer of the commodity. The collateral manager ensures the quality and quantity of goods stored in the warehouse. A well-developed warehousing system would foster the development of warehouse receipt trading.

Table 9. Likely Operating Models for Warehousing

S/N	OPERATION	WAREHOUSE RECEIPT OPERATOR (ISSUANCE)	DEPOSITORY	COMMENTS

[3] Includes stores, silos and other storage facilities
[4] This refers to the security and the management of the warehouse and the commodity in it

1	Exchange	Exchange	Exchange	This may be required for market development in the short term after which the Exchange may choose to hand over operation of warehouses to a licensed 3rd party. Ownership and operations of the warehouse lies with the exchange at this point as such, the exchange guarantees quality and quantity of commodity stored. The exchange also acts as the depository and carries out the clearing and settlement function. This may also be the recommended approach for a market like Nigeria's at the initial stage although it portends a risk of conflict of interest since everything is centered around the exchange.
2	Independent Warehouse Operator	Exchange	Exchange / Third party	The warehouse operator must be licensed to perform this function for commodities stored in an exchange accredited warehouse. The exchange issues receipts on the commodities stored and serves as a central counterparty when those receipts are traded. This model is also functional at the initial stage of exchange development.
3	Independent Warehouse Operator	Independent Warehouse Operator	Exchange / Third party	The Independent warehouse operator needs to meet minimum requirements as set by the Exchange and must be licensed to issue receipts. The Exchange or a licensed third party acts as a central counterparty in this case. This model is not recommended as conflict of interest may arise if the warehouse operator has commodities stored in the warehouse on which he issues receipts.
4	Exchange	Collateral Manager	Third Party	The Collateral manager confirms quality and quantity (as received by the exchange) of the commodities in the warehouse and issues a warehouse receipt. A third party licensed as a depository holds the warehouse receipts in dematerialized form. This model can be adopted as the exchange gains maturity.
5	Independent Warehouse Operator	Exchange	Exchange/ Third Party	The warehouse operator ensures the quality and quantity of the commodities stored in the warehouse whilst the Exchange issues warehouse receipts. The Exchange or a licensed third party can serve as a central counterparty. This model is not recommended as the exchange assumes liability for commodities for which it has no control since it issues the warehouse receipt.

6	Independent Warehouse Operator	Collateral Manager	Exchange/ Party	Third	Collateral manager confirms the quality and quantity of the commodities in the warehouse before issuing a receipt. This is also a recommended model of operation to adopt.
7	Collateral Manager	Collateral Manager	Exchange/ Party	Third	There is no conflict of interest in this case because the collateral manager does not own the commodities in the warehouse. However, this model is expensive as collateral managers are in high demand and their services do not come cheap. It is suggested that this could be adopted at the advanced stages of development.
8	End User	End User	Exchange/ Party	Third	There is conflict of interest in this case if the commodities stored in the warehouse belongs to the end user e.g. processors. However, allowing the end user to issue receipts on his own commodity deposits gives room for falsification of receipts and encourages fraud.

a. **Warehouse Receipts -** The Warehouse receipt is a document of title or promissory security issued by a collateral manager to a supplier detailing a specific quantity and grade of commodity stored in a specified warehouse by the supplier while noting the interest of a lender or financier.
The seasonal nature of agricultural production and absence of a functional warehouse receipt system may make all the year round trading activities impossible on commodity exchanges as commodity off-takers like agro processing companies, commodity merchants and exporters would have mopped up almost 60% to 70% of the available produce immediately after the period when commodity prices are at rock bottom. A functional warehouse receipt system will be required to smoothen commodity availability throughout the year for trading on the commodity exchanges. The warehouse receipt bill is with the National Assembly. This should be a low hanging fruit for the SEC. It should as a matter of priority engage the National Assembly on the passage of the bill into law as stated earlier.

8.3 Grading and Certification

Grading and certification are critical for enshrining standards and for the integrity of commodities traded. Grading and certification are therefore core to the operations of commodity exchanges. The grading and certification function of the exchanges ensures quality to commodities traded in the market and promotes trust and confidence. In other words, using the exchange will prevent trading in substandard produce including export commodities that pass through the exchange. Indeed, the recent experience with the prohibition of some export produce from Nigeria could have been avoided if subjected to the standards of a commodity exchange.

