# Agricultural Financing in Ethiopia

Policy and Regulatory Issues

March 2021

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# Abbreviations and Acronyms

| | |
|---|---|
| ABP | Anchor Borrowers Programme |
| ACSI | Amhara Credit and Saving Association |
| AdCSI | Addis Credit and Saving Institutions S.C |
| AEMFI | Association of Ethiopian Microfinance Institutions |
| AePS | Adhaar enabled Payment System |
| AGSMEIS | Agri-Business/Small and Medium Enterprises Investment Scheme |
| AOI | Agriculture Orientation Index |
| APIs | Application Programming Interfaces |
| APP | Agriculture Promotion Policy |
| ATA | Agricultural Transformation Agenda |
| CAGR | Compound Annual Growth Rate |
| CBE | Commercial Bank of Ethiopia |
| CBN | Central Bank of Nigeria |
| CCD | Corporate Communications Department |
| CEDEP | Consultants on Economic Development and Environmental Protection |
| CRG | Credit Risk Guarantee |
| DBE | Development Bank of Ethiopia |
| DCCBs | District Central Co-operative Banks |
| DECIS | Dedebit Credit and Saving Institutions S.C |
| DPI | Development Policy Innovation |
| ECX | Ethiopian Commodity Exchange |
| EPRDF | Ethiopian People's Revolutionary Democratic Front |
| ETB | Ethiopian Birr (Ethiopian Currency) |
| FAO | Agriculture Organization |
| FDI | Foreign Direct Investment |
| FEPSAN | Fertilizer Producers and Suppliers Association of Nigeria |
| FGDs | Focus Group Discussions |
| FI | Financial institution |
| FinTech | Financial technology |
| FMARD | Federal Ministry of Agriculture and Rural Development |
| FSS | Financial Self-Sustainability |
| GDP | Gross Domestic Product |
| GESS | Growth Enhancement Support Scheme |
| IFC | International Finance Corporation |
| IMF | International Monetary Fund |
| INR | Indian Rupee |
| KIIs | Key Informant Interviews |
| LABs | Local Area Banks |
| MFIs | Microfinance Institutions |
| MGNREGA | Mahatma Gandhi National Rural Employment Guarantee Act |
| MOA | Ministry of Agriculture |
| MoF | Ministry of Finance |
| MSME | Micro, Small and Medium Enterprises |
| NABARD | National Bank for Agricultural and Rural Development |
| NAIC | Nigerian Agricultural Insurance Corporation |
| NAICOM | National Insurance Commission |
| NAPI | National Agricultural Payment Initiative |
| NBE | National Bank of Ethiopia |
| NBFC | Non-banking Financial Companies |
| NFS | National Financial Switch |
| NGOs | Non-Governmental Organizations |
| NIRSAL | Nigeria Incentive-Based Risk Sharing System for Agricultural Lending |
| NPCI | National Payments Corporation of India |
| NPLs | Non-Performing Loans |
| NRM | Natural Resources Management |
| OCSSC | Oromia Credit and Saving Share Company |
| OMO | Omo Microfinance S.C |
| OSS | Operational Self-Sustainability |
| PACS | Primary Agricultural Credit Societies |
| PB | Payments Banks |
| PEDI | Presidential Economic Diversification Initiative |
| PFI | Presidential Fertilizer Initiative |
| PoC | Proof of Concept (Lab-level) |
| PSNP | Productive Safety Net Programs |
| RBI | Reserve Bank of India |
| REGIC | Royal Exchange General Insurance Company |
| RIDF | Rural Infrastructural Development Fund |
| RIFAN | Rice Farmers Association of Nigeria |
| ROA | Return on Assets |
| ROE | Return on Equity |
| RRBs | Regional Rural Banks |
| SACCOs | Savings and credit cooperatives |
| SBI | State Bank of India |
| SCARDB | State Co-operative Agriculture and Rural Development Banks |
| SFBs | Small Finance Banks |
| SHGs | Self-Help Groups |
| SME | Small and Medium Enterprise |
| StCBs | State Co-operative Banks |
| ToR | Terms of reference |
| UID | Unique Identification |
| UPI | Unified Payments Interface |
| USD | United States of America Dollar |
| WB | World Bank |
| WFP | World Food Program |

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Sincerely,

Managing Director, Precise Consult International PLC

# I Executive Summary

Despite the favorable natural conditions for agriculture and high work discipline of farmers in Ethiopia, the level of agricultural production and productivity have remained very low. As a result, not only Ethiopia remained incapable of producing enough to feed its population, but the proportion of food insecure households has remained very high, up to 20%.

Many factors are at play for this dismal situation. Backward agricultural technologies that undermine growth of productivity is one of the important factors. Sub-optimal investment on production and productivity boosting technologies (inputs, techniques, resource organization, etc.) has been directly associated with a shortage of "finance". This was for lack of adequate financial resource allocation for the sector in spite of its 40% share of GDP, 90% of export earnings, and covering 70% of industrial raw material needs of the national economy. The average share of loans received by agriculture from the banking sector was about 10% while the Agriculture Orientation Index (AOI) for credit was 0.2, a figure which is extremely low.

These evidences of inadequate access to finances called for this study with the major aim of assessing policy and regulatory impediments constraining the availability, access and utilization of agriculture finance. The study was conducted through review of relevant data/information, interviewing resources persons including those in the finance/banking and agriculture sectors. Moreover, experiences of India, Indonesia, Vietnam, Tanzania, and Nigeria were reviewed to draw lessons in the promotion of agricultural finance in Ethiopia.

The followings are the key findings of the study.

1. Policy related elements that limit access to agricultural finance

- No agricultural finance policy and strategy to ensure supply and utilization of adequate agricultural finance products. No focused policy or strategy on agricultural credit, insurance, saving or payment systems;
- No clear policy incentives for the engagement of the private sector in financing the risky agricultural development finance;
- Prudential requirements of bank policies emphasizing more on tangible collateral;
- Credit has been tried to be availed to few large-scale irrigation agriculture, domestic trade, and export sub-sectors, while it was scarce for processing and manufacturing or agribusiness development in the country;
- No established bank focusing on and serving the agriculture sector;
- No differentiated interest rates for agriculture sector in general and smallholder in particular.
- Smallholder farming subsector is ignored, except for the general supply of fertilizer and improved seed for major crops, such as maize;

2. Regulatory system gaps and challenges

- There is no regulatory framework focusing on agricultural finance, except the universal framework that is designed for all purposes;
- There is an imbalance between long-term agricultural growth, development and transformation targets, and supply of agricultural financial products;
- Although there are pilot based practices of warehouse receipts and value-chain financing, and the regulation on movable assets based collateral use, comprehensive regulations governing the feasibility and implementation of agricultural product and intangible collateralization are only forthcoming;
- No defined package of components of technologies or support services that may supplement or complement the access or utilization of financial services in agriculture sector;
- Lack of bankruptcy protection for agricultural (e.g., access to limited liability) corporate structures.

