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I. Introduction

Food insecurity is a major risk for Africa. Of the 86 low-income and food-deficient declared countries the world over, 43 are in Africa where the majority of the world's 6.7 billion people live under the poverty line. In sub-Saharan Africa, although agriculture accounted for 70 per cent of the labor force and over 25 per cent of GDP, the continent has continued to register low priority for investment in agriculture.

While agriculture is key to economic growth and employment in Africa, agricultural productivity within the last 30 years declined to 0.5 tonnes/hectare, when compared with the global average of 5 tonnes/hectare. Africa now spends US$30 billion for food import. African agriculture is, however, slowly responsive to the fast-changing global trends and dependence on foreign aid still remained a high risk to investment by commercial banks in Africa. Few lending institutions in the continent now accept farmers’ assets as collateral and provide smallholder farmers with loans and also charge high interest rates. It has remained difficult and unappealing for growers to build-up their farms. This notwithstanding, significant opportunity to boost the continent’s agriculture exists as the prospects of more African countries becoming self-sufficient in food supply and exports remains high.

Studies by the International Food Policy Research Institute showed that doubling the productivity of food staples across Africa by 2015 alone would lift over 70 million people out of poverty and move the continent from the food-deficit to food-surplus position and, thus, lower food prices by 20-40 per cent, increase Africa’s export potential and enhance export competition. This would impact on inflation, exchange rate and level of foreign reserves which are key requisites for growth and development.

I.1 Agriculture in Transition and Implications for Nigeria

Nigeria, as one of the most endowed countries in Africa, has a per capita GDP of US$1,760. The GDP growth of the country is largely driven by agriculture,
contributing about 42.1 per cent to GDP and accounting for 70.0 per cent of the country’s workforce.

Nigeria has 78.5 million hectares of agricultural land (85.0 per cent of the country’s total land area) out of which 39.5 million ha is arable. Of the arable land, only 60.0 per cent have so far been cultivated. The country receives an average of 1,150mm of rain a year (35.0 per cent more than Mexico and 6.0 per cent more than India) and has potential to irrigate 3.1 million hectares of agricultural land. Presently, only 13.0 per cent of the country’s agricultural land is irrigated.

Nigeria’s agriculture includes four sub-sectors, namely, crop, contributing about 85.0 per cent to the agricultural GDP, livestock, accounting for about 10.0 per cent of the GDP, fisheries activities, contributing about 4.0 per cent, and forestry activities, responsible for about 1.0 per cent. The crops and livestock sub-sectors have remained dominant in recent years, while the fisheries sub-sector has also continued to expand. The forestry subsector has, however, been shrinking. Cropping systems in the country are primarily rain-fed, with less than 1.0 per cent of cultivated area under irrigation.

There is an urgent need to transform agriculture in Africa, to take advantage of the new global trends in food demand. While, historically, Africa has accounted for only 2.0 per cent of global agricultural trade, shifts in global demand for high-value agricultural crops and dairy products, fruits and vegetables, rising demand for processed and semi-processed food staples and the growth in demand for bio-fuel presents new opportunities for Africa. Also, as the level of global food demand continues to be shaped by increased industrialization, shift in focus from commodities to products, increased preference by consumers for quality food products as a result of income expansion and urbanization, would ginger improvements in grades and standards. For Nigeria to effectively increase its share in Africa’s agricultural space and harness the market opportunities, the need to re-focus the country’s agricultural financing policy to develop its agricultural food baskets and its commodity value-chains to meet the food market product demands, has become imperative.

1.2 Causes of Food Insecurity

Food insecurity refers to the inability to have access to sufficient and affordable food by everyone. This could relate to a single household or the entire global population. Globally, 10 million people die annually from hunger-related diseases;
half of these are children who die of malnutrition, while about 850 million people were food insecure in 70 low-income countries in 2005.

The causes of food crisis include, among others, the lack of obligation on the part governments to create capacity for their people to feed themselves; international trade policies orchestrated by WTO - systematic dismantling of trade barriers on agricultural products in favour of the West; lack of subsidies for agriculture in developing countries; poor budgetary provisioning for agriculture. For instance, in Africa the lack of political will to honour the Maputo declaration to set aside 10.0 per cent of annual budget for agricultural development; population burst; political unrest and violent conflicts in developing countries; failure to improve crop yields; speculative commodity marketing; under-investment in agriculture and infrastructure; the rising international crude oil prices which makes it expensive to produce and to consume and emerging persistent inflation; and malfunctioning of credit market worldwide following the USA subprime crisis, among others, have all contributed to food insecurity in the continent.