As the agency responsible for establishing and approving standards in Nigeria, the SON should collaborate more closely with the SEC, the exchanges and other stakeholders to develop standards for the commodities traded over the exchange. The exchanges as regulatory agencies guided by international standards, must adopt international grading and certification standards.

There is the need to engage with SON to review and expose standards to stakeholders for implementation.

In this regard, a standing committee should be set up comprising SON, the SEC, the exchanges and relevant stakeholders to periodically review existing standards to meet international best practices. We should also seek certification for collateral management and partner with development partners towards this end.

8.4 Provision of Improved Extension Services

Provision of high quality farm inputs at more affordable price to smallholder farmers will significantly reduce their burden and boost production. Establishment of more seeds centers across the Federation for better access to improved seeds by smallholder farmers is important. It is not sufficient to provide the inputs but educating them on appropriate use of the inputs such as fertilizers and pesticides are also vital. Cooperatives could be effectively used for input distribution and as incentive to organize smallholder farmers into cooperatives. Efforts should be made by government at all levels to ensure that smallholder farmers have access to inputs in good time. Government agencies and the private sector should be encouraged to invest in mechanized farm implements to service the needs of smallholder farmers in clusters. Such implements should be available for lease by the farmers during farming season at affordable rates. To encourage investment in such implements, the government can incentivize private sector players through provision of tax breaks, access to agriculture and MSME funds, etc.

8.5 Introduction of Flagship Commodities

The Federal Government should designate one or two high value commodities such as cocoa, gold and cotton as flagship commodities and incentivize trading of the commodities on the exchanges when for export rather than mandate trading of such commodities on the exchange as in Ethiopia. For instance, trading of coffee for export is done mandatorily on the ECX in Ethiopia. Incentivizing trading of flagship export on the exchange will increase quality and volume traded as well as ensure international visibility for the commodities and indeed, the country. This should in turn increase foreign exchange earnings and encourage more production in such commodities. We are of the views that Nigeria should learn the lessons of the experience of ECX and not mandate as it led to the creation of a large black market in specialist coffee exports. However, we must acknowledge that the policy led to significant increase in coffee export.

8.6 Strategic purchases through the exchanges

Government should as a matter of policy, procure grains into the strategic grains reserve through the exchanges and mandate all of its agencies such as NEMA to procure their grains through the commodity exchanges. This will ensure quality, price transparency, and foster the development of the exchanges. International agencies operating in Nigeria such as the World Food Programme (WFP) should be encouraged to buy their agricultural commodity requirements through the Exchanges as is done in Ethiopia.

8.7 Discounted payments to farmers on insurance

This is one of the programs of Nigerian Agricultural Insurance Corporation (NAIC) whereby the government subsidizes premiums paid by farmers to NAIC for agricultural insurance. However, this aspect of NAIC's operations is currently facing challenges as government is not able to meet its obligations to NAIC. Government should support the liberalization of agriculture insurance by allowing private sector owned insurance companies participate in intervention schemes such as the CBN Anchor Borrowers Scheme. This will expand insurance coverage to include more farmers and farmer cooperatives. Currently, provision of insurance cover to farmers in intervention schemes is done only by NAIC. Besides, insurance capacity generally in agriculture insurance should be developed as there seems not to be enough capacity in agriculture insurance. Given the importance and potential of the agricultural sector to national development, the SEC should engage NAICOM and other relevant stakeholders to enhance agriculture insurance capacity and cover in the country.

8.8 Logistics

In order to ensure the security and quality of goods for delivery, the exchanges have to ensure that certain requirements are met by logistics providers registered with the exchanges such as;

- Monitoring vehicles through tracking systems;
- Insurance of goods in transit;
- Improved transportation system; and

- Improved Information Communications Technology.

