FEASIBILITY STUDY ON AFRICA COCOA EXCHANGE (AfCX) Appendix III

VALUE CHAIN AND SECTORAL REGULATORY ANALYSIS COUNTRY REPORTS NIGERIA COUNTRY REPORT

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Prepared for
International Cocoa Organization (ICCO)
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Notice and Acknowledgment

This document has been authored by Mr Ayo Akinola, Country Expert – Nigeria, a member of the Project Team for the ICCO African Cocoa Exchange Project.

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Acronyms

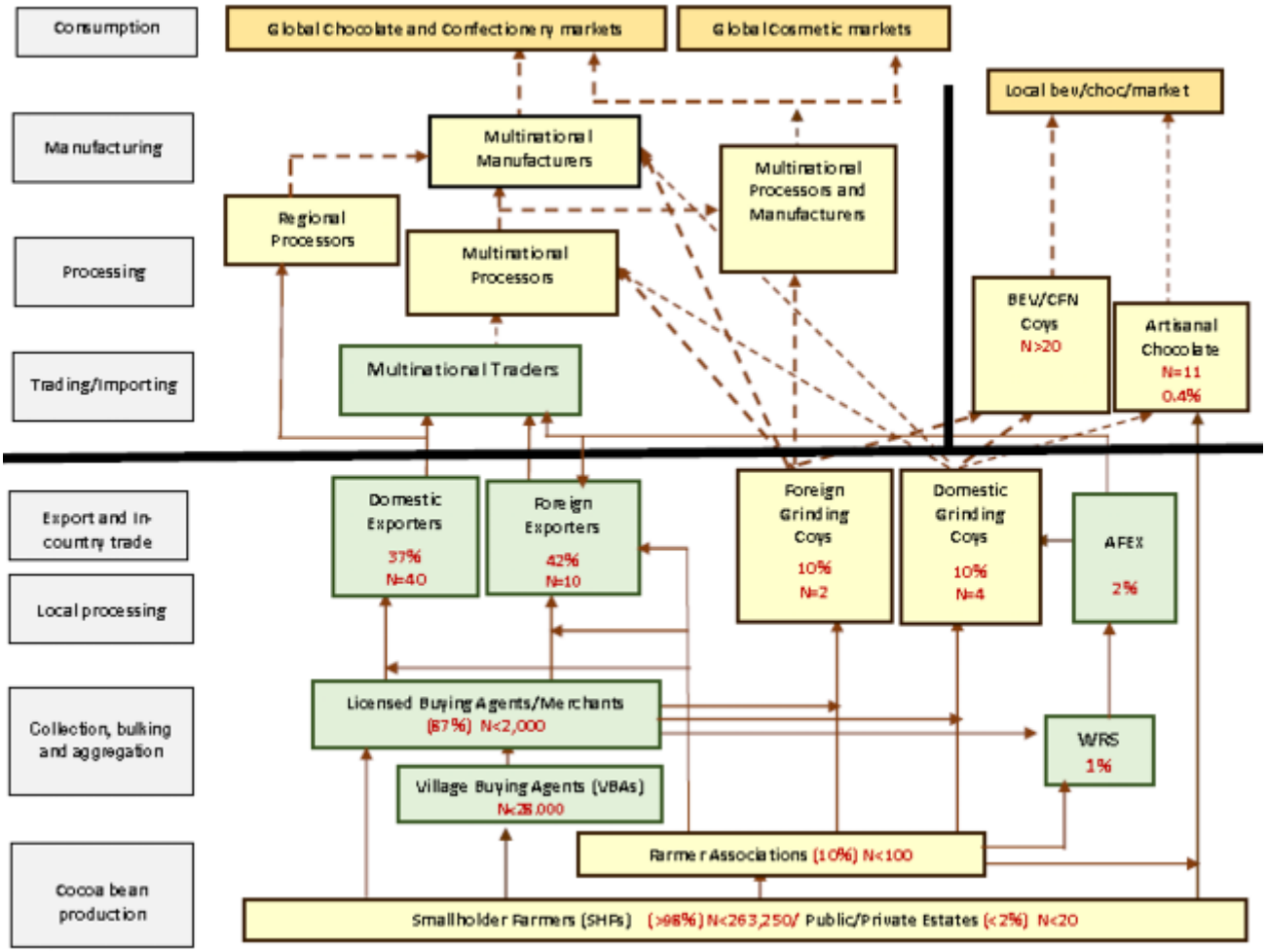
AADS	Accelerated Agriculture Development Scheme
ABP	Anchor Borrowers Program
ACCEL	Acceleration of Action in the Elimination of Child in Africa
ACGSF	Agricultural Credit Guarantee Scheme Fund
ACI	African Cocoa Initiative
ACF	African Cocoa Fund (RA Initiative)
ADF	Agricultural Development Fund
ADPs	Agricultural Development Programs
AFAN	All Farmers Association of Nigeria
AfCFTA	Africa Continental Free Trade Agreement (AfCFTA),
AfDB	African Development Bank
AgVCF	Agricultural value Chain Finance
AISA	Agricultural Input Supply Agency
ANCE	Association of Nigerian Cocoa Exporters
ANE	Association of Nigerian Exporters
APP	Agricultural Promotion Policy
ARCN	Agricultural Research Council Of Nigeria
ARSO	Africa Organization for Standardization
ATA	Agricultural Transformation Agenda
AVCs	Agricultural Value Chains
B2B	Bean to Bar Chocolatiers
BoA	Bank of Agriculture
BOFIA	Banks and other Financial Intuitions Act
BoI	Bank of Industry
CAC	Corporate Affairs Commission
CAD	Cash Against Documents
CAN	Cocoa Association of Nigeria
CACS	Commercial Agricultural Credit Scheme
CBN	Central Bank of Nigeria
CBS	Cooperative Business School
CBI	Centre for Promotion of Imports from Developing Countries
CBS	Cooperative Business School
CDUs	Cocoa Development Units
CEAN	Cocoa Exporters Association of Nigeria
CEO	Chief Executive Officer
CFAN	Cocoa Farmers Association of Nigeria
CFN	Confectionery Companies
SHFs	Smallholder Farmers
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMA	Cocoa Merchants Association of America
CMIS	Cocoa Marketing Information System
CocTA	Cocoa Transformation Agenda
CODEX	Codex Alimentarius Commission
COGAN	Cocoa Growers Association of Nigeria
COPAN	Cocoa Processors Association of Nigeria
CPC	Consumer Protection Council
CPP	Crop Protection Products
CRG	Credit Risk Guarantee
CRIN	Cocoa Research Institute of Nigeria
CSA	Climate-Smart Agriculture
CSO	Civil Society Organizations
CSR	Corporate Social Responsibility
CTA	Cocoa Traders Association
DCTS	Developing Countries Trading Scheme
DFIs	Development Finance Institutions
DG	Director General
DMO	Debt Management Office

DPPPs	Development Private Public Partnerships
ECC	Export Credit Certificate
ECCC	Export Commodity Coordinating Committee
ECOWAS	Economic Community of West African States
EEG	Export Earning Grant
EGRP	Economic Growth and Recovery Plan
EHs	Export Houses
EFIFF	Export Facilitation Initiative Funding
EOP	Economics of Production
EPT	Export Processing Terminals
EUDR	EU Deforestation Regulation
EXP	Export Price
FACAN	Federation of Agricultural Commodity Associations of Nigeria
FBS	Farmer Business School
FCC	Federation of Cocoa Commerce
FCCPC	Federal Competition and Consumer Protection Commission
FDAE	Federal Department of Agricultural Extension
FDC	Federal Department of Cooperatives
FDI	Foreign Direct Investment
FEPSAN	Fertilizer Producers and Suppliers Association of Nigeria
FFS	Farmer Field School
FGDs	Focused Group Discussions
FIRS	Federal Inland Revenue Service
FMARD	Federal Ministry of Agriculture and Rural Development
FMCG	Fast Moving Consumer Goods
FMF	Federal Ministry of Finance
FMG	Farmgate Price
FMITI	Federal Ministry of Industry Trade and Investment
FMLE	Federal Ministry of Labour and Employment
FMoH	Federal Ministry of Health
FMoJ	Federal Ministry of Justice
FO	Farmer Organization
FOB	Free on Board
FPIS	Federal Produce Inspection Services
FRIS	Federal Inland Revenue Service (FRIS)
FSMS	Food Safety Management Systems
FX	Foreign Exchange
GAP	Good Agricultural Practices
CGA	Global Cocoa Agenda
GDP	Good Distribution Practice
GEP	Good Environmental Practices
GESS	Growth Enhancement Support Scheme
GMP	Good Manufacturing Practice
GON	Government of Nigeria
GIZ	German International Cooperation
GSP	Good Social Practices
JICA	Japanese International Cooperation Agency
ICCO	International Cocoa Organization
ICE	Intercontinental Exchange
IEC	International Electro-chemical Commission
IFC	International Finance Corporation
IGI	International General Insurance
IITA	International Institute for Tropical Agriculture
ILO	International Labour Organization
IPM	Integrated Pest Management
ISO	International Organization for Standardization
ISPO	Irrevocable Standing Payment Order
ITC	International Trade Centre
LWR	Lutheran World Relief
IWC	Ikom Town Wholesale Centre

IUCN	International Union for Conservation of Nature (IUCN)
KG	Kilogram
KIIs	Key Informant Interviews
KIT	Riyal Tropical Institute
LBAs	Licensed Buying Agents
LC	Light Crop
LID	Living Income Differential
MAN	Manufacturers Association of Nigeria
MC	Main Crop
MEAs	Monitoring and Evaluation Agents
MDAs	Ministries, departments and agencies
MFBs	Microfinance Banks
MLR	Minimum Residue Level
MSME	Micro, small and medium enterprises
MT	Metric ton
NACCIMA	Nigerian Association of Chambers of Commerce Industry Mines and Agriculture
NCDC	National Cocoa Development Committee
NCS	Nigerian Customs Service
NAFDAC	National Agency for Food and Drug Administration and Control
NALDA	National Agricultural Land Development Authority
NAIC	Nigerian Agricultural Insurance Corporation
NAP	National Action Plan on Child Labour
NAQS	Nigeria Agricultural Quarantine Service
NASS	The National Assembly
NATIP	National Agricultural Technology and Innovation Policy
NBS	National Bureau of Statistics
NCS	Nigerian Customs Service
NCMC	National Cocoa Management Committee
NCS	Nigerian Customs Service
NCR	National Collateral Registry
NCQS	Nigerian Cocoa Quality Standard
NCX	Nigerian Commodity Exchange
NECA	Nigeria Employers' Consultative Association
NEPC	Nigeria Export Promotion Council
NEPZA	Nigeria Export Processing Zones Authority
NESS	Nigerian Export Supervision Scheme
NDLEA	Nigerian Drug Law Enforcement Agency
NFSMC	Nigeria's National Food Safety Management Committee
NGN	Naira
NIPC	The Nigerian Investment Promotion Council
NIPR	Nigerian Industrial Revolution Plan
NIRSAL	Nigerian Incentive-based Risk Sharing for Agricultural Lending
NPA	Nigerian Ports Authority
NSIA	Nigeria Sovereign Investment Authority
NSWTP	The Nigeria Single Window Trade Portal
OFI	Olam Food and Ingredients
OFSH	Offshore Markets
OSCC	Ondo State Cocoa Council
OPRM	Operating Margins
PFI	Presidential Fertilizer Initiative
PIAs	Port Inspection Agents
PIND	Partnership Initiatives for the Niger Delta
PPPs	Private Public Partnerships
PRS	Processing Companies
QMS	Quality Management Systems
RA	Rainforest Alliance
RAAMP	Rural Access and Agricultural Marketing Project
RMRDC	Raw Material Research and Development Council
RSSF	Real Sector Support Facility
SATS-C	Secure Agricultural Commodities Transport and Storage Corridor

SD	Sustainability Differential
SI	Sustainability Investment
SMS	Short Message Service
SONCAP	Standards Organization of Nigeria Conformity Assessment Program
SON	Standard Organization of Nigeria
SOP	Standard Operating Procedure
SPAZ	Special Agro-Industrial Processing Zones Program
SPS	Sanitary and phytosanitary
SPV	Special Purpose Vehicle
STCP	Sustainable Tree Crop Program
STCP	Sustainable Tree Crop Program
TCUs	Tree Crop Units
TEU	Twenty Foot Equivalent
UK	United Kingdom
UNIDO	United Nations Industrial Development Organization
USDA	United States Department for Agriculture
USAID	United States Agency for International Aid
UPS	United Parcel Service
VBAs	Village Buying Agents
VSS	Voluntary Sustainability Standards
W2W	Waste to Wealth
WCF	World Cocoa Foundation
WRS	Warehouse Receipts Systems
WTO	World Trade Organization

01 Value Chain Structure and Profile of the Actors



Context Setting: Although the Nigerian cocoa ecosystem operates in an acutely unregulated market environment and is beset with numerous challenges that impair global competitiveness; the value chain provides employment to millions of Nigerians and still remains the second largest non-oil foreign exchange (FX) revenue generating sector. Upstream, the Nigerian cocoa value chain comprises smallholder farmers (SHFs) that are in the majority impoverished, disenfranchised and dominated by itinerant and opportunistic sharecroppers; a couple of small-scale to medium scale commercial farmers and farmer organizations (FOs) and cooperatives that are plagued with governance, leadership and management challenges and lack of access to critical inputs and extension services. The cocoa farmgate is home to an estimated 263,530 SHFs and household population of 2.1million.

The midstream subsector is dominated by Licensed Buying Agents (LBAs) and an assortment of local and international export houses and in-country grinding companies. Year-on-year, more than 80% of the country output is exported as raw beans while the 20% balance is deployed for the production and export of derivatives (powder, butter and liquor). About 10% of the derivatives (powder) is utilized as feedstock for the domestic beverage and confectionery industry. The grinding companies also supply cocoa butter to the burgeoning artisanal chocolate sector. The bulk of Nigerian origin beans and derivatives is exported to Europe (69%) and Asia (22%). In Europe, The Netherlands is the largest importer, while Indonesia occupies the leadership status in Asia. Over the past 5 years, the cocoa sector has generated a total forex revenue of $4.36billion (N2.01trillion) from the export of cocoa beans and butter. Based on the 280,000mt output recorded in 2022, the institutional cascade of the Nigerian value chain and the distribution of the produce amongst and between the actors is simulated below:

Table 1: Institutional Cascade of the Nigerian Cocoa Value Chain

ACTIVITY	ACTORS	NUMBER	OUTPUT / FEEDSTOCK	VOLUME (MT)
Manufacturing	Beverage/ Confectionery[1]	20	Powder[2]	10,000mt
	Artisanal Chocolatiers[3] (0.4%)	11	Beans	1,120mt
Export and in-country trade	Foreign Exporters (42%)	10	Beans	118,795mt
	Domestic Exporters (37%)	40	Beans	104,085mt
Intermediate processing	Foreign[4] (10%)	2	Beans	56,000mt
	Domestic[5] (10%)	5		
Collection, bulking aggregation and supply	CMX (3%)	1	Beans	8,400mt
	LBAs[6] (87%)	2,000	Beans	243,600mt
	VBAs/Factors[7]	28,000		
	Cooperatives (10%)	100	Beans	28,000mt
Cocoe bean production[8]	Public/Private Cocoa Estates 2%	20	Beans	5,600mt
	Smallholder Farmers 98%	263,530	Beans	274,400mt
	Farmgate population	2,108240		
	Hectarage under cultivation	658,824ha		
	Yield/ha	425kg		

[1] Cadbury, Nestle, Friesland, Promisidor, Fan-Milk, Spectra Foods, Susan Cocoa, 10 biscuit factories in Ibadan/Lagos, Chi Foods, CWAY Foods, GlaxoSmithKline. Barry Callebaut (BC-Nigeria) is involved in powder and couverture trade.
[2] According to PIND, annual cocoa powder requests by a top beverage coy estimated 9,970mt (4,200mt beans).
[3] Dune, Pod, Loshes, Yemmies, Roostarr, Choc Boy, Sunshine Chocolate, Loom, Kalabari Gecko, Chockridge and an array of baking confectionery, boutiques and cafes.
[4] Cadbury Processing and Tulip Processing. (combined capacity at 45,000mt) at average operation capacity of 65% –(27,000mt).
[5] Alpha Cocoa Systems, FTN Cocoa Processing Company, JohnVents Industries, Ile-Oluji Cocoa Products and Plantation Industries (combined capacity 96,000mt) at average operating capacity of 30% -(28,800mt).
[6] An estimate and just about 41% (816) are duly registered across 5 states
[7] At an average of between 14 to 20 factors per LBA or at 10mt sourcing capacity.
[8] Yield of 425kg is the average of between a low of 350 and high of 500kg/ha. This crystallizes at roughly 1.1mt per farmer on 2.5ha farm-holding. The farmgate population of 2.1million is at 8-persons per household headcount.

02 Domestic Flows[9]

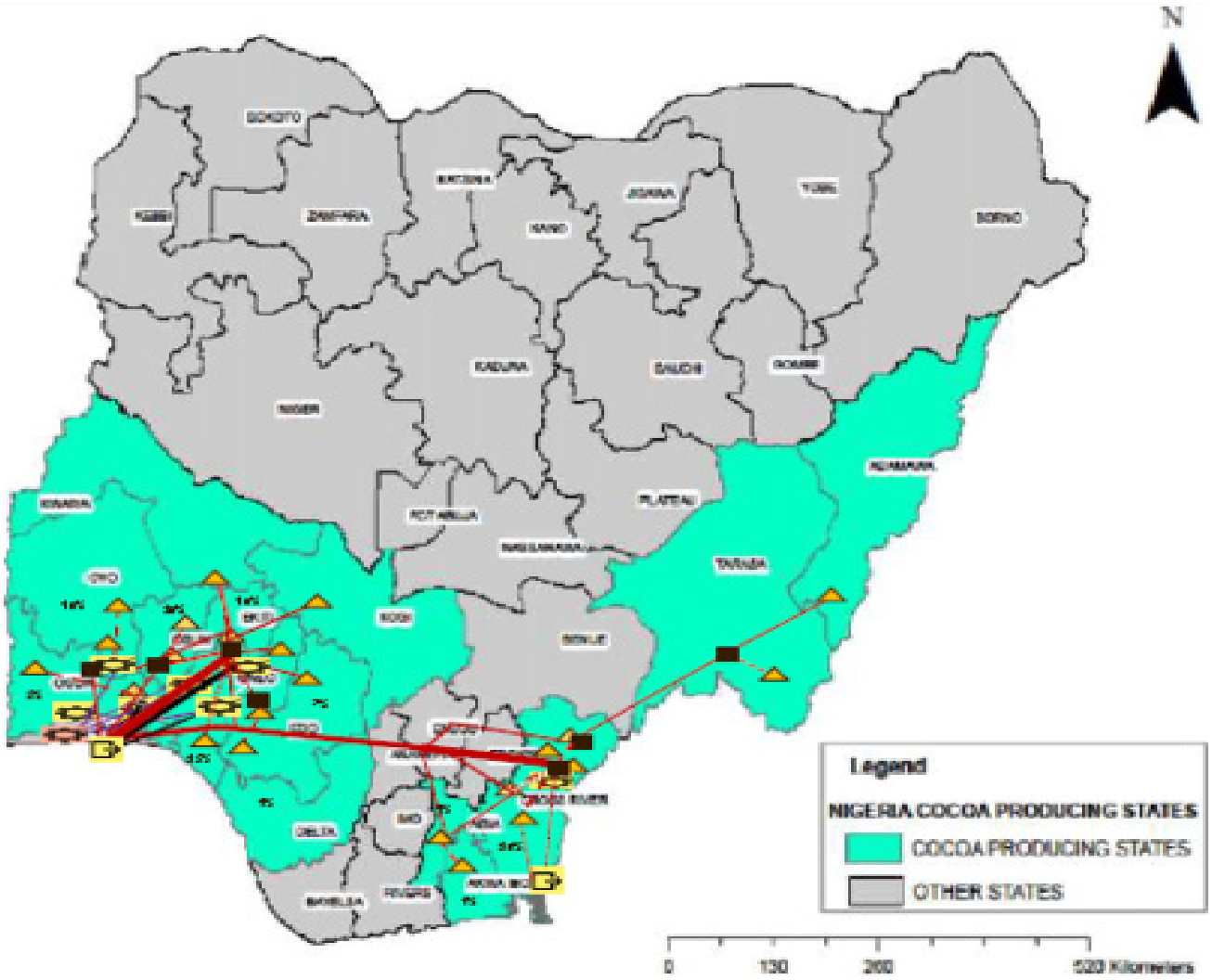


Table 2: Index to Country Domestic Flows Map

S/N	key Market Centres	ICONS
1	Assembly	
2	Wholesale	
3	Processing[10]/manufacturing	
4	Beverage, Confectionery and Chocolate[11]	
5	Export Terminal Ports[12] (Calabar/Lagos)	
6	Intra-state supply path	
7	Inter-state supply path	
8	Cocoa derivatives-domestic	
9	Cocoa derivatives-export	

Cocoa is produced across 4-geopolitical zones, 22 states with roughly 640,000ha under cocoa cultivation[13] but on a strictly economic and sustainable basis, production is typically associated with the 14 states and 120 Local Government Areas (LGAs) as presented below.

[9] In order not to make the map too busy, only the state production contribution to national output are posted. The percentages covering the assembly and wholesale centres are implied by the weights of the arrows depicting the flow patterns in the respective Southsouth and Southwest zonal maps on pages 12 and 14 respectively.
[10] There are 5 processing. (3 in Akure, 1 in Ile-Oluji, 1 in Ondo Town) and 1 chocolate factory (Idanre) in Ondo State. Due to space limitations, the manufacturing icon in Akure represents the 3 processing plants.
[11] Predominantly, beverage and confectionery companies.
[12] In total, there are 4 Ports, 3 in Lagos and 1 in Calabar, Cross River State.
[13] National Cocoa Plan (2019-2028) culled from 2005 CRIN Survey.

Table 3: Breakdown of Cocoa Producing Zones

S/N	Zones	States	LGAs	Area under cultivation
1	Northcentral (NC)	Adamawa, Kogi, Kwara and Taraba	8	13,984ha
2	Southeast (SE)	Abia	5	3,578ha
3	Southsouth (SS)	Akwa-Ibom, Cross River, Edo and Delta	16	183,088ha
4	Southwest (SW)	Ekiti, Ogun, Ondo, Osun and Oyo	91	443,399ha
			120	**638,736ha**

However as portrayed in the map 7 states[14] account for 619,132ha (97%) and over 90% of country output, thus making the SS and SW zones the major producing zones. At the prevailing yield rates of say, 350 to 500kg/ha; national output hoovers between 224,000 and 352,000mt and yielding an average of 272,000mt. Juxtaposing the 2005 CRIN Survey of 640,000ha with the 2013 National Bureau of Statistics (NBS) survey[15] with an area under cultivation at 1.34 million-ha suggests that average production yields may have bottomed up at 203kg/ha and approximately, 700,000ha of additional cultivation in 8 years. As there is no evidence to support these assertions; it might be more appropriate to estimate land cover by applying the average yield rate of 425kg/ha to the 2021 national output of 280,000mt, which crystallizes at a more realistic 658,824ha estimate. Adjusting the "rule of thumb" guesstimate[16] that consigns SS and other zones with 30% and 70% to SW to national output to 33% and 67% respectively, it is reasonable to assume that 92,400 and 187,600mt accounted for the output in the NC/SE/SS and SW zones respectively.

A cursory observation of the domestic flows map reveals that the SW zone region is vastly more developed with interdependent states that support value chain activities end-to-end. It also shows that in the SS zone, Cross River (from the Ikom hub) is the major origination cluster for most of the trade and supply chain activities from 7-LGAs and 4-contiguous states. Whether as feeder stock for value addition or for onward export; Lagos, the commercial capital of Nigeria and Ondo (the largest producing state) and Ogun State, home to 2 in-grinding companies constitute the major wholesale centres in the SW and the final destination for the SS cocoa shipments. Nonetheless, both Akure (administrative capital of Ondo) and Ikom (cocoa capital of Cross River) both serve as catchment destinations to the vast majority of frontline export houses, LBAs, trade associations, cooperatives, commercial Banks, development finance institutions (DFIs), input providers, certification agencies, state produce and agricultural agencies, development community initiatives, field stations of Cocoa Research Institute of Nigeria (CRIN) and state offices of various federal ministries, department and agencies (MDAs). Lagos is the host city to the major multinational and local beverage companies, confectionery and chocolate companies. Lagos also parades the major Ports, the accompanying public and private shipping and inspection agencies, export-bound storage facilities as well as most of foreign export houses. Aside from the undeveloped value addition and downstream subsectors; the fundamental difference between the SS and SW zones is the inadequacy of the Calabar Port to handle commodity export. And this probably underscores the overwhelming SW zone skew of the domestic cocoa flow pattern. The "**Ondo Deep Sea Port**", which promises to be a "**massive game changer**" in the scheme of things and for the SW cocoa ecosystem was finally approved by the GON.
See Link:-https://ojuasha.com.ng/breaking-fg-approves-ondo-deep-sea-port-grants-operating-license/

[14] (Cross River/Edo states in the Southsouth "SS" and Ekiti/Ogun/Ondo/Osun/Oyo in Southwest "SW").
[15] National Survey on Agricultural Exportable Commodities- a collaborative effort between Central Bank of Nigeria (CBN), Federal Ministry of Agriculture and Rural Development (FMARD), Federal Ministry of Industry, Trade and Investment (FMITI) and NBS.
[16] Increasing output from SS and declining productivity in the SW on account of older trees and farmers.

Southsouth Regional Map

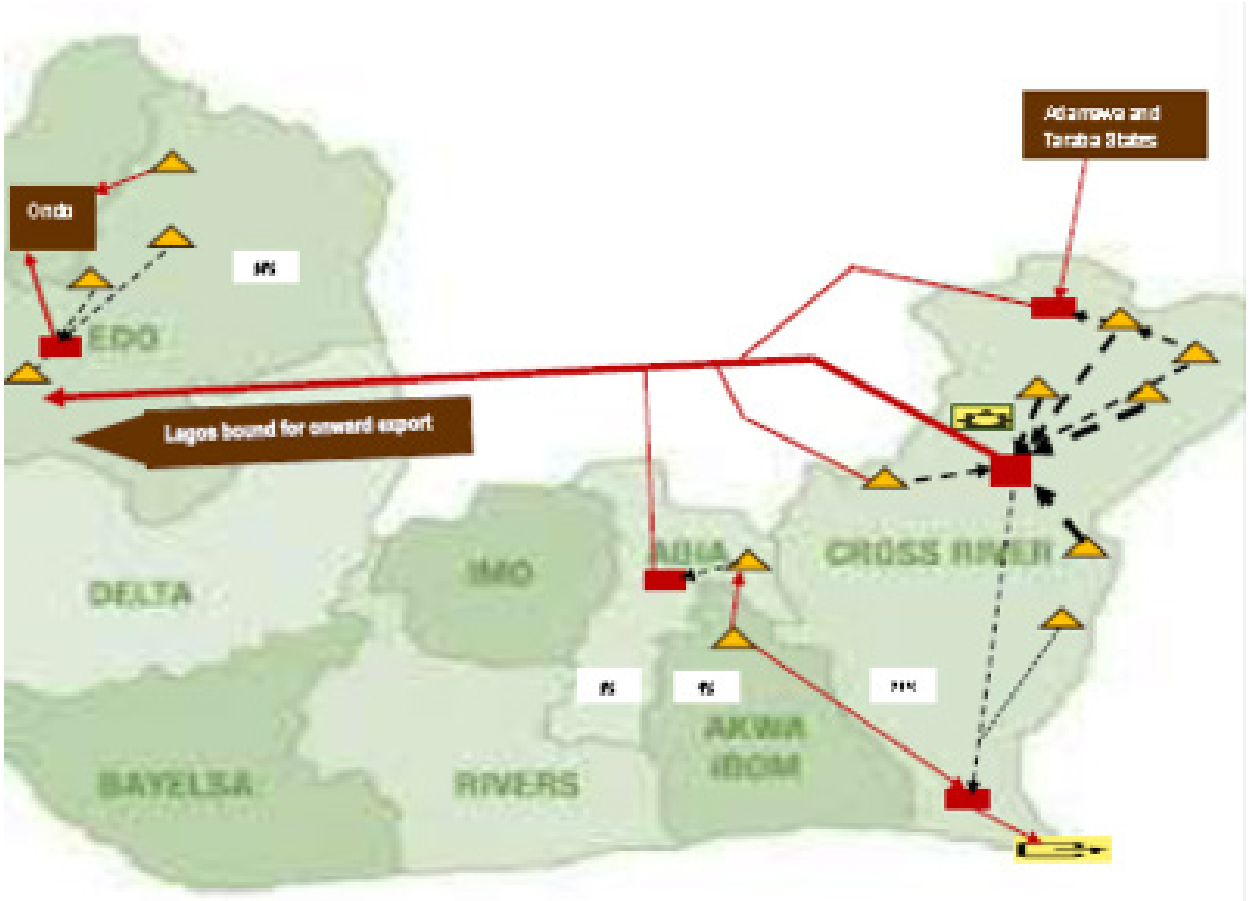


Table 4: Index to Southsouth Domestic Flow Map

S/N	key Market Centres	ICONS
1	Assembly	
2	Wholesale	
3	Processing/manufacturing[17]	
4	Beverage and Confectionery	
5	Export Terminal	
6	Intra-state supply path	
7	Inter-state supply path	

Assembly Centres: In total, there are 13 assembly points responsible for the production, procurement and aggregation of the 92,400mt volume assigned to the SS zone. Cross River State, which accounts for 73% of the output has 7 assembly centres distributed across the key local government areas (LGAs):- Etung (35%) delivers to the Ikom Town wholesale centre (IWC) 14km away; Ikom (24%) delivers to IWC all within a 20 to 50km perimeter; Obruba (2%) delivers some 50% to IWC 44km away, while the balance is shipped to the SW-Zone through Ebonyi and Imo states to connect the Onitsha/Lagos Expressway. Due to the deplorable road network, Obanliku (2%) some 165km away from IWC supplies to Obudu (2%) some 17km away. The same holds true for Boki[18] (30%) some 70km.Obudu town is also the catchment destination for all the cocoa production in the Obudu LGA, some from Boki LGA and also caters to Northcentral zone states (Adamawa and Taraba). Akampka (2%) on account of its proximity delivers to Calabar (administrative capital of Cross River) and host city of the Port Complex some 45km away. Calabar also serves as the catchment destination for some 30% output from the Ini-LGA (1%), some 97km away from Uyo, (administrative state capital) of Akwa-Ibom state.

[17] The Ikom Processing Factory although commissioned has not commenced operations. Its touted to be a 30,000mt plant with capabilities of cleaning cocoa beans, processing and chocolate component.
[18] Boki is 165km to the Ikom Wholesale centre.

The 70% balance is ferried out to the Bende/Itunta wholesale centre in Abia state, which accounts for 2% of SS output. Edo State, which contributes 8% has 4 major assembly centres that are bound by proximity and high demand to patronize wholesale centres in Ondo state; all within a 30 to 75km perimeter that connects the Onitsha/Lagos expressway at the Ore boundary in Ondo State. The Edo State assembly centres are Ovia-SW (26%), Ovia-NE (21%), Owan (26%) and Ohunmonde (27%)

Wholesale Centres: There are 5 major wholesale centres (WCs); 3 in Cross River, 1 each in Abia and Edo States. The IWC is by far the largest accounting for 55% (51,100mt) of the SS zone and the major transshipment centre to the SW zone. The Obudu-WC accounts for 17% (15,500mt) of total trade. The Abia-WC accounts for 2.2% (2,040mt), whilst the Edo State WC, which accounts for 24.2% (22,400mt) is "soaked up" by Ondo State merchants, LBAs and exporters. The remaining 2% (1,860mt) balance can be attributable to the Calabar-WC, outflows through the Obruba LGA and the mercantile activities of iterant middlemen especially in Abia and Akwa-Ibom States, where there seems to be more fragmentation in the value chain architecture.