**Table 1: Food Insecurity by International Regions – Under-Nourished By Region (%)**

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II. Performance of Agriculture in Nigeria

Approximately 70.0 per cent of the farming population in Nigeria consists of about 10 million smallholders with about 7 million operating on land holdings below 2 hectares. The growth rate of Nigeria’s agricultural sector has, however, been on the decline as the sector performance between 2006 and 2008 fell from 7.4 per cent in 2006, through 7.1 per cent in 2007 to 6.5 per cent 2008. Presently, the sector employs 70 per cent of the country’s active labour force and accounts for about 42.1 per cent of GDP.

![Figure 1: Growth Rate of Nigeria’s Agricultural Sector GDP (2004-2008)](image)

An analysis of Nigeria’s agricultural sector revealed that production is heavily dependent on smallholder farmers who adopt manual approaches to farming. Also, only a small fraction of the smallholder farmers have access to finance. The condition under which these subsistence farmers operate which includes lack of access to technology, high covariance risk, lack of access to farm inputs, lack of financial literacy, resistance to change and other challenges, culminate into low yield and poor income. All these compromised agricultural productivity and, consequently, food security in the country.

II.1 Imperativeness for Improved Finance in Nigerian Agriculture

Nigeria remains a poor country in spite of her immense oil endowments. With a projected population of 149.1 million, unemployment rate of 12.8 per cent, a GDP of US$1,760 million and a poverty incidence of 54 per cent and a fast declining agricultural labour force. As with many African countries, these factors have impeded the rapid economic development of Nigeria.
The performance of the sector has over the years not been encouraging. This is because Nigeria is a net importer of food. For instance, the import bills for food and live animals were ₦147.38 billion in 2004, ₦260.33 billion in 2005, ₦293.07 billion in 2006, ₦269.68 billion in 2007 and ₦299.48 billion in 2008 (Figure 2). The country has an annual population growth rate of 3.2 per cent and registered an unprecedented 5.4 per cent rate of rural-urban migration. The un-impressive situation had persisted since the economic depression of the 1970’s when crude oil earnings plummeted. With the failure of oil windfalls to turn the Nigerian economy around, it follows that agriculture must be taken seriously as it remains the next most important sector of the country’s economy after oil.

![Figure 2: The Importation of Food and Live Animals into Nigeria](image)

The need, therefore, to revitalize Nigerian agriculture calls for concerted efforts to improve financing, technology, resource supply, management, marketing and agric-business. The farmers need credit as catalyst to accelerate their adoption of improved agricultural technologies, finance for the procurement, maintenance, purchase of inputs and to meet their working expenses.

### III. Efforts to Promote Agricultural Financing Opportunities in Nigeria

Nigeria’s agricultural policy during the past years has been anchored on food import substitution and yield enhancement. This is aimed at reducing the country’s dependence on the importation of basic food items, such as wheat, rice, sugar, etc., by producing them locally; and the promotion of national food security. It is also targeted at providing employment, stemming rural-urban migration, promotion of modern farm practices through commercial agriculture; and supporting of natural resource conservation to stem declining soil fertility and the moderation of indiscriminate destruction of the country’s vegetation.
III.1 Role of Deposit Money Banks (DMBs) in Agricultural Financing

The Nigerian banking system has over the years shown a strong preference for short-term lending, as such, this has remained the dominant form of bank finance to Nigeria’s agriculture. As at December 2008, outstanding loans and advances of less than one year maturity accounted for 75.4 per cent of all loans. Taking into account the peculiar need of the agricultural sector (requiring long-term finance), the capital needed by the agricultural sector in the country has been in short supply.

Presently, the agricultural sector of Nigeria accounts for only 1.4 per cent of total lending even though the sector accounts for about 42 per cent of the country’s GDP.

III.2 Agricultural Finance Schemes Operated/Managed by the Central Bank of Nigeria (CBN)

The CBN has in the last three decades been involved in the design and implementation of various schemes and programmes aimed at addressing the problem of limited access to credit by small-scale producers ranging from such monetary policy instruments as the regulation with variants of credit quota and interest ceiling to the deregulated regime. The Bank co-financed the establishment of institutions such as the former Nigerian Agricultural Cooperative & Rural Development Bank (NACRDB) now the Bank of Agriculture (BOA), the Bank of Industry (BOI), Nigerian Agricultural Insurance Company (NAIC) and the Agricultural Credit Guarantee Scheme Fund (ACGSF).

The ACGSF with a capital base of ₦5.0 billion has in its 31 years existence provided guarantee to deposit money banks (DMBs) for loans valued ₦42.0 billion granted to 656,000 small and medium scale farmers in the country. The Bank also
complemented the ACGS with a N2.0 billion Interest Drawback Programme (IDP). The Scheme was an initiative which provided 40.0 per cent interest rebate to farmers under the ACGS who repayed their loans as at when due. Under the IDP, a total of N169.28 billion has been paid to 21,212 deserving farmers.