3. Other factors affecting smallholder farmers' access to agricultural credits

- Low penetration of banking (less than 5%) and insurance (less than 1%) services;
- Low expansion of banking infrastructure including branches, FinTech, agent services, etc.;
- Low level of financial literacy including on insurance, saving, and payment mechanisms;
- Underdeveloped financial transaction systems.

The followings recommendations are proposed to enhance agricultural financing in Ethiopia.

1. **Improve the supply of and demand for financial resources for agriculture** through reinstating agricultural bank; renovating financial markets and mobilizing savings nationally;
2. **Promote financial accessibility** through agent expansion; upgrading MFIs and credit and saving cooperatives to rural/agricultural banks; building infrastructure, promoting digitization and interoperability among financial institutions and engaging private firms in supplying agricultural financial products;

3. **Support ease of financing** through provision of special considerations for the agriculture sector through lowering prices of financial products and expansion of intangible collateral systems by focusing more on profitability and effectiveness of projects;

4. **Improve regulatory framework** through introduction of detail procedures ensuring importation of genuine and quality capital good; developing system of registry providing proper valuation of assets and assigning unique identity of agricultural product collaterals; providing appropriate system to facilitate traceability of individual borrower, agricultural product collaterals and transferability of use right or farmland that is used as collateral;

5. **Facilitate financing smallholder agriculture** by focusing more on micro and small-scale farms; transform poverty reduction program budget utilization mechanism into credit-based and market-oriented modality; and emphasizing more on productive capacity development and on return on investment (ROA) performances of a farm project;

6. **Provide agricultural finance and business development support (BDS)** by making the service mandatory to all financial services providers; designing a functional system towards strict project appraisal procedures;

7. **Introduce monitoring and evaluation system** by establishing an agriculture specific "M&E desk" and undertaking periodic impact evaluation on completed agricultural financial service delivery projects for effective utilization of the country's financial resources;

8. **Promote micro-insurance in the agriculture sector** among smallholder farmers through reducing insurance premiums; expanding insurance products such as smart and weather index insurance along with digital financial service promotion; making insurance mandatory with financial credits; raising literacy levels and public awareness about insurance; allowing the regulatory body of the insurance service to be independent and autonomous at national level; addressing technical capacity and skill limitations of insurance personnel; and ensuring exit strategy for donor supported insurance schemes.

# I Introduction

## Background

Historically, the development of Ethiopia's agricultural sector was punctuated by the February 1974 *Derg* revolution. Prior to the revolution, private commercial farms were emerging in many Ethiopian regions including the Shashemenie area (in the south); parts of Mojo, Nazareth and Arsi (in the south-east); the Metema-Humera corridor (in the North -West); and expanses of Lower, Middle and Upper Awash (in the east). Investment in agriculture was expanding due to a supportive legal framework and policy initiatives that included the establishment of the Agricultural Development Bank of Ethiopia (ADB), the now Development Bank of Ethiopia (DBE).

Following the *Derg* revolution, the socialist-oriented development policies disfavored private investment and private enterprise development. The privately owned financial institutions (FIs)-three commercial banks, thirteen insurance companies and two non-bank financial intermediaries-were nationalized on 1 January 1975. Development of the agricultural sector, in general, and private farming (commercial and smallholder) in particular, was severely affected in multiple ways, mainly due to the absence of an enabling environment. Specifically, lack of (i) ownership rights over land; (ii) incentive to invest in modern agricultural technologies; (iii) access to financial and capital goods services; and (iv) motivation to care for agricultural resources, etc. Although the last years of the *Derg* witnessed reforms to introduce the "mixed economy economic development model", a free market model for development was adopted when the Ethiopian People's Revolutionary Democratic Front (EPRDF) took over the government power.

Economic growth accelerated and big strides were made in the development of infrastructure. However, while these achievements were described favorably by the IMF and World Bank, the disconnect between the massive capital inflows (FDI, loans, and grants) and the developmental outcomes that left millions still living in poverty, including 20-25% of the population suffering from food insecurity, was among the issues the critics pointed out. Others pointed to the inconsistency between the growth rhetoric and the failure of economic growth to become self-sustaining.

Seeking to correct these unsatisfactory results, the "change government" is now setting an agenda for economic transformation that focuses on the quality of economic growth and adopts a people-centered approach to development. Increasing agricultural production is seen as key to eradicating poverty, especially since Ethiopia faces a growing population and a changing climate. Fortunately, Ethiopia is endowed with natural resources and an established base of commercial and smallholder farms. Nonetheless, to leverage these assets, farmers' access to financial services must be substantially increased from the current very poor levels.

For the overwhelming majority of smallholder farmers (1), access to financial resources from formal sources for production or consumptive purposes is very limited if not unavailable at all. As a result, it is not uncommon for them to resort to the informal sources (usurers) where the cost (interest rate) is exorbitant. The non-existent of agricultural insurance further exacerbates farmers' access to credits.

Since the last three or more decades, huge budgets have been allotted for "poverty reduction" initiatives. The funds for the initiatives were offered through programs such as 'Food Aid' and Productive Safety Net Program (PSNP). The programs' achievements in supporting the poorest of the poor and those physically incapable of working in the field as well as in natural resources development are appreciated. Nevertheless, budget utilization "modalities" are alleged to have undermined the productive capacities and self-confidence of able bodied and physically active beneficiaries most of whom are on programs' payroll for multiple years or even longer than a decade.

The support, provided for free (for those with physical inability) or as payment in kind (or cash) for participation in development activities such as natural resources rehabilitation program, continues until each beneficiary achieves family level food self-sufficiency. Their unabated participation in the programs rather purported "food aid dependency mentality" even among the "able bodied beneficiaries" let alone expediting their early graduation as "food self-sufficient" families. The huge budgets could have been utilized in a manner that encourages able bodied beneficiaries to be productive and self-supporting citizens within a shorter period of time. Such innovative budget utilization modality has to result in a pool of funds that can be collected from the graduating beneficiaries to be utilized by other needy farming households under a revolving fund system.

Lack of financial awareness coupled with absence of agricultural insurances has greatly constrained expansion of credit services among smallholder farmers. Absence of agricultural insurances, which are neither integrated nor made compulsory for agricultural activities, has negatively affected provision of agricultural credits which could have contributed for the improvement of the backward farming technologies.