Processing and Export: The Ikom Cocoa Processing Factory was officially commissioned in September, 2021, but has not commenced commercial operations. It's touted to be a 30,000mt plant with special cleaning, processing and chocolate capabilities. The delay in operations is due to unresolved issues in the technical partnership agreement. Nonetheless, the Ikom Factory is envisioned as the anchor for the African Development Bank (AfDB)-led Special Agro-Industrial Processing Zones (SAPZ) intervention[19] Ideally, produce from Cross River, which accounts for anywhere between 19% and 30% of national output should be exported via the Calabar Port (200km from Ikom) but it is way too small to accommodate large ships and export can only be undertaken via barge transshipment for onward loading to larger ships on the high seas. According to newspaper accounts, only 7,000mt (10.4%) of the state output has been exported through the Calabar Port[20]. KIIs with exporters revealed that the cost of transshipment is not only prohibitive but way more cumbersome than the 774km road transportation to Lagos.

Conclusion: The SS Zone has 3 major land borders, Ondo state to the west, the Southeast and Northcentral zones to the North and Cameroon to the East, which shares boundary with 3LGAs (Etung, Boki and Obanliku) in Cross River state. Undocumented but nonetheless significant volumes of produce diffusion is prevalent; the SW through Edo State, the NC through Obudu-WC and Cameroon through the aforementioned LGAs. Unlike the other SS states, the Cross River value chain is governed by locally inspired chain of command policy, which defines the pecking order of trade and supply chain activities from the farmgate to the assembly, wholesale centres and markets and strictly adhered to in the following sequence:
SHFs->Cooperatives[21]->VBAs->LBA->Exporters.
Exporters and unregistered merchants are strictly prohibited from direct commercial relationships with the farmgate, thereby making the Cross River and by extension, the SS ecosystem extremely regimented.

[19] According to AfDB accounts, the SPAZs are new economic zones located in rural areas to be fully supported by infrastructure (power, water, roads, digital platforms and logistics) that will allow food and agribusiness companies to locate within such zones and attract an array of service providers, end-to-end. For the cocoa value chain, Cross River and Ogun States have since qualified for the phase-1 intervention.
[20] Equipped to handle 10,000 TEUs or 240,000mt of cargo. It handles 9.6million mt of crude oil export annually.
[21] Cooperatives with LBA licenses though few and far in between are permitted to transact businesses with exporters.

Southwest Regional Map

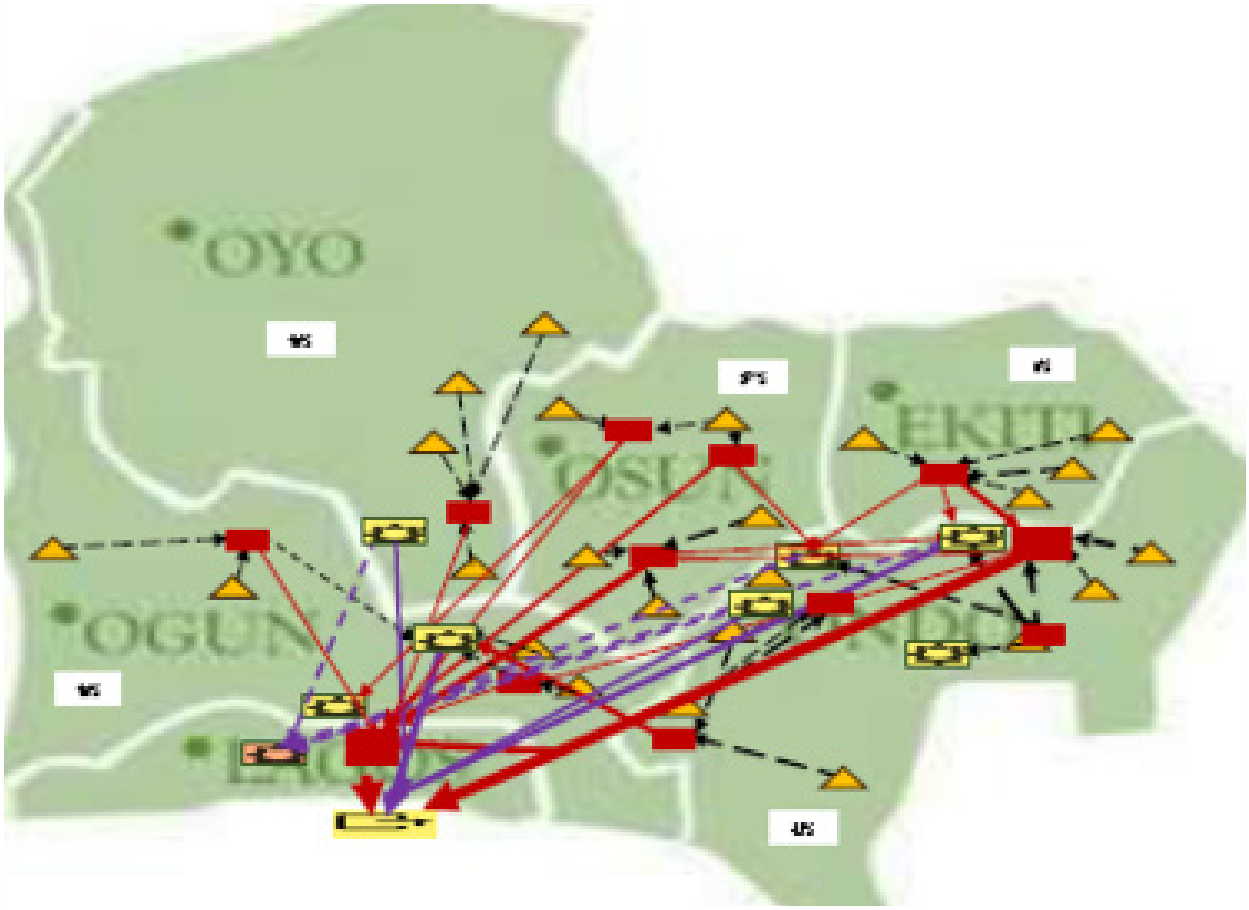


Table 5: Index to the Southwest Domestic Flow Map

S/N	key Market Centres	ICONS
1	Assembly	
2	Wholesale	
3	Processing[22]/manufacturing	
4	Beverage and Confectionery	
5	Export	
6	Intra-state supply path	
7	Inter-state supply path	
8	Cocoa derivatives-domestic	
9	Cocoa derivatives-export	

A cursory observation of the map immediately reveals that the SW is not only a lot more fragmented than the SS zone but also that the individual states are interdependent and the VC actors have wider market choices midstream, downstream and are open to numerous origination and sourcing opportunities within and outside state boundaries upstream. Furthermore, on account of the high degree of contiguity between the states, the unfettered and high demand structure from the Akure hub and the differences in grading fees, registrations and other statutory levies; there is a significant volume of undocumented diffusion and cross-border trade. Also very mobile in between the states are a whole legion of sharecroppers, laborers and small scale farmers that are in constantly in search of virgin land and abandoned farmlands. Even though the states are at different levels of maturity and interdependence, the common denominator is that the vast majority of the export-houses and processing companies sustain a wide and viable network of linkages to the assembly and wholesale centres. Logistically, this is due to the fact that the distance between the farthest WC in Ekiti State is just under 320km to Lagos and less than half of the 804km distance between the Obudu-WC (in Cross River State) and Lagos.

[22] There are 5 processing plants and 1 chocolate factory in Ondo State as noted earlier.

Assembly Centres: In total, there are 24 assembly points responsible for the production, procurement and aggregation of the 187,600mt volume assigned to the SW zone. Ondo, which accounts for 43% of the output has 7 assembly centres across the following LGAs Idanre (43%), Ondo-East/Ile-Oluji (4%), Odigbo/Ondo West (10%); Irele (31%), Akure (6%) and Owo/Ose (6%). In Osun, which accounts for 27% of SW output parades 5 assembly centres mainly across Ilesha perimeter (28%), Oriade (24%), Ife (24%), Ayedade (21%) and Oshogbo (3%). In Ogun, at 10%, there are 3 assembly centres are at Abeokuta (7%), Egbado (29%) and Ijebu (64%). In Oyo, at 10%, there are 4 assembly centres are in Ibadan (27%), Ogbomosho (30%), Oyo (13%) and Eruwa (30%). In Ekiti State, at 9%, the 4 assembly centres are Ise (35%), Gbonyin (21%), Ado-Ekiti (13%) and Ikole axis (31%). Due to the fragmented nature of the market, the porosity of state boundaries especially between Ogun/Ondo; Oyo/Osun; Ekiti/Ondo; Oyo/Ogun, Ekiti/Osun; Osun/Ondo and Edo/Ondo; it's a bit more challenging to estimate the volume of goods that are delivered to the wholesale centres. It is however reasonable to assume that since the vast majority of the exporters and processors are domiciled in Akure, a larger percentage of the produce will flow into the Akure and Lagos wholesale centres.

Wholesale Centres: There are 12 WCs, 4 in Ondo; (Akure, Idanre, Ondo and Ore); 3 in Osun (Ife, Ilesha and Oshogbo); 1 each in Oyo and Ekiti; 2 in Ogun (Abeokuta and Ijebu) and 1 in Lagos; that primarily serves as transshipment point for export-bound produce. With the exception of Tulip[23] all the foreign and frontline export houses have head-offices/warehouse facilities in Lagos, from where they pool their produce for onward export. So for the most part, deliveries are made to Lagos through contractual agreements with LBAs based in contiguous states such as Ogun and Oyo that account for 20 and 14% of county and zonal output respectively. Notwithstanding, all the export houses have their major operational offices at the Akure hub that serves as the catchment point from Ekiti, Ondo and Osun states, which by far account for the largest contribution of 53 and 79% respectively to country/zonal output. The Akure and Ore WCs in Ondo State also benefit from Edo and Ogun State cross-border trade. Typically, under pre-shipment finance driven contracts, the LBAs drawn from the aforementioned states supply the exporters in Akure and 5-processors in Akure, Ondo and Ile-Oluji. Depending on the pedigree of the LBAs and expediency, deliveries to Lagos warehouses are also commonplace. The relationship between LBAs and exporters/processor is two-pronged. The first is strictly commercial, which guarantees seamless delivery of standardized beans in the volumes and quality specified in the contract. The second aspect covers the sustainability, certification, CSR activities and the provision of embedded value chain financial services and support. The exporters/processors thus rely exclusively on the LBA upcountry procurement architecture to reach promising and well selected farmer groups and cooperatives that eventually act as mentor platforms to "rein-in" the critical mass at the farmgate on the virtues and monetary benefits of certification and sustainability protocols.

Processing and Manufacturing Centres: Out of the 9 processing factories with combined capacity of 198,000mt in the SW, there are 7 functional plants: - 1 each in Ogun and Oyo, and 5 in Ondo State with installed capacity[24] of 138,000mt. At the much often "touted" demand profile of 20% to country output, 56,000mt represents the current feedstock. At 30% of SW output, it is easy to appreciate the intensity and fierce struggle for beans between exporters and grinders; the overbearing dominance of the LBAs; the indispensability of the SS zone in the scheme of things; the negative impact on pricing and quality; and the need for nimbleness[25] and creativity in sourcing mechanisms. However the increasing popularity and acceptance of sustainability projects and the stricter compliance protocols with regard to child abuse and deforestation free cocoa has also occasioned an outgrower/ingrower paradigm shift in the procurement mechanism of processing companies that used to depend solely on LBAs and exporters for the supply of cocoa. These processing companies supply the beverage manufacturers in Lagos with cocoa powder. With the exception of for Cadbury Nigeria Plc (Mondelez) that has a dedicated arrangement with the cocoa processing subsidiary in Ondo State, the other beverage companies namely Nestle, Promasidor, Friesland, Fan Milk and a number of biscuit manufacturing companies in Ogun and Oyo States are supplied by the other grinding companies. Due to the predominant bean-to-bar (B2B) business model, the main artisanal chocolatiers have direct relationships the farmgate community, mostly in Ondo State. Even as their cocoa bean and cocoa butter consumption is considered to be negligible, this sub-sector is currently generating more than a passing interest from processors, export-houses and other institutional investors.

[23] The cocoa processing and export activities are undertaken from the Ijebu-Mushin premises in Ogun State.
[24] Tulip Processing (30,000mt), Ogun State, FTN Cocoa Processors (20,000mt), Oyo State, JohnVents Industries (18,000mt), Ile-Oluji Cocoa Processing (30,000mt), Cadbury Cocoa, (15,000mt), Plantation Industries (15,000mt) and Alpha Cocoa Processing (10,000mt all in Ondo State).
[25] From KIIs and cocoa beans export data, the processing companies are also involved in the export of cocoa beans. While this scenario might have been occasioned by the transition from exporter to processing company for a few, it is now looking more as industry practice as even the new entrants maintain cocoa bean export portfolios.

Export Ports: There are 3 export major Ports in Lagos, namely, Lagos Port Complex, Tin-Can Island Port Complex and the newly commissioned Lekki Deep Sea Port, acclaimed as the largest in West Africa. However, cocoa beans and derivatives export is primarily undertaken through the Lagos Port Complex and the Tin-Can Island Port Complex. To discharge effective non-oil export bound operations, the Nigeria Customs Service (NCS) in collaboration with the Nigerian Ports Authority (NPA) and Nigerian Export Promotion Council (NEPC), established a domestic warehouse initiative tagged as export processing terminals (EPTs). The initiative was primarily set up to eliminate logistics challenges experienced by exporters. The EPT is thus a one stop-shop facility under the instrumentality of the Lilypond Export Command to undertake stuffing, examination and document processing for non-oil export cargos accessing Lagos ports by road, rail and barges. The overarching goal is aimed at fast-tracking export businesses for quick turnover to ensure proper documentation and repatriation of export proceeds and to decongest the port. The Lilypond Export Command, which is equipped with a dedicated 7,000 TEU storage capacity processed 113,185mt of non-oil exports valued at N86.4billion ($187million) in Q-1, 2023.

Conclusion: Whether fragmented or regimented, the LBAs in both geo-political zones have complete monopoly on the trade and supply chain upstream. In times past and before the advent of increasing sustainability and certification projects, the impoverished and disenfranchised farmgate community were held captive by the middle-men worldview. However, with the increasing reliance on the LBA grassroots network to drive the sustainability and CSR projects, there appears to be some moderation in the balance of power equation and increasing market choices for the farmgate community as indeed, growing esteem in the scheme of things. If this paradigm shift is institutionalized, this may well be the beginning of a win-win situation for the exporters and processors alike: - better quality cocoa, seamless supply and enhanced farmgate loyalty.

03 Data Tables

3.1 Production Data by key States (mt)

Year	CRS	EDS	EKS	OGS	OND	OSN	OYS	Others	Total
2013	57,120	19,040	14,280	16,660	69,020	42,840	16,660	2,380	**238,000**
2014	59,520	19,840	14,880	17,360	71,920	44,640	17,360	2,480	**248,000**
2015	46,800	15,600	11,700	13,650	56,550	35,100	13,650	1,950	**195,000**
2016	48,000	16,000	12,000	14,000	58,000	36,000	14,000	2,000	**200,000**
2017	55,200	18,400	13,800	16,100	66,700	41,400	16,100	2,300	**230,000**
2018	64,800	21,600	16,200	18,900	78,300	48,600	18,900	2,700	**270,000**
2019	60,000	20,000	15,000	17,500	72,500	45,000	175,00	2,500	**250,000**
2020	69,600	23,200	17,400	20,300	84,100	52,200	20,300	2,900	**290,000**
2021	67,200	22,400	16,800	19,600	81,200	50,400	19,600	2,800	**280,000**
2022	72,159	24,052	18,039	21,046	87,192	54,119	21,046	3,007	**300,662**

Source: ICCO, NCP, NBS, NCS and analysis based on historical trends

3.2 Local Processing Data (mt)

Year	Cadbury Cocoa	FTN	Ile-Oluji Cocoa	JVI	Alpha	PIL	Tulip Cocoa	Total
2018	12,000	1,000	4492	0	500	5,400	13,608	**37,000**
2019	12,000	1,000	1592	0	500	5,400	13,608	**34,000**
2020	12,000	1,000	0	0	0	6,000	18,000	**37,000**
2021	12,000	1,000	0	5,000	0	8,600	21,000	**47,600**
2022	12,000	1,000	0	12,060	0	12,060	23,013	**60,133**

Source: FAO, NCS, PIND and analysis based on historical trends of operating capacities

3.3 Export Data to the Major Importing Nations (mt)

Year	Netherland	Germany	Indonesia	Belgium	Malaysia	Spain	Estonia	USA	Vietnam	Italy	Others	Total
2018	81,534	11,163	22,917	9,960	11,120	2,103	278	1,610	3,105	1,977	2,652	148,419
2019	88,798	26,338	13,842	16,370	8,607	3,807	2,725	2,385	1,542	346	1,809	166,569
2020	82,910	19,560	22,248	18,945	14,925	2,631	4,341	5,462	3,244	635	26,768	201,669
2021[26]	185,730	32,630	31,405	14,362	61,604	4,305	1,591	14,401	10,022	1,448	28,579	386,076
2022	131,8645	27,703	28,660	19,802	24,051	4,088	2,930	5,980	4,823	1,489	15,725	267,116

Source: FAO, NCS

[26] The 106,076mt differential between the 2021 output and export data is due to the lack of effective data sharing between the various agencies charged with export data documentation and collation. This silo culture, which is not limited to the public sector is a consequence of the endemic bureaucracy lack of solidarity and undue competition across the value chain. Due to prevalent data inconsistency, researchers prefer to reference international sources. Incidentally, the export data sourced from the Nigeria Customs Service (NCS) bears no similarity with the Federal Produce Inspection Services (FPIS). Even as produce stockpiled at the ports in the wake of the COVID-19 pandemic could also be a factor, other data sources suggest that the export data outpaced the country output estimates. And that may well explain the stability of Nigeria's rating as the 4th largest producer. However, given the integrity of the ICCO data, it is more fitting to deploy for country output and contribution by states from 2013 to 2021.

3.4 Export Data by Exporters (mt)

Year	Olam	Starlink	Olatunde	Spring-field	Tulip	Mt + Azzezo	Wacot	Gbemtan	Alpha	Sun-beth	Others	Total
2018	47,939	35,116	10,389	9,365	8,623	8,044	6,842	3,310	2,968	2,746	13,075	148,419
2019	53,802	39,410	11,660	10,511	9,678	9,028	7,679	3,715	3,331	3,082	14,675	166,569
2020	65,139	47,715	8,933	12,725	11,717	10,930	9,297	4,497	4,033	3,731	11,243	201,669
2021	124,703	91,346	25,640	24,362	22,431	20,925	17,798	8,610	7,722	7,142	32,270	386,076
2022	86,279	63,200	18,898	16,855	15,519	14,478	12,314	5,957	5,342	4,942	35,647	267,116

Source: FAO, NCS, FPIS and analysis based on historical trend

04 Value Chain Actor Profiling

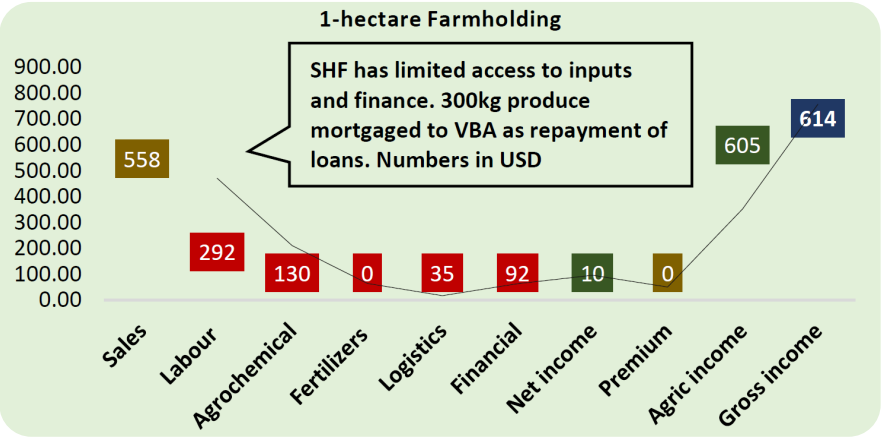
4.1 PRODUCERS

Sizing: From 30,000, 45,000, 152,000 to 450,000 different and inconsistent estimates have been reported on the population of SHFs. Unfortunately, due to the delay in conducting an up-to-date and in-depth census[27] we rely on guestimates, outmoded and outdated information to make otherwise informed decisions. From my assessment, 264,000 SHFs operating at a subsistent 2.5ha farm-holding level crystallizes in a total area under cultivation of 660,000ha. According to a PIND report on SHF farm sizes in the Niger-Delta cocoa ecosystem, 15% operate <1.5ha; 66% between 1.5 and 5ha and 19% >5ha. Nationwide, the land under cultivation is at a respectable 21.1% to the 3.1millionha considered suitable[28] for cocoa cultivation. However, on a zonal basis, SW (47%), SS (11%), SE (20%) and NC (2%), the unfolding scenario points to NC and SS as the "future strongholds" for the evolution of cocoa production.

Business Model: 98% of the country output is produced by the SHFs. The 2% balance is attributable to the government and private cocoa estates. The core business undertaking is farm husbandry, which comprises establishment, maintenance, harvest and post-harvest activities. The post-harvest covers, fermentation, drying, bagging and sales at the ruling farmgate price either to the farmer organization (FO)/coop store, the independent merchant (mostly rent-seeking middlemen) and the village buying agent (VBA). Nationwide, the practice is largely the same, the difference however lies in the degree of fragmentation and the accompanying demand/supply dynamics.

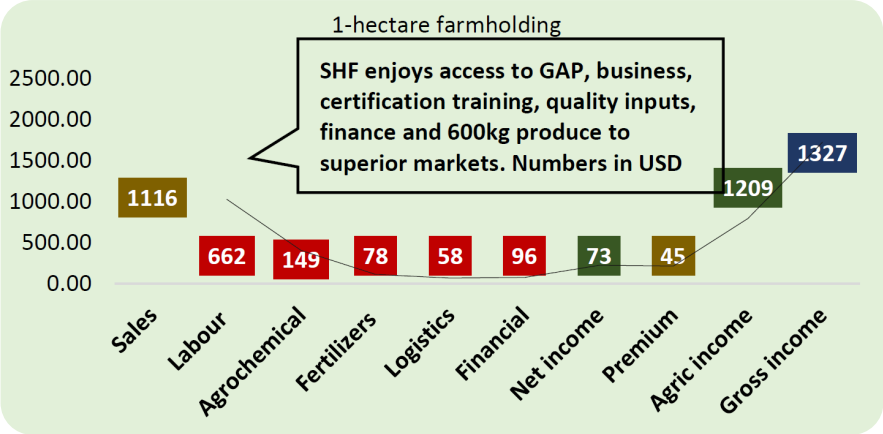
Profit and Loss: 2 scenarios are displayed below: - 1) the 1-ha subsistence SHF (A) with limited access to inputs and finance; 2) SHF (B) that is member of an outgrower scheme;

At the March global price of $2.75/kg, SHF's harvest of 300kg will generate revenue of N.258million, which crystallizes at a daily N707 ($1.53). Cocoa net income is however at a paltry $9.6 or at 0.03cents daily. The 4.8 bags are pre-sold to the VBA/or merchant that provided the loan/funding that facilitated limited access to inputs, labour cost (covering farm maintenance, harvest and post-harvest) and the accompanying logistics (bags, packing and transportation costs). The saving grace however is the $605 income from other agricultural enterprises that shores up the gross income to $614 ($1.68 daily). However, for SHFs that typically have access to extension, business education, financing and superior inputs and markets, the revenue/income scenario is better, they are expected to generate revenue of N.512million ($1,116) from 9.6 bags at daily revenue of N1,413 ($3.1) and as displayed below in the diagram, the farmer is still eligible for $45 as premium payment under the certification protocols.



[27] No up-to-date and credible data on land under cultivation, forested/degraded area, total number and distribution of cocoa farming households by locations, gender, age, demographics, structure of trees/farms and farmers, farmer organizations, LBAs and other VC actors. Furthermore, there is no information mechanism that tracks price, trading, production as well farmgate procurement and commercial activities, thus making it difficult to estimate and distinguish between output and graded cocoa.
[28] Culled from the National Cocoa Plan (2019-2028).

By virtue of the outgrower scheme membership, SHF-B enjoys insurance and is geo-referenced alongside other members of the group. The net cocoa income crystallizes at $73 (20 cents daily), which enjoys a bigger boost ($1,209) from income from other agric enterprises that have also benefitted from access to extension, business education and group building protocols. Total gross income of $1,327 ($3.6 daily) is roughly 2.2x (times) superior to SHF-A. Nonetheless, there is a growing consciousness that a minimum of 5ha constitutes the "living wage" benchmark. This realization has spawned off the emergence of medium-scale size farms and commercial plantations in Cross River, Ondo and Osun states that operate under best practices farming and crop protection standards and are said to return yields of between 1.5 and 2.5mt per ha.



Prevailing Production Practices: Access to land for cocoa production is mostly through inheritance (60%) of plantations, which is prevalent in SW; so also is the sharecropper[29] arrangement (40%). In Cross River, sharecropping (50%) is the dominant practice. Others include tenant farming (in government estates (35%) and owner-managed (15%). Typically, farmers are charged yearly rentals for operating in the farm estates strategically established across key producing LGAs. For the most part, cocoa production, which is predominantly rain-fed dependent is intercropped with indigenous and economic trees and an assortment of fruits, vegetables and arable crops with beneficial impact to "people, planet and profits". By and large, the quality, efficiency and sustainability of farm husbandry is a direct function of access to extension services, improved seedlings and agrochemicals.

However at the abysmal 1:2,500 extension agent/farmer ratio; farmers are stuck with their old cocoa trees, antiquated and labour-intensive farm practices coupled with the sustained lack of access to inputs and agrochemicals from state agencies beset with acute budgetary constraints. Furthermore, on account of increasing incidences of insecurity to lives and property, primary processing is no longer undertaken at the farms. Wet (freshly harvested) cocoa is ferried over several kms from the cocoa farms to the farmstead for fermentation (heap fermentation with leaves for 5-7days), drying (on concrete slabs for 5-7days), packing and storage[30]. Harvesting is still conducted with crude implements and mechanization, which is now commonplace in other climes seems like rocket science, the same holds true for irrigation-fed cultivation. Against the backdrop of deteriorating productivity, increasing cost of hired labour that are open to much more lucrative opportunities in commercial motorcycle transport, most SW farmers have abandoned their farms to sharecroppers. It therefore comes to no surprise that the upstream sector is dominated by aging trees, older farmers and itinerant sharecroppers. As at 10 years ago, the mean age of cocoa farms in Ondo and Cross River were 30 and 22 years, while the age of farmers were 60 and 50 years respectively. Despite this gloomy picture, which might put the current farmer age at 70 and 60years respectively; the productivity measurement survey by CRIN in 2007 indicated Ondo and Cross River as the most prolific states and with country-wide average yield ranging between and 150 and 1226kg/ha.

[29] Sharecroppers usually enter into a profit sharing relationship with the land owners on a profit sharing arrangement, whereby the landowner typically takes 66% and sharecropper 34%. Profits is determined after all-costs have been deducted.
[30] Small farmstead/household barns and beans packed in bigger sacks with capacity of 80 to 100kgs for onward supply.

Table 6: Productivity Rating of the Cocoa Producing States

High		Medium		Low	
State	kg/ha	State	kg/ha	State	kg/ha
Ondo	1,226kg	Osun	446kg	Akwa-Ibom	353kg
Cross River	1,211kg	Abia	425kg	Kogi	211kg
Oyo	954kg	Taraba	411kg	Ogun	200kg
Edo	846kg	Kwara	390kg	Ekiti	150kg

With much younger[31], virile and largely more entrepreneurial farmers in the SS, expectations are rife that Cross River output will outstrip Ondo State within the next 5 to 10 years.

Social Issues/Challenges: The cocoa farmgate is confronted with numerous and recurring challenges that have remained largely unresolved since the 1986 commodity board abolition that triggered the free market regime. Against the backdrop that the cocoa economy does not enjoy the prominence[32] accorded the grains/arable crops and livestock; the basket of challenges include:

- Aging farmers and trees and dominance of itinerant sharecroppers that are in the majority; in cocoa cultivation for the money, consequently they are not totally responsive to farmer education, best practices, certification and other capacity building protocols. And this perhaps underscores the slow rate of adoption of modern technologies amongst the farmers;
- Fluidity and high cost of hiring labour, high incidences of child labour abuse, especially amongst the migrant population from the NC/SS that are typically deployed as farm hands.
- Significant security, socio-economic and infrastructural deficits occasioned by perpetual public sector neglect and funding constraints and the consequences in the unreliable electricity supply, pipe-borne water, un-motorable and poor rural road networks, insufficient and ineffective storage and post-harvest facilities, poor transportation, multiple-tax/levies regime and increasing incidences of armed robbery, kidnapping, arson and bandit attacks;
- High and rising cost of production/processing equipment (such as brush cutter, pruning kits, sprayers) and approved/certified agrochemicals when available
- Weak credit, extension services, agro-input and improved seedling delivery systems, prevalence of pests and diseases, proliferation of fake agrochemicals and poor quality assurance mechanisms, lack of attention to gender-friendly waste-to-wealth (W2W) opportunities, power asymmetry in favour of traders (LBAs/exporters) and fluctuating global prices makes cocoa farming unprofitable and unattractive; with the consequences in the unbridled; and
- The relentless rural-urban migration arising from farmgate apathy and disenchantment by the successor generation of farmers, which by far remains the greatest sustainability treat to the SW zone in the near team.

By and large, the huge vacuum in the public sector service delivery mechanism has been moderated pretty much by the growing impact of the sustainability/CSR/certification initiatives creatively integrated into the sourcing mechanism. Cadbury Cocoa Processing Company (formerly Stanmark Cocoa) enjoys the distinction of being the first private sector coy to establish an outgrower program. This paradigm led to the mushrooming of the extremely successful donor[33] community collaboration with FMARD, ADPs, chocolate/cocoa industry partners, input suppliers and financial institutions. Through these DPPPs, cocoa farmers benefited from GAP training (in the mould of the Farmer Field School "FFS" protocols) business skills training under the GIZ-led Farmer Business School (FBS) and Cooperative training by Socodevi that spawned off new FOs and reactivated and strengthened existing coops.

[31] The CRIN study also indicated that 22% of farmers and under 40 years, 48% are in the 41-60 year bracket and 20% above 61 years. The study also singled out Cross River for having farmers less than 20 years.
[32] In contradiction to the AU prescribed 10% allocation to country budget, the Agriculture budget in Nigeria is at a measly 1.1%, yet the sector contributes over 23% to the national GDP.
[33] GIZ, USDA, USAID, IITA, WCF, IDH and STCP.

Typically, these projects[34] focus on increasing productivity diversified agricultural portfolios, promoting socially responsible and environmental practices, as well as financial and social literacy via the stepping down process through extension agents, lead farmers and more recently, through digital extension and weather reporting etc.

As it's now evident with the expanding export volumes for cocoa beans and derivatives, it's no gainsaying that productivity and overall quality of the Nigerian-origin cocoa has improved. By and large, this is a direct consequence of the inherent reward mechanism that is associated with sustainability/certification projects. Ultimately, the most enduring solution lies in the establishment of a "**dedicated coordinating and regulatory agency**" that will provide oversight and guidance. It is edifying to note that this solution is the common denominator in the responses to the survey questionnaire as indeed KIIs with key VC actors upstream, midstream and downstream. The same solution was unanimously corroborated by the leadership of the trade associations and cocoa desk officers of state and federal MDAs.

Organization: Typically, coops are governed by a board of directors (board of trustees) that is responsible that decision making on strategic planning, financial management and the overall operations of the cooperatives. The board members, which serve for fixed periods are elected delegates of the cooperative. The day-on-day operations are handled by a management team mandated to effectively and efficiently manage the coop in accordance with the board directives and in the overall interest of its members. The management team is led by a manager (general secretary), who oversees the warehousing, sourcing/marketing, quality assurance, extension and accounts/admin departments. In keeping with the democratic tenets and hierarchical disposition, it is mandatory for the cooperative to have a general assembly that periodically meets to review the performance, elect or remove board members. The general assembly is made up of all members of the cooperative. According to CRIN, the critical mass of SHFs have membership affiliations[35] with coops and FOs.

Producer organizations in whatever form, the traditional cooperative[36], the unitary self-driven structures; informal groups, community based formats and donor inspired[37] outgrower models; the overarching vision is for market power, income generation, peer-learning, self-reliance and enhancement of household livelihoods. From informal industry sources, there are more than 100 formal FOs n the cocoa ecosystem at various levels of maturity. With the introduction of the free market regime, the SW, which used to be the bastion of the cooperative movement has not recovered from the deterioration and eventual collapse[38] of the cooperative culture. In the SW, most big FOs are thriving due more to the diversified[39] investment portfolio than cocoa business. Incidentally, the SS farmers understand scale economics and are generally more amenable to group dynamics and the democratic protocols.