The Agricultural Credit Support Scheme (ACSS) was initiated by the Federal Government and Central Bank of Nigeria with the active support and participation of the Bankers’ Committee, and has a prescribed fund of N50.0 billion. The aims of the Scheme were to reduce the cost of agricultural production, increase output, generate exports and provide inputs for the manufacturing sector. Under the ACSS, credit facilities were extended to eligible borrowers by commercial banks at a maximum interest rate of 14.0 per cent per annum. While the farmers pay 8.0 per cent of the interest, the Central Bank of Nigeria pays 6.0 per cent of the interest due. Since inception in 2006 to October 2010, a total of N368.84 million has been paid as 6.0 per cent interest rebate obligation on 35 large-scale commercial agricultural projects.

The N200 billion Commercial Agriculture Credit Scheme (CACS), another financing effort of the CBN, is a seven-year, single-digit financing initiative meant to fast-track agricultural development, shore-up foreign exchange earnings, mitigate the food and financial crisis, encourage job creation and develop large-scale commercial agriculture with emphasis on value-chain financing (production, processing, storage and marketing). As at November 2010, the sum of N91.76 billion has since inception, been released under CACS by the CBN to 15 deposit money banks to finance 81 agricultural projects/promoters and 15 State Governments for release to farmers’ cooperatives and unions under their constituencies.

The most recent efforts of the CBN expected to also have significant impact on agricultural development in Nigeria are the N200 billion Small & Medium Enterprises (SMEs) Guarantee Scheme (SMECGS) and the N500 billion Power, Aviation and Infrastructure Fund (PAIF).

IV. Why Banks are not Financing Agriculture

IV.1 Perception

Despite the availability of a plethora of schemes and programmes, banks are not still lending enough to agriculture because of the perceived high risk of lending to the sector. The perceived high risk is driven by factors such as lack of understanding of the agricultural sector and historically-derived risk structures attendant of high default rates from government-driven lending programmes.
They also do not perceive agriculture as a business because they are unable to access and price the risk elements. The challenge now is not to have additional funds to banks but ability to de-risk the sector to make it attractive for financing.

IV.2 Risks in Agricultural Lending
Although counter-party risks in agriculture may be high due to its nature, poorly-developed supply chains serving smallholder farmers, stochastic factors such as weather, pests and diseases or price volatility, farming systems and the differentiation of farmers are not often taken very well into consideration.

IV.3 Other Challenges
Banks neither understand the needs of agriculture nor do they have the capacity and skill to finance value-chain agriculture. As such, they do not see the sector as strategic. They lend based on opportunistic tendencies because agriculture suffers information asymmetry, lacks the required technology and the infrastructure to support it.

V. Nigerian Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL)
The Nigerian Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) is the most recent agricultural financing initiative of the CBN aimed at providing farmers with affordable financial products, while de-risking agriculture and unlocking the access of input suppliers, farmers, agro-processors, and product marketers in the agricultural value-chain financing from financial institutions. Towards the realization of this objective, the CBN on August 9, 2010 signed an Agreement with the Alliance for a Green Revolution in Africa (AGRA) to develop the concept and implementation framework for the new agricultural financing mechanism that would unlock and expand the volume of lending, reduce the transaction costs and establishment of sustainable financial delivery platforms for agricultural business.

NIRSAL is a five-solution initiative that will build capacities of Nigerian banks to lend to agriculture, deploy risk sharing instruments that will lower the risks of lending, provide technical assistance for farmers and banks and develop a bank rating scheme that will incentivise and showcase/situate banks based on their capacities to lend to the agricultural sector. NIRSAL will also constitute a sub-fund of the Impact Investing Fund for African Agriculture that will:

- Stimulate innovations in agricultural lending.
Encourage banks that are lending to the agricultural sector.

Eliminate state-dependency by banks for deploying loanable funds to agriculture.

Leverage commercial bank balance sheets for lending to agriculture.

Ensure risk sharing approaches that will build a business approach where banks share in the risk of lending to the sector.

The five major components of NIRSAL are:

i. **Risk Sharing Facility (RSF):** This will support the deployment of different risk sharing instruments to reduce the risk of lending by commercial banks to agriculture. This will include first-loss and shared-loss arrangements, depending on the volume of lending, the part of the value-chain that the bank wants to lend to, the term of lending and the type of bank, experience and capacity for agricultural lending.

ii. **Insurance Component (IC):** Will identify existing insurable risks, existing solutions for coverage/assist in the development of such solutions and link such products to the loan provided by the banks to loan beneficiaries.

iii. **Technical Assistance Facility (TAF):** To be used to support banks that have clearly demonstrated interest and verifiable commitment to entry into smallholder agricultural lending. The risk sharing fund and the technical assistance facility will be blended for banks to share risks and build capacity of banks to lend and build delivery platforms in support of agricultural lending. The technical assistance facility will also be used to build the capacity of smallholder farmers and assist them in managing market and financial activities.