Below, the report reviews: (i) challenges faced by the agricultural sector in accessing bank services such as financial credits ; (ii) constraints on financial institutions' credit policies affecting investment decisions on production and productivity-raising technologies; and (iii) financial institutions' limitations to improve credit to the agricultural sector. Though many establishments are identified by the National Bank of Ethiopia (NBE) as financial institutions, the study is limited to insurance companies; banks; and micro-finance institutions (MFIs).



1. Whenever the word/phrase 'smallholder' or 'smallholder farmers', appear in the document, they may also include pastoralists and/or agro-pastoralists.

## Significances of Agricultural Finance in Ethiopia

Agricultural finance poses exceptional challenges for formal financial institutions due to the following factors intrinsic to agriculture and agricultural markets in Ethiopia:

a. High transaction costs in rural areas compared to urban centers because of lower population density and inadequate infrastructure (transport, telecommunications, and power supply).

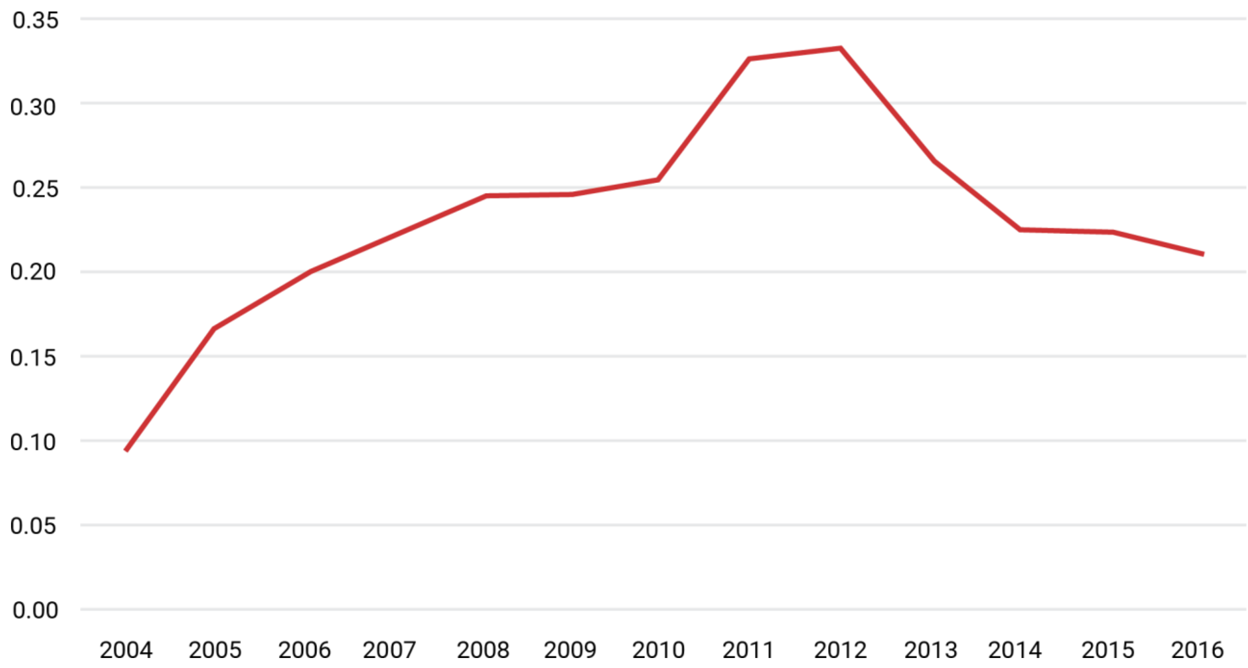
b. Weak financial infrastructure for financial deepening (e.g., borrowers' credit histories; land couldn't be used as collateral due to lack of title deed (now allowed with certificate of "use right"), lack of insurance coverage due to limited access or high premium, movable asset was not accepted as collateral (it is now allowed).

c. Covariance of risks related to agricultural production (e.g., natural hazards such as droughts, floods and pests), market and price volatility coupled with absence of adequate instruments (e.g., insurance) tailored to manage and hedge risks raised by volatility in the sector, particularly for small farmers.

These factors combine to create a disincentive for private sector engagement in agricultural finance, resulting in inadequate flows of private capital, despite the social utility of such flows. According to the Food and Agriculture Organization (FAO), the agricultural sector in nearly half of its member countries received less than 3.5% of total credit made available, and globally, the share of commercial credit flowing to agriculture stood at about 2.9% in 2017, less than agriculture's contribution to global GDP (FAO, 2018).

The Agriculture Orientation Index (AOI) for credit normalizes the share of credit to agriculture by taking into account the contribution of agriculture to GDP. An AOI less than 1 indicates that the agricultural sector receives a credit share less than its contribution to the economy, while an AOI greater than 1 indicates a credit share to the agricultural sector greater than its economic contribution. Sub-Saharan Africa features many countries that have a very low AOI given the importance of agriculture in their economies. Ethiopia is amongst those with the most extreme disparity between the share of GDP accounted by agriculture (50.5% in 2006/07 and 33% in 2018/19) and the sector's share of credit, with an AOI of around 0.2 in the latest data and declining in recent years from recent highs in the 0.3 range (still a very low figure) in 2011-2012 (Figure 1).