Irrespective of scale and scope, the key functions of the FOs comprises input and credit provision, farm management services, aggregation, product management, quality assurance[40], intermediate trade, advocacy and linkages and mediation for financial, insurance, technical, social benefit services and donor/CSR engagement and portfolio diversification. By the volume of cocoa trade, the respondents to the survey as captured below can be rated as big, medium and small.

[34] Evidently, these projects provided the bedrock for the partnership between GIZ and the Nigeria Incentive Based Risk Sharing System for Agricultural Lending (NIRSAL) to equip cocoa farmers with business skills in order to enable them become more entrepreneurial, technically proficient and more befitting of superior partnerships with value chain partners downstream.
[35] On a state-on-state basis, the study shows that 7-states (Akwa-Ibom Kwara, Kogi, Ekiti, Ogun, Osun and Oyo) 82% members; 4 states (Abia, Cross River, Edo and Ondo) have 50% and 3 states (Adamawa, Delta and Taraba) have 17%.
[36] Organically configured into tertiary apex (or umbrella) bodies, secondary and primary societies.
[37] On account of sustained exposure to technical, business and cooperative education.
[38] As a pointer to this, the CRIN study indicates that percentage of farmers deriving benefit were extremely low as follows:- agrochemicals (2.1%); credit (1.9%); labour (1%) and farm equipment (0.8%).
[39] Investments in real estates, input supplies, petrol stations, hospitality sector and other agricultural enterprises, poultry, fisheries oil palm refining and cashew.
[40] Field officers, lead farmers and task-force among members to monitor compliance with the ideals/concept of GAP from the cocoa farms, field to processing stage.

Table 7: Farmer Organization Profiling

S/N	Big FO/Coop	Features
1	Trade volume	>14,000 mt annually
2	Profit scenario[41]	> N5 billion ($10.5 million) -31%
3	Assets	8 warehouses distributed along key producing LGAs, head office and central warehouse, vehicles and logistic trucks
4	Farm Assets	Seed garden and community nurseries
S/N	**Medium FO/Coop**	**Features**
1	Trade volume	>1,200mt annually
2	Profit scenario	>N30.5million ($66,161)-10%
3	Assets	Office complex with 2 warehouses and 7 distributed across key societies with numerous produce stores at the cocoa farmstead vehicles, trucks
4	Farm Assets	oil-palm and cashew
5	Investments	real estate, hospitality and petrol stations
S/N	**Small FO/Coop**	**Features**
1	Trade volume	>250mt
2	Profit scenario	>N3.2million ($6,941)- 2%
3	Assets	Office complex with warehouse
4	Investments	Shopping complex

The major strength of Coops lies in the underlying solidarity mantra, which underscore their relationship with member groups and farmers. The key attributes are scale economies, bargaining power and peer learning. However, the backlash generally arises from weak and poor management, which crystallizes in integrity, accountability and reputational deficits. All too often, cooperative management as a profession is underrated and undermined[42] yielding to the engagement of "square pegs in round holes". Similarly, the degree and quality of membership participation, access to capital/financial resources; limits the attractiveness to service providers as indeed, the scope and scale of market outreach. For all the FO templates described above, the core business model can be summarized as follows:

Input supply > production/harvesting > assemblage/transport > bagging/storage > marketing

Nonetheless, the distinguishing features of the outgrower/nucleus estate are captured below:

- Dedicated access to improved seedlings, approved and quality agrochemicals and financial services (credit, insurance and savings at the right time, in optimal quantity and at bulk purchase costs
- Dedicated access to extension services (GAP, GWP, business education, financial literacy, social literacy, cooperative and sustainability protocols), pruning and spraying services and monitoring and evaluation
- Peer learning and guidance with increased information sharing between farmers and offtakers
- As the risks associated with production and markets are significantly reduced, the offtakers will better disposed to consolidating the partnership with more meaningful and beneficial social investments; and
- Small scale farmers enjoy the market power, scale economies, enhanced esteem and livelihoods

[41] None of the respondents were willing to share their financials except trade volumes, some expense items and the bottomline.
[42] GIZ developed the Cooperative Business School (CBS) protocol to address this problem and provide a capacity and institutional pathway for FO incubates that evolved after the Farmer Business School (FBS) training and exposure.

Market Linkages and Traceability: As "price takers" in a "free market" regime, farmgate cocoa prices are defined by the ruling world market prices, which fluctuates almost on a daily basis and the accompanying naira/dollar exchange rate. Typically, exporters deploy the FOB price for the contractual arrangements with their suppliers. As depicted in the value chain map, SHFs sell their produce through 4 channels; 1) the coops/ FOs; 2) village buying agents (VBAs) that are factors to LBAs); 3)LBAs; 4) chocolatiers; and 5) processors. The trading arrangements are captured below:

Table 8: Producer/FO Sales Channel

S/N	Channel	Trade/funding Modalities	Pricing / payment	Traceability
1	SHF > FOs SHF > VBAs SHF > LBAs	Dedicated delivery terms based on advance payments covering subsidized input, credit, and working capital under pre-finance facility to societies and members	Ruling[43] farmgate price Cash upon delivery to store and scaling and quality check. Prices discounted in line with compliance with quality specifications and ruling tare rates. Cash or digital payments depends on seller	Produce tagged at point of sale but the identity is lost during the grading, sorting and packing
2	SHF > B2B	Retail basis	Cash upon purchase	Origin preserved
3	FOs > LBAs	Wholesale basis and higher margins on volume of produce	Pricing is farmgate plus margin, logistics costs and ruling world prices. Consideration for higher margins based on quality and volume. Digital payments upon delivery for standardized (graded) produce. Deferred payments when quality is substandard and concluded upon the subsequent deliveries.	8 warehouses distributed along key producing LGAs, head office and central warehouse, vehicles and logistic trucks
4	FOs > EHs	Same as above but there are also some input and working capital pre-financing under certification and outgrower schemes		Produce tagged at point of sale but the identity is lost during the grading, sorting and packing
5	FOs > PRS	Same as above		Origin preserved in accordance with the company's protocols

Access to Finance: is benchmarked against the quality and degree of trustworthiness and integrity, track record of experience and managerial ability, reputation and collateral, currency of transaction cycles and income/cash generation, repayment capability, risk management and industry experience. For all of these measures, the cocoa farmgate is high risk and no-go area to the banking industry. In the absence of formal banking, farmers resort to informal credit sources[44] ranging from LBAs (47%); Cooperatives (20%); other famers (10%); moneylenders (10%); agricultural credit coops (8%); family (4%) and FOs (2%). Regarding utilization, 78% of the loans were deployed towards agrochemicals and fertilizers, while the 22% balance met working capital/labour and household needs.

[43] Oscillates between 82 and 95% of the ruling FOB world market price on account of the weather conditions, period during the main crop campaign, quantum of harvest and demand pattern.
[44] Sourced from CRIN report.

With the exception of the money lenders that charge between 15 to 20% (180 to 240% pa) monthly; loans from LBAs/Coops/FOs are usually softer, interest-free in most cases and come with subsidy considerations all in a bid to win over patronage and deepen farmgate loyalty. Repayment is always on "in-kind" basis and through produce pledged in exchange for the facilities. Loans from other famers/moneylender are also secured by the mortgaging the produce from their farms. At Coop/FO level, access to capital and financial resources is essentially a function of pedigree, quality of the accompanying collaterals[45] and third party guarantees. These funds are typically provided for produce stockpiling purposes by commercial banks (at market rates of 25%), microfinance banks (5% per month) development finance institutions (DFIs) at sub-10% rates per annum. Depending on the value chain "risk acceptance criteria" insurance premium payments on agricultural insurance range from 1.5 to 3%. Typically, the insurance premium as with other bank facilitation and management fees are in-built features under the loan terms. Coops/FOs also enjoy collateralized pre-financing shipment finance from the foreign exporters.

Income: As noted earlier, cocoa farming in Nigeria is often practiced as part of mixed farming systems, where different crops co-exist within the same vicinity. Such trees include Kolanut, citrus fruits, coconut pulses, vegetables and staples. It is not unusual to see fish farms, livestock, poultry and snail enterprises at the farmgate households. Ditto for maize, cassava and bee-keeping. According to the GIZ-SSAB impact[46] study report, cocoa business contributed 48% of the household income. The balance is attributed to other crops (maize, cassava and plantain) and livestock. The study, which was limited to farmers that had enjoyed GAP and business education also indicated that per capita income rose from $1.86 in 2011 to $2.72 in 2017. In qualifying this assertion, this is certainly contrary to the current plight of the critical mass of SHFs. Nonetheless, the logic that "shouldn't be lost on us here" is that cocoa cultivation may well be gradually giving way to more rewarding agricultural enterprises. The major non-cocoa value chains in the cocoa producing zones are captured below in table-9.

Table 9: Non-Cocoa Value Chains

S/N	Zone	Economic VCs	Other VCs
1	Northcentral	cashew, coffee, sheanut, cotton, sesame, garlic ginger, gum arabic, sugarcane, citrus fruits	maize, wheat, rice, yam, water-melon, beans, soy-beans, groundnuts, cassava, Irish-potato, sweet potato, cocoyam, tomato, pepper, plantain, banana vegetables, sorghum, okro millet, Livestock, poultry and aquaculture
2	Southeast	oil-palm, cashew, rubber, bush mango, citrus fruits, sheanut, ginger, kolanut, sugarcane, coconut	maize, rice, yam, water melon, beans, soy-beans, groundnuts, , cassava, Irish-potato, sweet potato, cocoyam, tomato, pepper, plantain, banana vegetables, okro Livestock, poultry and aquaculture, pear, avocados
3	Southsouth	oil-palm, cashew, rubber, bush mango, citrus fruit, kolanut, sugarcane, coconut	maize, rice, water melon, , beans, soy-beans, groundnuts, , cassava, Irish-potato, sweet potato, ,plantain, banana cocoyam, tomato, pepper, vegetables, okro Livestock, poultry and aquaculture , pear, avocados
4	Southwest	oil-palm, cashew, coffee, bush mango, citrus fruits, kolanut, rubber, cotton, ginger, sugarcane, coconut	maize, rice, water melon, , beans, soy-beans, groundnuts, , cassava, Irish-potato, sweet potato, cocoyam, tomato, okro, pepper, plantain, banana vegetables, sorghum, millet, pear, avocado

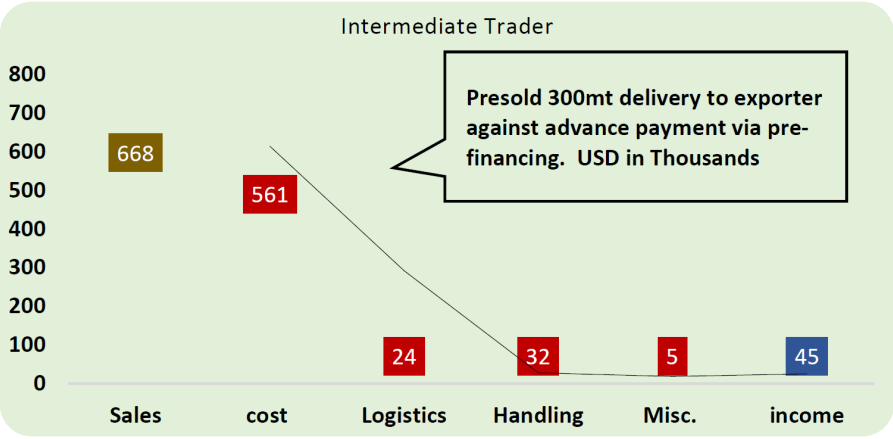
[45] Warehouse buildings, office buildings in choice locations in urban centres. The closer to the state capital or and Lagos the more enticing. The facility could also be secured against deposits and receivables from the buyers.
[46] Assessment of income changes of smallholder farmers across Cameroon, Cote d' Ivoire, Ghana and Nigeria by the GFA Consulting Group.

4.2 INTERMEDIATE TRADERS

Sizing: What the value chain map on page 8 couldn't capture is that between the farmgate, assembly and wholesale centres, there are various layers of an array of itinerant and rent-seeking middlemen that fragment the upstream trade architecture through unethical practices. These interlopers go to the extent of buying "wet beans" for the price of standardized and graded produce with grave distortions to quality, supply patterns and the pricing mechanism. It is essentially at times as this that the "see-and-buy" syndrome (or speculative trading) kicks in at the farmgate driving prices well above the naira translation of the ruling world price. From KIIs and informal discussions with LBAs, FOs (and VBAs), the sourcing capacity of LBAs range from a low of 125mt to a high of 10,000mt. Even as it's difficult to determine where the skew lies between the lower and upper limits, the 816 registered LBAs across 5 states (Cross River, Ekiti, Ogun, Ondo and Osun) provides a credible basis for an informed decision. At between 80 and 87% control of the origination activities, the 2021 output of 280,000mt translates to an average of roughly 343mt (roughly 12, 30-ton trailers) per LBA.

Business Model: the core function product management and intermediate trade involves the bulking, aggregation, grading, storage, quality control and handling, logistics and forwarding of beans supplied (or collected) from the dedicated network of VBAs that buy and aggregate upstream on behalf of (or for the account) of the LBA. LBAs also patronize FOs and indeed, farmers directly[47] through outgrower schemes and primary societies. Farmgate loyalty is nurtured and sustained through pre-financing facilities, extension services, capacity building and CSR investments (farming equipment, quality testing tools, school and road repairs and farmer open day events). The business model is summarized as follows: **SHFs>FOs>VBAs>LBAs**. Through direct deliveries to exporters and in-country grinders, the big FOs also operate in this farmer owned approach via **SHFs>FOs>EHs; Farmers>FOs>PRS**.

Profit & Loss: The P&L is built on the assumption that the LBA sources 300mt of dried cocoa beans at farmgate price of $1,869/mt[48] and delivers standardized graded cocoa to the exporter at $2219. Income here is more or less the operating income. Logistics costs covers cleaning, blending, drying, packing and grading costs. The handling covers the series evacuation activities from the various VBA and FO sources upstream and the delivery cost to the buyer's warehouse either within the state or to Lagos for the critical mass of the foreign export houses. Hence the bottomline is expected to further reduce after "netting-off" the accompanying administrative costs. Nonetheless, the $45k operating income is at 4.6% margin to the total sales figure of $668k. However, AFEX Commodity Exchange Limited (AFEX) on account of its unique role, acting as a commodity broker/collateral manager upstream, intermediate trader and exporter midstream transverses the upstream and midstream sectors. AFEX is thus seamlessly connected with farmers, FOs, exporters, processors and offshore buyers/brokers (OFSHS). AFEX's business model is thus three-pronged **Farmers>FOs>AFEX>EHs; Farmers>FOs>AFEX>PRS**; and **Farmers>FOs>AFEX>OFSH** and it's probably the most efficient business model in terms of quality assurance, traceability and the overall sourcing costs, which is farmgate driven and "cuts across" several rent-seeking trade layers between farmers and offshore markets.



[47] This is however more prevalent in the SW, where there supply chain is not hampered by the chain of command regulation.
[48] Benchmarked at the March global price of $2.75/kg.

Asset Ownership: as the custodians of assembly and wholesale centres, the intermediate traders have the full complement of assets that enable discharge their functions effectively and efficiently. It is only a matter of scale that distinguishes the asset profiles. By the nature of their business, their warehouses are essentially structured as transhipment hubs with adequate throughput capacity. Except in unusual circumstances like the COVID-19 lockdown, produce is not held for longer than 5days on the outside. The offloading and loading of produce is almost a daily event during the light crop and main season campaigns. Assets range from central warehouses, weigh bridges, platform scales, scales of different capacities, quality pre-test equipment, drying bays, sorting and cleaning equipment, alternative power sources, 10-ton and 30-ton trucks, motorbikes and a network of upcountry stores with the accompanying storage assets and facilities across sourcing destinations.

Quality: According to KIIs with some actors, quality assurance is the cornerstone of their business. Accordingly, they complement their in-house management with thoroughbred quality control officers that examine and ensure the integrity of the produce from their upstream network to the central warehouse. Lead farmers, field staff, and quality control officer of outgrower schemes, FOs/Coops and VBAs are routinely trained and re-trained and are provided with the best quality pre-testing tools. Use of moisture meters, knifes/cutting scissors to check for mouldiness, picking, sieving, sun-drying and use of pallets as raised platform for proper storage. Deploying international standards[49] and certification protocols to benchmark in-house protocols; training and peer learning campaigns on good warehouse practices (GWP) and GAP are conducted periodically.

Buyers: The main buyers are export houses and processors. At 55% of the delivery destinations in the survey responses, the dominance of the foreign export houses of the cocoa ecosystem is duly reflected. The terms of sale, quality specifications and delivery conditions standardized quality, deliveries to store, immediate upon quality confirmation (usually within 5days) and via digital payments.

Access to Finance: To effectively mop up the highly sought-after produce and ensure a consistent, seamless and guaranteed supply of high-quality beans in the wake of the fierce competition; the foreign exporters and LBAs enjoy a very strong and symbiotic relationship. Accordingly, the LBAs have access to massive pre-finance and stockpiling facilities from exporters and their bankers respectively. These trading facilities, which are essentially short-term, volume driven in nature with FX benefits that provide "knock-on" arbitrage income, are priced at very concessionary rates and come under the Central Bank of Nigeria (CBN) intervention funds window. These loans are secured by collateral as well as a lien on the cocoa receivables. Just as LBAs/FOs pre-finance SHFs upstream, exporters and processing companies that have become just as bullish (as the intermediate traders) also provide trusted LBAs with pre-financing facilities well ahead of the buying campaign. Similarly, the warehousing Receipt System (WRS) model of AFEX is duly recognized by CBN and the Nigerian Commodity Exchange (NCX) as a bona fide instrument for commodity finance and the accompanying structured trade financing products and services.

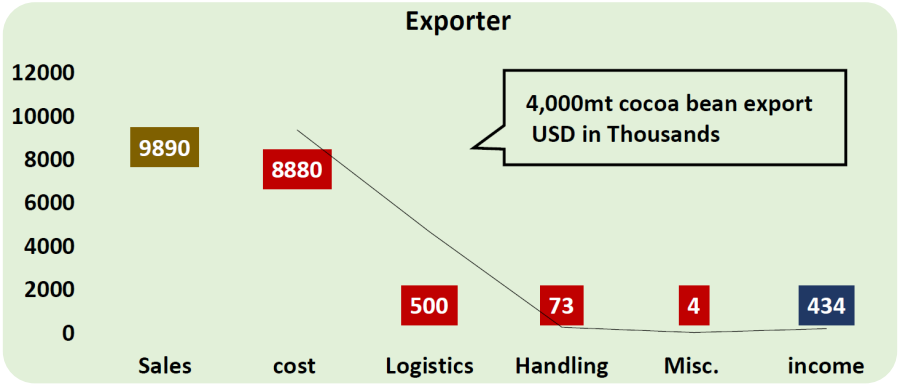
[49] ISO 2451, Federation of Cocoa and Commerce (FCC), the Cocoa Merchants Association of America (CMA), the Minimum Residue Level (MRLs), the EUDR, and Rainforest Alliance (RA) Sustainable Agricultural Standard 2020 and Voluntary Sustainability Standards (VSS) .

4.3 EXPORTERS AND PROCESSORS

Sizing: There are 123 exporters and 17 processing factories licenced by the Nigerian Export Promotion Council (NEPC). From export data gleaned from FPIS, about 50 (41%) companies are actively involved in export. As noted on page 16,7 (41%) in-country grinders are functional. With the commencement of the 65,000mt Multitrex (Ogun State) and 30,000mt Ikom Factory (Cross River); installed capacity will be in the neighbourhood of 233,000mt and 83% of country output. While processors traditionally consume between 15 and 20% of country output; export houses mop up the 80 to 85% balance. 10 (20%) exporters and 2 (29%) processors[50] have strong affiliations with the global cocoa and chocolate industry. Accordingly, there are 40 active domestic export houses and 5 in-country grinding[51] companies. Nonetheless, 3 exporters control over 50% of the beans export trade. And based on the current operating capacities, the derivatives export market segment is dominated by the foreign in-country grinders.

Description of Business Model: As intermediate processors, the grinding companies produce 2 critical cocoa derivatives, namely cocoa butter (38%); cocoa powder (42%) from cocoa liquor (80%). The 20% balance, typically called waste finds use as animal feed, fertilizer, cosmetics/personal health care, additives for the food and confectionery as well as for feedstock for biogas production. 5 to 10% of the cocoa powder and cocoa butter production are utilized by the beverage, biscuit and ice-cream manufacturing companies, the burgeoning artisanal chocolate producers and wide array of baking and confectionery outfits. About roughly 90 to 95% of the cocoa powder and butter production is exported. As actors in the tertiary level of cocoa ecosystem and in discharging their trade and supply chain responsibilities; the business philosophy of the exporters is on creating, nurturing and sustaining customer value and loyalty through consistently high-quality beans upstream and midstream. Exporters execute this philosophy through optimal procurement, secondary processing, warehousing, logistics, distribution and export activities that are managed by experienced professionals and staff.

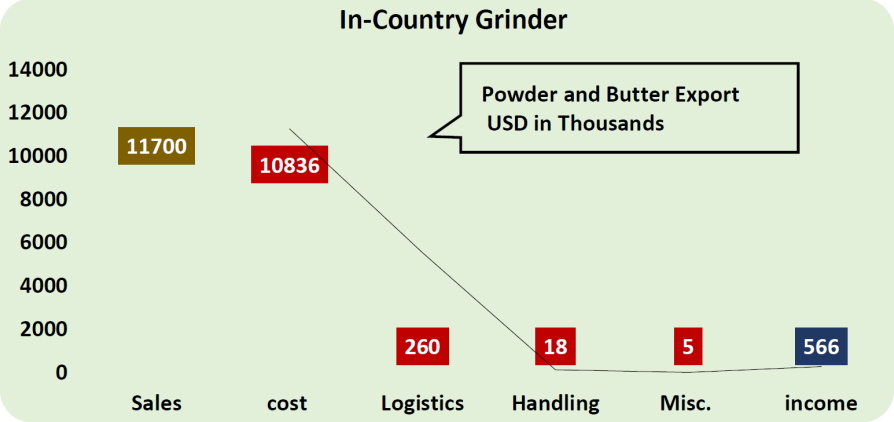
Exporter Profit & Loss: the exporter buys standardized cocoa beans from the pool of suppliers (LBAs and FOs) at $2,219/mt and export in line with the export contract of FOB basis estimated at $2,473/mt. The income figure of $434k is essentially the operating income and subject to deductions of selling, administrative and general expenses. The relevant cost consideration are the purchasing cost of the beans and the associated cost for the logistics, which covers the various charges/levies for the local, national and international quality checks and certifications from Federal Produce Inspection Agency (FPIS), the Nigerian Agricultural Quarantine Services (NAQS); the National Drug Law Enforcement Agency (NDLEA), the Port Inspection Agencies (PIAs), the Nigerian Customs Service (NCS) and export terminal ports (EPTs) for export bound goods. The handling cost covers secondary processing, haulage, loading/offloading and the accompanying road taxes/levies to the Lagos Port. The operating margin is 5% to the $9.8 million sales revenue.



In-Country Grinder Profit & Loss: the diagram below is based on processing and export of 4,000mt of cocoa beans into 1,680mt of powder and 1,520mt of butter. The assumption here is that the processor procures the dried beans at $2,241/mt (slighter higher than exporter's cost) to maintain the supply source and exports the powder and butter at $2,883 and $4,451 respectively. The operating costs covers the cocoa beans, related factory expenses handling and logistics costs are pretty much in line with the description under the expenditure profile of the P&L diagram of the exporter.

[50] Cadbury Cocoa Processing Company and Tulip Processing Company.
[51] Alpha Cocoa Systems, FTN Cocoa Processing Company, JohnVents Industries, Ile-Oluji Cocoa Products and Plantation Industries.

Similarly, the operating profit of $566k crystallizes at a 6% margin of the $11.7millom revenue. At operating profit margins of 5 and 6% and against the backdrop of the harsh operating environment, unstable power supply, high diesel and generator maintenance cost, and volatility of cocoa prices; exporters and in-country grinders are bound to suffer from acute profitability challenges. To stay afloat, most exporters are involved in other value chains (cashew, palm-kernel, and sheanut, ginger and sesame seeds) and other businesses. Out of the 58 export-houses and processors; 5 (9%) are involved in export trade and grinding; the top (18%) 10 are involved in logistics, forwarding and handling, 4 (8%) have crop protection affiliates; and AFEX as noted earlier occupies an extremely unique position. However for all, the arbitrage earning on FX receivables is the saving grace. And for the processors in particular, succour[52] comes from access to the Export Expansion Grant (EEG) that entitles them to 30% rebate on exports.



Identification and Mapping:

S/N	Processors	Factory Location	State	Installed Capacity	Operating Est.
1	Ikom Processing Company	Ikom	Cross River	30,000mt	yet to commence
2	Tulip Processing Company	Ijebu-Mushin	Ogun	30,000mt	76%
3	Multitrex Investments[53]	Warewa	Ogun	65,000mt	about to restart
4	Cadbury Cocoa Processing Company	Ondo Town	Ondo	15,000mt	80%
5	Ile-Oluji Cocoa Products[54]	Ile--Oluji	Ondo	30,000mt	5%
6	Alpha Cocoa Systems	Akure	Ondo	10,000mt	5%
7	JohnVents Industries	Akure	Ondo	18,0000mt	67%
8	Plantation Industries[55]	Akure	Ondo	15,000mt	67%
9	FTN Cocoa Processing Company	Ibadan	Oyo	20,000mt	5%

Asset Ownership/Storage: By and large, the functional processing factories are in pristine condition with state of the art facilities connected to the national power grid (with independent transformers) and backup sources, ranging from compressed natural gas (CNG), bio-gas and solar facilities and are operated in accordance with country and internationally accepted standards for the food manufacturing sector. Typically, other assets range from a series of warehouses (raw materials, spare-parts and peripherals and finished goods), trucks of various configurations to handle raw materials and finished products.

[52] See page 47 under sector regulation policies.
[53] Recently acquired by Starlink Global, a frontline domestic exporter.
[54] This factory was recently acquired by JohnVents Industries.
[55] Plans are afoot to increase the capacity and commence chocolate production.

Due to the fierce competition, processors also maintain offsite warehouses/stores strategically located at key producing cocoa and outgrower hubs to mop-up, collect, aggregate cocoa supplies. This configuration is also standard practice with the exporters that have central collection warehouses in the key cocoa production zones. Due to the intensity of the handling and logistics dimension from various assembly points and wholesale centres for onward deliveries to the central warehouse for final sorting, packing and quality checks; the frontline exporters are deeply involved in haulage/freight forwarding not only for optimizing their supply and trade chain activities but also, as service offering to third parties. Accordingly, exporters and processors[56] alike operate a rather large fleet of motorbikes, trucks and trailers for collecting produce from aggregation nodes for onward forwarding to their Lagos warehouses (as in the case with most foreign exporters) and port terminal warehouses for the domestic exporters and processors.

Quality: In the wake of more stringent standards processors and exporters alike are very bullish on quality assurance. Most, if not all carry Fairtrade, UTZ and RA certification. Quality assurance is thus a very important dimension that is ingrained across their value chain activities from farmgate (through their sustainability programs) to the upcountry and central storage facilities that are operated in accordance with best warehouse[57] practices. At each of these operational nodes, they have the requisite quality check/test tools and equipment to verify, validate and confirm specifications ahead of payments for produce upstream and at their central warehouses. They have thoroughbred quality assurance team across their operations that are consistently exposed to training and retraining. Furthermore, some exporters equip their warehouses and stores with modern drying machines. To safeguard and preserve the integrity of their produce that have been properly conditioned for export, most frontline exporters and processors carry "bonded warehouse licences" that makes them eligible to run as an inland port facility. As an inland port operator, all the statutory inspections and documentation for export transactions are done at their headquarters. Once the produce have been duly certified for export, they are loaded into containers and sealed for export and maintained/preserved in pristine quality.

Sourcing/Technology: In the main, processors and exporters get the bulk of their produce from the LBAs on primarily standardized produce on delivery-to-store terms or indeed collected. Payments are via digital mode and after the quality has been duly validated. Deferred payments arise when produce fall short of the required specification and in most cases, the final payment is discounted in line with the rating of the produce to each of the line items (moisture/dryness, mould, weight, count and slaty) of the specification. Most exporters and processor profess to traceability compliance through collaborative engagements with certification programs but only AFEX[58] disclosed their digitally operated systems and mechanisms. Even though OFI officials refused render any details on their traceability mechanisms, this author is aware that all their farmers on the supply chain have digital identities and that the company has geo-referencing capabilities that tracks produce volumes, locations and quality. Furthermore, as OFI is the company perhaps the only Nigerian exporter that has ascribed to the Cocoa and Forest Initiative, it is assumed that they will have a well-established traceability mechanism. Chances are high that Tulip, which is not only linked to Ecom Cacao but operates a very well established farmer outgrower scheme in Cross River and Ondo and retains the patronage of a network of FOs/Coops also has a comprehensive traceability backbone.

Buyers: The bulk (91%) of Nigerian-origin cocoa is exported to Europe[59] (69%) and Asia[60] (22%) and USA, EU, South America, Africa[61] (9%). Buyers are a mixed bag of manufacturers, processors, traders and brokers and some of them include Nestle, OLAM, Barry Callebaut, Cargill, Riley Sports, Ferrero, Theobroma, Sucres Et. Denrees, Mondelez and ETG. Payment terms were based on letters of credit and cash against documentation basis. There have however been instances where the in-country grinding companies buy cocoa beans from the exporters to "shore-up" their stocks so as to radically reduce or eliminate factory downtime.

[56] In a question to one of the processors why they had to have a haulage operation, they retorted that it was not only more cost efficient and effective but from experience, it also helped to keep preserve information and knowledge on raw material sources and market destinations.
[57] Covering health & safety, quality control, pest control, moisture, maintenance/cleaning.
[58] A barcode is generated on every bag of cocoa aggregated which enables buyers to trace back the source of the cocoa to the farmer and farmland. For LBAs, the commodities exchange platform enables transactions to be settled seamlessly and provides price discovery and matches buyers to sellers. The traceability mechanism also captures all transactions per farmer in terms of weight, discount, payable net, amount to be paid or to be paid to farmer and field area measurement app to capture farm coordinates and size. For input distribution, loans are booked against each farmer after which inputs are distributed to farmers.
[59] The Netherland (49%), Germany (10%), Belgium (7%), Estonia, Italy and Spain (3%).
[60] Indonesia (10%), Malaysia (10%) and Vietnam (2%).
[61] Chad, Ghana, Liberia, Mauritius and South America.

Vertical Integration: In what is emerging as an oligopolistic trend, 3 grinding companies[62] are organically connected (by ownership) to frontline export houses and as such they fully benefit from the supply chain architecture of the export houses. Between these 3 conglomerates, over 50% of the national output is deployed for export and value addition. At another level, Cadbury Nigeria Plc (Mondelez Group) as earlier noted has a fully-fledged cocoa processing subsidiary. By virtue of the sustainability, outgrower and certification projects most of the frontline exporters and processors have direct linkages with farmers either through their LBAs/FO procurement linkages or both in most cases. The idea of backward integration at the production level upstream, which some have tagged "in-grower" schemes is also gaining prominence. Under long-term concession arrangements with state governments, 2 grinding companies have access to over 3,000 ha of cocoa farming estates, previously run by public sector agencies. Others like AFEX, a couple of exporters and a processor are involved in various CSR initiatives and the production and distribution of improved seedlings through outgrower schemes. However, one of the greatest defects in the vertical integration landscape is that the beverage multinationals are not organically linked upstream nor do they extend the massive sustainability/CSR spend enjoyed by sister producing nations.

Access to Finance: Since the CBN revised mandated banks to source for FX needs from non-oil export proceeds, the cocoa sector has become the "go-to" destination. Accordingly, exporters/processors, considered to be the most lucrative clients are generally not in despair for funding. For the most part, they enjoy 1) working capital facilities in the mould of stockpiling (or inventory) finance; 2) embedded value chain finance that enables them provided dedicated financial services (inputs, agrochemicals, maintenance credit and insurance) to their upstream partners; and 3) longer-term equipment finance for assets acquisition (warehouses, trucks, machinery, generators etc.) and factory upgrade. Even as all these facilities are collateral backed (buildings, factory, warehouses, chattels etc.), and mostly, for exporters, a lien on the forex receivables, the challenges range from the pricing of the facilities and the timing of disbursement. Perhaps the most fundamental, is that due to the risk-averse culture and high risk benchmarked against agriculture and preponderance of CBN intervention funds; bankers have not developed a suitable financial product line. And for the discerning, this is where trade finance and custody arrangements can fill the agricultural financing gap. Another solution being sought are bond instruments, which are longer-term and fixed pricing in nature, and offer more flexibility and comfort. We are aware that exporters/processors that are affiliates of multinational companies ride on offshore financing.