8.9 Integration of major players in the commodities exchanges

Exchanges should integrate the major players in the commodities value chain in their activities by offering them membership on the exchange. This will enable them see the benefits of trading on the exchange thereby supporting and deepening the market. For instance, major commodity traders and exporters as listed in table 4 can be encouraged to carry out their activities on the floor of the exchanges. Equally, New Nigeria Commodity Marketing Company (NNCMC), a subsidiary of New Nigerian Development Company (NNDC) was recently establish to amongst other, engage in business of commodities aggregation and marketing as well as linking farmers to major off-takers in Nigeria. Given the vital role the company is likely to play in the commodities ecosystem, the SEC and the Exchanges should encourage it to trade the commodities on the exchanges

9.0 RECOMMENDATIONS AND TIMELINE FOR IMPLEMENTATION

Figure 14: Timeline for Implementation

Table 10. Recommendations

Phases	S/N	Requirements/Recommendations	Actions by
Phase 1	1	Develop a public enlightenment/education roadmap for commodities market	SEC

	2	Organize international conference on development of a thriving commodities ecosystem in Nigeria (1st half, 2018)	SEC, Relevant stakeholders
	3	Encourage investment in warehouses and storage facilities by exchanges/private sectors	Exchanges and Private Sectors
	4	Allow exchanges to own warehouses at this developmental stage.	SEC and Exchanges
	5	Encourage existing commodity merchants such as Olam and New Nigerian Commodity Marketing Company to participate actively on the exchanges either as traders or investors	SEC and Exchanges
	6	Commodity exchanges to provide commodity price information via information centers, media, website and mobile phones (Ethiopia and Kenya model) to farmers and stakeholders across the country	FMARD and Exchanges
	7	Organize farmers into cooperatives to aggregate produce and encourage them to become members of exchange	CBN (FSS 2020), SEC, Exchanges FMARD and relevant stake ministries
	8	Partner with NBS on price information	NBS, SEC and Exchanges
	9	Commence advocacy for macroeconomic stability and policies which will promote the commodity market (exchange rate, interest rate, inflation rate, infrastructure etc.)	CAMMIC
	10	Commence advocacy for amendment of the Land Use Act	NEC, CAMMIC, NASS, CBN (FSS 2020)
	11	Engage with Governors' forum to encourage delegation of land matters to relevant agencies	CAMMIC, CBN (FSS 2020)
	12	Review SEC rules and regulations relating to commodity exchanges especially for the spot market	SEC and Exchange
	13	Develop rules on collateral management	SEC
	14	License collateral managers/management companies	SEC and Exchanges
	15	Introduce Electronic Warehouse Receipt (EWRs)	Exchanges
	16	Government to patronize the exchanges for purchases in respect of strategic grain reserves, emergency feeding programme, e.g. IDP; and MDAs	CAMMIC

	17	Encourage government contractors to buy commodities of a certain volume from commodity exchanges	CAMMIC
	18	Encourage International organizations such as the World Food Programme (WFP)to patronize the exchanges for some of their requirements	CAMMIC
	19	Review Nigerian Bankruptcy Law to promote the derivatives market	CAMMIC, and Exchanges
	20	Establishment of Central Counterparty (CCP)	Exchanges
	21	Review downwards minimum capital requirement for spot market participants	SEC
	22	Introduce risk based capital requirement for commodities operators for non-spot commodities traders	SEC
	23	Delegate regulation of operators in the spot market to Exchanges	SEC
	24	Expedite the enactment of a warehouse receipt bill into law. Also, the SEC should have regulatory purview over warehouse/storage facilities for exchange traded commodities as against the proposed warehouse regulator as contained in the bill before the National Assembly	CAMMIC, CBN (FSS 2020), NASS
	25	Develop grading and standardization system in line international best practices	SON, SEC, CBN and Exchanges
	26	Increase the capacity of IST to handle commodities exchange related disputes	IST, SEC, Exchanges
	27	Develop a certification system for collateral managers in Nigeria through collaboration with international development agencies and international certifications bodies	SEC, Exchanges
	28	Strengthen the commodities exchange unit of the SEC to discharge it functions effectively	SEC
	29	The Bank of Agriculture (BOA) should be more more efficient and relevant to the Commodity trading ecosystem, which could include partial privatization of the institution	CAMMIC
	30	Engage with transporters to enlighten them on opportunities available for haulage of exchange traded	Exchanges