iv. **Bank Incentive Mechanisms (BIM):** Banks that lend significantly to agriculture will be further incentivized. This will be done through lower guarantee fees for the use of the RSF and access to further capital for agricultural lending at a lower rate from the Central Bank to be able to lend more.

v. **Agricultural Bank Rating System (ABRS):** This will be done by reputable independent parties to rate banks based on their performance in
agricultural lending and impacts of the lending on food security, rural employment and incomes. The independently-developed rating scheme will be used to differentiate banks. Banks with higher ratings will be further incentivized through the Bank-Incentive Mechanism to do more lending to the agricultural sector. The system will also have a dedicated monitoring and evaluation system to track impacts and effectiveness.

V.1 Selection of Commodity and Financial Value Chains
Selecting the enterprises to be financed under NIRSAL required a thorough scientific analysis of commodity and financial value-chain. Based on this, two teams were constituted. The first team comprised UNIDO, BOI and the CBN which conducted a study on value-chains. In addition, AGRA engaged Monitor Group to do a commodity value-chain analysis and identify the various bread baskets in Nigeria.

The exercise was aimed at prioritizing the commodity value-chains that will be considered under the pilot phase of NIRSAL. The study reviewed the financial requirements of the various agricultural value-chains in the country, collated the reaction of banks to the commodity value-chains and bread basket choices made, received suggestions on the innovative and workable methods for up-scaling agricultural lending. The study teams undertook a holistic diagnosis of Nigeria’s agro-industrial value-chains and analyzed their various segments. The perspectives covered during the study include: mapping of bankable chains (Identification of Main actors and Uses); primary production and sourcing of inputs; processing capacity and technology; end-markets and trade; chain governance and linkages; resource productivity and environmental performance; macroeconomic and policy context; availability of finance, and financing requirements.

The outcomes of the analysis enabled the selection of value-chains to be financed based on impact on indices on the economy such as: incomes, employment, poverty reduction, food security, export earnings and import substitution. Based on the above criteria, ten agricultural value-chains (Figure 3) were selected for the country: cassava, cotton, fisheries, maize, fruits, oil palm, poultry, rice, soya beans and tomatoes. On the basis of the investment opportunities identified for commodity financing under the various segments of the value-chains; the CBN’s decisions on where to invest/support value-chains was based on:
(i) **Development Potential** – value-chains with the highest development potential and for which cassava, rice, meat/leather, soybean and fisheries were selected.

(ii) **Financial needs** - commodities with high financial needs, for which meat/leather, poultry, soyabean, dairy and cassava were chosen.

**Figure 3: Strategic Decision Matrix for Financing of Value Chains in Nigeria**

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**V.2 Conclusion: Actionable Steps towards the Actualization of NIRSAL**

Informed by the low outreach of the ACGS, the multiplicity of schemes and programmes and the need to merge them, the shift in policy from being a managing agent to a policy input and supervisory organization, the CBN signed a Memorandum of Understanding (MoU) with the Alliance for Green Revolution in Africa (AGRA) on NIRSAL.

NIRSAL is intended to strategically re-engineer the country’s agricultural finance landscape, decompose all existing initiatives, namely, the ACGS, IDP, ACSS, CACS and NAIC schematically shown below into NIRSAL’s five (5) core components that will unlock the financing challenges of the country’s agricultural sector:
The CBN in its vigorous pursuit to change the agricultural financing landscape of Nigeria has not only moved NIRSAL from the concept phase but taken it into the design phase. Presently, along the five-solution component of NIRSAL, work streams were designed to collaborate with foreign and local consultants. Ahead of NIRSAL's roll out and implementation, a retreat would be held with stakeholders to validate the concept, confirm acceptance of the commodity choices recommended by the consultants as well as securing the needed buy-in of all parties. To further firm up NIRSAL's actualization, the Bank is proposing as follows:

- A 5-man Steering Committee to comprise of the CBN Governor as Chairman, Honourable Ministers of Agriculture & Rural Development (FMA & RD), Finance and Commerce and the Vice-President of AGRA be established.

- The Bank of Agriculture (BOA), Nigerian Agricultural Insurance Corporation (NAIC), Bank of Industry (BOI) and the Nigerian Export-Import Bank (NEXIM) be co-opted into the relevant work streams of NIRSAL.

- Implementation of the pilot of NIRSAL is to commence with some enterprises to be selected based on the business plan and opportunities presented by such states that fall under identified breadbasket regions. Here, participation would strictly be based on business cases i.e. for states that will show commitment in the provision of arable land, roads, security, tax relief and other incentives that will be attractive to industrialists. Meetings are already being held between the Bankers Committee on Economic Development and Governments of some states on modalities for making the initiative operational.