4.4 PROFITABILITY SCENARIO ACROSS THE VC

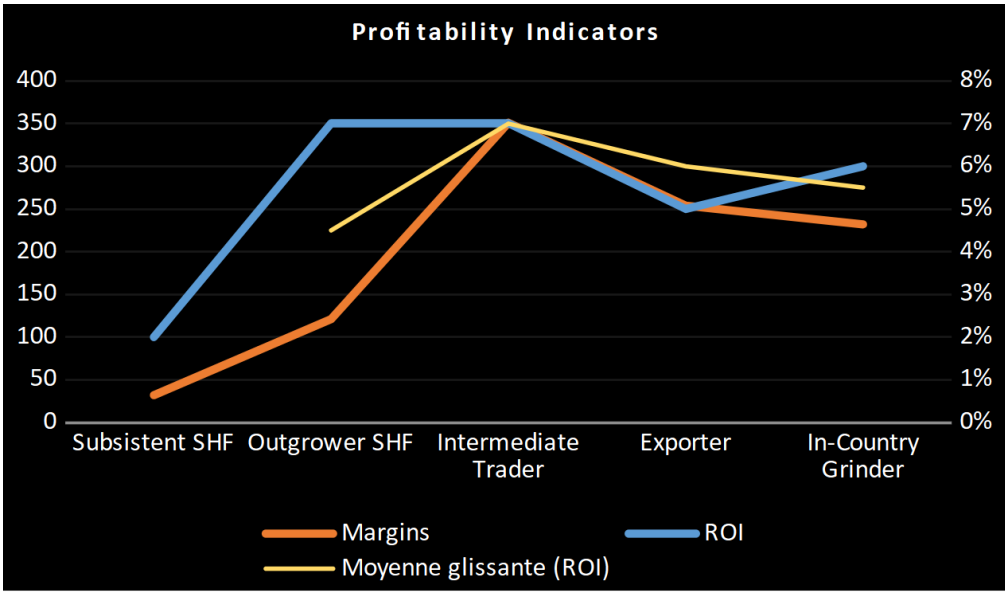
As captured in the table and graphs below, the (ROI)-operating margins[63] of the producers, intermediate traders, exporters and processors and the accompanying price differentials (margins) per metric ton reflects the unregulated trade structure as indeed, the chaotic domain at the assembly and wholesale centres.

Table 11: Profitability indicators of VC Actors

VC Actors	ROI	Margins	Variance	Comments
Subsistent SHF	2%	32	-166	Based on the differential between cost of production to Farmgate (FMG) price
Outgrower "O/GR" SHF	7%	121	-77	
Intermediate Trader	7%	351	+153	Differential between FMG and Exporter Contract
Exporter	5%	254	+56	Differential between LBA and FOB beans
In-Country Grinder	6%	232	+34	Differential between LBA and FOB beans
Market Average	5%	198	0	

[62] Plantation Industries (Agrotraders); Tulip Cocoa Processing (Tulip Cocoa Limited) and Multitrex Limited (Starlink Global).
[63] Defined as the percentage of total operating cost divided by the total revenue from cocoa sales but loosely referred to ROI.

With the exception of the in-country grinder, that enjoys the added value of $452/mt for a total of $684/mt from export of derivatives, the price spreads clearly suggest that in this price-taking environment, the intermediate traders (LBAs/FOs) with $153 advantage over the market average are the greatest beneficiaries. However, at 7% ROI and $77 negative variance to average price spreads, there is certainly light at the end of the tunnel for the league of the "**O/GR SHFs**" that must now significantly deepen their cocoa farm-holding assets with improved cocoa seedlings to not only be sustainable but also to instigate change from subsistent SHFs and also attract the successor generation of farmers. For as long are there is sustainable supply of cocoa beans, access to the EEGs, arbitrage FX opportunities and cheap intervention finance to secure LBA patronage, exporters and processors will continue to thrive. As previously established in the domestic flow narrative and from a design perspective, the **intermediate traders** are thus perhaps, "**the most critical VC actors**" to interrogate and get their buy-in (and ownership) of the overarching near and longer term benefits of the commodity exchange intervention that "**will string together**" the upstream and midstream sectors.



4.5 INPUT MARKET STRUCTURE

For the cocoa ecosystem, the input market is characterized by 1) production and distribution of improved seedlings; 2) crop protection products (CPP) and 3) fertilizer distribution and services.

Seeds: To preserve the integrity of Nigerian's cocoa identity and stock, only the Cocoa Research Institute of Nigeria (CRIN) has the mandate to research, establish the parent stock, hybrids and other varieties in Nigeria. The varieties/hybrids currently available are nurseries at the headquarters and outstation[64] offices of CRIN are the traditional F3 Amazon and TC1-8 series[65]. However due to budget constraints, complementary breeding programs are carried out by the state agencies[66] (ADPs, TFUs and CDUs), Coops/FOs, trade associations (Cocoa Association of Nigeria "CAN" and Cocoa Farmers Association of Nigeria "CFAN"), universities and colleges of agriculture, donor and private sector community. Previously, cocoa pods were the only type available for distribution but due to the weight, high transportation costs to their communities and reluctance of farmers in establishing community based nurseries; seedlings have since become the preferred choice. Every year for the past 2 decades, several millions of seedlings have been distributed to SHFs by federal and state MDAs. Regrettably, due to defective farmgate targeting and lack of monitoring and evaluation most of these initiatives failed.

[64] Strategically located in Abia, Cross River, Edo and Cross River States.
[65] Which have many distinguishing characteristics: early yielding, drought and disease resistant, high butter content, good aroma and can produce anywhere between 1.5 to 2mt/ha.
[66] Through the instrumentality of various seed gardens in strategic cocoa producing states and LGAs.

However, FOs/SHFs that were exposed to donor-driven GAP and business education were inspired to establish community based nurseries as a farmgate business offering not only as a revenue booster but also, to ensure that members got access to superior seedlings. Recognizing that youth engagement and access to improved seedlings constitute some of the major challenges upstream, the idea of community based nurseries as a "business undertaking" through a network of service providers (akin to pruning and spraying gangs) was institutionalized by Partnerships Initiative for the Niger-Delta (PIND) in collaboration with CRIN. As earlier enumerated, exporter/processor companies are involved in the production and distribution of seedlings for onward delivery in a much-targeted manner (complemented by training) to their farmgate partners.

Crop Protection Products[67]**:** According to 2013 newspaper accounts, the imported CPP market size, which was estimated at $120million (N18billion) and projected at an annual 5.6% growth rate is now probably in the region of $207million (N97billion). On account of the weak regulatory architecture, CPP market is unorganized and home to all manner of importers and traders, thus making it difficult to define market shares and sizes of the various agricultural value chains. According to Croplife Nigeria sources, the 2021 cocoa CPP market was estimated at $28million (N13billion). At the 5.6% annual growth, the CPP spend could well be in the neighborhood of $32million (N15billion). Despite the lack of structure, the CPP products reach the cocoa farmgate through:

- Public sector agencies[68] at subsidized rates and on pro-bono basis. However, public sector agro-input agencies operate largely as a business, buy bulk from reputable importers of the best brands and distribute on cash-and-carry basis at base prices from their warehouses/farm service centres located across producing LGAs. These agencies provide training on proper handling, effective application and self-protection.
- Private agrochemical and agri-input companies sell on cash and carry basis and through their network of distributors, wholesalers and peri-urban and rural agro-dealer or in bulk to FOs and LBAs.
- Collaborative efforts between agrochemical companies and key trade Associations, especially CFAN, that buy bulk for onward distribution to farmer affiliates nationwide under soft credit terms. Under the partnership, farmers are trained on GAP, safe use of agrochemicals and enjoy spraying gang services.
- Embedded value chain finance[69] to outgrower schemes, where farmers are supplied on in-kind basis[70] and repay on back-ended basis when produce supplied.
- Private organizations that have replicated the embedded value chain finance driven by blockchain mechanisms
- FOs/coops with agro-input shops under dealership arrangements with a network of importers distribute agrochemicals both on cash and credit basis terms; and
- LBAs, VBAs and Coops that supply on in-kind basis in exchange for cocoa produce upon harvest

Quite a number of the key agrochemical companies provide training on IPM, safe and effective use of agrochemicals and offer spaying gang services as a knock-on strategy to nurture and sustain farmgate brand loyalty. With the exception of Harvestfield Industries, Jubali (Agrotech) and CANDEL, which have production facilities most agrochemicals in the cocoa ecosystem import from abroad. There are a few global names such as Biostadt, Syngenta, Bayer, Wacot and Springfield that compete head-on with domestic companies namely Saro Agriosciences, INSIS Limited, African Fertilizers and Chemicals Nigeria Limited. To nurture and sustain grassroots patronage, agrochemical companies deploy the sachet product approach, whereby the products are packaged in small sizes between 50 and 200grams. The most popular agrochemical brands approved and recommended by CRIN and the National Food and Drug Administration and Control (NAFDAC) in the cocoa ecosystem are fungicides (Ridomil Gold, Funguran, and Ultimax); pesticides (Actara, Confidor); insecticides (Touchdown and Round Up).

Fertilizers: until the advent of business education and access through embedded value chain finance offering of the Anchor Borrowers Program (ABP), soil fertility was not seriously rated amongst the farmers as an integral component to shore-up productivity. Fertilizers more commonly used for arables and other perennials are stocked by the public sector agencies and the critical mass of agro-dealers across the cocoa producing states.

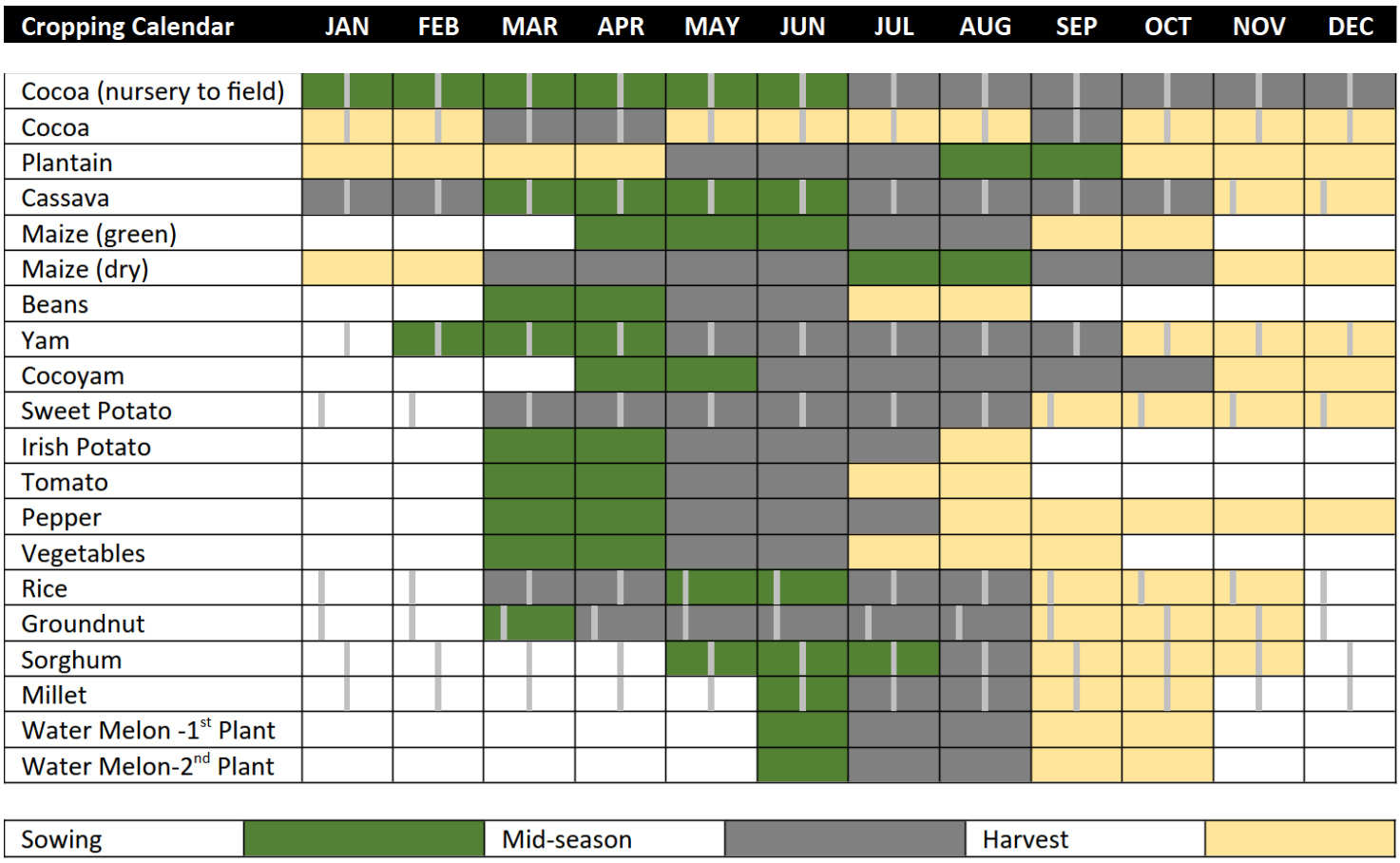
[67] Comprising herbicides (30%), insecticides (40%), fungicides (15%), seed treatment chemicals (8%), and rodenticides, nematicides and others (7%) .
[68] Agricultural Development Programs (ADPs), Cocoa Development Units(CDUs), state branches of FMARD, Nigerian Export Promotion Council (NEPC) amongst others.
[69] Under the auspices of the Anchor Borrowers Program (ABP), designed by the CBN and executed by the Nigerian Incentive-based Risk Sharing for Agricultural Lending (NIRSAL).
[70] A number of agrochemical companies supplied through this route via the canceled Growth Enhancement Support Scheme (GESS) program.

By and large, fertilizers[71], which are more accessible to farmers are generally procured at peri-urban centres and in close proximity to most rural households. Nonetheless, the advantage in bulk purchase that is attributable to cooperative and outgrower scheme membership and better bargains from state agencies characterizes the other distribution channels. By and large, the availability of the fertilizers is credit to the Presidential Fertilizer Initiative (PFI) that was established in 2016 to reverse the shortfall in fertilizer production (specifically NPK 20:20:10) and distribution, strengthen the domestic production capacity, reduce the incessant importation and enhance direct delivery mechanisms to the farmgate for onward delivery to the critical mass of farmer at very affordable prices. As at 2021, 2.7million metric tons (54million 50kg bags) of fertilizer had been reportedly distributed to farmers nationwide.

[71] Typically, NPK 15-15-15, Single Fertilizer Super Phosphate (SSP) and Single Fertilizer Potassium Chloride are recommended.

05 Cocoa Crop Cycle

Non-Cocoa Cropping Calendar: As enumerated earlier SHFs are involved in the cultivation of arable products, vegetables, economic trees, livestock, aquaculture etc. to shore-up household incomes and boost agroforestry. The agricultural calendar of the major crops are captured below:



Oil Palm Cropping Calendar: As displayed in table-9, oil palm, which is a major cash crop and predominant in the SE, SS and SW zones is seriously gaining prominence as an alternative VC to cocoa and has attracted the interest of IDH. Oil palm abounds mainly in wild grooves, intensive artisanal milling activities and large estates (industrial mills) across cocoa producing states such as Abia, Akwa-Ibom, Delta, Edo, Cross River, Imo and Ondo. Other direct massive investments by state governments, private companies involved include Okitipupa Oil miss, Irele Oil Mills, Okomu Oil Mills, Presco Limited, PZ-Wilmar, FTN, JB Farms Limited etc. The cropping calendar is captured below.

Oil palm Cropping Calendar	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Procurement of seedling												
Nursery establishment/maintain												
Land preparation												
Transplanting												
Weed management												
Fertilizer application												
Gapping where necessary												
Pruning												
Harvesting (peak season)												
Post-harvesting (peak season)												
Bagging /Selling												
Harvesting (light season)												
Post-harvesting (light season)												
Bagging /Selling												

Sowing	Mid-season	Harvest-Light crop	Post-Harvest	Harvest-Main Crop

Cocoa Cropping Calendar: Production is affected by seasonal variations in weather patterns. Typically, there are 2 seasons the main crop (MC) campaign (October to February); and the light-crop (LC) campaign (April through September). Traditionally, the LC lasted 3 months, however due to changing weather patterns, the LC duration in the SW is fairly regular but stretches into July, while in the SS, it starts in late mid to late June and stretches into September. Production, which peaks at the MC accounts for 70 to 75% of annual output, is characterized by dry season, low humidity and rainfall. The fruits begin to ripen from say mid-October and the harvest/post-harvesting activities commences full swing until February, or early March. The LC campaign on the hand, is characterized by higher humidity and rainfall. Due to the smaller pod production, output accounts for between 25 and 30% of country output. Year-on-year, harvesting commences from mid-April until September.

Cocoa Cropping Calendar	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Land preparation												
Establishment of cocoa nursery												
Transplanting												
Clearing/weeding												
Mulching												
Light pruning(removal chupons)												
Pruning-Removal of mistletoe												
Spraying of insecticide												
Spraying of fungicides												
Harvesting												
Post-harvest												
Bagging												
Weighing and selling												

Sowing	Midseason	Harvest-Light crop	Post-Harvest	Harvest-Main Crop

Seasonality of Cocoa: - production is affected by seasonal variations in weather patterns. Typically, there are 2 seasons the main crop (MC) campaign (October to February); and the light-crop (LC) campaign (April through September). Traditionally, the LC lasted 3 months, however due to changing weather patterns, the LC duration in the SW is fairly regular but stretches into July, while in the SS, it starts in late mid to late June and stretches into September. Production, which peaks at the MC accounts for 70 to 75% of annual output, is characterized by dry season, low humidity and rainfall. The fruits begin to ripen from say mid-October and the harvest/post-harvesting activities commences full swing until February, or early March. The LC campaign on the hand, is characterized by higher humidity and rainfall. Due to the smaller pod production, output accounts for between 25 and 30% of country output. Year-on-year, harvesting commences from mid-April until September.

06 Quality and Storage

Extraneous matter, free of smoky, velvety or black beans and any evidence of adulteration and which contains less than 3% by count of mouldy beans, 3% by count of slaty beans and 3% by count of other defects.

- **At farmers' level:** good quality cocoa is measured by mere physical appearance to detect fully fermented, no slatey, well dried by cut test, no extraneous matter, beans not germinated.
- **At FO/LBA level:** good quality cocoa is measured by physical appearance and cut tests to determine fully fermented, no slatey, no moulds, well dried, less than 8% moisture using a moisture meter, no extraneous matter, beans not germinated, no weevil damage. Cocoa of lesser quality attracts discount.
- **At Exporters/Processors' level:** good quality cocoa is measured by fully fermented, no slatey, less than 3% mould, less than 3% slatey, less than 3% other defects, well dried, , less than 8% moisture using a moisture meter. No extraneous matter, beans not germinated, no weevil damage, black beans. Cocoa of lesser quality attracts discount.

Parameters: for determination and measurement of cocoa quality – including physical attributes, origin, variety and health/toxicity/infestation are broken down as follows:

1	*Fermentation, whether fully fermented and not slaty*	6	Dirt and other extraneous matter including stones
2	*Slatey % by cut tests*	7	Moisture content by moisture meter- should be less than 8% moisture
3	*Mould % by cut tests*	8	Black or velvety beans
4	*Weevil damage*	9	Flat beans
5	*Germinated beans*		

Grading Systems: According to NEPC, the Nigerian Cocoa Quality Standard (NCQS) is classified around 2 grade ratings; namely 1 and 2 and as itemized below are consistent with the international cocoa standards ISO-2451, Federation of Cocoa Commerce (FCC):

Parameters	Grade-1		Grade-1	
	Main Crop	Light Crop	Main Crop	Light Crop
Mouldy beans maximum by count	3%	3%	4%	4%
Slaty beans, maximum by count	3%	3%	8%	8%
Insect damaged, germinated or flat beans	3%	3%	6%	6%
Maximum moisture content	7.5%	7.5%	7.5%	7.5%
Maximum size outside range-not more than:-	12%	12%	12%	12%
Maximum foreign matter-not more than	2%	2%	2%	2%
Weight of 300 beans	>310g	>310g	<310g	<310g

International Standard Organization (ISO-2451): chronicles the terms and grade standards deployed to classify cocoa beans. The grade standards are based on cut test that define flavour defects. The quality requirements are as follows:

- *Maximum 7.5% bean moisture content*
- *Free of any contaminant, odour and no signs or evidence of adulteration*
- *Virtually free from living insects and other infestations; foreign matter, broken beans, fragments, pieces of shell, bean clusters, flat beans, germinated beans and residues*
- *Uniform in size, fit to produce a foodstuff and sizes based on bean count per 100g-Large beans:-bean count of less or equal to 100; Medium beans:-bean count of 101 to 120; Small beans:-bean count greater than 120.*

Parameters	ISO-2451	
	Grade-1	Grade-2
Mouldy beans maximum by count	3%	4%
Slaty beans, maximum by count	3%	8%
Insect damaged, germinated or flat beans	3%	6%

Federation of Cocoa Commerce (FCC): roundly regarded of one of the most deployed standards in the global cocoa trade is subject to the following conditions:

- *Dry consistency and homogenous in form colour and texture;*
- *The parcel must be 1) fit to produce a foodstuff; 2) have no traces of adulteration, contamination and rodents; 3) have no presence or traces of live insects especially mites or other types of insect infestation; 4) must not contain germinated beans; and 5) must be within the customary range for violet or purple beans of the specified grade/origin*

Testing Methods and Equipment: quality is measured, tested, certified at the different stages as follows:

SHFs	*Visual examination to determine if fully fermented, that is beans not slatey and availability of germinated beans, dirt, stones and other extraneous matter; cut tests to determine dryness and moisture content.*	*Sharp knife*
FO/ LBAs	*Visual examination and cut tests on scooped sampled of 300 beans from every 100 bags to determine fully fermented, slatey, moulds; well dried, less than 8% moisture using a moisture meter, no extraneous matter, no germinated beans, cut beans, flat beans, no weevil damage.*	*sharp knife, counter scale, moisture meter, scoops or bag sampler, bucket*
EXH/ PRS	*Fully fermented, no slaty, no moulds, well dried, less than 8% moisture using a moisture, no extraneous matter, no germinated beans, cut beans, flat beans, no weevil damage.*	*Sharp knife, counter scale, moisture meter, scoops or bag sampler, bucket*

Quality Practices: production, harvest, post-harvest, logistics, handling and storage practices that impact quality are captured below:

Production	*Planting of improved variety; maintenance of farm free of weed, mistletoes, epiphytes and removal of infested pods; and control pests and diseases*
Harvest	*Avoid over-ripening of pods by harvesting when pods are greenish yellow and diseased and infested pods should be separated from the heap and burnt*
Post-Harvest	*No delay in removing beans from harvested pods, fermentation of beans properly using plantain/ banana leaves for 5-7 days depending on the weather; dry beans properly on raised platform to less than 8% moisture content; and Store properly on wooden pallet and in a leakage-proof structure or store*
Transportation	*Haulage of cocoa should be done using a vehicle that can be properly covered in case of rainfall. Any vehicle or container meant for cocoa should be properly cleaned if used for other products to avoid contamination. Avoid contact with water during transportation by using very good plastic sheet cover or tarpaulin*
Cleaning and Re-drying	*Cleaning involving picking of extraneous matter, flat, cut beans are done, separation of cluster beans and drying deploying raised platforms or drying machines*
Warehousing	*Well-conditioned and aerated structures that ensure proper stacking, fumigation schedule maintained to ensure infestation free environment, proper cleanliness and hygiene standards and regular maintenance to prevent contamination and quality control, drying and blending record keeping and reporting*

Packaging: prevailing and the ideal types of packaging at various points along the chain:

SHFs	*Old jute bags, baskets and polybags- the ideal is good jute bag*
FOs/LBAs	*Old jute bag, and new jute bags for graded and standardised cocoa*
EXP/PRS	*New jute bags clean and free of hydrocarbons*

Buyer Requirements: quality requirements, impacts of low/high quality and steps undertaken to achieve to comply with contractual demands are summarized below:

FO/ LBAs	*Cocoa that is thoroughly dry, free from foreign or extraneous matter, free of smoky, velvety or black beans and any evidence of adulteration and free of mouldy beans, free of slaty beans and free of other defects. Good quality cocoa determines the profitability and margin of the buyer. Substandard quality will attract discounts thus reducing profit margin.*
	Supply of recommended and approved inputs to their farmers, monitoring to ensure quality assurance compliance, Tests/examination during purchases and discounting when necessary, adequate storage and pest control and blending in order to achieve overall good and acceptable quality
EXH/ PRS	*Cocoa that is thoroughly dry, free from foreign or extraneous matter, free of smoky, velvety or black beans and any evidence of adulteration and free of mouldy beans, free of slatey beans and free of other defects. A good exportable quality cocoa determines the profitability and margin of the exporter. Substandard quality will attract discounts thus reducing profit margin and constitutes a blight on their reputation and rating with buyers abroad*
	Proper tests during purchases and at delivery and discounting when necessary, blending in order to achieve good and acceptable quality and stringent compliance with best warehousing practices and supply chain optimization

Traceability and Social Certification: Following the UTZ/Rainforest Alliance (RA) merger, cocoa certification is in the main implemented by RA and under its 2020 RA Sustainable Agriculture Standard. RA works in alliance with FOs/coops and ingrower/outgrower schemes dedicated to frontline export and in-grinding companies. Under the certification process, RA program requires that 1) each member farmer has a unique identification code, which is used to record and track all cocoa produced and delivered by the farmers; 2) cocoa volume estimate is done for each member farmer using a credible methodology. The harvest is also recorded and later compared with the initial estimate for possible adjustment. 3) the group has an efficient record keeping from farmers level (receipt on every delivery) to the point when the group/company sells the group volume to external buyer; and 4) geo-location data (coordinates and polygon) are captured for all member farms to track risk of deforestation, encroachment into protected areas and accuracy of volume estimate. RA support the group with analysis of the geo-data to develop risk map for implementation of risk mitigation measures. And in terms of online traceability, RA has a robust traceability platform called MultiTrace[72] where member groups and companies are required to record all sales/ purchase transactions with accompanying documentation. All these are mandatory requirements[73] for certified members. In replacement of the traditional premium payment regime, the new RA certificate program deploys an-kind and direct payment approach; namely a) the Sustainable Differential (SD)-the mandatory cash ($70/ mt) amount paid to producers of RA certified crops as reward for producing sustainably; and b) Sustainability Investment[74] (SI)-an in-kind or cash investment paid to certified groups to support them in the implementation of the standard. As mentioned earlier, AFEX deploys the barcoding that assigns a unique code to each bar of cocoa beans and allows for traceability throughout the supply and trade chain, from the farms to farmgate, warehouse and to buyer. Ditto, for OFI, Olatunde International, Agrotraders, BC-Nigeria (Barry Callebaut), Sucden, Tulip, ETG Group, (Beyond Beans) and JohnVents amongst others. As at 2021, the estimated volume of certified production was roughly 92,243mt (32% of national output) but in an "uncanny" turn[75] of events, only 43,554mt (15%) was exported as certified cocoa. Unconfirmed data, which puts the 2022 percentage at 50 to 60% suggests that certification is getting entrenched. Nonetheless, the unregulated cocoa ecosystem, the lack of synergy between key MDAs and antiquated forest policies are some of the key challenges confronting certification.

[72] Formerly Good Inside Portal for UTZ and MarketPlace for pre-merger RA.
[73] These are checked and confirmed annually during independent audit exercises and during RA periodic audits of groups/ companies. RA also supports the group with regular trainings on traceability requirements and implementation.
[74] Through the Africa Cocoa Fund, RA has supported over 10,000 farmers (from 7 certified groups) with over $300,000 worth in sustainability.
[75] Side-selling is prevalent on account of the irresistible offers from desperate buyers or and rent-seeking middlemen.

Overall Performance: Despite the fact that the sector is unregulated, has not complied with the Global Cocoa Agenda (GCA) and described by a veteran VC actor:-as a football match without a referee Nigerian-origin cocoa beans have consistently been highly regarded and patronized for the "excellent aroma", which is associated with fully fermented cocoa. Accordingly, Nigerian-origin cocoa beans may well be rated at between 75 and 80%. Nonetheless, Nigeria still enjoys the ignoble reputation of being the most precarious cocoa ecosystem. My personal experience during the information gathering phase was an eye-opener to the fact that after 2 decades since I undertook a guided factory tour of a processing company, the floor of the cleaning and destoning machine still had heaps of adulterated matter. The solution then was to connect the grinding company with a nucleus community of dedicated and well trained farmers, which substantially reduced the pressure on the equipment. Second incidence was with a FO manager who revealed with pride that their beans was always in great demand because of its high quality and "blending" attributes. These experiences suggests a very "weak quality assurance architecture" upstream, which is nonetheless mitigated by the superior cleaning drying, blending and packaging activities at LBA, exporter and processor levels midstream.

Strengths: 1) the resilience of the cocoa farmgate actors; 2) the sustained good aroma brand; 3) the fairly low climate risk index score coupled with large expense of land available for cocoa cultivation that will not occasion grave climatic change concerns; 4) the growing uptake of sustainably produced cocoa at the farmgate; 5) the increasing investments in processing and artisanal chocolate manufacturing; and 6) the overwhelming push and solidarity by VC actors, policy makers and the in-coming administration to restore commodity boards and scale-up existing commodity exchange mechanisms.

Weaknesses: 1) the farmgate enjoys pretty much the same pricing for standard and unstandardized cocoa beans; 2) end-to end there are no sanctions for trade malpractices; 3) end-to-end there are no trade barriers; easy entry/easy exit; 4) public sector funding constraints, weak extension and input delivery; and significant infrastructural deficits and inaccessibility of farms; 5) high cost of labour, old trees and farmers; and 6) poor public sector quality assurance end-to-end and lack of a sector-wide statistical database.

Storage.

Types: The storage mechanisms along the value chain are captured below:

Type	Capacity	Ownership	Business Model/Type
Village	820mt	Farmgate (400 villages)	Origination: Storage of dried beans before sale Farm-gate purchase storage facilities. Typically small household barns made of mud/cemented exterior with roofs.
FOs/Cooperatives	30,000mt	100	Collect from members, grade and sell to exporters. Warehouse well-structured to preserve quality.
LBAs	90,0000mt	About 2000	Aggregate, quality check and storage. Warehouse well-structured to preserve quality, drying machines, bays and other critical elements.
Exporters	317,000mt	Various[76] about 50	Aggregate, quality check, storage and export. Professionally outfitted with state of art facilities
Collateral Manager	20,000mt	AFEX	Aggregate, quality check, warehouse warrants issuance, storage and export : Professionally outfitted with state of art facilities.
Processors	61,500mt	7- processors[77]	Quality check for inputs, storage and storage of outbound derivatives and export: Professionally outfitted with state of art facilities.
FPIS	Awaiting data	Public	Second tier quality and grade validation.
Export Terminal Port Lagos	7,000 TEUs	Lilypond Export Command[78]	Specialized facility for final quality check, handling and processing for export.

[76] Agrotraders (10k), Chriswel (30k), Gbemtan (12k), Olatunde (22k), Josanik (22k), Sunbeth (25k), Alfa (12k), Courtyard (7k), Starlink (25k), Tulip (10k), OFI (21k), Nivik (3k), Azzezo (7k), Omas (7k), Armajaro (12k), Jimgaf (5k), Fagboyegun (10k) others (60k).
[77] Cadbury (7k), Ile-Oluji (7k), Alfa (7k), Plantation (12k), Johnvents (33k), Tulip (15k), FTN (1.5k).
[78] An integral component of the Lagos Port, which has 1.0million TEUs carrying capacity and provides services to over 1,000 vessels and roughly 5.7million mt of inward and outbound cargo annually. The port also serves as transshipment port for the land-locked neighboring countries.

Additional Services: The non-storage services commonly provided aside from quality checks, sorting, drying, packaging, handling and logistics, which are strictly in-house services are haulage and freight forwarding services for themselves and others.