Figure 1: Ethiopia's agriculture orientation index (AOI) for credit, 2006-2016

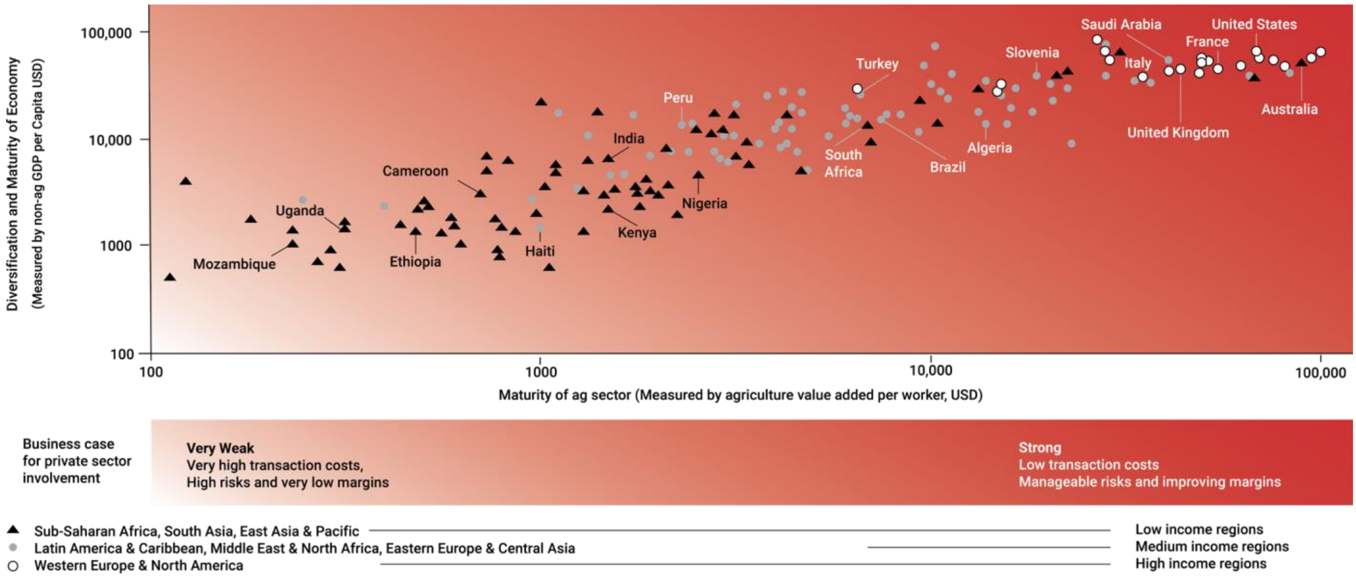



Source: FAO, 2018

Only in the most advanced countries with mature, highly diversified, and corporatized agricultural sectors is the business case for private sector agricultural finance strong (ISF, 2020).

Ethiopia, clearly, is well short of reaching that status (Figure 2) and features all the standard problems that have been identified in financing agriculture in developing countries.

Figure 2: Economic diversification and maturity of the agriculture sector




Source: ISF, 2020

Countries in the lower left quadrant of Figure 2 feature high transaction costs and high risks. In a context where there are relatively few "bankable" clients, this results in a weak business case for private sector provision of credit, insurance, or payment services (ISF, 2020; 2). Consistent with the above data, Ethiopia's agricultural sector and rural enterprise significantly lags behind urban and industrial sectors when it comes to access to credit and financial inclusion (i.e., access to deposit facilities, payment services and insurance instruments amongst others) in general. By the same token, Ethiopia is relatively far from the "tipping point" where private sector credit providers would voluntarily enter the market. In short:

*"... the independent business case for financial service provision in agriculture simply does not exist without government subsidy and support; particularly when banks weigh agricultural service provision against lending to government treasuries or more profitable segments of the economy, such as telecommunications, infrastructure, and extractive industries. ... A recent analysis of bank portfolios in East Africa found a -1% Return on Assets (ROA) for Agriculture SME lending vs. an average of 3-5% ROA for lending in other sectors. This represents a quantified opportunity cost of 4-5% for banks."* (ISF, 2020; 3)

## Gap-filling Public Sector Role

Not surprisingly, given the realities facing private sector financing for rural and agricultural development, governments around the world have had to step into the breach and play a leading role in providing capital for agricultural development, tailored to the specific needs of this sector, including the household farms. Some examples of such gap filling institutions are Kenya's Agricultural Finance Corporation, a state-owned institution tasked with agricultural finance and rural development, and Canada's Farm Credit Corporation, which describes its mandate as "providing specialized and personalized business and financial services and products to farming operations, including family farms, and to those businesses in rural Canada, including small and medium-sized businesses, that are businesses related to farming."

Since the deficiency in private sector credit support agriculture is widespread internationally, there is also considerable international experience in developing measures to address this shortfall. This makes an important case for benchmarking international practice. At the same time, the variance across countries in basic conditions naturally cautions about "one-size-fits-all" policies in this area; accordingly, the relevance and adaptability of solutions developed internationally must be carefully considered when Ethiopia has to learn from.

## Technological Developments – Fintech

The rapid development of financial technology (Fintech) is opening up new ways to harness information technology to increase private sector willingness to lend to small borrowers including smallholder farmers. These technological developments include mobile banking and payments, national identification systems, and block chain technology. With these and related technologies, Fintech can expand financial inclusion, facilitate the pricing of risk, reduce the cost of managing loans, and help organize value chains, all of which help in expanding the flow of credit to rural and agricultural borrowers.

Across the developing world, the deployment of these technologies promises to allow countries to leapfrog legacy systems in which they have deficits and deficiencies – indeed, it is precisely in economies in which Fintech does not face entrenched competition from legacy financial systems where it is most rapidly taking off and where it has the biggest bang for the buck in terms of generating growth and development. Access to technology does not, however, represent a "silver bullet" that disposes of problems. For example, microfinance projects have seen limited take-up by farm households in contexts where the basic business case for borrowing and investing was weak and/or financial literacy was low.

*"In contexts where supply chains are not well developed and poor infrastructure makes input prices high and output prices low, a set of recent experimental studies attempting to extend credit to farmers have typically seen quite weak demand. A microfinance project in a rural area of Morocco facing virtually no competition from other lenders saw take up of 17% of households ... Experiences from Sierra Leone and Mali have seen take up in the range of 21% and 25%." (McIntosh and Mansini, 2018).*

Accordingly, comprehensive solutions are required, including addressing the value chain which smallholder agriculturalists plug into. Given the importance of agriculture for the majority of the rural population and the overall economy of Ethiopia, weaknesses in these areas translate into overall weak development outcomes and slower economic growth. By the same token, addressing the policy/regulatory issues that affect financial flows and financial services to the sector is of fundamental importance to Ethiopia's further development.

## Objectives and Scope of the Study

The objectives of the study are to:

1. Review Ethiopia's existing institutional framework for agricultural credit provision, including the laws and regulations governing Ethiopia's financial institutions with a view to identifying impediments to the flow of funds to the agricultural sector;
2. Describe the existing private sector financial entities engaged in financing economic activity in Ethiopia, the extent to which these entities channel finance into the agricultural and rural sectors, and the state of uptake on modern financial technologies ("Fintech"); and
3. Develop a set of policy reform recommendations to support the implementation of these reforms based on analysis of the barriers and impediments to the flow of funds to Ethiopia's agricultural sector, and in light of best practices internationally as identified through a benchmarking exercise.

The study covers the current policy and regulatory issues in agricultural financing in Ethiopia. The study involved appraising "how policies and regulatory frameworks" of the financial sector are supporting (or otherwise) the rural population in their activities involving agricultural production? Related actions included data gathering from identified sources in a participatory manner and employing appropriate methods and tools. The study also involves formulation of appropriate policy options that address institutional (policy) or other challenges and constraints facing the actors in the financial sector and the beneficiaries, including the farmers.

## Study Approach and Methodology

The study was conducted using a "participatory" approach where all players in the agriculture and financial sectors participate at all phases of the Study. These included officials and policy makers in the finance sector (NBE, Commercial Bank of Ethiopia, DBE, and private banks, insurance companies and MFIs), cooperatives promotion agencies, private agriculture operators and members of the cooperative associations.