		commodities	
Phase 2	1	Review foreclosure law to eliminate the challenge of possession in defaults and thereby promote access to finance	CAMMIC, NASS
	2	Amend the Land Use Act	NEC, CAMMIC, NASS, CBN (FSS 2020)
	3	Continuous de-risking of the agricultural value chain	NAICOM, NIRSAL, NAIC, Insurance Companies, BOA
	4	Designate high value export commodities such as cocoa as flagship products and incentivize trading through exchanges	CAMMIC, NEC, CBN (FSS 2020)
	5	Exchanges should install traceability system for Nigeria's flagship and other export commodities that are traded through their platform	Exchanges
Phase 3	1	Exchanges should key into the Customs Single Window System to ease the process of export	Exchanges
	2	Work with Ministry of Mines and Steel Development and Ministry of Petroleum to introduce energy and solid minerals on the exchanges	Ministry of Mines and Steel Development, Ministry of Petroleum, Exchanges
Phase 4	1	Introduce solid minerals on the commodity exchange	Ministry of Mines and Steel Development, Exchanges
	2	Introduce energy, e.g. crude oil on the commodity exchange	Ministry of Petroleum, NNPC, Commodity Exchanges
	3	Attract international players to trade on the exchange	SEC, Exchanges
	4	Warehouses to be independent of a commodity exchange	SEC

Other recommendations

1. Federal Ministry of Agriculture and Rural Development should reconsider its reported plan to reintroduce marketing boards for some specific commodities. We believe that commodity exchanges will be better positioned to perform the functions, which are expected of the marketing board. Apart from duplication of functions, the marketing boards, as government agencies, are likely to be bedeviled by bureaucracy and other challenges. The commodities market is currently being repositioned to effectively serve the development needs of the economy.
2. The Government should provide enabling environment and non-ownership support to the exchanges to thrive while the private sector drives the exchange
3. Government should allocate at least 10% of its budget to agriculture in line with AU Malabu recommendation. State government should be encouraged to do the same
4. State governments should develop their agricultural master plan in line with Federal Government's 10-year agricultural master plan

CONCLUSION

This report was put together detailing roadmap to developing a vibrant commodity trading ecosystem in Nigeria. The Committee discussed some recommendations, which are believed to be useful in achieving these goals. We hope that the key stakeholders, especially the SEC, will find the recommendations useful. The Committee will like to appreciate the support and cooperation received from stakeholders consulted in the process of putting the report together. The Committee wishes to particularly thank GMEX Group, London and FSS 2020 for their invaluable contribution. It also wishes to express its profound appreciation to the Commission and promises its availability in the process of implementing these recommendations as well as in future and related assignments.

10.0 APPENDICES

Appendix A

Committee Members

The Committee has the following members:

1. Daisy Ekineh – (DSE Advisory Services) Chairperson
2. Ayodeji Balogun (AFEX) Member
3. Benson Lawal (NCX) Member
4. Akin Akintunde (Midian Consult) Member

5. Emmanuel Etaderhi (FMDQ) Member
6. Ebelechukwu Enedah (CMSA) Member
7. Aliyu Abdulhameed (NIRSAL) Member
8. Agama Emomotimi (SEC) Member
9. Afolabi Olowookere (SEC) Member
10. Ada Akonobi Member
11. Usman Mohammed - Secretary
12. Shamsudeen Tukur - Secretary
13. Ojiugo C. Eze Secretary

Special appreciation goes to the under listed members whose invaluable contribution made this work possible:

1. Sam – Ukoh, Ukoh (AFEX)
2. Akinyinka Akintunde (AFEX)
3. Farhat Kunmi – Olayiwola (AFEX)
4. Ezekiel Davou (NCX)
5. Abiodun Oladotun (NCX)

Methodology

The TC commenced work in July 2017 and observed that a few reports had been written on reviving the commodities trading market in Nigeria. However, no concrete actions were taken on the recommendations of the reports. The Committee reviewed some of the reports with the objective of incorporating aspects, which it considered useful to its work.