Public warehousing/warehouse receipts: Since export trade is largely conducted by the private sector, there are no such facilities, except for some state governments, like Ondo that maintains satellite warehouses across producing LGAs for the distribution of agro-inputs and seedlings. However, most are dilapidated and in a state of disrepair.

Overall Storage Balance: Subject to storage data from FPIS and considering that only 20 exporters and 5 processors are truly active; the estimated overall origination warehouse capacity at 519,320mt from a throughput capacity perspective is very adequate. From KIIs, produce is exceedingly transitory and no longer than 2weeks and only processors stockpile for longer periods to sustain production all year round. The same holds true for the export terminal with capacity of 7,000 TEUs (168,00mt) and a total industry warehouse capacity of 687,320mt. The biggest challenge perhaps lies in the configuration, suitability and adequacy of the storage facilities in the farmsteads and villages.

07 Finance

Context Setting: In the face of more lucrative, less risky, well secured portfolios in the import, FMCG, telecoms, oil, services and multinationals sectors; agricultural lending is not a preferred destination. It was for this reason that GON established various subsidized agricultural credit schemes[79], which were not beneficial to the cocoa ecosystem. However, in an aggressive push to bolster non-oil FX income, catalyse the establishment of agro-allied business and stem massive food/grains importation, the CBN introduced a series (and admixture) of intervention[80] funds priced at sub 10% digit, with exceedingly generous terms for engagement with the private sector and state governments. As the second largest non-oil FX earning value chain, the cocoa ecosystem has become a very attractive for the funds designed to cover upstream, midstream to downstream sectors. Typically, production, farm-input supplies (including farm machinery and equipment), working capital, processing/value addition; storage; and marketing including exportation are on offer. By and large, it must be emphasized that the intervention funds are provided by GON via CBN and that the commercial banks are simply "conduit pipes" for seamless and effective delivery.

Product lines	Product Description (type, amount, term, collateral, interest rate)	Main Financial Service Providers[81]	Overall Scale, Scalability and Bottlenecks
Land development and tree renewal	CACS facility is more patronized by state governments; tenor up to 5 years, 9% all-in interest rate; and secured by Irrevocable Standing Payment Orders (ISPOs). For private sector is secured by a lien on the assets. Opportunities for farm maintenance credit is available for producers under the ABP facility. Usually short-term within 12 months and priced at between 9 and 15%. Secured by cross guarantees, lien on produce and assets where possible	Fidelity, Sterling, FCMB, FBN, Unity, GTB, Jaiz, Wema, Zenith and Stanbic	Major bottleneck here is lack of access to large contiguous farmlands. And threat from bandits, kidnappers and herdsmen. Under the maintenance credit about N120 million. Scalability up to 20% from current exposure and challenges include financial illiteracy and distance from actors for more effective monitoring and management
	ADDS facility specifically targeted at cultivation of new farmlands, engagement of 370,000 youths is priced at sub 10% interest rates. Softer security alongside 50% NIRSAL CRG and interest drawback and insurance cover. Facility targeted to offtakers, agro-allied businesses and others involved in backward integration and outgrower schemes.		
Input finance (including value chain financing)	The ABP is an end-to-end embedded value chain finance facility; tenor usually short-term and structured on a 12-month transaction cycle that commences during the start of the maintenance period. Priced at between 12 and 15% due to knock-on fees, insurance, extension/business education and geo-mapping. For FOs/Coops, shared and cross guarantees and lien on harvest. For private sector, lien on produce and assets	Fidelity, Sterling, FCMB, FBN, Unity, GTB, Jaiz, Wema, Zenith and Stanbic. DFIs-BoA	Roughly about N23 billion to VCs. Challenges were mostly on substandard inputs, diversion of funds and inputs and repayment difficulties

[79] Loans to the cocoa sector (Ajetomobi) between 1981 and 2002 was between at an average of 1.2%. Currently agric hovers between 4 and 5% of the total bank credit portfolio.
[80] Anchor Borrowers Program (ABP); Export Facilitation Initiative Funding (EFIFF), FX Repatriation (RT200FX) Program to generate $200billion from non-oil export; Commercial Agriculture Credit Scheme (CACS), Real Sector Support Facility (RSSF) and facilities under the Nigerian Export Import Bank (NEXIM), Bank of Agriculture (BoA) and Bank of Industries (BoI)
[81] Out of the 21 commercial banks, 14 (67%) are active in agricultural lending with support coming from 4 -DFIs namely NIRSAL, BoA, BoI and NEXIM and 3 insurance companies, the Nigerian Agricultural Insurance Corporation (NAIC), Leadway Insurance, and Industrial and General Insurance Plc (IGI). An informal telephone survey with VC Actors (FOs, LBAs EXHs/PRS) suggests that the 10 listed represents the most agricultural friendly banks.

Product lines	Product Description (type, amount, term, collateral, interest rate)	Main Financial Service Providers[79]	Overall Scale, Scalability and Bottlenecks
Equipment finance (including leasing and vendor finance)	An admixture of CACS, ABP, EFIFF and RSSF. But more like the RSSF, which is targeted at start-ups and expansion projects. Priced at 9% all-in rate and tenor is up to 15 years. Loans are tailor made from N500 million to 10 billion	Fidelity, Sterling, FCMB, FBN, Unity, GTB, Jaiz, Wema, Zenith and Stanbic and DFIs-BoI	About N24 billon to VC actors and major challenge is preference for fairly used and inferior machinery, lack of expertize to operate equipment and machinery and repayment issues
Working capital finance (including inventory and supply chain financing)	An admixture of CACS, ABP, EFIFF[82] and RSSF. But most companies deploy the ABP window because it offers interest drawback scheme and credit risk guarantee (CRG). It's a 12 month facility priced at sub 10%. It also enjoys an insurance cover. Collaterals range from insurance bonds, bank guarantee, lien on the receivables or and assets	Fidelity, Sterling, FCMB, FBN, Unity, GTB, Jaiz, Wema, Zenith and UBA. DFIs-BoI, NIRSAL	All together N41 billion and complaints range from funds diversion, documentation integrity, and reluctance to adhere to approved transaction dynamics. Scalability is 50% on current exposure
Trade finance (including structured trade and commodity finance)	An admixture of the CACS, ABP and EFFIF facilities. Interest is at sub 10% but due to fees, insurance cover and other incidentals, the weighted average is between 9 and 14%. Essentially 12 months and warehouse receipts (WRS) and lien on the FX receivables on custody arrangements. Otherwise, it's secured by assets and lien on FX receivables under the export and contracts with exporters for the LBAs	Sterling, GTB, Ecobank, FCMB, FBN, Fidelity and Unity. DFI-NIRSAL	N27 billion to VC actors (LBAs/EXHs/PRS). Challenges range from FX market volatility, seasonality of commodities, unstable government policies, repayment issues and concerns about asset bubble since LBAs already enjoy pre-funding facilities from exporters
Financing of capital investments	An admixture of CACS, ABP, EFIFF and RSSF. The RSSF and CACS windows are the most enticing. These facilities are priced at 9% all-in and can be structured to enjoy the CRG and interest drawback scheme of NIRSAL. It is not uncommon for companies to approach the bond market for longer term bond instruments that have fixed coupon payments and longer gestation periods.	Fidelity, Sterling, FCMB, FBN, Unity, GTB, Jaiz, Wema, Zenith, Stanbic and DFIs-BoI, NIRSAL	Over N5billion and USD 10 million and concerns range from unrealistic financial projections, undercapitalization of promoters and inability to access forex to pay for equipment
Insurance and risk	Typically offering covering crop failure arising flood, drought and other perils. Insurance also covers staff, vehicles/chattels farm equipment and farm property. Usually renewal every year, premiums range from 1 to 5%. NIRSAL provides 50% subsidy on insurance premiums to farmers. Under its collaboration with NAIC, NIRSAL also provides the Area Yield insurance, designed to cover cost of production and expected profit. As earlier enumerated NIRSAL also provides the CRG, which is a risk-sharing product that covers up to 75% of the total loan of an obligor.	NAIC, Leadway Insurance, IGI and NIRSAL	N217 million covering all the VC actors

[82] As at December, 2022, N44.5billion ($98.4million) was reported by the CBN as cumulative exposure under the export-oriented intervention.

08 Prices and Terminal Markets

Price Trends:

Differential across Locations/Actors: Prices are benchmarked against the FOB value of world prices and dollar/NGN exchange rate. The differential between locations is primarily due to farmgate supply/demand dynamics. The weather pattern also influences the disparity. For instance, if rains are excessively heavy during MC, commensurate demand pressure will shift to other regions where dry cocoa is available. Incidentally, the converse happens where rains are falling, LBAs/FOs with access to drying units buy the beans at discounted prices because the longer the beans stays with farmers, the more losses they will incur. Nonetheless, between the SS and SW hubs, prices are not overwhelming different.

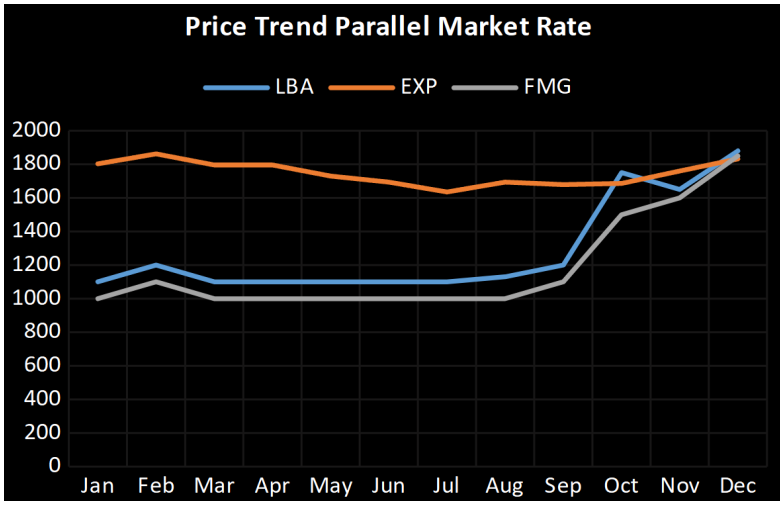
Table 12: Cocoa prices across different locations (NGN/kg)

Cocoa Zone	Low	High	Average	Variance	Distance	Zone
Idanre, Ondo State	1,240	1,300	1,270	50.00	0	Southwest Zone
Ore, Ondo State	1,250	1,300	1,275	55.00	83km	
Ife, Osun State	1,150	1,200	1,175	-45.00	103km	
Ikom, Cross River	1,200	1,250	1,225	5.00	0	Southsouth Zone Akoko Edo is however closer to Idanre (158km), where SW influence is keener
Bende, Abia State	1,100	1,200	1,150	-70.00	250km	
Akoko, Edo State	1,200	1,250	1,225	5.00	481km	
Average of all the prices			**1,220**			

Source: https://nigerianprice.com/cocoa-prices-in-nigeria - October, 16 2022

The differential between VC actors is essentially due to a cost+margin factor over the farmgate purchase between LBAs and Exporters and LBAs and Processors. And this ranges between N50 and N200/kg.

Seasonal Trends: Prices generally fluctuate in line with the world price and exchange rate, usually highest during the MC season (October through February) tapers down slightly and stable during the LC season, which technically[83] begins in April and ends in June. Except world prices rise during the LC season, this pattern is fairly consistent year-on-year. The graph below displays the monthly trend of the 2022 prices from the farmgate, trader level to export markets.

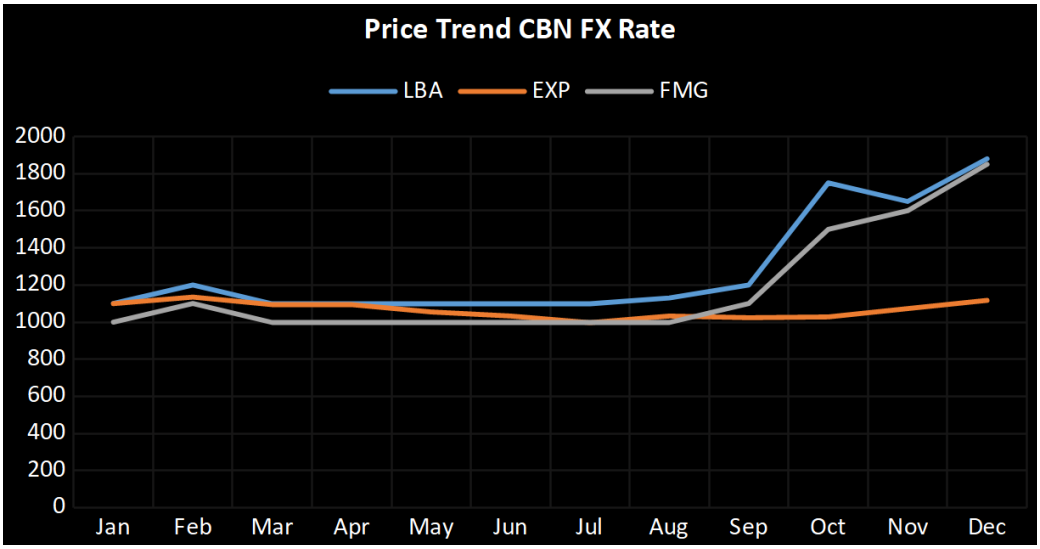


FMG prices rose sharply in October in response to the increasing demand and peaked in December when the margins between the LBAs had virtually vanished and was literally par with the export price. In January of the 2021/22 season it's also evident that the FMG and LBA prices swung in concert with the world price until the beginning of the light crop in April and fairly stable until the main crop 2022/23. In the period of price stability, it is clear that the exchange rate was more of a determining factor than the global prices, which were on a downward trend.

[83] However we are beginning to experience a departure from this fixed trend, sometimes it starts in May and stretches into September (SW until June, and SS from July into September).

Method: The guiding principle is that prices are set in line with the prevailing world price and the ruling exchange rate. At each level beyond the farmgate, margins are fixed on the farmgate price in a manner that it covers cost and accommodates some profit. Because no consideration is given to the cost of production at the farmgate, it is actually the SHF that bears the full brunt of the price-taking mechanism. The exporter/processor are constrained because they are operating under fixed prices. So in situations when the farmgate is at par or rises above the world price, the consolation lies in their ability to hedge their export contracts as indeed the FX arbitrage income that cushions their loss. For both actors, it is abundantly clear that if the transactions were not profitable, they would have long exited the business. Rather, what is emerging is market power concentration (and consolidation) on all supply/chain frontiers.

Terminal Markets: Cocoa pricing is perpetually linked to ruling world prices that fluctuate on a daily basis. The farmgate price, which for all intents and purpose is the "floor price" is adjusted in line with the world price movements. The FOB rate of the prevailing world price is translated to Naira at the current exchange rate. Ex-warehouse, Ex-port prices are computed with consideration to costs and the attendant margins. This author wasn't privy to the export documentation of exporters or indeed the processors. The explanation as deduced is simply on a "cost plus pricing" basis. To demonstrate the influence of the Naira/dollar exchange in price determination, the graph below represents the earlier graph now computed at the ruling CBN rates.



Exporters hedge through a basket[84] of market instruments and quite a few are into other exportable produce[85], which might be useful in cushioning cocoa portfolio losses. Cocoa export could also be viewed from the standpoint of accessing the scarce foreign exchange for importation recycling purposes.

Information: The FOs/LBAs typically rely on ICCO and global trading sites. Most information sources (largely newspaper and bloggers) on farmgate prices are not current. Exporters/processors have a wide sourcing networks and expectations are that they maintain a weekly price reporting mechanism. Years back, ICCO in collaboration with the Federal Ministry of Industry Trade and Investment (FMITI) championed a sector-wide cocoa marketing information system (CMIS) but later abandoned.

[84] Cocoa futures contract and short futures etc.
[85] Cashew, palm-kernel, sesame, ginger, sheanut.

Producer Prices: NGN/KG

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2018	700	700	700	700	700	700	650	600	600	600	700	700	670.8
2019	700	700	700	700	650	700	700	700	700	700	800	800	712.5
2020	800	850	850	750	750	750	750	800	850	1000	1000	950	841.7
2021	900	850	900	850	850	850	900	900	950	1000	1100	1000	920.8
2022	1000	1100	1000	1000	1000	1000	1000	1000	1100	1500	1600	1850	1179.2

Source: Frontline LBAs in Cross River and Ondo State

Intermediate Prices: NGN/KG

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2018	750	750	750	700	750	750	700	650	650	650	750	750	716.7
2019	750	750	750	750	700	750	750	750	750	750	900	900	770.8
2020	900	920	950	800	800	800	800	850	900	1100	1150	1050	918.3
2021	950	950	950	950	950	950	1000	1000	1100	1100	1200	1150	1020.8
2022	1100	1200	1100	1100	1100	1100	1100	1130	1200	1750	1650	1880	1284.2

Source: Frontline LBAs in Cross River and Ondo State

Processor Prices: NGN/KG

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2018	800	800	800	750	800	800	750	700	700	700	800	800	766.7
2019	800	800	800	800	750	800	800	800	800	800	950	950	820.8
2020	950	970	1000	850	850	850	850	900	950	1150	1200	1100	968.3
2021	1000	1000	1000	1000	1000	1000	1050	1050	1150	1150	1250	1200	1070.8
2022	1150	1250	1150	1150	1150	1150	1150	1180	1250	1800	1700	1930	1334.2

Source: Frontline LBAs in Cross River and Ondo State

Export Prices[86]: NGN/KG

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
2018	722	784	925	969	984	892	962	803	810	788	810	818	855.6
2019	816	816	794	841	838	866	874	791	832	881	910	881	845.0
2020	1225	1281	1102	1069	1093	1050	989	1107	1159	1079	1112	1135	1116.7
2021	1365	1376	1405	1353	1376	1353	1330	1416	1462	1467	1365	1359	1385.6
2022	1803	1862	1796	1796	1730	1694	1635	1694	1679	1686	1760	1832	1747.1

Source: Mundi, CBN foreign exchange rates and prevailing parallel rates

[86] Please note: These are strictly CIF prices. Typically, contracts are computed on FOB basis at some 15% discount to the CIF quotes. The average Naira translation would thus be as follows: N727, N713, N949, N1,178 and N1,485 for 2018, 2019, 2022, 2021 and 2022 respectively.

Spot versus Forward Pricing: To set the context, prices of goods and services in Nigeria are traditionally sticky downwards. This is due primarily to the deteriorating (and increasing instability) of NGN/USD exchange rate especially, during the run-up to the year-end festivities and MC campaign that compels importers to price their goods on a "forward exchange rate" cost replacement basis. Against the backdrop of the deteriorating NGN/USD exchange rate regime, FMG prices are thus influenced by the 2 factors, the fluctuations of the daily/weekly global spot prices and the intensity of the demand/supply dynamics. FOB prices are translated at between 5 and 20% of the CIF price. Accordingly, by virtue of the exchange rate configuration, there is an element of "forward pricing" that is intrinsic in the FMG prices, which generally hoovers between 75 and over 100% of the ruling spot price. According to the Royal Tropical Institute (KIT) journal on cocoa marketing and prices; the FMG/spot price between 2001 and 2008 ranged from 55 to 88% and at an average of 74% over the 8-year period. With the increasing economic headwinds and consistent exchange rate deterioration over the same 8-year period (between 2016 and 2023); the average FMG/spot price increased by 15 percentage points to 89%. The glaring distinction between the 2 periods underscore the importance of the regulatory landscape at play. The first period coincided with the Cocoa Rebirth Program (CRP)[87] of the Obasanjo-led administration as against the vastly unregulated nature of the second period. The range in the second period is between 78 and 106% as captured below.

Table 12: Farmgate prices to Export Prices (NGN/mt)

Period-1	%	Period-2	FG	EXP	%
2001	88%	2016	1000	1011	99%
2002	70%	2017	600	836	72%
2003	55%	2018	671	727	92%
2004	66%	2019	713	713	100%
2005	75%	2020	842	949	89%
2006	86%	2021	921	1178	78%
2007	75%	2022	1179	1485	79%
2008	75%	Feb-2023	1730	1630	106%
Average	**74%**			**Average**	**89%**

Source[88]: page 41, Dow Jones and dailies

Bilateral Contracts, Auctions, Forward Contracts and Pricing Impact: KIIs with LBAs/FOs reveals that in situations when there is a "run" on the farmgate and prices spike above the 95% threshold, they are compelled to deliver but at significantly reduced margins or at a loss. However, in order to sustain the patronage of the LBA/FOs, especially those with a "price-adjustment clause" contracts, the buyer (exporters/processors) typically adjust the contract price upwards to moderate the severity of the loss. For those LBAs/FOs that don't have a price-adjustment clause, they usually request for a review of the existing contracts to allow for larger volumes that will be matched to the prevailing farmgate prices. By so doing, the enlarged volume will ultimately moderate the losses. In a bid to bring some sanity to this unregulated terrain, there have also been spirited attempts by buyers to institutionalize a weekly/biweekly "price fixing" trade structure. Unfortunately, this initiative failed due largely to non-compliance by the same league of buyer that fixed the price and the lack of enforcement mechanisms to sanction erring buyers. To worsen the situation, SHFs/FOs "hold back" on their produce so as to benefit more from the escalating farmgate prices and consequently, further pushing the marketplace into a speculative trading frenzy and an all-comers affair.

[87] See page 64 under evolution of cocoa sector.
[88] https://www.ecomsms.com/case_study/improving-practices-and-techniques-nigeria/

The public sector companies that engage in WRS[89] activities and ordinarily could support auctions are not active in cocoa value chain. Ultimately, the onus falls on the private-led WRS activities to set the pace for forward pricing transactions as indeed, auctions. Through the warehouse warrants (and electronic receipts), AFEX provides a window for forward contracting, fixed prices and hedging that will allow SHFs/FOs (and even LBAs) exercise their franchise in a more sustainable, seamless and profitable manner. Beyond the WRS window, AFEX also offers the ComX trading platform[90] that enables small-scale portfolio investors engage in sustainable commodity trading activities.

[89] The Nigerian Commodity Exchange (NCX) and Lagos Commodities and Futures Exchange (LCFE) are more involved in grains .
[90] A trading app that allows that opens investors to trading opportunities in key agricultural commodities like securities, which provides an investment portfolio hedge and opportunity to invest in exchange traded commodities and profit from the collective performance of a basket of commodities.

09 Sectoral Regulatory Analysis

Policies Governing the Cocoa Sector:

The National Agricultural Technology and Innovation Policy (NATIP)-2022-2027 was developed by FMARD to bring about enduring economic and social change through PPP investments in agriculture and rural development. In responding to never ending challenges of price hikes, food insecurity, weakening productivity, NATIP draws upon from previous agricultural policies[91] and against the backdrop of inferior inputs, deficient technologies, unsustainable production practices, budgetary limitations, poor export history and the lack of synergy between agriculture and industry on the hand and at the other, between the national and subnational ministries, departments and agencies (MDAs); the key objectives are to:

- *Facilitate the creation of 12-million job opportunities in the agricultural sector by strengthening agricultural research, innovation and extension service delivery;*
- *Deploy GAP and appropriate technologies for a rapid increase in production, processing and marketing of crops, fisheries, and livestock for domestic and international markets;*
- *Support the evolution of Agricultural Development Fund (ADF) into a Mega Agency to overcome agricultural funding inadequacies and fast track rural development;*
- *Re-position agricultural cooperatives as a vehicle for the emergence of sustainable clusters; increase access to agricultural finance, agricultural insurance and agricultural land;*
- *Promote digital and CSA, organic agriculture and efficient water management for improved efficiency, productivity and income in the face of climate change;*
- *Develop high priority value chains[92] based on ecological or comparative advantages covering crops, livestock and fisheries sub-sectors in collaboration with states; and*
- *Reduce malnutrition and improve nutritional security through improved food systems and increase the competitiveness of Nigeria's agricultural products in the international markets;*

Export Expansion Grant (EEG) (1986 to date) established to stimulate export-oriented activities in the non-oil export sector, accelerate export volume and enable exporters expand and diversify their export portfolio and market coverage. EEG is backed by the Export (incentives and miscellaneous provisions) Act Cap 118 LFN 1990 act cap E19 LFN 2020 and administered by the Nigerian Export Promotion Council (NEPC). Simply put, the EEG[93] is a post-shipment incentive designed to encourage Nigerian exporters to expand export volume, value and improve global competitiveness of Nigerian products. Depending on the product category, exporters/processors are thus eligible to between 5 and 30% of their annual export value. Payments are made through an instrument known as the Export Credit Certificate (ECC). Discussions with NEPC officials reveal that several frontline cocoa exporters and processors have benefitted with commensurate impact on the livelihoods of their upstream partners. Furthermore, it had also enabled the beneficiary companies to invest in other areas that has enhanced their operational capacity. While it remains unknown how much will accrue to the cocoa value chain, a recent newspaper account reported that Dr. Ezra Yakusak, NEPC CEO disclosed that promissory notes valued at N308.45 billion ($674million) have been approved by GON for onward disbursement to 199 exporting companies. If as at November, 2022, cocoa accounted for 20.2% of the total non-oil FX proceeds; it can thus be predicted that as much as N62billion ($136million) would be enjoyed by the cocoa ecosystem.

[91] 1) the Agricultural Transformation Agenda (ATA) 2011-2015; 2) the Agricultural Promotion Policy (APP) 2016-2020 coupled with the 3) Economic Growth and Recovery Plan (EGRP) 2015-2020, 4) National Development Plan (NDP) 2021-2025, the Sustainable Development Goals (SDGs) and other African Union (AU) and continental pathways.

[92] Development of SPAZs in 2 cocoa-producing states, namely Cross River and Ogun in the Phase-1 of the intervention.

[93] In order to benefit, the following guidelines must be met; 1) registered with Corporate Affairs Commission (CAC)and NEPC ;2) have carried out formal exports, with repatriation of proceeds into Nigerian bank account (CBN confirmation needed); 3) have a minimum annual export turnover of N5 million ($11,000); 3) be a manufacturer/producer or merchant of products of Nigerian origin; 4) evidence of confirmed repatriation of export proceeds into a domiciliary account in Nigeria; and 5) submit baseline data (audited financial statements, information on operational capacity, tax clearance certificate and export expansion plan).

Cocoa Development Levy: This policy that requires all exporters to pay a $5 dollar levy on every metric ton of cocoa beans exported from Nigeria. There is also another levy of 0.5% on the FOB value of cocoa exports under the Nigerian Export Supervision Scheme (NESS). The funds which are collected and domiciled at CBN under a dedicated Cocoa Fund account is said to be reserved to finance cocoa development projects. Even though shrouded in secrecy, unconfirmed accounts have said such projects include research and development, infrastructural projects etc. Other sources believe that the Cocoa Fund Account could be better deployed as "seed-finance" for the planned Nigerian Cocoa Board.

Chain of Command Policy: To stem the incessant infiltration of all manner of buyers, carpetbaggers and interlopers at the cocoa farmgate, and the consequences in defective post-harvest practices; hoarding, speculative trade and price distortions; the chain of command policy was first institutionalized in Cross River State by the local CAN chapter. Under the command structure, an offtake "pecking order" relationship was instituted as captured below.

Even as the Export House can no longer buy directly from the smallholder farmgate, they can still have contractual arrangements with coops that are licensed as LBAs. The LBAs work through a number of VBAs (factors) that are better resourced and have more storage facilities to mop up the farmgate cocoa supplies

A robust surveillance mechanism was put in place and non-compliance was met very stringent sanctions and fines. Following the success of chain of command arrangement, pressure on the farmgate actors by the field staff of foreign export houses especially for cashew, sesame and cocoa during the main seasons coupled with increasing incidences of kidnapping, banditry and herdsmen attacks, the FMITI with the consent of the cocoa trade associations and the Federation of Commodity Associations in Nigeria (FACAN) banned foreign export companies from the farmgate and limited the procurement activities to the urban and peri-urban centres wholesale centres. This policy, which enjoyed commendation from FMARD, the other MDAs and the upstream value chain actors has not only brought more modicum of sanity to upcountry field operations but has by and large, moderated kidnapping and banditry occurrences. Whilst the policy hasn't impaired the certification, CSR and outgrower schemes; it has inadvertently entrenched the LBAs as an extremely important and indispensable hub in the value chain ecosystem.

Global Cocoa Agenda (2011) is perhaps the most critical policy dimension that resonates with the thrust to establish regulatory frameworks to guide the cocoa ecosystem. Irked by the failure to get executive approval for the Cocoa Marketing Corporation under the ATA policy regime; the current FMARD administration established the National Cocoa Management Committee[94] (NCMC) in 2022 to develop the regulation and monitoring of the activities in the country's cocoa sector and make the industry more transparent. Under the instrumentality of a National Cocoa Policy Bill that is currently being processed at the National Assembly (NASS), NCMC will aim at establishing a Nigerian Cocoa Board that will serve as a regulatory body for the industry. Feelers from policymakers suggest that the bill will be framed in line with the old commodity board but without a "price fixing" responsibility. It is important to add the idea of the cocoa board is co-terminus with the agricultural manifesto of the President-Elect that speaks to the establishment and institutionalization of regional agricultural boards and scaling up of existing commodity exchanges. NCMC was commissioned by FMARD with the following terms of reference:

1) To develop a framework for the regulation and monitoring of the activities of the cocoa sector so as to make the industry more transparent;
2) develop a strategic plan towards the establishment of a Nigerian Cocoa Board;
3) Upscale their activities to all cocoa producing states;
4) Organize and conduct a national conference for Commissioners of Agriculture from the 36 states and Federal Capital Territory (FCT) to sensitize them on the importance of LID and efforts by GON towards ensuring that Nigerian SHFs also enjoy the benefits like Ghana, Cote' d Ivoire and others.

[94] Membership comprises Presidents of CAN, CFAN, and FACAN, Cocoa desk officers of FMARD and FMITI, CBN, FMARD Director amongst others and CRIN Director General is to serve as Secretary.

The other relevant policies[95] on the industrial landscape, financial services, agrochemicals and inputs and child-labour that impact the cocoa ecosystem are outlined in the appendix-1 from page 69.

Laws governing the Cocoa Ecosystem:

The Abolished Cocoa Board Framework The 7-commodity boards (including the Cocoa Board) abolished the 1986 under the Structural Adjustment Program (SAP), were established under the Commodity Board Decree 1977 (of the Nigerian Military Government) with the mandate[96] and the accompanying functional activities reproduced below:

a) To secure the most favourable arrangements for the purchase of the relevant commodity and sale thereof to meet domestic requirements and the evacuation to the port of shipment of any surplus to such requirements intended for export
b) To purchase all relevant commodities which are offered for sale to the Board and which conform with the grades and standards of quality under any enactment; and
c) To promote the development and rehabilitation of producing areas generally and in particular to ensure that adequate supplies of fertilizers and improved seedlings and other requisite inputs are made available to promote the benefit and prosperity of the producers;

The functional activities of the Board were to:

- *hold and manage, whether by way of investment or otherwise, and alienate movable and immovable property; purchase or otherwise take over all or any of the assets, business, properties, privileges, contracts, rights, obligations and liabilities of any company, firm or person in furtherance of any business engaged in by the Board;*
- *enter into contracts or partnerships with any company, firm or person which in the opinion of the Board will facilitate the discharge of its functions under or pursuant to this Act;*
- *train managerial and other staff for the purpose of the running of its operations; to support and stabilize the price of the relevant commodity;*
- *appoint licensed buying agents, ginning and other agents; fix and control the allowances to be paid to licensed agents for the relevant commodity; grant, renew and withhold licenses to licensed agents, to impose conditions upon the granting or renewal of such licenses and to cancel or suspend them for good cause;*
- *prescribe by public notice specific periods during which the buying of the relevant commodity for export or for mechanized processing shall be prohibited, restricted or allowed; do all things necessary for and in connection with the purchase, sale, cleaning, packing and transport of the relevant commodity; engage in the processing of the relevant commodity and, where necessary, the purchase and subsequent sale of processed and semi-processed products thereof for the domestic market and for the export of any surplus to such requirements;*
- *establish buying centres in all major producing areas for the relevant commodity; ensure quality control of the relevant commodity and, for that purpose, to advise the Minister charged with responsibility for external trade with regard to standards and grades of the relevant commodity which may be exported; and*
- *conduct research into the production, handling, marketing, pest control of the relevant commodity and any other matter relating to the relevant commodity and any products derived from or connected therewith; and to do any other thing as may be necessary or expedient for giving full effect to the provisions of the Act.*

Unfortunately, after the Nigerian Cocoa Board was abolished, the cocoa sector invariably became subject to the national assembly and 22 state assembly oversight activities, 27 federal departments and agencies that are affiliated to the presidency, 5 federal ministries and at least a minimum of 9 sub-national MDAs and 8 trade associations. The extant laws that guide the activities of the 12 most important federal and state MDAs[97] and trade associations involved in the implementation of the overarching agricultural, finance, trade and export policies are captured below:

[95] Nigerian Industrial Revolution Plan, Growth Enhancement Support Scheme, Growth Enhancement, Presidential Fertilizer Initiative, NIRSAL, Anchor Borrowers Program (ABP), National Collateral Registry (NCR) of Nigeria; Commercial Agricultural Credit Scheme (CACS), Export Facilitation Initiative; and National Action Plan (NAP) on Child Labour.
[96] (reference https://faolex.fao.org/docs/pdf/nig120201.pdf).
[97] The other relevant MDAs are outlined in the appendix:-2.