The approach emphasized on engaging stakeholders on providing 'up-to-date' data while their valuable contributions in subsequent phases were welcome. To ensure deeper understanding of thoughts, impressions and insights on the issues, interviews and discussions were achieved by the consultants.

In the study the following techniques were employed:

a. **Identified Data Sources**: Sources identified for the assessment were (i) materials on policies and regulatory issues on finance and agriculture; (ii) resource persons from policy makers; experts; etc. on issues of the assessment; (iii) private operators in agriculture and members of farmers' cooperatives; and (iv) officials in the finance and agriculture sectors.

b. **Data Collection Techniques Used**: Document/desk review, focus group discussions (FGDs); key informant interviews (KIIs), and professional observation using checklist were the techniques used to gather data and information.

c. **Study Tools developed**: Interviews (KIIs), discussions (FGDs) guides and checklists for professional observation were prepared, agreed upon and used for the study.

d. **Techniques Used in Data Analysis** : The qualitative and quantitative data/information obtained from the sources were checked and edited for correctness and consistency. Edited information/data was then collated systematically for ease of analysis.

The policy/strategy assessment involves deep understanding of the situation, challenges, threats, and opportunities. Identification of critical gaps and pillars shaping them, strategic initiatives with breakthrough ideas, actors' power/interest and relations, and possible future threats and uncertainties were all in the realm of the analysis. Critical scrutiny of the political economy of agricultural finance and credit policy/institutional accountability were aslso conducted. Global experiences and exhaustive identification of innovative practices were critically assessed. These followed critical scenario analysis, careful examination of assumptions, and transformative policy options for recommendations of new/innovative agricultural finance and credit policies and strategies with implementation framework as well as global lessons adoptable to current Ethiopian conditions.

## Structure of the Report

This report presented the issues of the study as follows. The foregoing provides an introduction starting with a "background" which reminds development of commercial agriculture in pre 1974 Ethiopia; shows how Ethiopian agriculture is underfinanced even from among the Sub-Saharan African countries - laying the rationale for this study. The section continues with a summary of the objective and scope of the Assessment and culminates with the "approach and methodology" employed in which identification of data/information sources and methods gathering and tools used for were described succinctly.

Section 2 provides a summary of document review on guiding policies and regulatory frameworks of Ethiopia's established financial sector entities engaged in providing agricultural finance and summary statistics on the flow of funds to the agricultural sector and farmer households.

Section 3 reviews the 'Gaps and Challenges of Existing Agricultural Financial Policies and Regulatory systems". The section also highlights current developments in the country towards bridging gaps and addressing challenges.

Section 4 examines "Experience of Other Countries" for benchmarking purposes of some countries with similar socio-enomic conditions to Ethiopia. Countries selected include India, Kenya, and Nigeria which have adequately addressed problems of agricultural Financing among smallholders and the agriculture sector in general.

Section 5 deals with "Recommendations" in which areas for (i) policy revision or changes or introduction and (ii) regulatory framework improvements required are identified and recommended with the objective of addressing problems of agricultural financing observed among the agriculture enterprises in general, and smallholder farmers in particular.

# II Policy and Regulatory Framework for Agricultural Finance

## Policies Governing Credit Provisions and other Bank Operations to Agricultural Sector

Banks and their agents (2) formulate and pursue credit policies that guide and govern the allocation and provision of credit. Each bank determines whether a credit request by a borrower in the agricultural sector can be entertained and under what conditions. For analytical purposes, banks operating in Ethiopia are categorized into four groups, namely: (i) special purpose banks (the Development Bank of Ethiopia; (ii) public commercial banks (Commercial Bank of Ethiopia); (iii) private commercial banks (total 19); and (iv) microfinance institutions.

The rate of penetration of bank services in Ethiopia is extremely low, even by sub-Saharan Africa (SSA) standards. Creditors of MFIs which operate mainly closer to the rural societies and the farmers number as of 2019 over 5 million beneficiaries. The latest figure of total creditors (2019) of all banks in Ethiopia is less than 300,000. This is extremely low for a country with a population of over 100 million.

### Development Bank of Ethiopia

Established some 112 years ago (1901 in the Ethiopian calendar), the Development Bank of Ethiopia (DBE) is the longest serving bank in Ethiopia. Initially established to exclusively serve the agricultural sector, its roles were subsequently widened to cover manufacturing to support industrialization.

#### Loans and Eligible Sectors

The DBE operations are restricted to government-specified priority areas, namely: manufacturing, agro-processing, mining or extractive industries, and commercial agricultural projects. Within these broad sectors, the DBE is empowered to extend the following forms of finance (Loan Manual, 2014): (i) investment credits; (ii) term loans (medium and long-term); (iii) permanent working capital loans; and (iv) short-term working capital as a package.

Notably, smallholder farmers, MSEs, SMEs and agricultural sector start-ups are not included as priorities. One important structural feature is that the lowest minimum farm size eligible for DBE financing is 20 hectares (vegetable production), while about 64% of smallholder farmers (or an estimated 15-20 million in total), have holdings of less than one hectare. The exclusion of smallholder farmers sharply reduces the ability of the DBE to contribute to Ethiopia's agricultural sector policy objectives, since these farmers account for close to 95% of total crop production, 40% of GDP, 90% of Ethiopia's export earnings, and 70% of raw material needs.

Since smallholder farmers share over 85% of the population, their exclusion as a priority sector also has widespread negative socio-economic impacts, with millions living with poverty, hunger, and malnutrition, as a result.

#### Loan Conditions and Durations

Long and medium-term loans have a maximum duration of 20 and 3-5 years, including grace period, respectively. Permanent working capital loans provided as a package have a maximum of 15 and 5 years repayment duration for long and medium-term loans, respectively. Working capital is another loan category which is available to agricultural projects as a 'bridge' finance. Such loans are provided specifically to (i) extend the inventory cycle of a project under implementation; (ii) improve capacity utilization; and (iii) cover short term cash flow shortages. Lease financing is also part of the DBE's credit product palette. A project has to support the national Agricultural and Industrialization Strategy to qualify for lease financing.

To qualify for a loan, borrowers have to be creditworthy, while projects are supposed to be appraised for their financial and economic viability, social desirability, and environmental soundness. The DBE's credit conditions to agricultural priority areas (agro-processing and commercial agricultural projects) are detailed in the manual. In order to serve smallholder farmers as a priority area, the DBE must revise its lending policy, and ensure that a comprehensive package of financial services is available to these clients.

#### Agriculture as a Priority Area and Loan Requirements

In its loan provision, the DBE has prioritized commercial agriculture of the following types: fruits and vegetables production; rain-fed commercial crop production; and agro-processing industries. To process loans, the Bank has set a number of criteria including minimum land size (see annex 1) ; targeted loan-eligible agro-processing industries; and commercial farms (annex 2 and 3). The DBE has enumerated requirements for rain-fed commercial crop production and other agricultural projects (annex 4) , namely (a) location within suitable agro-climatic zones with historically reliable rainfall record; and (b) insurance against relevant potential risks, which include the following: excessive rainfall; weather storms; drought; flood; hail and frost; fire and lightning; and uncontrollable pests and diseases.