Specifically, the TC held its inaugural meeting on July 12th, 2017 and extensively deliberated on the terms of reference and methodology for the assignment. Four sub-committees were consequently constituted to examine and report on the following areas:

Overview of Commodities Exchanges – (by AFEX, NCX & SEC)

i. History and development of commodity exchanges in Nigeria and selected countries;
ii. Current state of the commodity exchange market and challenges
iii. Determining the ideal commodities trading ecosystem for Nigeria;
iv. Identifying market participants and other key players;
v. Organising smallholder farmers as a critical part of the ecosystem;
vi. Infrastructure and technology critical for the ecosystem;
vii. Market types – spot, forwards and futures; and
viii. Clearing and settlement mechanism

Warehousing and Standards – (by Midian Consult)

i. Warehousing

ii. Standards and quality
iii. Grading

Liquidity Issues – (by NIRSAL & AFEX)

i. Key issues in liquidity creation
ii. Organising small holder farmers for ease of financing (access to credit)
iii. The role of CBN and banks in addressing high interest rates on commercial loans
iv. Experiences from other jurisdictions such as East Africa

Legal and Regulatory Framework – (CMSA & FMDQ)

i. Review of the ISA 2007 and SEC Rules and Regulations on commodity exchanges.

The sub-Committee presented its report to the Committee on September 13th 2017. The Committee had several other meetings thereafter.

Appendix B

Current SEC Registration Requirement for Commodities Exchange (Refer to the rules)

(1) Application for registration as securities exchange shall be filed on Form SEC 5 as provided in schedule III to these rules and regulations and shall be accompanied by: -

(a) Copy of the certificate of incorporation certified by the company secretary.

(b) 2 copies of the Memorandum and Articles of Association and amendments (if any) certified by the Corporate Affairs Commission;

(c) Latest copy of audited accounts or statement of affairs signed by its auditors and management accounts that are not more than thirty (30) days old as at time of filing with the Commission;

(d) 2 copies of existing or proposed by-laws or rules, code of conduct, code of dealing, etc., which are referred to as **"rules of the exchange**";

(e) 2 copies of the listing requirements of the exchange;

(f) Sworn undertaking to promptly furnish the Commission with copies of any amendments to the rules of the exchange and the listing requirements;

(g) Information relating to market facilities including—

(i) Trading floors/facilities;

(ii) Quotation board;

(iii) Information board/ticker tape;

(h) Detailed information about the trading system to be adopted;

(i) Information as to its organization including structure and profile of members of its council/board as well as rules and procedures

(j) Instruction and inspection manual of member's activities;

(k) detailed information about the promoters and principal officers of the exchange;

(l) Sworn undertaking to keep such records and render such returns as may be specified by the Commission from time to time;

(m) Sworn undertaking to comply with and to enforce compliance by its members with the provisions of the Act and these rules and regulations;

(n) An application for registration of at least three (3) principal officers of the exchange on Form S.E.C. 2;

(o) Minimum paid-up capital requirement of N500 million;

(p) Any other document required by the Commission from time to time for the protection of investors.

Appendix C

Collateral Management Services

Collateral management services shall cover all services relating to professional storage of goods in a warehouse from arrival of goods to the authorized release. These services can be summarized as follows.

(a) Inspection Services (Quantity, Quality etc.)

- Inspection and approval of warehouse
- Pre-operational services –due diligence, verifications, agreements, insurances etc
- Inspection/stock management agreement
- Supervision of arrival of trucks at the controlled warehouse.
- Supervision of weighing prior to storage
- Sampling and determination of quality.
- Supervision of discharge and segregation of sound and damaged commodities.
- Tally at the time of entry into the warehouse.
- Reporting
- Etc.

(b) Collateral Management Services:

- All parties meeting & drafting of Sequence of events
- Allocation of responsibilities.
- Pre-operational services.
- Collateral management agreement.
- Supervision of receipt of commodities into the warehouse.
- Supervision of weighing prior to storage
- Sampling and Quality testing
- Checking stacking of accepted goods inside the warehouse
- Keeping the goods under the Collateral Managers custody for the duration of the agreement
- Issuing Warehouse Receipt Certificates (warrants)
- Stock control
- Receiving and verifying the authenticity of release instructions from the exchange.
- Authorizing and checking physical handling out operations.
- Performing tally of goods at time of delivery into and ex-warehouse
- Reporting
- Fidelity and other types of Insurance
- Etc.

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