	National MDAs	Laws Acts etc.	Supervising Ministry
1	Central Bank of Nigeria	1958 Act of Parliament, as amended in 1991, 1993, 1997, 1998, 1999, and 2007. The CBN Act of 2007	The Presidency
2	Pre-shipment Inspection Agency	Was introduced in 2006 under the Pre-Shipment of Exports Decree NO. 10 OF 1996 ACT CAP. P25 L.F.N. 2004	Central Bank of Nigeria
3	Nigerian Customs Service (NCS)	The Customs & Excise Management Act (CEMA) Cap 45, Law of the Federation of Nigeria, 2004	Federal Ministry of Finance (FMF)
4	Standard Organization (SON)	Under Enabling Act Number 56 of December 1971 - the Standards Organization of Nigeria cap 412 of the laws of Federal Republic of Nigeria	Federal Ministry of Industry Trade and Investment (FMITI)
5	Nigerian Export Promotion Council (NEPC)	Nigerian Export Promotion Council Decree No. 26 of 1976 and was formally implemented in March 1977. The act was amended by Decree No. 72 of 1979 and further amended by the NEPC	
6	Federal Produce Inspection Services (FPIS)	FPIS was established by law of Nigeria no24 of 1950 as a produce enforcement of export standard law. In 1959, an act of parliament empowered FPIS to regulate pest control in Port Areas and control of Pest Infestation in Agricultural Export produce inside the port and its environs. This Law was subsequently subjected to further amendments in 2009, 2010 and the last of which was done in 2016	
7	Cocoa Association of Nigeria (CAN)	Registered with the Corporate Affairs Commission (CAC) as legal entities to carry on business as umbrella bodies and apex associations	
8	Cocoa Farmers Association of Nigeria (CFAN)		Federal Ministry of Agriculture and Rural Development (FMARD)
9	Cocoa Research Institute of Nigeria (CRIN)	Nigeria Statute, Act No. 6 of 1950, Nigerian Research Institutes Act No.33 of 1964 and Agricultural Research Institutes Order No. 107 under the Agricultural Research Institutes Decree No. 35 of 1973	
10	Nigeria Agricultural Quarantine Service (NAQS)	NAQS Establishment Act 2018	
11	National Agency for Food and Drug Administration and Control (NAFDAC)	Decree 15 of 1993 (as amended)—now Acts of Parliaments: CAP N1 LFN 2004	Federal Ministry of Health (FMoH)
12	State Produce Departments	Covered under the laws enacted by the various State House of Assemblies	State Ministries of Agriculture and/or Commerce

Against the backdrop of the array of federal/state MDAs, the overlapping mandates, policy inconsistency, lack of clarity, the interagency rivalry, communication gaps between national and subnational levels; the "default muddling-through" operational mechanism that characterizes the cocoa ecosystem is not difficult to understand. To the critical mass of cocoa value chain actors, the silo mentality and unending competition for superiority between FMARD (with 10 agencies) and FMITI (with 8 agencies) is essentially a "chicken and egg" situation; which comes first?

The total forest area in Nigeria was estimated at 360,000 square km in 1975 and with the reckless destruction of forests at the rate of 600,000 ha per year (6000square km), there are valid grounds to believe that timber resources would be decimated[98] in couple of years (Bashir Akinola 2023). On account agricultural encroachment, excessive logging and urbanization, only about 10% of the landmass is covered with natural forests. While the cocoa ecosystem is not under the supervision of the Ministry of Environment (especially, as it pertains to the antiquated Forestry Policy), there have been increasing levels of stakeholder collaboration on the endemic challenges of rapid forest encroachment, the depletion of the forest reserves and the proper "delineation" and protection of what is left of the protected areas.

[98] Currently, almost all the 1,000 forest reserves are listed on the World Database on Protected Area of the International Union for Conservation of Nature (IUCN) have been seriously degraded.

The Constitution of Nigeria prohibits forced labour, slavery, and servitude. This is enshrined in the 2015 Trafficking in Persons Law Enforcement and Administration Act that applies throughout Nigeria and prohibits commercial sexual exploitation, pornography, drug trafficking, and trafficking for the purposes of forced or compulsory recruitment into armed conflict. Nigerian law punishes such offenses with fines and imprisonment. Under the framework of the Acceleration of Action in the Elimination of Child in Africa (ACCEL) and working in collaboration with the Federal Ministry of Labour and Employment (FMLE), the International Labour Organization (ILO) coupled with other Nigerian stakeholders (MDAs, Civil Society Organizations "CSOs" and Labour Congress) initiated a national work plan to eliminate child labour in Nigeria, including in the mining, cocoa, and gold supply chains. This policy is instrumentalized through the National Action Plan[99] on Child Labour.

Institutions Involved In Cocoa Sector Regulation

FMARD is responsible for promoting agricultural development and ensuring food security. Its mandate includes formulating policies and strategies for the agricultural sector, coordinating and implementing agricultural programs and projects, promoting private sector investment in agriculture, and facilitating the transfer of appropriate technologies to farmers.

Governance and management structure: FMARD is headed by a Minister, who is responsible for providing overall leadership and direction to the Ministry. The Minister is supported by a Permanent Secretary, who is responsible for the day-to-day management of the Ministry. FMARD is divided into departments and units, each headed by a Director or Deputy Director. The departments and units include Agricultural Services, Planning and Policy Coordination, and Finance and Accounts. **Strengths: Comprehensive Mandate:** covers a wide range of agricultural activities, making it a crucial agency for promoting agricultural development and food security in Nigeria. **Experienced Workforce:** skilled and experienced workforce that is dedicated to promoting agricultural development in Nigeria; and **Strategic Partnerships:** FMARD partners with a wide range of organizations and institutions to promote agricultural development in Nigeria, including research institutions, private sector organizations, and international development agencies. **Weaknesses: Inadequate Funding:** challenges in securing adequate funding to carry out its mandate effectively; **Inefficient Processes:** bureaucratic processes can be slow and inefficient, making it difficult to implement policies and programs quickly; and **Limited Capacity:** lacks capacity to effectively coordinate and implement the range of programs and initiatives needed to promote agricultural development in Nigeria and lack of a comprehensive database on the agricultural sector.

CRIN: Established in 1964 to promote research and development of cocoa farming in Nigeria and for conducting research, developing technologies, providing training and extension services to cocoa farmers and other stakeholders aimed at improving the productivity, quality, profitability ad sustainability of cocoa farming. Specific objectives are to develop improved cocoa varieties, cultural practices, pest and disease management strategies, and post-harvest technologies to enhance cocoa production in the country.

Governance and management structure: CRIN is governed by a Board of Directors appointed by the presidency. The Director General/CEO is responsible for the day-to-day management and reports to the Board of Directors. The institute also has a Research Advisory Committee, which provides scientific advice and guidance to the institute's research activities. CRIN is organized into research departments, which include Plant Breeding and Genetics, Soil Science, Crop Protection, and Agronomy. Each department is headed by a Director, who reports to the institute's Director. CRIN also has administrative and support departments, including finance, human resources, and information technology. **Strengths:** CRIN has a long history of conducting research and development activities in cocoa farming, which has resulted in the development of improved cocoa varieties and technologies. CRIN has a team of experienced researchers and extension officers who provide technical assistance to farmers and other stakeholders in the cocoa value chain. CRIN also has strong collaborations with other research institutions, both locally and internationally, which enhances its research capabilities. **Weaknesses:** One of the main challenges facing CRIN is inadequate funding, which limits its research and extension activities. CRIN also faces challenges in attracting and retaining qualified staff, which affects its research capacity. Additionally, there is a need for the institute to improve its outreach and extension services to farmers and stakeholders in the cocoa value chain and position itself as the repository of statistical cocoa data in Nigeria. And need for stronger and more sustainable research and development (R&D) partnerships between CRIN and private sector towards commercialization of cocoa beans, derivatives and waste-to-wealth products.

[99] See page 75 for the narrative.

FMITI is responsible for promoting and facilitating industrial development, trade, and investment. Its mandate is to create a conducive business environment for economic growth and development in Nigeria by supporting the growth and development of industries and businesses, promoting exports, attracting foreign direct investment, and improving the ease of doing business. Functional activities Policy formulation and implementation, regulation, trade negotiations, investment promotion, export promotion, industrial development, and small and medium enterprise (SME) development; and Agency oversight: -responsibility for the Nigerian Investment Promotion Commission (NIPC), Nigerian Export Promotion Council (NEPC), Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), and the Standards Organization of Nigeria (SON).

Governance and management structure: FMITI is led by the Minister who is appointed by the President of Nigeria. The ministry is also divided into departments and units responsible for various functions. These departments and units include the Industrial Development Department, Investment Promotion Department, Trade Department, and the Small and Medium Enterprises Development Department. The management structure consists of the Minister, the Permanent Secretary, and the Directors, who oversee the various departments and units within the ministry. **Strengths:** Promoting economic growth and development; Promoting trade and investment, and supporting the growth of small and medium enterprises; and strong governance structure that is designed to facilitate effective policy implementation and regulation. **Weaknesses:** FMITI faces several weaknesses, including a lack of funding and inadequate infrastructure to support industrial growth and development. Burdened by the array of agencies and departments under its purview, FMITI also faces challenges in effectively implementing policies and regulations in the cocoa economy and in attracting foreign direct investment (FDIs) into Nigeria.

Nigerian Export Promotion Council (NEPC) is a responsible for promoting non-oil exports in Nigeria. Its core mandate is to develop and diversify Nigeria's export base, increase foreign exchange earnings, and create employment opportunities. Functional activities include market research, export development, extension services, export promotion, and export finance.

Governance and management structure: the governance structure of the NEPC is hierarchical, with a Director-General at the top, followed by Directors, Deputy Directors, and Assistant Directors. The NEPC's management structure is organized by departments and expertise areas, such as export development, export promotion, and finance. The agency has a decentralized management structure with zonal and state offices responsible for implementing its activities nationwide. **Strengths** aggressiveness in promoting and deepening the non-oil exports through very focused match-making strategies including regular trade promotions, events and trade fairs in Nigeria and abroad especially in emerging markets. NEPC scores rather well too in creating awareness end-to-end on quality assurance, sustainability and certification. **Weakness:** NEPC's hierarchical governance structure may limit innovation and responsiveness to changing market conditions, and its management structure may lead to silos and lack of coordination between departments. Furthermore, NEPC ought to be the clearing house for end-to-end trade and supply chain data on all Nigeria's exportable products.

Central Bank of Nigeria (CBN) is the primary financial regulatory body in Nigeria, responsible for maintaining financial stability, promoting economic growth, and controlling inflation. The primary mandate of the CBN is to ensure price stability and maintain the value of the Nigerian currency. Additionally, the CBN is responsible for maintaining the soundness of the Nigerian banking system and promoting financial inclusion. Functional activities: include issuing and regulating the Nigerian currency, supervising and regulating financial institutions, maintaining monetary policy, and promoting financial stability. The CBN also manages the country's foreign reserves, acts as a banker and financial advisor to the Nigerian government, and develops policies and programs to support economic growth and development.

Governance and management structure: The CBN is governed by a board of directors, which is appointed by the Nigerian president with the approval of the Senate. The board is responsible for setting the policies and objectives of the CBN and ensuring that they are carried out. The governor of the CBN is also a member of the board and serves as the chief executive officer of the bank. Management Structure: The CBN's management structure is organized into departments and units responsible for carrying out the bank's various functions. The bank's management is headed by the governor, who is supported by deputy governors and executive directors. **Strengths:** The CBN has played a critical role in promoting financial stability and economic growth in Nigeria. The bank has a strong reputation for implemented policies and programs that have helped to increase financial inclusion and the expansion of the non-oil sector. **Weaknesses:** CBN has been criticized for some of its policies and practices. For example, the bank has been accused of implementing restrictive foreign exchange policies that have hindered economic growth and discouraged foreign investment especially for the exporters that don't have a free reign on the management of the export proceeds.

Nigerian Customs Service (NCS) is responsible for managing and enforcing customs regulations in Nigeria. Its mandate is to collect and account for all revenues accruing to the government through customs duties, import and excise duties, and other taxes. Functional Activities: NCS include collection of customs duties, import and excise duties, and other taxes Prevention of smuggling and illegal importation of goods; facilitation of legitimate trade and compliance with trade agreements Enforcement of trade regulations and standards; protection of the Nigerian economy and citizens from harmful goods and activities.

Governance and management structure: The agency is headed by the Comptroller-General, who reports to the Minister of Finance, Budget and National Planning. Management Structure: The Nigerian Customs Service is divided into 6 operational departments, each headed by a Deputy Comptroller-General. These departments are Customs Investigation, Inspection and Enforcement, Tariff and Trade, Customs Intelligence, Excise, Industrial Incentives, and Strategic Research and Policy. There are also other support departments such as Finance and Administration, Human Resources, Information and Communication Technology, and Legal Services. **Strengths:** NCS has a well-defined mandate and functional activities, which have been instrumental in generating revenue for the government. The agency has also made significant strides in improving trade facilitation and compliance with international trade agreements. **Weaknesses:** one of the major challenges faced by the Nigerian Customs Service is corruption, which has been identified as a major hindrance to its effectiveness. The agency also faces issues of inadequate funding and lack of modern technology to effectively monitor and control the borders. Furthermore, the agency is sometimes accused of using excessive force in the enforcement of trade regulations.

Pre-Inspection Agencies (PIAs) are appointed by the CBN and perform several key functions to ensure that the quality of the cocoa beans meets the standards required by the international market. These functions include quality control to ensure that cocoa beans meet specific quality requirements by conducting quality control tests to check for moisture content, bean size, bean count, and other parameters; certification: PIAs issue certificates to confirm that the cocoa beans have met the required quality standards; verification of the quantity cocoa beans that are being exported by weighing the beans and ensuring that they match the declared quantity; sampling of the cocoa beans to be analyzed in accredited laboratories to verify the quality of the beans and pest control to ensure that the cocoa beans are free from pests and other contaminants by conducting inspections at the farms and warehouses.

Strengths: Quality Assurance PIAs ensure that only high-quality cocoa beans are exported, which has recently helped to redeem Nigeria's reputation as a reliable exporter of quality cocoa bean; as regards standardization PIAs ensure that the cocoa beans meet the international standards required by buyers, and as a build-up to the certification by the national and subnational produce inspection, the certification provided by PIAs is not only recognized and accepted internationally but the reinforces the overall quality assurance process. **Weaknesses:** High cost of services provided by PIAs makes it prohibitive for cooperatives and MSMEs; there are a limited number of PIAs in Nigeria, which can make it difficult for exporters to access their services; and process of obtaining pre-inspection services can be time-consuming, which can delay the export process and increase costs for exporters.

Federal Produce Inspection Services (FPIS) a uniformed regulatory Federal Government agency with objectives to- (a) enforce grades and quality standards of produce and commodities for shipment; (b) monitor and inspect produce and commodities for export before shipment; (c) boost international trade to generate revenue for government through commodity exportation and payment of requisite taxes. Functional[100] activities:- include standardization, quality check-testing, spraying and dis-infestations, monitoring and evaluation of produce movement, rendering statistical data to Export Commodity Coordinating Committee (ECCC), ensure payment of mandatory levies, laboratory Services, certification, levy enforcement, training of Warehouse/Store-Keepers; and Licensing of warehouse and mills.

Governance and management structure: FPIS is headed by a Chief Produce Officer who reports to the Board of Directors appointed by the presidency. FPIS maintains decentralized organizational structure with the administrative headquarters in Abuja, operational headquarters in Lagos and zonal and state offices nationwide. **Strengths:** has a team of experts who are knowledgeable about the industry and possess the skills to inspect and certify the quality of cocoa; good reputation and regulatory authority to enforce regulations and standards for cocoa production and trade and interdependence which helps to maintain quality and prevent fraud; and appropriate Infrastructure for inspection and certification.

[100] FPIS's mission is to technically conduct quality checktest and fumigation on all agricultural produce meant for export to ensure they conform to prescribed exportable standards; while its vision is to regulate and ensure that only good quality agricultural produce that meet national and international quality standards are exported out of or imported into Nigeria thereby creating foreign exchange earnings and employment to Nigerians that are involved in either export or processing of agricultural produce.

Weaknesses: FPIS is plagued by limited resources, lack of modern technology to brace up to the emerging standards in the cocoa sector and lack of inter-agency collaboration in the compilation and reportage of export data.

The State Produce Departments typically come under the state ministries of agriculture, and in few cases under the ministry of commerce. The produce departments are responsible for the primary quality assessments and classification of cocoa through the process of grading in line with national and international standards. The produce department intervenes at the designated registered cocoa grading stores of the LBA, FO or and Exporter. The process involves supervision of bagging weighing and labelling to conform to export quality specification. The produce department is also responsible for record keeping and data on the output and graded cocoa as well as all VC actors in the state. **Governance and management structure** vary from state to state. However, they are typically headed by a Director, who reports to the Commissioner for Agriculture through the permanent secretary of the ministry of agriculture. The departments are staffed primarily various cadres of produce inspection officers and field staff strategically located in the nooks and crannies of cocoa producing LGAs. **Strengths** lies in the quality control, certification at the farmgate and at merchant stores and revenue generation responsibility through grading fees, levies and registrations. **Weaknesses:** Inadequate funding and resources to carry out their mandate effectively, limiting their capacity to achieve their objectives. Limited coordination between the departments and other stakeholders in the agricultural value chain, leading to suboptimal outcomes. Insufficient training and capacity building opportunities for the departments' staff, hindering their ability.

National Agency for Food and Drug Administration and Control (NAFDAC) is responsible for regulating and controlling the manufacture, importation, exportation, distribution, advertisement, sale, and use of food, drugs, cosmetics, medical devices, and chemicals. NAFDAC's mandate is to safeguard public health by ensuring that only safe, effective, and wholesome products are available to the Nigerian public. The agency achieves this by: regulating and controlling the manufacture, importation, exportation, distribution, advertisement, sale, and use of food, drugs, cosmetics, medical devices, and chemicals. Conducting laboratory tests on products to ensure their safety, efficacy, and quality. Conducting inspections of manufacturing and distribution facilities to ensure compliance with Good Manufacturing Practice (GMP) and Good Distribution Practice (GDP). Seizing and destroying counterfeit and substandard products and Educating the public on the dangers of fake and substandard products.

Governance and management structure: NAFDAC is headed by a Director-General who is appointed by the President of Nigeria. The Director-General is responsible for the day-to-day management of the agency and reports to the Federal Ministry of Health. The agency is governed by a board of directors that provides strategic direction and oversight. **Strengths:** NAFDAC has significantly reduced the incidence of counterfeit and substandard products in Nigeria. The agency has improved the quality of locally manufactured products by enforcing GMP and GDP standards. NAFDAC has established a robust laboratory system that is capable of conducting tests on a wide range of products. The agency has a strong public education program that has helped to raise awareness about the dangers of counterfeit and substandard products. **Weaknesses:** NAFDAC is underfunded and understaffed, which limits its capacity to carry out its mandate effectively. NAFDAC's regulatory processes can be slow and bureaucratic, which can discourage investment in the Nigerian market. The agency's enforcement activities can be inconsistent and sometimes arbitrary, which can create uncertainty for businesses operating in Nigeria. For the cocoa sector, there needs to be coordination and synergy with CRIN with regard to the regulation, certification and approval of agrochemicals.

Nigerian Agricultural Quarantine Service (NAQS) is a responsible for the inspection, certification, and quarantine of agricultural products and commodities in Nigeria. The agency was established in 1964 under the FMARD to protect Nigeria's agricultural industry from pests and diseases, and to ensure that agricultural products exported from Nigeria meet international standards. The mandate of NAQS is to prevent the introduction and spread of plant pests and diseases, animal diseases, and any other harmful organisms that may affect Nigeria's agricultural productivity and trade. **Functional activities:** - include inspection, certification, and quarantine of agricultural products and commodities at ports of entry and exit, as well as within Nigeria. The agency also conducts pest and disease surveillance, provides pest control services, and collaborates with other government agencies and stakeholders to promote the development of Nigeria's agricultural sector.

Governance and management structure:-NAQS is governed by a board of directors appointed by the presidency, with a Director-General (DG) as the chief executive officer (CEO). The agency has a decentralized management structure with zonal and state offices responsible for implementing its activities at the local level. **Strengths:** - One of the strengths of NAQS is its role in protecting Nigeria's agricultural industry from pests and diseases, which is critical for ensuring food security and facilitating trade. The agency has also implemented several measures to improve the quality of Nigerian agricultural products and enhance their competitiveness in the global market. **Weaknesses:**-However, NAQS faces several challenges, including inadequate funding, limited capacity and resources, and the need to improve its operational efficiency and effectiveness. The agency also needs to strengthen its collaboration with other stakeholders, including farmers, traders, and other federal and state government agencies, especially the state produce departments to achieve its mandate effectively.

Functions and Service Providers across the Cocoa Sector:

Value Chain Licensing Qualification for business in the cocoa ecosystem involves a series of licenses, permits and registrations across a number of institutions at national and subnational levels that qualify the value chain actors for operation in the cocoa value chain. The organizations involved and accompanying functions are as follows:

S/N	Organizations	Jurisdiction	Functions
1	Corporate Affairs Commission (CAC)	Federal	*Issues certificate of incorporation that enables the company operate as a legal entity*
2	Nigerian Export Promotion Council (NEPC)	Federal	*Issues the export license based on compliance with the statutory conditions*
3	Federal Inland Revenue Services (FIRS)	Federal	*Registers companies for the purposes of tax assessments, returns and compliance*
4	Central Bank of Nigeria (CBN)	Federal	*Through the commercial bank trade documentation and other regulatory agency certification, the CBN registers and approves companies for the purpose of export documentary services, foreign exchange proceeds repatriation*
5	Nigerian Customs Service (NCS)	Federal	*Registers companies for the purpose of export trade documentation, facilitation and the collection of export levies and charges*
6	NAFDAC	Federal	*Certifies the use all imported and locally manufactured crop protection products as well as cocoa beans and derivatives for export*
7	Cocoa Research Institute of Nigeria (CRIN)	Federal	*Sole agency for testing and approving authority for recommending agrochemicals to be used and regulates the use of crop protection products and service providers (input providers) in the cocoa sector*
8	Federal Produce Inspection Services (FPIS)	Federal	*Certifies cocoa beans and derivatives for export in line with prescribed and contractual quality standards*
9	The Nigeria Agricultural Quarantine Service (NAQS	Federal	*Registers companies for the purpose of quarantine and SPS quality assurance certification*
10	Nigeria Drug Law Enforcement Agency (NDLEA)	Federal	*Registers companies for the purpose certifying the shipment in line with its standard operating procedure (SOP)*
11	Pre-Shipment Inspection Agents (PIAs)	Private	*Registers companies for the purpose of pre-shipment compliance and certification*

S/N	Organizations	Jurisdiction	Functions
12	Produce Departments (under the Ministry of Agric or Commerce)	State	*Registers companies for the purpose of produce inspection, certification and collection of grading fees, levies, permit, warehousing and storage fees and logistics fees*
13	State Inland Revenue Services	State	*Registers companies for the purposes of state and local government area (LGA) tax assessments, returns and compliance*
14	State Ministry of Commerce	State	*Registers companies in line with commercial and industrial polices of the state government and registration premises, business permits, signage and other statutory levies and fees*
15	Department of Cooperatives (under Ministry of Commerce or Cooperatives)	State	*Registers cooperatives in line with the state cooperative policies, certification and collection of permits and levies*

Land development, tree renewal and health: The Land Use Act of 1978 vests all land within the territory of each state (except land vested in the GON or its agencies) solely in the Governor of the State, who holds such land in trust for the people and is responsible for land allocation in all urban, per-urban and rural areas to individuals and organizations for residential, agricultural, commercial, recreational and other purposes. The Act also provides for the principles of land tenure, powers of the Governor in relation to land, control and management of land advisory bodies, and designation of urban areas. The institutions involved and functions are described below:

S/N	Organizations	Jurisdiction	Functions
1	Governor's Office	State	*All power of land allocation, land control, land tenure and management vested in the state governor*
2	Ministry of Lands and Housing	State	*Mandate to ensure the sustainable management and utilization of lands, forestry and wildlife resources*
3	Department of Forestry	State	*Manages the state forest reserves in line with the environmental, deforestation mitigation, afforestation and revenue generation policies*
4	Ministry of Agriculture (CDUs and/or TCUs)	State	*Responsible for multiplication and distribution of hybrid cocoa seedlings and pods through seed gardens and community nurseries; GAP training*
5	State Cocoa Programs	State	*Driving the rehabilitation and regeneration policy through the establishment and management of seed gardens, community nurseries and commercial cocoa plantations (Ondo is currently establishing an 8,000 ha plantation)* *Supervision and allocation of farming lands under Cocoa Owned Cocoa Plantations totaling 20,000ha on sharecropper tenancy basis to cocoa farmers in Cross River and Ondo State and distribution of seedlings*
7	Rural Access and Agricultural Mobility Project (RAMP) under FMARD	Federal	*Project aims to improve rural access and agricultural marketing in Nigeria through the rehabilitation and maintenance of rural transportation infrastructure*
8	Cocoa Research Institute of Nigeria (CRIN)	Federal	*Sole sector mandate holder and involved in high quality research activities covering hybrid development, appropriate farming system, irrigation technology, rehabilitation, soil survey and land evaluation soil fertility and farm establishment. CRIN operates and maintains outstations and seed gardens across cocoa producing states*
9	Farmer Associations/ Cooperatives and Smallholder Producers (SHPs)	Non-State	*Beyond the normal cocoa farm husbandry activities, they are involved in rehabilitation of community based nurseries of ancestral, community and sharecropper farmlands*
10	Private Investors/VC Actors	Non-State	*Acquisition, regeneration, expansion and management of state-owned cocoa estates and private plantations with the deployment of tenant farmers and agroforestry practices*

Inputs (research, development, multiplication and distribution):

S/N	Organizations	Jurisdiction	Functions
1	Cocoa Research Institute of Nigeria (CRIN)	Federal	*Sole sector mandate holder in hybrid and operates and maintains outstations and seed gardens across cocoa producing states for multiplication and distribution purposes. In 2010, CRIN released 8 new improved and highly prolific varieties known as TC 1-8*
2	FMARD, FPIS, NEPC	Federal	*In collaboration with CRIN, ad-hoc sponsorship of multiplication and distribution of improved seedlings to farming groups during training and awareness creation programs*
3	Ministry of Agriculture (CDUs and/or TCUs) and State Cocoa Programs	State	*Responsible for multiplication of improved cocoa seedlings and pods through seed gardens distribution through community nurseries and GAP training to cooperatives and farmer Groups*
4	International Institute for Tropical Agriculture (IITA)	International	*Collaborates with CRIN, industry partners and other donor-led (IDH, ACI) research activities in gene-bank development and soil fertility*
5	Partnership Initiatives for the Niger Delta (PIND)	International	*Collaboration with CRIN to strengthen the market system for the production, multiplication and deployment of quality seeds in the cocoa sector through the development, licensing and institutionalization of seed entrepreneurs*
6	FOs/Cooperatives and Smallholder Farmers (SHFs)	Non-State	*Management of community based nurseries and distribution of seedlings to member farmers at subsidized rates*
7	Cocoa Farmers Association of Nigeria (CFAN)	Non-State	*In collaboration with CRIN substations multiplication and distribution of improved seedlings to member state affiliates across the cocoa producing states*
8	Private Sector/Exporters/ Processors	Non-State	*Under outgrower schemes and in collaboration with CRIN (and state TFUs) multiplication and distribution of improved seedlings to cooperatives and farmers*

Extension and Capacity Building:

S/N	Organizations	Jurisdiction	Functions
1	Cocoa Research Institute of Nigeria (CRIN)	Federal	*CRIN provides a series of extension, capacity building and awareness creation training programs ranging from GAP, community nursery husbandry, cooperative management, commodity trade literacy, record-keeping, value addition and on-farm by-product literacy, phone-in programs and television documentaries, establishment of adopted village schools, industrial attachments, cocoa processing training for quality flavour and research finding dissemination. The target outreach ranges from smallholder farmers, cooperatives, export companies, to agric students, extension service providers from public and private sector, input providers to teaching in secondary and tertiary agricultural colleges. To promote and sustain quality, CRIN hosts the Cocoa Excellence Program in Nigeria*
2	Federal Department of Agricultural Extension (FDAE)	Federal	*In collaboration with state FMARD office and the ADPs, it provides extension services to farmers. Recently it developed e-training extensions tools and trained State agric ministry and ADP staff for onward deployment in the cocoa producing states*
3	FMARD, FPIS, NEPC, NAFDAC, NAQs	Federal	*In collaboration with CRIN, ad-hoc sponsorship of GAP training during training and awareness creation programs on export quality and certification compliant cocoa beans*
4	CBN/NIRSAL	Federal	*In collaboration with CRIN, state ADPs/TFUs provision of GAP, business education, financial literacy, pruning and spraying gangs services, and cooperative management training under embedded value chain financing*

S/N	Organizations	Jurisdiction	Functions
5	Ministry of Agriculture (CDUs and/or TCUs) and State Cocoa Programs	State	*In collaboration with donor organizations and private companies, ADPs provide GAP, business education and financial literacy training to cocoa farmers. The ADPs have enjoyed worthwhile collaborations with the IITA-led Sustainable Tree Crop Program (STCP) Farmer Field School (FFS); German International Cooperation (GIZ) for the Farmer Business Schools (FBS); the World Cocoa Foundation (WCF); Olam, Rainforest Alliance, Barry Callebaut, Sucden, Tulip, ETG/Beyond Beans, Cocoanet and domestic frontline exporters such Agrotraders, AFEX, Sunbeth etc.*
6	Produce Departments	State	*Trains farmers on quality assurance and proper storage and handling*
7	Department of Cooperatives (under Ministry of Commerce or Cooperatives)	State	*Provides periodic cooperative management training, leadership and institutional capacity building to cooperatives and farmer groups They also provide these services in collaboration with donor agencies and NGOs*
8	Cocoa Farmers Association of Nigeria (CFAN)	Non-State	*In collaboration with CRIN and FMARD, CFAN produced GAP training manuals for onward distribution to its farmgate communities across all the cocoa producing states. CFAN in collaboration with the ADP offices nationwide provides follow-up GAP and cooperative management training in accordance with cocoa calendar.*
9	Private Sector/Exporters/ Processors	Non-State	*Under outgrower schemes and in collaboration with the ADPs, Rainforest Alliance (RA) and other certification companies; project farmers receive dedicated access to GAP sustainable cocoa practices, cooperative training, , business education and certification protocols*
10	Input Service Providers	Non-State	*Under outgrower schemes and in collaboration with the ADPs farmers receive training on safe pesticide, integrated pest management (IPM) and agrochemical training, pruning services, spraying service management*
11	Rainforest Alliance/donor industry	International	*Undertakes training sessions on certification and climate-smart protocols and in line with program mandates*

Output Quality Standards:

S/N	Organizations	Jurisdiction	Functions
1	Cocoa Research Institute of Nigeria (CRIN)	Federal	*In line with its mandate, regulates and approves the use of agrochemicals and service providers. Through its flavour lab, it also undertakes to develop and train on the production of high-quality cocoa beans*
2	NEPC	Federal	*In collaboration with CBI, UNIDO, CRIN and UK other local partners, NEPC conducts various awareness creation and advocacy training sessions on certification, sustainability and quality for various VC actors on FSMS, QMS, DCTS amongst others*
3	FPIS, NAFDAC, NAQs, SON, NDLEA and PIAs	Federal	*In accordance with their mandates and at various nodes of the trade chain, these organizations certifies Nigerian origin cocoa beans and derivatives for export*
4	Produce Departments	State	*Certifies and grades cocoa beans at the farmgate stores and merchant/exporter warehouses in the peri-urban and urban centres*
5	LBAs, Exporters, Processing companies	Non-State	*Ensures that good warehouse/storage practices, appropriate handling and logistics are maintained*
6	SHFs/Cooperatives	Non-State	*Adherence to GAP and post-harvest protocols*