The agricultural risk insurance requirement represents a stringent criterion for most areas of the country where smallholder farmers live/operate. Moreover, the lack of availability of and/or access to reliable and timely forecast data on agro-climatic conditions of the agricultural areas of the country is another challenge facing the credit procedures.

2. Banks and insurance companies have started using agents to retail their service (credit, insurance, payment services) through private business operators working at all levels, including small towns. Agents are legally allowed to operate with certain requirements defined by the NBE.

As well, smallholder farmers need financial support services for food production, and access to risk management for, inter alia, financial risk (e.g., change in the repayment periods), political risk (e.g., conflict-related damages), and market risks (e.g., deviation from expected price) are significant gaps.

Agro-processing projects are given due emphasis as they are considered strategic because of their strong backward and forward linkages with the rest of the economy. However, since growers are mostly smallholder farmers who face constraints on access to finance to produce the required volume at desired quality, they represent the weak link in the value chain. The agro-processing entities or higher-level value-chain actors may have better access to financing and/or capacity to provide such financial services.

### Lending Conditions and Collateral

DBE examines the fulfillment of various conditions to approve loans. Among the many conditions, insurance and collateral are considered important for the assessment. The Bank states that it relies primarily on the financial viability of the project itself. Nevertheless, to minimize default risk, the Bank requires first degree collateral security for all loans outside of the project amounting to 100% of the loan. The double collateral requirement, in the view of many, is "high and discouraging", if the project has passed economic and financial feasibility tests. Currently, however, this regulation is improved in that Lease Financing Scheme is institutionalized for the purchase of equipment in that investors can obtain credit by using the certificate of ownership of machinery.

### Agri-Sector Projects Access to forex

One of the socio-economic criteria for obtaining a loan from the DBE is "export earnings and foreign exchange saving" capacity of the project.

To summarize, for the DBE to expand its role in meeting Ethiopia's agricultural development objectives, there are numerous issues that it must address in its lending policies, including:

1. Make smaller scale farms eligible for DBE products.
2. Review the conditions or alternative financial product types required to expand financial services to neglected parties.
3. In particular, make financial support services available for food production, an activity with which many of the smallholder farmers are engaged.
4. Gaps in risk coverage that need to be filled include, inter alia, financial risk (e.g., change in the repayment periods), political risk (e.g., conflict-related damages), and market risks (deviation from expected price).
5. In this case of the majority of smallholder farmers and start-ups that do not have property for collateral, there is a need to find ways of financing their business. Options include sharing benefits and risks, and providing these enterprises with concrete business development support services. Alternative modalities, such as venture or equity financing or angel investment options may also need to be investigated.

## Commercial Bank of Ethiopia

Established in 1963 E.C., Commercial Bank of Ethiopia (CBE) is the largest public commercial bank in the country with the largest branch network. As of February 2020, the CBE provides its services through 1,600 branches spread across the country. The CBE provides investment loans, including to the agricultural sector; microfinance loans; and working capital loans. The CBE's credit extension to the agricultural sector, however, represents less than 10% of its credit portfolio.

### Loans and Eligible Sectors

The CBE has over 10 major categories of credit products (3) offerings for agriculture; these are described below. Almost all these products, however, are encouraging production of exportable products. Although importation of inputs (fertilizers, seeds, etc.) is supported, no credit product is yet available for production of food crops by smallholder farmers.

**Livestock Export Financing** is a credit given to livestock exporters in the form of pre-shipment export loan for purchasing, quarantine and transportation of live animals. 'Insurance' for the animals and a 'sales contract' from a foreign buyer for a known quantity of cattle are mandatory to qualify for this loan. Although insurance directives are available to cover such needs, exporters are not encouraged to obtain the coverage because of the high charges and complicated and tiresome procedures.

**Agricultural Output Financing** is a credit facility specifically for cooperatives/unions to address working capital problems in fulfilling their obligations under sales contracts with the World Food Program (WFP). The main purpose is to deliver domestically purchased and processed food grains mainly white maize, wheat and sorghum to the WFP. Valid or bona fide forward delivery contracts, order/sales contracts, and engagement in the business for at least two years qualify cooperatives/unions for the loan. Those that are unable to fulfill the above conditions are required to provide acceptable collateral equivalent to 75% of the loan for grade 1 & 2, 85% of the loan for grade 3 and 100% of the loan for Grade 4 and above cooperatives/unions.

**Agriculture Term Loan** is another product that the bank provides to the agricultural sector. The loans are available as short (up to 3 years), medium (3-7 years) and long (7-15 years) term loans with a repayment period of 1 - 15 years depending on the loan category. Three types of term loans are availed for the sector, viz: agricultural input loans, commercial farming term loans and cotton farm term loans.

**Agricultural Input Loan** is a short-term loan used to finance the purchase and distribution of agricultural inputs such as fertilizer, improved seeds, and other similar inputs by smallholder farmers, cooperatives, unions, and legal persons. Eligible for the loan are regional state governments, regional state presidents, cooperatives, unions, and associations. Regional governments and the presidents require a letter of guarantee from the Ministry of Finance and Economic Cooperation (MoFEC), while the cooperatives, unions and associations need to submit legal registration, minutes of the request, demonstrate at least one year of business experience with good track record, evidence of acquiring offices, etc. with professional manager recruited.

**Commercial Farming Term Loan** is a short to long-term loan available for cooperatives, unions, associations, private limited companies, share companies, and individuals engaged with modern commercial farming or agro-processing industries. The loans are meant for working capital and/or acquiring/leasing/ constructing fixed assets such as buildings, agro-processing machinery and equipment for plantation, crop production, and animal husbandry in medium and large-scale farming. The CBE, under this loan, encourages production of exportable crops, be it by rain-fed or irrigation system farms.

**Cotton Farm Term Loan** is a short-term loan given to cotton farmers against a guarantee from the DBE. The loan is to cover working capital requirements for post-sowing activities, cotton harvesting and ginning. The repayment period is one year, while the volume of the loan is determined by production capacity, previous year sales performance, and other cost requirements. Borrowers are required to submit documents including a 'bona fide' order from a local buyer, land holding/lease or use, and a clan leaders' agreement (if in Afar). Borrowers who have been in the business for less than a year are requested to post collateral of 40%. The minimum land size for a farm to qualify for such a loan is 30 hectares.