Pricing:

S/N	Organizations	Jurisdiction	Functions
1	Central Bank of Nigeria	Federal	*Forex management policies defines the exchange rate of the Naira to the dollar*
2	Exporters/Processors	Non-State	*Based on their export contracts, FOB prices and the prevailing Naira/$ exchange rate, these organizations engage the LBAs*
3	LBAs	Non-State	*Based on the closing price of the previous season, contract price from exporter/processor, the prevailing Naira/$ exchange rate, prediction on harvest based on weather conditions, LBAs set the prices for the farmgate in line with the prevailing percentages to global prices at the Nigerian cocoa farmgate*
4	SHFs/Cooperatives	Non-State	*Due to the fact that cooperatives and smallholder farmer groups have dedicated and pre-sold arrangements with the LBAs on account of off-season, advance payments and pre-shipment finance support, they are essentially price-takers but are guided by a minimum farmgate that is in keeping with traditional percentages to the global prices*

Financing:

S/N	Organizations	Jurisdiction	Functions
1	Central Bank of Nigeria	Federal	*Provides a robust bouquet of intervention funds to trigger non-oil export finance for upstream, midstream and downstream activities*
2	NIRSAL	Federal	*Offers credit facilities to fund factory operations and stockpiling working capital and insurance facilities. Through the Anchor Borrowers Program (ABP), NIRSAL provides embedded value chain financing to processors, exporters and LBAs and cooperatives and input service providers*
3	NEXIM	Federal	*Provides single-digit stockpiling facilities, credit guarantees and insurance facilities and financial services to exporters and LBAs as well advisory services*
4	Bank of Industry (BoI)	Federal	*On-lends the CBN intervention funds to finance equipment, machinery and processors and chocolatiers*
5	Bank of Agriculture (BoA)	Federal	*On-lends the CBN intervention funds and the ABP funds to finance upstream production and stockpiling activities of cooperatives and producers groups*
6	State Credit Agencies	State	*Provide credit facilities cooperatives and farmer groups*
7	Commercial Banks/Micro-Finance Banks	Non-State	*Provides working capital facilities and on-lends the intervention funds and ABP facilities to processors, exporters, LBAs, cooperatives and input providers*
8	Exporters/Processors	Non-State	*Provides pre-shipment/offtaker finance to LBAs/cooperatives to mobilize and trigger up-country cocoa buying activities*
9	LBAs	Non-State	*Provides off-season funding to tide over farmers during the hunger months and to meet other household needs and advance payments for inputs, agrochemicals production and post-harvest activities. Repayment for these funds are in cocoa*
10	Private Equity Firms	Non-State	*provide institutional funds, bonds and venture capital for exporters, processing companies and chocolatiers*
11	Money-Lenders/Family	Non-State	*provide emergency loans to pressing business and household needs*

Storage:

S/N	Organizations	Jurisdiction	Functions
1	Farmer Organizations	Non-State	*Operate and manage on-farm and off-farm stores as collection centres at the farmgate*
2	Factors/LBAs	Non-State	*Own operate and manage village stores and peri-urban collection centres and warehouses as transit nodes for onward delivery to exporters and processors*
3	Exporters/Processors	Non-State	*Own and manage warehouses as collection centres for logistic and handing for onward shipment to the port or in the case of processors; stockpiled as feeder stock.*
4	State Cocoa Programs	State	*Own storage and warehouse facilities in strategic cocoa producing locations for renting and business purposes*

Marketing and Export:

S/N	Organizations	Jurisdiction	Functions
1	Commercial Banks	Non-State	*Contact point for the initiation and documentation of the export transaction*
2	Central Bank of Nigeria	Federal	*The custodian of export documentation and clearing house for export transactions*
3	NEPC	Federal	*Critical node in the export documentary procedure*
4	FPIS, NAFDAC, NAQs, SON, NDLEA and PIAs	Federal	*Certifies the produce for export*
5	Forwarding Agent	Non-State	*Facilitates the logistics, transportation and documentation of the produce from exporter warehouse to the export terminal port*
6	Export houses/Processors	Non-State	*Secondary processing, warehousing, logistics to export*

Promotion:

S/N	Organizations	Jurisdiction	Functions
1	FMITI	Federal	*By its status as the responsible ministry for a number commodity related international organizations namely, ICCO, ISO, Cocoa Producers Alliance (COPAL); Common Fund for Commodities (CFC), International Trade Association (ITA), Federation of Cocoa Commerce (FCC), European Cocoa Association (ECA), Cocoa Merchants Association of America (CAMA) FMITI occupies a strategic position as the focal point of the Nigerian cocoa ecosystem*
2	NEPC	Federal	*NEPC organizes trade promotion activities such as match making road shows, trade fair participations, buyer-seller meet, trade missions (incoming and outing), contact promotion programs recently it opened trade offices abroad*
3	CRIN	Federal	*As the host organization of the Cocoa Excellence Program*
4	Trade Associations	Non-State	*Deploy awareness creation, advocacy and lobbying*
5	Eti-Oni Development Group	Non-State	*Organizes the yearly Eko Chocolate Show in Lagos to showcase the attributes of the Nigeria cocoa, derivatives and chocolate*

Taxes and Duties:

S/N	Organizations	Jurisdiction	Functions
1	Federal Inland Revenue Services (FIRS)	Federal	*Collection of tax and levies*
2	Nigerian Customs Service (NCS)	Federal	*Documents and collects of export duties, levies and charges*
3	NAFDAC, NAQs, FPIS, NEPC, NDLEA, PIAs, NESS	Federal	*Statutory levies and charges paid by exporters for services rendered*
4	Commercial Banks	Non-State	*Bank charges and management fees for export documentary activities*
5	Produce Departments (under the Ministry of Agric or Commerce)	State	*Collection of grading fees, levies, annual business permit, warehousing and storage fees*
6	State Inland Revenue Services	State	*Collection of taxes at state and LGA levies.*
7	State Ministry of Commerce	State	*Collection of registration premises, business permits, signage and other statutory levies and fees*
8	Department of Cooperatives (under Ministry of Commerce or Cooperatives)	State	*Collection of registration charges and levies*
9	Cocoa Association of Nigeria	State	*Membership registration fees*
10	Local Government Areas (LGAs)	LGA	*An assortment of taxes and levies*

Monitoring and Reporting:

S/N	Organizations	Jurisdiction	Functions
1	CBN	Federal	Repository of all export transactions
2	NEPC	Federal	Collates cocoa export data for the EEG documentation and processing
3	FPIS, NCS, PIAs	Federal	Collates export data and reports to the CBN for export documentary purposes
4	CRIN	Federal	Undertakes various research exercise and renders annual on the findings. Conducts surveys and reports annually the last comprehensive cocoa survey was conducted in 2007.
5	National Bureau of Statistics (NBS)	Federal	Collates all production, demographic and export data and reports on annual basis
6	State Produce Departments	State	Collates data on cocoa beans graded in the states on annual basis
7	ADPs	State	Prepares M&E reports on its activities and reports on annual basis

Historical Evolution of the Cocoa Sector

West Africa Cocoa Research Institute (WACRI) 1944: The Nigerian Substation of WACRI with headquarters at Tafo, Ghana was established in Ibadan, Oyo State with responsibility to conduct research to facilitate production of disease resistant cocoa varieties in Nigeria.

Nigerian Cocoa Marketing Board (1947): The Nigerian Cocoa Marketing Board was established by the colonial administration to among other responsibilities, buy and distribute export cash crops. It's however instructive to mention here that the first cocoa farms were in Bonny and Calabar (Southsouth geo-political zone) but as the area was found unsuitable, cocoa cultivation successful in Lagos from 1880 and later on spread northwards towards Agege (greater Lagos area) and Ota and Abeokuta (present day Ogun State). The first cocoa export was in the 1880s but it wasn't until after the first-world war that it gained prominence. By the 1920s, 50,000mt were exported annually, which rose rapidly to 100,000 by the 1930s. To exert market control, the British established the export produce control boards in 1939 that transformed in value chain specific boards after the second-world war.

Western Region Marketing Board (1954-1976): The Western Region Marketing Board was established to replace the defunct Nigerian Cocoa Marketing Board as part of a political restructuring that expanded the administrative capacities of the Western Region Government. The marketing board mechanism was designed as a seamless delivery of embedded and critical farmgate needs (production credit, inputs, fertilizers, agrochemicals, working capital, training, capacity building and social investments) in exchange for supply of consistent good quality produce at the required volume and at a pre-determined price. Between 1954 until the mid-60s, it is on record that Nigeria was the second largest producer of cocoa in the world. By 1970/71 cocoa output reached a peak of 317,000mt and plummeted to 100,000mt in 1986/87 trading year. The massive decline was primarily as a consequence of the oil boom and massive rural-urban migration; unattractive producer prices on account of the failure of the price stabilization policy to compensate farmers for spikes in global prices-farmers were receiving less than 20% of global prices, deteriorating productivity arising from aging trees, increasing incidences of black pod disease, and a market shift away from commodities.

Cocoa Research Institute of Nigeria (CRIN (1964 to date): CRIN was established as legacy research institution to the WACRI, which had transformed to CRIG after the Ghanaian independence. CRIN's mandate was expanded to coffee and kolanut and subsequently to cashew and tea in 1975. In the 60s, 70s and early 80s, it is safe to say the CRIN was well funded and discharged its mandate creditably, but its fortunes began to slide with the prominence of the oil sector.

The Nigerian Cocoa Board (1977 to 1986): The Nigerian Cocoa Board was established to replace the Western Nigerian Marketing Board with mandate to 1) stabilization of produce prices against vagaries in global marketplace; 2) stabilization of producer incomes; 3) development of export producing companies; 4) research and development. Aside from the core regulatory, procurement and marketing functions, other activities included, input supply, quality assurance, farmgate infrastructural development, cooperative management and financial services. In essence, the National Cocoa Board had monopoly on a) domestic procurement, sales and export of cocoa beans; b) quality inspection at the farmgate, and across the trade chain to the ports; and c) procurement and onward delivery of approved inputs to the farmgate.

Structural Adjustment Program (SAP) Era (1986 to 2000): In keeping with the foreign exchange, trade and agricultural sector reform thrust and paradigm shift towards the free-market system and in response to drawbacks of the price equalization policy, which didn't reward cocoa producers for upward swings in global cocoa prices; the Nigerian Cocoa Board was scrapped. The basic objectives of SAP were to:- 1) restructure and diversify the productive base of the economy in order to reduce dependence on oil; 2)reduce government involvement in unproductive investment; 3) encourage non-oil exports especially, agricultural products; and 4)improve the agricultural sector's efficiency as well as intensify the growth potential of the private sector. The main elements of SAP were the exchange rate deregulation, liberalization of export trade, reduction in extra-budgetary expenditure, withdrawal of subsidies and the privatization of public enterprises. Nonetheless, the post-liberalization era did more damage[101] to the hitherto well-structured cocoa economy. It was characterized by inadequate on cocoa farm assets, low income and limited level of diversification, unstructured trade and weak and poorly coordinated farmer organizations, inadequate support services and the prevalence of sharecroppers.

[101] The immediate impact of the deregulation was a 300% increase in the cost of maintaining cocoa farms while producers prices increased by about 800%. Furthermore, the accompanying gross margin analysis (Oguntade) indicated a gross margin of N1,585/ha in 1989 representing a whopping 1410% increase from N105 in 1985.

Cocoa Association of Nigeria (CAN) (1986 to date) is the umbrella body of all the actors (upstream, midstream and downstream) was established primarily to fill the vacuum created by the defunct cocoa board. Unfortunately, CAN did not have the mandate to enforce regulatory authority, nor carry out the functions of the defunct Cocoa Board. Hence, the cooperative structure that sustained the upstream activities disintegrated, quality suffered, production nose-dived and Nigerian-origin cocoa beans no longer commanded premium prices. This led to a proliferation of cocoa trade associations and splinter umbrella bodies for farmers, exporters, traders and processors trying to fill the vacuum created by the abolition of the cocoa board. Yet, at another level, unhealthy rivalry and mandate overlaps amongst the MDAs at the national and state levels hampered collaboration and purposeful oversight and governance for the sector.

With the disintegration of the well-structured and seamless value chain mechanism inherited from the marketing board, Nigeria is widely reputed as the most precarious business terrain, a most misunderstood cocoa ecosystem riddled with policy somersault, lack of a clearing (and regulatory) agency and central and up-to-date information/ knowledge database, trade and market information asymmetry, old trees and aging farmers, rent-seeking middle men, price instability, deplorable rural road networks, unattractive tax regime, poor quality assurance mechanisms and easy entry and exit conditions and terribly disenfranchised and poverty-ridden cocoa farmgate.

Cocoa Rebirth Program (CRP) (2000 to 2010): To arrest the decline in cocoa output, productivity and quality and sector-wide cohesion and structure and enhance the livelihoods of the cocoa farmgate; the National Cocoa Development Committee (NCDC) –a collaborative effort between the Federal Government of Nigeria (FGN) and 14 cocoa producing states was established with a specific objective to increase output from 170,000mt to 320,000mt in the short-to medium term and 600,000mt into the long-term and promote domestic consumption of cocoa products. By 2008, output had increased to about 330,000mt and pilot school feeding program (SFPs) to trigger domestic consumption had commenced in some states. The production spike was achieved through massive rehabilitation, new plantations of high yielding and early maturing varieties, subsidized farming inputs and agrochemicals, extension services and cooperative training.

Cocoa Transformation Agenda (CocTA) (2011 to 2014): Building on past interventions, CocTA, the cocoa component of the Agricultural Transformation Agenda (ATA) was designed as an end-to-end value-chain undertaking to effectively engage and provide support all stakeholders from research, input suppliers, farmers, marketers and processors as well as addressing the various inefficiencies in the sector. The key goals were to increase country output to 500,000mt, improve the livelihood of 100,000 farmers by increasing the yield per hectare and cocoa income by US$450 every year in 250,000 farm households, create 390,000 jobs to the Nigerian Cocoa ecosystem by doubling production, increasing capacity of in-country grinders and improving cocoa marketing. Between 2010 and 2015, cocoa production stabilized at an average of 242,750mt. And even though production ambition was not realized, the highpoints were 1) CRIN launched 8 new cocoa hybrid varieties (TC1-TC8), which have many distinguishing characteristics: early yielding, drought and disease resistant, high butter content, good aroma and can produce anywhere between 1.5 to 2mt/ha; 2) 3.4million hybrid cocoa pods were supplied to farmers; 3)Growth Enhancement Support Scheme (GESS) a liberalized and wallet based input distribution (eliminated rent-seeking middlemen) and ensured farmers received approved inputs and agrochemicals at subsidized rates; 4) farmgate uptake of outgrower schemes and sustainability projects; 5); increase in certified cocoa export; and 6) improved DPPPs between the FMARD and the development[102] community.

In contrast, the rejection of the blueprint of the governance/regulatory agency (tagged the Cocoa Marketing and Trade Corporation "CMTC") by the presidency was indeed the major low point of the CocTA policy era. Nonetheless, on account of the "farming-is-business" mantra of the Dr. Akin Adesina-led FMARD, which was widely adopted the period also witnessed the establishment of regional and sub-national cocoa programs (Cocoa Revolution Program (CRP) of Ondo State and enhanced farmgate diversification, and SME-led bean-to-bar chocolatiers and Osun State Produce Agency amongst others.

[102] The World Cocoa (WCF), African Cocoa Initiative (ACI), TechnoServe, Croplife and German International Cooperation (GIZ) on critical dimensions ranging from soil fertility, crop protection, extension services (technical, business and cooperative management education), climate change adoption and mitigation and access to finance.

Global Cocoa Agenda (GCA) (2017 to 2021): Following Nigeria's accession to the GCA that dimensioned sustainable cocoa production, sustainable cocoa industry, sustainable cocoa consumption in origin countries and strategic cocoa sector management as the protocols that would guarantee a sustainable cocoa ecosystem and the Abuja International Cocoa Summit, the attainment of the 500,000mt by 2021 and the need to develop a 10-year development became centre stage. Under ICCO's watch, this resolution culminated in the formulation of a national cocoa plan that was developed through an all-inclusive and participatory approach that involved all the cocoa value chain actors (producers, cooperatives, traders, exporters, processors, wholesalers, research institutions, trade associations, national and state MDAs and NGO and the development community).

The ten-year (2019-2028) National Cocoa Plan103 (NCP), recommended the establishment of a central clearing house to manage the cocoa economy. The key goals were to grow Nigeria's share of the global cocoa marketplace by increasing output to 714,000mt by 2028, expand cocoa farmholding to 905,000ha, improve incomes for 350,000 active farm households, and create 500,000 new jobs along the value chain through increased production, in-country grinding, value addition, marketing activities and domestic consumption. Unfortunately, the NCP, which was roundly endorsed by ICCO and Afrieximbank for funding is still on the pretty much on the drawing table due largely to the change in government (from the Jonathan-led Peoples Democratic Party (PDP) in 2015 to the Buhari-led All Progressive Congress (APC) and the agricultural policy thrust that was skewed towards reversing food security challenges and the need to radically increase the domestic production of rice, wheat, cotton, fish, dairy, fish value chains that was putting a yearly $9.3billion drain on the foreign exchange (FX) reserves from importation. Inadvertently, due to lack of funding CRIN became hamstrung and limited in its overall relevance to the cocoa economy. Nonetheless, the partnership with WCF led to the establishment of a state-of- the-art cocoa flavour laboratory, which is touted to be the best in West Africa is expected to help farmers get premium prices for specific flavours of cocoa and enjoy the benefits of good farm husbandry. Similarly, the Ondo State Cocoa Council (OSCC) was established as state-led PPP intervention and clearing house agency [104] in 2021 to arrest the decline in the Ondo State Value chain.

National Cocoa Management Committee (NCMC) (2022 to date): In the Post COVID era, the agricultural sector is experiencing a refreshing reawakening. This is occasioned by the Government of Nigeria's (GON) resolve to radically shore-up its non-oil foreign earnings as one of the critical measures to confront the economic headwinds, the depreciating Naira/dollar exchange value and the lingering recession. For the cocoa sector, this is contemplated through a number of donor and PPP initiatives to shore-up country output in the near-term, integrate the LID at the farmgate and institutionalize the governance and coordination mechanism that will drive the GCA, restore sector-wide cohesiveness and global marketplace credibility. Accordingly, the sector is witnessing the emergence of new realignments amongst critical stakeholders, improved solidarity between the MDAs especially FMARD, FMITI and the core trade associations all amidst, the entry of new actors (namely, global trading house affiliates, aggregation, intermediation companies, traceability and blockchain protocols, agric fin-techs, in-country grinders and chocolate MSMEs).

Under the instrumentality of a National Cocoa Bill that is currently being processed at the National Assembly (NASS), the National Cocoa Management Committee (NCMC) was established to develop the regulation and monitoring of the activities in the country's cocoa sector and make the industry more transparent. However, in a twist of events, this author gathered that NCP document has been approved by the Ministers of FMARD and FMITI and barring any changes it is expected that it will be submitted to the federal executive council for approval before the end of the tenure of the Buhari-led administration.

[103] With overarching philosophy to promote a sustainable cocoa economy that is the leading GDP contributor, through a resurgence in production and industrialization to trigger robust domestic consumption, farmgate prosperity, youth engagement and increased foreign exchange earnings from the export of consistently superior quality beans and products.[103] With overa

[104] With vision To professionalize and transform the Ondo State cocoa value chain into a science-based, technology-driven, bankable, prosperous and sustainable ecosystem that will operate on the basis of globally accepted standards, and become a viable international investment hub.

Under the Ondo State Cocoa Council, plans are currently afoot to professionalize the value chain through the institutionalization of a state-led N25billion Cocoa Bond that will rollout an end-to-end embedded value chain financial offering that will organically link 5,000 well selected SHFs with the in-country grinders. Under the instrumentality of the WRS, a minimum of 15,000mts is expected to be supplied to the aforesaid offtakers in the pilot phase and increasing therefrom in subsequent years. It is hoped that by year-5, the project which is designed as an end-to-end digitally driven and blockchain inspired supply and trade chain will be controlling not less than 50% of the Ondo State output, currently in the 85,000 to 90,000mt production range. The bond also aims to significantly cocoa productivity through the supply and cultivation of prolific cocoa hybrids across well targeted farmer communities and rehabilitation the abandoned state and cooperative warehouse/storage facilities that can professionalize origination activities at assembly and wholesale centres across key producing LGAs and communities upstream. Through the instrumentality of the cocoa bond project, Ondo State is desirous of increasing output from 85,000mt to 150,000mt in the near term and producing world-class quality Ondo State origin beans that will attract premium prices hitherto associated with Nigeria before the free-trade regime.

This period also heralded the commencement of the USDA sponsored USD 21.3 million cocoa productivity and marketing program. The 5-year program tagged Traceability and Resilience in Agriculture and Cocoa Ecosystems of Nigeria (TRACE), which is implemented by the Lutheran World Relief (LWR) in collaboration with CRIN and the International Institute of Tropical Agriculture (IITA) seeks to increase productivity by applying climate smart agriculture and expands the cocoa market through traceability to its source promises alongside the approval of the Ondo State Deep Sea Port promises to be a massive game changer for the Nigeria Cocoa Ecosystem.

The Agricultural Policy of the In-coming Administration (2023 and beyond) As gleaned from manifesto of Asiwaju Bola Ahmed Tinubu, the President-Elect the cornerstone of the agricultural and food security policy direction, which seeks to boost food production and GDP growth of 7% annually rests on 4 pillars that are co-terminus with the cocoa ecosystem and the African Cocoa Exchange, namely:

- The Strengthening the Lagos Commodity and Futures Exchange (LCFE);
- The establishment of regional commodity boards for strategic value chains such as cotton, cocoa, rice, palm kernel and groundnuts;
- Mechanization and agro-allied businesses; and
- Creation of a new set of successor generation farmer entrepreneurs.

SWOT Analysis of Cocoa Sector Regulation

Effectiveness, Efficiency and Sustainability of Cocoa Sector Regulation	
Strengths	**Weaknesses**
• Nigeria is a signatory to international regulatory standards and agreement on child labour, environmental degradation, rural development, achieving Maximum Residue Limits (MRL), cocoa certification, trade and commerce etc.	• Absence of a cocoa specific regulatory framework and central coordinating body
• Despite the acute neglect of the cocoa subsector by the federal government in recent years it still remains the largest non-oil sector foreign (FX) earner	• Mandate overlap and undue rivalry between MDAs at national and sub-national levels and duplication of efforts
• Increasing support from the donor community and increasing development, private, public partnerships (DPPPs) driving niche markets, sustainability, CSR projects and knowledge and database generation	• Lack of interagency coordination resulting in undue duplication of efforts and inefficient use of resources
• Large pool of highly skilled expertise and trained manpower and expertise at the research institutes, universities and the MDAs	• Inconsistencies in the policy thrust and inefficient implementation of export incentives
• Improved stakeholder collaboration between value chain stakeholders and closing of the ranks on many contentious issues	• Unregulated market structure, unstable trade policy and limited reach of inputs, agrochemicals
• Availability of TC1-8 series improved planting material by CRIN that is early bearing at less than 2 years, higher yield potential at 1.3-2.5mt/ha, high butter fat seed yield potential of 56-57%, better disease resistant and more water tolerance	• Inadequate funding to federal and state MDAs especially, CRIN resulting in inadequate R&D and limited reach of extension services and availability of high-quality genetic planting materials
• Increasing certification friendly farmgate has led to sharp increase in certified cocoa exports	• Multiplicity in trade facilitation agencies, foreign exchange restrictions and lack of access to finance for upstream VC operators
• Success of and depth of financial inclusion agency banking, fintech banks and Agritech service providers in the agricultural sector	• Lack of an up-to-date database on the cocoa sector, information sharing and reporting mechanism-poor data quality
	• Proliferation and lack of synergy between CAN and other sub-sector trade associations leading to easy entry and easy exit for traders and exporters
	• Lack of monitoring and evaluation (M&E) and reporting mechanisms
	• Limited private sector partnerships and huge bureaucratic and red-tape bottlenecks impede response to challenges, decision making and policy implementation

Effectiveness, Efficiency and Sustainability of Cocoa Sector Regulation	
Opportunities	**Threats**
• The uptake of mobile phones and digital payments in the rural areas is great opportunity to drive a digital and traceability and blockchain mechanisms	• Lack of policy continuity by successive governments at national and sub-national levels
• Increasing solidarity of the federal and state MDAs on the urgent need and importance of a cocoa coordinating agency is the recipe to transform the cocoa economy in line with the GCAs	• No guidelines on roles and responsibilities of VC actors and absence of enforcement and sanctions
• The commodity exchange policy environment, success of the CMX companies in aggregation and warehouse receipts has introduced a thrust system expected to encourage new tech-enabled agribusiness companies and sector uptake	• Despite favourable policy pronouncements, Lack of attention to climate-smart specific policies as well as traceability, quality assurance, deforestation and child-labour free production,
• The agricultural policy thrust of the incoming government is favourable for the institutionalization of commodity board and commodity exchanges	• Lack of attention to cross-border diffusion, aging farmers and trees, market and information asymmetry, high and multiple taxation and levy regime, value addition, SMEs and domestic consumption and cross-border diffusion
• Climate resilient cocoa economy through carbon sequestration and carbon credits introduced into climate-smart interventions	• Lack of attention to price volatility and contractual disputes between actors
	• Policy inertia to addressing rural road networks and socio- infrastructural deficits and the prohibitive land tenure policy
	• Lack of attention on modern cooperative protocols, successor generation farming population and gender engagement at the farmgate and downstream
	• Policy inertia to stem the increasing insecurity to lives and businesses from herdsmen, banditry, kidnapping and religious and ethnic conflicts
	• Lack of coordination between the state and federal agencies involved in quality assurance and certification of agrochemicals and no sanctions for bad quality across value chain
	• Poor branding and weak public relations on advocacy on Nigerian-origin beans and derivatives
	• Exporters/Processors should be given freedom and flexible to manage their foreign exchange portfolios

APPENDIX I

Other Relevant Policies governing the Cocoa Ecosystem

Commercial Agricultural Credit Scheme (CACS) 2009 to date: The Commercial Agriculture Credit Scheme (CACS) was established by the Government of Nigeria (GON) in 2009 as a collaborative project between CBN and FMARD to provide finance for the country's agricultural value chain. Its main aim is to promote commercial agricultural enterprises in the country. In addition, it will cater for the financial needs of farmers in the form of Agricultural Credit Guarantee Scheme (ACGS) and Interest Draw-back scheme. CACS is financed through the proceeds realized from the N200 billion three (3) year-bond raised by the Debt Management Office (DMO) and loans under the scheme are disbursed at a minimum interest of 9%.

The regulations that guide the fund enables each state government to borrow about N1 billion for on-lending to farmers' cooperatives societies and other areas of agricultural practices that are in line with objectives of the CACS. Essentially, the fund covers 4 pillars namely, production, processing, storage and marketing. Under production, the cash crops (including cocoa); food crops, poultry, livestock and aquaculture. Under processing dimension, the thrust is on feedmills, threshing, pulverization, agro-processing plants and other forms of value addition. The Storage focuses on commodities, agrochemicals and warehousing whilst farm input emphasizes delivery of seeds/seedlings, breeder stock, feeds, fertilizer, mechanization, tractors and other farm equipment; and marketing which covers all forms of marketing activities and logistics support. Total disbursements to date is reported at N745.3billion ($1.63billion) covering 680 projects across the 5 target funding areas. A number of actors, especially the input and processing subsector in the cocoa value chain are reported to have benefitted from this facility. At this time of writing this report, this author is still awaiting response from the CBN. However, the CBN in its 2012 impact report indicated that out of 198 projects valued at N145 billion ($317million), input supply projects accounted at 1.7%; whilst production, processing, marketing and storage accounted for 48; 74; 15 and 6% respectively. With regard to the 198 projects; input supplies accounted for (0.5%) whilst production, processing, marketing and storage accounted for 33; 51; 11 and 4% respectively. From both metrics, the skew was largely towards production and processing activities, which accounted for 169 projects valued at N122.3billion ($266.9million).

Nigerian Incentive-based Risk Sharing for Agricultural Lending (NIRSAL) 2011 to date: NIRSAL was established in 2011 and incorporated in 2013 by the Central Bank of Nigeria (CBN) as a public-private (PPP) initiative to catalyse the flow of finance and investments into fixed agricultural value chains (AVCs). NIRSAL is thus a dynamic, holistic approach that tackles both AVCs and the agricultural value chain finance (AgVCF) that does two things at once; a) fixes the AVC, so that banks can lend with confidence to the sector and, b) encourages banks to lend to the AVC by offering them strong incentives and technical assistance. Unlike previous schemes which encouraged banks to lend without clear strategy to the entire AVC spectrum, NIRSAL emphasizes lending to the VC and to all sizes of producers. With an estimated allocation of $500million from CBN, NIRSAL discharges its mandate through 5 pillars namely; 1) Risk-sharing Facility ($300 million)- This component would address banks' perception of high-risks in the sector by sharing losses on agricultural loan; 2) Insurance Facility ($30 million):- the facility's primary goal is to expand insurance products for agricultural lending from the current coverage to new products, such as weather index insurance, new variants of pest and disease insurance etc.; 3) Technical Assistance Facility ($60 million)- This would equip banks to lend sustainably to agriculture, producers to borrow and use loans more effectively and increase output of better quality agricultural product; 4) Holistic Bank Rating Mechanism ($10 million)- This mechanism rates banks based on two factors, the effectiveness of their agricultural lending and the social impact and makes them available for the public; and 5) Bank Incentives Mechanism ($100 million)- This mechanism offers winning banks in Pillar 4 above, additional incentives to build their long-term capabilities to lend to agriculture. It will be in terms of cash awards. NIRSAL, which operates as "one bullet solution" to de-risk and encourage commercial banks to adopt the value chain approach in lending to the agriculture sector provides:

• *Financing cost moderation (7.5% to 10.5%) using interest drawback, Risk sharing ranging from 20–80%. Thus, the higher risk primary sectors and lower capacity farmers enjoy higher risk sharing*

• *Mechanisms for technical support and education for all stakeholders as well as incentives for commercial banks; and Strengthens risk sharing by encouraging development of various insurance products*

Discussions with various commercial bank officials however revealed that they benefitted largely from the Credit risk guarantee (CRG) facility, for onward lending to the processors and manufacturers in the agro-allied subsector. As at 8th March, 2022 and in an interview with the MD/CEO, a Vanguard Newspaper that over N73billion ($162million) has been pumped into the agro-processing through commercial banks. From interactions with staff of export companies, it was also gathered that frontline cocoa exporters also benefited from massive stockpiling facilities to finance the procurement and storage of large volumes of cocoa beans.

Growth Enhancement Support Scheme (GESS)-(2012-2015): Launched as a digital input delivery initiative of the ATA, the GESS was designed to address the drawbacks of the credit system of the National Cocoa Development Committee (NCDC) led Cocoa Rebirth Program (2000-2007) of the Obasanjo-led regime. Through the instrumentality of the electronic-wallet mechanism, the GESS was also envisioned to bypass the rent-seeking middlemen that disrupted the well-intentioned plans for direct delivery of inputs (fertilizers and agrochemicals) to the farmgate. Through mobile payments, millions of farmers were reported to have paid subsidized prices for inputs. Essentially, the e-wallet was based on smallholder farmers (SHFs) across a number of agricultural value chains (AVCs) receiving short message service (SMS) notifications to collect their inputs at designated collection centres. Perhaps the first such intervention in Africa, the E-wallet scheme was quite successful and by 2013, about 4.9 million SHFs (principally at the cassava farmgate) got subsidized seeds, fertilizers and agrochemicals via their mobile phones. In a bid to expand the outreach, 10million farmers with e-identity card were registered on the GESS dashboard and enabled FMARD to build and a biometric database for intensification. However, for the cocoa value chain, it wasn't nearly as rewarding. Some of the challenges the E-wallet system had included amongst others; farmers complained of slow process of registering their names unto the national data base; farmers complained of not receiving SMS alerts due to telecommunication networking problem Farmers complained of the quantity of agro-chemicals given per farmer to be grossly inadequate for a growing season; farmers complained that the rollout of the GES program most times was not timely to the period farmers needed to apply these agrochemicals to their crops; and some farmers were observed to side-sell their agrochemicals to other buyers. Most of the manufacturers involved in this programme experienced a higher demand in their products and upward rise in sales.