**Warehouse Receipt** is a credit facility offered to members and clients of the Ethiopian Commodity Exchange (ECX). This is a short-term loan granted as a merchandise loan to cooperative unions, local traders, or exporters of agricultural commodities, having "warehouse receipts" showing the commodity is warehoused in the ECX facility. The receipt is retained as collateral and the commodities must be accepted by the ECX.

**Merchandise Loan Facility** is given against merchandise or document evidence (railway receipt, warehouse receipt, or airway bill) held as a pledge or collateral. This facility does not accept perishable commodities or chemicals except fertilizers. Loan requests of fertilizer importers are also entertained under the "import letter of credit facility". Private users of this facility are required to pay a minimum of 30% of the value of the imported goods.

**Pre-shipment Export Credits** are extended to exporters of coffee, sesame, and other agricultural products against the security of a valid sales/export contract or bona fide purchase order from a foreign buyer. The CBE channels the payments through the ECX. The maximum advance rates are 90% (coffee), 85% (sesame) and 80% (for all others) of the value of the sales contract. The cost of the loan for pre-shipment export loans is 3% of the advanced loan for coffee and 5% of the advanced loan for all other commodities.

### Loans Conditions and Durations

All credit products available from the CBE are obviously contingent on borrowers meeting eligibility criteria. In this respect, there are two sets of eligibility criteria: general eligibility criteria and eligibility criteria for each loan/advance.

Among the general eligibility criteria, the major ones are lawful and creditworthy business with defined and sustainable sources of income; legal documents establishing the business (trade license, etc.); no history of (a) tax evasion, (b) breach of exchange control regulations, (c) maloperation of the checking account in the banking system and (d) unlawful dealings; and there would be no non-performing loan or unsettled previous loss by major shareholder /subsidiaries/related parties of the borrower.

Eligibility criteria for specific loans or advances include posting acceptable collateral of 40% - 75% of the loans (depending on the nature of the loan and borrower); providing documents such as sales contract, bona fide from forward delivery contract order/sales of a foreign buyer; warehouse receipt from ECX facility, insurance for animals; and guarantee from MoF when loan request is by regional governments/ presidents or from the DBE in the case of a cotton farm term loan.

For all loans extended to the agricultural sector, the maximum repayment period was 15 years (without a grace period) for commercial farm loans used for fixed assets such as buildings, etc.; the minimum term is one year (cotton farm term loans) to finance working capital requirements.

### Bank's Priority Areas (Agriculture) and Loan Requirements:

The CBE's lending policy elaborated under credit business procedures makes no explicit statement about priority of economic/social/environment sectors for access to loans. Any borrower fulfilling the general and specific eligibility criteria or project appraised for its economic and financial feasibility is acceptable. Although eligibility criteria vary slightly according to loans requested.

To summarize, production of food crops for domestic consumption is not in the CBE's priority list. While the CBE's general criteria are similar for almost all loans, enterprises engaged in the production of exportable items are treated more favorably than those producing goods or services for domestic consumption. Since Ethiopia suffers from inadequate production of food crops, which has impacted on food prices and general costs of living and thus imports annually 600 – 700 thousand metric tons of grains according to the NBE (mainly wheat), the CBE's contribution to alleviating these pressing concerns in Ethiopia's agricultural sector is limited.

### Private Commercial Banks

Re-Establishment and operation of private commercial banks started in 1994 after Ethiopia changed from a socialist-oriented to a market-led development approach. Almost all private banks are organized as share companies. To date, there are 18 private commercial banks (including Zam Zam Bank S.C., which is under formation at the time of this study) with about 3,000 branches. Operations of private banks may vary depending on the length of time in the business as well as on the system of management established in each bank. These differences may be in their systems of internal operations such as credit rating, treatment of exceptions, portfolio management, or innovativeness in service delivery including customer handling efficiency in loan delivery, avoiding duplication of efforts, and soundness of credit risk management, etc. Nevertheless, all banks, including private commercial banks which are established under Proclamation No. 592/2008, are governed by rules and regulations of the NBE, which is the regulatory and supervisory body. As a result, credit procedures, sector priority, system of operations, and banking services are similar. For known reasons of higher risk, private banks attach no priority to serving the agricultural sector, in general, and the smallholder farmers, in particular. Distribution of their branches is more urban centered than rural areas.

#### Loans and Eligible Sectors

Credit products provided by private commercial banks are more or less similar from bank to bank despite minor variations in focus. Credit products generally take the form of loans and advances or guarantees. Loans and advances include merchandise loans, advances on export, overdrafts, term loans, import financing, etc. Guarantee products are contingent liabilities which include bid bond guarantees, performance guarantees, customs bond guarantees, advance payment guarantees, and retention money guarantees. Loans for microfinance institutions, project financing and syndicate financing are also loan varieties that private banks offer.

Although there is a long list of potential customers identified as eligible creditors, those activities related to the agricultural sector and identified as loanable include: (i) domestic trade and services; (ii) manufacturing loans and advances; (iii) export loans and advances; (iv) construction of export processing plants; and (v) export processing machinery and equipment.

#### Loan Requirements and Durations

Loan requirements and conditions that private bank customers have to fulfill to meet prudential requirements established by the banks tend to be similar across banks but vary depending on the type of loans. Loans related to the agricultural sector provided by private banks include project financing, pre- and post-shipment export facilities, import and export trade financing, overdraft, syndicate financing, warehouse receipts, and loans for microfinance institutions.

Common credit requirements that borrowers must meet include an economic and financial feasibility study with positive net present value for projects and competent management; tangible collateral in the form of buildings, cash or cash substitutes; documents showing sound financial standing establishing justification for credit needs; satisfactory past records in meeting banks' requirements for tangible collateral in building, cash or cash substitute; insurance; letter of guarantee issued by a bank; and in case of microfinance institutions, an NBE license, quality of loan portfolio, loan approval system, and loan recovery performance.

#### Priority Areas

The economic sectors eligible for private commercial banks' credit products are many. All banks have identified agriculture as one of their loanable sectors. However, while the sectoral priorities of individual banks vary, the share of their credit portfolios for agriculture, in general, and for smallholder farmers, in particular, is extremely low. As a corrective measure, the government has recently issued a new directive that obliges all private commercial banks to allocate and provide 5% of their loanable funds to microfinance institutions, which have considerably greater reach-out to smallholder farmers than the banks themselves do, or directly to beneficiary agricultural business firms or farmers.

Agriculture related activities that receive commercial bank credit services include distribution and trading of agricultural products such as cattle, food products, leather products, wood works, tea and coffee; processing and packing for export of coffee and oilseeds; export of livestock and livestock products, flowers, beans and pulses, fruit and vegetables, leather and leather products, textile and garments, salt, lint cotton, beeswax and Khat (chat); construction of export processing plants; and export processing machinery and equipment.