Though the program was designed to help small farmers it became unsustainable because of institutional, political, managerial, economic and social issues as the major challenges and constraints of the GES scheme. It is widely reported in the Nigerian dailies that in 2017, the Cocoa Farmers Association of Nigeria (CFAN) wrote a protest letter to the Presidency to stop FMARD on the cocoa procurement of inputs such as jute bags, solo sprayer pumps, fungicides and insecticides. These inputs were rejected by cocoa farmers as a result of low standards and negative impact on productivity. Nonetheless, the program clearly demonstrated the efficacy of digital transactions in the agricultural sector. And it many more ways than one, the program spawned off blockchain service providers and other agric-tech interventions. For example, a PWC report on agricultural finance identified crowd funding and technology enabled commodity exchange as two emerging private sector solutions to farmers' challenges in aggregation, storage, and financial inclusion. It noted that organizations such as Binkabi and AFEX Commodities Exchange are leading the movement to provide a ready market for both farmers and buyers at the postharvest segment of the value chain.

National Action Plan (NAP) on Child Labour (2013 to 2025): Child labour is a significant problem in the Nigerian cocoa economy. According to a 2018 report by the U.S. Department of Labour, an estimated 1.5 million children between the ages of 5 and 14 are engaged in cocoa-related work in Nigeria, including hazardous work such as using machetes and pesticides. Child labour is prevalent in areas where cocoa is produced, and many children work alongside their parents or other family members. Also, incidences of child labour trafficked from neighboring countries. NAP's goal, which was approved by the presidency[105] in 2012 is to eliminate child labour, especially its worst forms. The plan is a response to the growing determination of the GON to eliminate child labour. The plan aims to strengthen the capacities of employers in child labour elimination in mining, gold and cocoa supply chain and to conduct a National Child and Forced Labour Survey and empower one million vulnerable households/child labour victims by strengthening the Conditional Cash-Transfer Programmes. The first National Policy on Child Labour and the National Action Plan for the Elimination of Child Labour in Nigeria was developed in 2013 with a five-year implementation period (2013 – 2017) and the second policy framework (2021-2025), which builds is anchored on Nigeria's Action Pledges at the international launch of the International Year for the Elimination of Child Labour (IYECL) in January 2021, which prioritized key activities towards Target 8.7 of the SDGs, which seeks to end child labour, forced labour, modern slavery, and human trafficking by 2025. The second plan has since been validated by sector stakeholders and currently awaiting the presidential approval. ILO has also signed an implementation agreement with the Nigeria Employers' Consultative Association (NECA) to strengthen the capacities of employers and employers' organizations in child labour elimination in supply chains in Nigeria, including in the cocoa industry. To this end the Code of Conduct, is expected to guide the private sector in addressing the child labour issues in value chains.

[105] The Constitution of Nigeria prohibits forced labour, slavery, and servitude. The 2015 Trafficking in Persons Law Enforcement and Administration Act applies throughout Nigeria and prohibits commercial sexual exploitation, pornography, drug trafficking, and trafficking for the purposes of forced or compulsory recruitment into armed conflict. Nigerian law punishes such offenses with fines and imprisonment. Under the framework of the Acceleration of Action in the Elimination of Child in Africa (ACCEL) and working in collaboration with the Federal Ministry of Labour and Employment (FMLE), the International Labour Organization (ILO) coupled with other Nigerian stakeholders (MDAs, Civil Society Organizations "CSOs" and Labour Congress) initiated a national work plan to eliminate child labour in Nigeria, including in the mining, cocoa, and gold supply chains.

The Nigerian Industrial Revolution Plan (NIPR)-(2014-2019): Launched by the Federal Ministry of Industry, Trade and Investment (FMITI) in 2014 as a 5-year plan that to accelerate industrial capacity and addressing the key challenges that increase input costs, reduce overall competiveness and profitability such as limited access to credit and financial services, poor infrastructure, unreliable power supply. NIRP[106] focuses on 4 key industrial sectors of clear comparative advantage, namely agribusiness and agro-allied subsector, solid minerals and metals, oil and gas related industries and construction, light manufacturing and services. For the agribusiness and agro-allied subsector, the focus was to maximize the benefits from the country's agricultural resources by building an end-to-end integrated agriculture value chain, boosting local production to meet local demand, and reducing the country's reliance on imports of processed food. Unfortunately, the NIPR goals are yet to be realized and plans are afoot to revise the framework to align with the net-zero emissions global target, the Africa Continental Free Trade Agreement (AfCFTA), climatic change are still on the drawing board. Rather, the current FMITI administration is focused on implementing the World Trade Organization (WTO) Trade Facilitation Agreement by 2025 and the Secure Agricultural Commodities Transport and Storage Corridor (SATS-C)[107], which is geared towards strengthening agricultural supply chains, standards, commodity handling, reduction in haulage cost, post-harvest losses and ultimately, lower consumer prices. SATS-C, a model that delivers seamless supply-chain for handling agro-allied commodities such as inputs, raw materials for processors, exporters and promises to be beneficial to the cocoa ecosystem is still stuck in policy formulation stage.

The Anchor Borrowers Program (ABP), 2015 to date: Launched in November 17, 2015, the ABP is intended to create a linkage between anchor companies involved in the processing and small holder farmers (SHFs) of the required key agricultural commodities. ABP, the flagship offering of the CBN seamlessly delivers embedded and critical farmgate needs (production credit, inputs, fertilizers, agrochemicals, working capital, training, capacity building and social investments) in exchange for supply of consistent good quality produce at the required volume and at a pre-determined price. In essence, it's a pre-sold and dedicated market that fosters a seamless supply of produce or commodities through shorter and less disruptive value chain arrangements, usually under a combination of outgrower management and value chain financial services. The target AVCs across the geo-political zones are:-a) cotton, onion and tomato, cassava, rice and sorghum, livestock and fisheries in the Northeast; b) cotton, onion and tomato, cassava, rice and sorghum, livestock and fisheries in the Northwest; c) maize, rice, soybean, livestock and fisheries in the Northcentral; d) oil palm, cocoa, cassava, rice, livestock and fisheries in the Southsouth; e) oil palm and cocoa, cassava, rice, livestock and fisheries in the South-east; f) oil palm and cocoa, cassava, rice, livestock and fisheries in the Southwest.

On balance, the ABP is reported by the CBN to have supported over 4.8million SHFs across Nigeria for the production of the 21 AVCs including cocoa. It does this by through the provision of credit facilities, for input supply, mechanization, aggregation and other productivity-enhancing services (including farmer education). Regrettably, despite its overall relevance to the cocoa ecosystem; the skew of activities is much more pronounced in the Northern geopolitical zones and across the aforementioned value chains. Other challenges include delays in accessing the facilities, supply of low-quality inputs and insensitivity to the agricultural calendar principles. Evidently, it comes to no surprise that only 24% of the N1.09trillion ($2.4million) disbursed have been recovered thus far. The way forward is that NIRSAL should be properly integrated into the cocoa value chain system for more efficacy and functioning. Nonetheless, under the ABP, both state governments and private sector organizations can access the ABP funds to their AVC policies and projects. At the time of writing this report, Ondo State is pursuing a facility to prosecute a 10,000ha cocoa plantation that will provide engagement opportunities for second-generation tenant farmers who will be allocated 5ha each.

Presidential Fertilizer Initiative (2016 to date): The PFI was specifically established to reverse the shortfall in fertilizer production (specifically NPK 20:20:10) and distribution, strengthen the domestic production capacity, reduce the incessant importation and enhance direct delivery mechanisms to the farmgate for onward delivery to the critical mass of farmer at very affordable prices. CBN designated the Nigeria Sovereign Investment Authority (NSIA) to manage the 9% per annum fund on behalf of Fertilizer Producers and Suppliers Association of Nigeria (FEPSAN). Since managing fertilizer fund is not NSIA's core mandate, it established a special purpose vehicle known as NAIC-NPK Limited (NSIA Agric Investment Company) to carry out this function on its behalf.

[106] NIPR was inspired by the critical need to reverse and contain the widespread reliance on foreign exchange (FX) (including and the unrelenting drain on FX reserves) for the importation of intermediate and raw materials; stem food importation; embark on local raw material sourcing for the food and beverages industry (FBI) and other industrial sectors; trigger economic diversification and growth of the agricultural value chain; ramp up the development of the micro, small and medium enterprises (MSMEs) sector; increase R&D, technology and innovation to generate the competitive edge needed to penetrate the global economy; enhance FX earnings from exports of manufactured goods; boost employment and the overall resurgence of the industrial sector.
[107] https://guardian.ng/business-services/industry/revisiting-nigerias-industrial-policy-for-competitiveness/

To ensure uptake and increased productivity, the program, NAIC-NPK also provides technical assistance and extension services to the farmgate. As at 2021, 2.7million metric tons (54million 50kg bags) of fertilizer has been distributed to farmers nationwide. Other success points include, 250,000 direct and indirect jobs created across the agricultural value chain in general and fertilizer trade chain in particular. This includes jobs in logistics, ports, bagging, rail, industrial warehousing and haulage touch-points and others that have been created. It also said food security had been achieved by facilitating increase in domestic food production through the provision of affordable, high quality fertilizer. Other gains recorded include the resuscitation and establishment of 41 blending plants across 17 states, reduction in the price of fertilizer from N10,000 ($22) to N5,500 ($12) per bag and the generation of $350million dollars in FX savings on account of domestic production and the import-substitution strategy. The lesson points in the implementation of the PFI has occasioned the need for a central regulatory framework under a dedicated national fertilizer policy.

National Collateral Registry (NCR) of Nigeria: With support from IFC, the National Collateral Registry is a CBN initiative established in May, 2016 to deepen MSME access to finance. In the Nigerian informal economy, there are an estimated 37million MSMEs that are excluded from formal finance because the critical mass lack traditional collateral instruments such as land, buildings, equipment and machinery. With due access to capital, their contribution to economic growth, job creation and national prosperity is indeed very significant. In essence, the Collateral Registry, which operationalizes Part III of the Central Bank of Nigeria's Regulations on Registration of Security Interests in Movable Property by Banks and other Financial Institutions (Regulations No, 1, 2015) is a web-based system that allows lenders to determine any prior security interests, as well as to register their security interests over movable assets provided as collateral. The Collateral Registry facilitates the use of movable / personal assets as collateral that remain in possession or control of the borrowers and thereby improves access to secured finance because:

• Movable assets/personal property often account for most of the capital stock of private firms and comprise an especially large share MSMEs;

• Movable assets are the main type of collateral that MSMEs, especially those in developing countries, can encumber to obtain financing; and

• Given the opportunities in agri-business among others, the Collateral Registry regime allows Nigerian farmers and entrepreneurs to unlock significant sources of capital with assets that would otherwise not be looked at by lenders as potential collateral.

The registry will enable allow low-income people and small-scale entrepreneurs to secure loans against movable assets such as machinery, livestock, and inventory. The benefits of the collateral registry include enabling businesses to leverage their assets to obtain credit for growth, improve assets liquidity especially short-term assets, and allow asset diversification as well as to reduce cost and promote prudent lending. In conclusion, the NCR is viewed by industry pundits as a major achievement to help improve access to finance for MSMEs and more broadly the financial inclusion agenda in Nigeria. With the emergence of the commodity exchange, the NCR will create credibility and a more conducive landscape for the deployment and uptake for warehouse warrants in the cocoa ecosystem.

APPENDIX II

Other Relevant Laws governing the Cocoa Ecosystem

National MDAs		Laws Acts etc.	Supervising Ministries
1	Agricultural Credit Guarantee Scheme Fund (ACGSF)	Established by Decree No. 20 of 1977	Central Bank of Nigeria (CBN)
2	Commercial Agricultural Credit Scheme	The Agricultural Credit Scheme Fund Act, Cap A11, LFN 2004	
3	Nigerian Incentive-based Risk Sharing for Agricultural Lending (NIRSAL)	Launched in 2011 ad incorporated by CBN as a public private initiative regulated under Banks and other Financial Intuitions Act (BOFIA) of 2020	
4	National Collateral Registry (NCR)	The Collateral Registry, which operationalizes the Secured Transactions in Movable Assets Act, (STMA) 2017, is a web-based system that allows lenders to determine any prior security interests, as well as to register their security interests over movable assets provided as collateral.	
5	Nigeria Sovereign Investment Authority (NSIA)	NSIA Act of 2011	
6	Federal Competition and Consumer Protection	Federal Competition and Consumer Protection Act (FCCPA) 2018	Federal Ministry of Industry, Trade and Investment (FIMITI)
7	Nigerian Investment Promotion Council (NIPC)	Nigerian Investment Promotion Act Chapter N117 Laws of the Federation of Nigeria 2004	
8	Nigerian Commodity Exchange (NCX)	Commodity Exchange Bill of 2019	
9	Bank of Industry (BoI)	Bank of Industry Act 2002 and amended in 2014	
10	Consumer Protection Council (CPC)	CPC is established under Consumer Protection Council Act, Cap 25, 2004 Laws of the Federation of Nigeria, to promote and protect the interest of consumers over all products and services.	
11	Nigeria Export Processing Zones Authority (NEPZA)	The NEPZA Act 1992	
12	Federation of Agricultural Commodity Associations of Nigeria (FACAN)	Registered with the Corporate Affairs Commission (CAC) as legal entities to carry on business as umbrella bodies and apex associations.	
13	Cocoa Processors Association of Nigeria (COPAN)		
	Cocoa Exporters Association of Nigeria (CEAN)		
14	Federal Department of Cooperatives (FDC)	Act Cap 27 LFN 2004	Federal Ministry of Agriculture and Rural Development (FMARD
15	Agricultural Research Council Of Nigeria (ARCN)	The Nigerian Research Institutes Act of 1964 established four research institutes: CRIN, NIFOR, RRIN, and NITR. Subsequent actions included the following: 1971-A decree established the Agri- cultural Research Council of Nigeria (ARCN) and made it responsible for coordinating all agricultural research.	
16	Bank of Agriculture (BoA)	Incorporated as Nigerian Agricultural Bank (NAB) in 1973 and governed by the BOFIA of 1991	
17	National Agricultural Land Development Authority (NALDA)	National Agricultural Land Development Authority Act of 1992	

18	Nigerian Agricultural Insurance Corporation (NAIC)	The implementation of the Scheme was initially vested in the Nigerian Agricultural Insurance Company Limited, which was later incorporated in June, 1988 but later turned into a Corporation in 1993 by the enabling Act 37 of 1993.	
19	Nigerian Drug Law Enforcement Agency	Established by Decree No. 48 of 29th December 1989.	Federal Ministry of Justice (FMoJ)
20	Land Tenure Policy	Land Use Act of 1978	Federal Ministry of Lands
21	Forest Policy		Federal Ministry of Environment
22	Child Labour	The 2015 Trafficking in Persons Law Enforcement and Administration Act	Federal Ministry of Labour and Employment (FMLE)
State Agencies		**Laws Acts etc.**	
1	Cocoa Council/Cocoa Board/Produce Agency	State and CAC registration	Governor's Office
2	Agricultural Development Programs (ADPs)	N27 Laws of the Federation of Nigeria (LFN) 2004	State Ministry of Agriculture and Forestry
3	Tree Crop Units (TFUs)-COCOREV	Covered under the laws enacted by the various State House of Assemblies. For instance, In Ondo State the Produce Department, the COCOREV intervention and Cocoa Council are covered and guided by the Produce Inspection By-Laws of 2006. The State Afforestation (Forestry Exploitation Laws) guides the Department of Forestry in the protection of forest areas.	
4	Cocoa Development Units (CDUs)		
5	State Produce Department		
6	Department of Cooperatives		State Ministry of Commerce
7	Department of Forestry		
8	State Credit Schemes		
9	Input/Agrochemical Supply		
10	State Trade Associations/Farmers Congress	CAC registration as legal entity	

APPENDIX III

Other Relevant Institutions to the Cocoa Ecosystem

Agricultural Development Program (ADP) was first launched in 1972 only two years after the end of civil war, when Nigeria was facing its first food and fiber deficiencies. The two main objectives of the ADP were to increase food production, and to raise the income of small-scale farmers through capacity building. The current mandate of the ADPs is to promote sustainable agricultural development, increase food production and improve the livelihoods of rural farmers. The program aims to achieve this by providing agricultural extension services, training, and technical assistance to farmers, as well as facilitating access to credit and other resources. Functional activities: include provision of technical support and training to farmers, the development of agricultural policies, the promotion of research and innovation in agriculture, and the dissemination of information on new agricultural technologies.

Governance and management structure: Typically, the ADPs are governed by FMARD in collaboration with state governments. The program is implemented through a decentralized structure, with each state having its ADP office responsible for implementing the program in that state. Under the supervision of the ministries of agriculture at sub-national level, the state coordinators, in turn, oversee the activities of the local coordinators who work directly with farmers. **Strengths:** The ADP in Nigeria has been successful in promoting sustainable agricultural development and increasing food production in the country. The program has also helped to improve the livelihoods of rural farmers by providing them with technical assistance and facilitating access to credit and other resources. Another key strength is that quite a number of donor community projects, NGOs and private sector organizations have found in the ADPs a wiling, resourceful and reliable partners to prosecute their extension and capacity building objectives. **Weaknesses:** One of the main weaknesses of the ADP in Nigeria is inadequate funding, which has limited the program's ability to reach more farmers and provide them with the necessary support. There have also been issues with corruption and mismanagement within the program, which have further undermined its effectiveness. Additionally, the program has been criticized for its focus on large-scale farmers at the expense of small-scale farmers, who are the most vulnerable and in need of support.

Nigerian Export-Import Bank (NEXIM) was established in mandate is to promote and diversify Nigeria's exports and imports, provide export credit guarantee and export credit insurance services to Nigerian exporters, and facilitate the growth and development of the Nigerian economy through export-oriented initiatives. Functional activities:- include providing export credit guarantees and export credit insurance to Nigerian exporters; providing financial assistance to export-oriented industries and businesses in Nigeria; facilitating the export of Nigerian goods and services; providing advisory and consulting services to Nigerian exporters on export financing and international trade practices; and promoting and developing export-oriented industries[108] in Nigeria.

Governance and management structure: NEXIM is governed by a Board of Directors, which is responsible for setting the strategic direction of the bank and ensuring that it operates in compliance with its mandate and relevant laws and regulations. The Board is appointed by the presidency and is chaired by the Minister of Finance. Management Structure: NEXIM is managed by an Executive Management team, which is responsible for the day-to-day operations of the bank. The team is led by the Managing Director and CEO, who is appointed by the presidency and reports to the Board of Directors. **Strengths:** NEXIM is a specialized institution with a clear mandate to promote and diversify Nigeria's exports and imports. The bank has a comprehensive range of financial products and services tailored to the needs of Nigerian exporters. NEXIM has a strong governance structure and has a well-trained and experienced management team that is committed to achieving its mandate. **Weaknesses:** NEXIM has been criticized for its slow processing of loan applications and disbursement of funds.

Standard Organization of Nigeria (SON) Its mandate is to ensure compliance with national and international standards and to promote quality assurance in the production, importation, and distribution of goods and services in Nigeria. Functional Activities: include developing and promoting standards for products, materials, and services; Certifying products to meet standards and specifications; regulating and monitoring the quality of goods and services in Nigeria; investigating complaints from consumers and businesses; providing technical assistance to businesses in improving their production processes, extension and capacity building and conducting research and development in the field of standardization.

[108] It is on record the NEXIM funded the first generation of cocoa processing companies that were established in the Southwest geo-political zone.

Governance and management structure: SON is governed by a Board of Directors appointed by the presidency. The Board oversees the activities of the agency and ensures that it operates in accordance with its mandate and the provisions of the SON Act. Management Structure: SON is headed by a Director General/ CEO who is responsible for the day-to-day management of the agency. The Director General is supported by a team of Directors who oversee the various departments and units of the agency. These departments include the Standards Development Department, the Laboratory Services Department, the Inspectorate and Compliance Department, and the Human Resources and Administration Department. **Strengths:** SON plays a critical role in ensuring the safety and quality of products and services in Nigeria. The agency has developed and promoted several standards that have helped to improve the quality of products and services in the country. SON has a wide range of technical expertise and resources to support businesses in improving their production processes. The agency has a robust complaints management system that ensures that consumer complaints are investigated and resolved in a timely manner. **Weaknesses:** The agency faces challenges in enforcing compliance with standards and regulations, especially in the informal sector. SON has also suffered from integrity issues, which have undermined its credibility. The agency's resources and capacity are sometimes limited, which can hinder its ability to carry out its mandate effectively.

National Drug Law Enforcement Agency (NDLEA), is tasked with enforcing drug laws and regulations in the country. The mandate of the NDLEA is to prevent, control, and combat drug trafficking and abuse in Nigeria. The agency is also responsible for coordinating and collaborating with other law enforcement agencies in the country and internationally to achieve this goal. Functional activities: include drug investigation and intelligence, drug demand reduction, public enlightenment, community-based rehabilitation, and training and research. The agency works with a wide range of stakeholders, including the government, civil society organizations, the private sector, and the public, to carry out these activities. It also mandated to certify goods for export as drug free.

Governance and management structure: governed by a Chairman that is appointed by the presidency. The agency also has a Board of Directors that oversees its operations and provides strategic direction. The Board is made up of representatives from various government agencies and sectors, as well as civil society organizations. Management structure: The management structure of the NDLEA consists of various departments and units, including the Operations Department, Intelligence Department, Drug Demand Reduction Department, Legal Services Department, and Administration and Finance Department. Each department is headed by a Director who reports to the Chairman. **Strengths:** One of the strengths of the NDLEA is its mandate to combat drug trafficking and abuse, which is a critical issue in Nigeria. The agency has a well-defined structure and functional activities that enable it to carry out its mandate effectively. Additionally, the NDLEA has a broad network of stakeholders and partners, which enhances its ability to achieve its objectives. **Weaknesses:** However, the NDLEA faces several challenges in carrying out its mandate, including limited resources, inadequate training and capacity building, and corruption. The agency also faces significant security threats from drug trafficking syndicates, which can compromise its operations.

Nigerian Investment Promotion Commission (NIPC) is responsible for promoting and facilitating both foreign and domestic investment in Nigeria. NIPC's mandate to attract, facilitate and retain investments in Nigeria. The mandate of NIPC is to promote and facilitate investment in Nigeria through the provision of relevant information and services to investors. The agency aims to enhance the investment climate in Nigeria, by providing a conducive business environment, and to make Nigeria the preferred investment destination in Africa. Functional activities: - include investment promotion, investor services, policy advocacy, and research and analysis.

Governance and management structure: NIPC is governed by a board of directors appointed by the presidency, with an Executive Secretary as CEO. The commission has a decentralized management structure with zonal and state offices responsible for implementing its activities at the local level. The Commission is thus structured to consist of North-Central, North-East, North-West, South-East and South-West Zonal offices to work with sub-national state investment agencies in the coordinating and further actualization of GON's mandate. **Strengths** lies in its role in promoting and facilitating investment in Nigeria, which is critical for economic growth and development. The commission has implemented several measures to improve the investment climate in Nigeria, including the establishment of the One-Stop Investment Centre (OSIC) to simplify investment procedures and provide investors with a single point of contact for all investment related matters. **Weaknesses:** However, NIPC faces several challenges, including inadequate funding, limited capacity and resources, and the need to improve its operational efficiency and effectiveness. The agency also needs to strengthen its collaboration with other stakeholders, including the private sector, government agencies, and international organizations, to achieve its mandate effectively. Despite these challenges, NIPC has made significant progress in promoting investment in Nigeria, and its efforts have contributed to the growth of Nigeria's economy.

Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) established by the CBN in 2011 to address the challenges faced by Nigerian farmers in accessing credit facilities for agricultural production. NIRSAL's mandate[109] is to facilitate the flow of affordable financing to the agricultural sector by de-risking the agriculture value chain through its risk-sharing facility. NIRSAL's approach is to mitigate the risks associated with agriculture by providing insurance, technical assistance, and support for capacity building for farmers and other stakeholders along the agricultural value chain.

Governance and management structure: NIRSAL is governed by a board of directors, which oversees the implementation of its strategic objectives. The CBN also provides oversight and regulatory guidance to NIRSAL. Management structure: NIRSAL is headed by a MD/CEO, who oversees a team of technical experts, finance, and administrative personnel. **Strengths:** NIRSAL has been successful in de-risking the agriculture value chain, thereby facilitating access to finance for smallholder farmers and other stakeholders. It has also been able to promote the adoption of best practices in the sector, thereby enhancing the productivity and competitiveness of the agricultural value chain. **Weaknesses:** NIRSAL's operations are largely dependent on the financial institutions it partners with to lend to the agricultural sector. NIRSAL needs to work more closely with financial institutions to create customized financial products that are tailored to the needs of smallholder farmers. Additionally, there is a need for more investment in the agricultural sector, particularly in infrastructure, research, and development.

Cocoa Association of Nigeria (CAN) established in 1986 to promote the growth and development of the cocoa industry in Nigeria. The mandate of the organization is to support the interests of cocoa farmers, processors, traders, and other stakeholders in the cocoa value chain. The CAN President is also mandated to represent Nigeria at the International Cocoa Organization (ICCO), Cocoa Producers Alliance (COPAL) and Common Fund for Commodities (CFC) meetings, activities and events. Functional activities include providing market information to members, promoting research and development, and advocating for policies that benefit the cocoa industry. The association also organizes training programs and workshops for farmers and other stakeholders to enhance their knowledge and skills in cocoa farming, processing, and marketing. Alongside FMITI, CAN also plays a key role in facilitating the implementation of ICCO projects in Nigeria. It is instructive to add that CAN's ownership of the Global Cocoa Agenda (GCA) triggered the development of the 10-year National Cocoa Plan (2019-2028).

Governance management structure of CAN is led by an executive committee composed of elected members who oversee the organization's activities. The management structure includes a secretariat, which is responsible for the day-to-day operations of the association. There are zonal representatives on geo-political arrangements just as there state-led affiliates to enable CAN reach the grassroots. **Strengths** lies in is its ability to bring together different stakeholders in the cocoa industry to work towards common goals. The organization has also played a significant role in promoting sustainable cocoa farming practices and improving the livelihoods of cocoa farmers. **Weakness:** limited resources and funding, which undermines its ability to implement its programs effectively as indeed its visibility. Also, in recent times, CAN's sphere of influence has diminished in the cocoa ecosystem. This is primarily due to the emergence of trade associations within its ranks that offer similar services. These include the Cocoa Farmers Association of Nigeria (CFAN); Cocoa Processors Association of Nigeria (COPAN); Cocoa Exporters Association of Nigeria (CEAN) and Cocoa Traders Association (CTA). The ability of CAN to rein them in and integrate them under the national body will determine how well CAN will fare in the coming years.

Cocoa Farmers Association of Nigeria (CFAN) is a non-governmental, non-profit organization established primarily to represent the interests of cocoa farmers in Nigeria. The mandate of CFAN is to advocate for policies and programs that promote the welfare of cocoa farmers and increase cocoa production in the country. Functional activities include organizing farmers, providing education and training on best farming practices, liaising with government agencies, and advocating for improved cocoa prices and access to credit facilities. CFAN also provides market information and links farmers to potential buyers. In response to the EU due diligence framework and corporate responsibility, CFAN facilitated the production of a Cocoa GAP Handbook. The training manual, which is distributed to the farmgate community free of charge has brought to fore the negative danger of child labour practices, deforestation activities, pesticides abuse, need for traceability and transparency and the embracement of climate-smart adaptation strategies.

[109] NIRSAL provides credit guarantees, insurance, technical assistance, and other risk management services to financial institutions that lend to the agricultural sector. It also works with smallholder farmers and other stakeholders in the value chain to build their capacity, provide technical assistance, and promote the adoption of best practices. NIRSAL also facilitates access to markets and enhances the value of agricultural products through market linkages.

Governance and management structure: is through a Board of Trustees and a National Executive Council. The Board of Trustees is responsible for overall policy direction and provides guidance to the National Executive Council, which oversees the day-to-day activities of the organization. The management structure of CFAN is composed of a National President, Vice President, Secretary General[110], Treasurer, and other officials elected by members at the annual general meeting. There are also state and local government chapters of CFAN, which are responsible for coordinating activities at the grassroots level. With a 50,000 registered membership, CFAN has a very strong presence across all the producing LGAs in Nigeria.

Strengths: lie is its strong and results oriented advocacy for the rights of cocoa farmers in Nigeria, which has in recent times reinforced the need to set up a regulatory agency for the cocoa sector. The organization has successfully lobbied for policy changes that have benefited farmers, such as the integration of Nigeria in the living income differential (LID) struggle and a defined push to trigger farmer's ownership of agroforestry practices through the publication and distribution of cocoa handbook free of charge that also deals with eradication of child labour and environmental sustainability. CFAN has also facilitated access to credit facilities, improved inputs, agrochemicals and seedlings and improved access to markets for cocoa farmers. **Weakness** is its limited capacity to effectively reach and represent all the cocoa cooperatives/FOs in Nigeria. And as such to the ordinary bystander, CFAN could be viewed as being in competition rather than an apex umbrella to the other cooperatives/FOs. The organization has also faced challenges in adequately financing its activities.

[109] According to General Secretary of CFAN (Mr. Adeola Adegoke) the association's vision is summarized as follows: to establish a Cocoa Resource centre; to produce 98% premium cocoa; setting up a networking platform for farmers in Africa and Indonesia and setting up a Cocoa academy.

APPENDIX IV

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APPENDIX V

Survey Destinations

Table 14: Survey destinations

S/N	Survey destinations	Number	%	Responses	%	Frequency
1	FGN Public Sector	6	7%	5	8%	83%
2	Research Institutes	3	4%	2	3%	67%
3	State Public Sector	9	11%	7	12%	78%
4	Trade Associations	9	11%	6	10%	67%
5	University/Expert	4	5%	2	3%	50%
6	Development/NGO	8	10%	5	8%	63%
7	Certification Coys	1	1%	1	2%	100%
8	FOs/Coops	8	7%	7	12%	88%
9	LBA/merchants	11	12%	7	12%	64%
10	CMX Org	1	1%	1	2%	100%
11	Export Houses	8	10%	4	7%	50%
12	In-Country Grinders	4	4%	1	2%	25%
13	Input Suppliers	6	4%	5	8%	83%
14	DFIs	3	4%	2	3%	67%
15	Commercial Banks	8	10%	4	7%	50%
16	PIAs	1	1%	1	2%	100%
		90	**100%**	**60**	**100%**	**71%**

Table 15: Destinations covering KIIs

S/N	KIIs	Number	%
1	FGN Public Sector	5	11%
2	Research Institutes	2	4%
3	State Public Sector	6	13%
4	Trade Associations	4	9%
5	University/Expert	3	6%
6	Development/NGO	3	6%
7	Certification Coys	1	2%
8	FOs/Coops	2	4%
9	LBA/merchants	4	9%
10	CMX Org	1	2%
11	Export Houses	6	13%
12	In-Country Grinders	2	4%
13	Input Suppliers	2	4%
14	DFIs	3	6%
15	Commercial Banks	2	4%
16	PIAs	1	2%
		47	**100%**

Survey questionnaire and KIIs were structured in line with the information gathering template developed by Adam and Alexis. In all, 90 destinations across 16 subsectors of the ecosystem as displayed on table-14 were mapped out for questionnaire survey across Abuja (actors in the regulation space); and Cross River, Edo, Ekiti, Ondo, Ogun and Osun States for a combination of state regulatory actors and VC actors upstream and midstream. Questionnaires were administered via emails, Whatsapp and physical contact. The survey tools and KIIs were conducted largely during the information gathering period between 19th March and 20th April. A series of follow-up KIIs were conducted on telephone during the writing phase, 23rd April to 10th May. The KIIs were skewed to in-country grinders, commercial banks, exporters and LBAs that were quite reluctant in parting with information on their operations. Ditto for the FGN and State public actors on critical data and statistics on the cocoa sector. Due to time constraint and tight reporting deadlines, the trip to the Lagos Ports had to be cancelled. Ultimately, the foreign exporters/ grinders turned out to be the most difficult respondents. Only one responded with very scanty information. For the others, requests for approvals to respond to the survey were declined by the hierarchy. By and large, aside from the unwillingness of most respondents to part with information; data limitations and inconsistency was perhaps the greatest challenge. Nonetheless, the desk research work came in very handy to filling the critical information and knowledge gaps.