### Microfinance Institutions

a) Need for MFIs: Establishment of MFIs has been necessitated to bridge the gap created by the conventional banks which are concentrated mainly in the urban centers. Even if the banks are available, the rural population in general and the poor in particular are excluded from the services due to higher costs (screening, monitoring and enforcement) which small loans cause. Moreover, most poor have few or no assets that can be secured by the banks as collateral.

This lack of access to financial services has been identified as one of the important constraints impeding rural livelihood development. Thus, establishment and operation of MFIs have given access the rural population to bank services.

b) Requirement for establishment: The minimum capital required to establish an MFI is Birr 10 million (on the order of USD 25,000). The institutions operate under the NBE rules and regulations. MFIs are under three ownership types – government, NGOs and private. The dominant MFIs, in terms of capital asset owned and volume of transactions, are those established and owned by the regional governments.

Critical and important functions of MFIs include functions related to deposits; loans; local money transfer; micro insurance, non-financial services and any other functions that may be determined by the NBE. Microloans are given for a variety of purposes, including input purchase, petty trade, to start new business, development of micro-enterprises and consumption smoothing.

c) Development and Functions of MFIs : According to the NBE , the latest figure for the number of MFIs operating in Ethiopia is 46. The earliest recorded establishment (1995) and licensed to operate as an MFI dates back almost a quarter of a century ago (April, 1997).

The Association of Ethiopian Microfinance Institutions (AEMFI) has a membership of 34 MFIs (74%) of registered and licensed by the NBE . Based on members' years in operation (age), total asset, number of personnel and loan officers, the Association categorizes its members into three – small, medium and large - peer groups (see annex 5). Total assets owned (2019) by the small, medium and large peer groups were ETB 121.39 million; ETB 1.1587 billion and ETB 82.0998 billion, respectively. The number of loan officers in the respective group over the same period were 166; 704 and 88,106 while average years in operation were 9; 16 and 19 years, in that order.

Major areas of operations are supporting income generating projects of urban and rural micro and small-scale operators or others engaged in productive activities; managing funds for micro and small- scale businesses or other related productive activities; providing financial leasing service to leases in accordance with capital goods leasing proclamation No 103/1998 and capital goods leasing business. According to the proclamation for business amendment, the MFI can also be engaged in providing digital finance services, agent banking, and interest free MF services.

Provision of short-term credits, most importantly to farmers who are given credits mostly for fertilizer and seed purchases, is MFIs dominant service. Such loans can be given without collateral secured by group or individual guarantee as appropriate at the discretion of the institution.

Beneficiaries, however, consider the lending rate as "high", a reason they attest for not being encouraged to benefit from the credit service. MFI's interest rates are determined by themselves taking (a) saving interest, (b) administrative cost, (c) cost of firm expansion and (d) inflation as the bases in their computation. MFI officials claim that credit accessibility, not the going interest rate, is the most deterring factor for the farmers from benefiting the credit services. The officials justify their argument that the going interest rate constitutes only 3% of the production costs - according to a recent study. Nevertheless, as return on assets (ROA) and return on equity (ROE) are comfortably high, the regional governments are in a position to subsidize the interest rate by setting aside a portion of the profits from MFIs operations. This measure would facilitate the region's development by supporting the small household farmers who complained about the interest rate as "high" and deterred from getting the credit services.

In practice MFIs lending rates are more than 20% in some cases-with a minimum interest rate on savings of 7%, as determined by the NBE. The public MFIs (such as Amhara, Dedebit, Oromia, and Omo MFIs) are known to have high rates of non-performing loans (NPLs) as farmers were encouraged to take credits in contexts in which they proved unable to repay. The publicly owned MFIs, whose management is politically influenced, are said to have contributed to the failed culture of the financial market by developing deliberate default by the side of borrowers, as the political bodies used to compensate their NPL with the regional development budgets, and farmers relieved at the cost of regional development programs.

d) Reaching out and Financial Performance: MFIs, in their drive to support poverty reduction efforts, are expected to reach out to as large number of beneficiaries (rural inhabitants) as possible, thus increasing "breadth" of outreach while at the same time ensuring credit access to those with relative "high poverty levels" – increasing again "depth" of outreach.

Table 1: Outreach market share, loan portfolio and total savings

| Particulars | MFI Peer Group | | | Total |
|---|---|---|---|---|
| | Small | Medium | Large | |
| Number of Active Borrowers | 11,105 | 65,138 | 5,001,979 | 5,078,222 |
| Percentage of Women Borrowers* | 45% | 40% | 51% | 50.8% |
| Gross Loan Portfolio (ETB) | 82,643,449 | 917,465,206 | 57,387,681,401 | 58,387,790,056 |
| Average Loan Balance per Borrower | 74,656 | 157,960 | 244,652 | 477,268 |
| Saving (Voluntary) (ETB) | 29,010,804 | 362,513,501 | 34,821,263,455 | 35,212,787,760 |
| Saving (Compulsory) (ETB) | 16,315,081 | 114,507,322 | 5,274,827,187 | 5,405,649,590 |
| Total Saving (ETB) | 5,325,885 | 477,020,823 | 40,096,090,642 | 40,618,437,350 |

Source: Association of Ethiopian Microfinance Institutions -Bulletin 2020 -14 and own computations.

Total beneficiaries (active borrowers) who were reached out in 2019 by the three categories of the MFIs stand at 5,078,222, of which almost half were "women" beneficiaries (Table 1). Disaggregated by the three groups, their services were reached to 11,105 (45% women); 65,138 (40% women); and 5,001,979 (51% women) by the small, medium and large peer group MFIs, respectively . The three largest MFIs accounted for 72% of the total borrowings (i.e., ACSI (27%); OCSSO (20%) and OMO (25%). It is interesting to note that not only MFIs reached the larger borrowers, but also more women were proportionally served by them than the small and medium did.

e) Total Asset and Employment Creation: Although not uniform and vary considerably from each other, the Ethiopian MFIs have shown a considerable growth in their asset and employment creation. According to Bulletin – 14 of AEMFI, the 30 Association members hold a total asset of ETB 83.380 Billion from which ETB 58.3 Billion is loan portfolio, at year ending 2019 (Table 1). The five largest MFIs (viz, ACSI, OCSSO, OMO, DECIS, and AdCSI) constitute 89% of the total asset .

In promoting employment, the association members of the MFIs employ a total of 98,331 employees, of which 88.106

Table 2: Total asset and employment creation by peer group

| Particulars | MFI Peer Group | | | Total |
|---|---|---|---|---|
| | Small | Medium | Large | |
| Total Asset (ETB) | 121,391,583 | 1,158,775,714 | 82.099,848,608 | 83,380,015,905 |
| Personnel (No) | 166 | 704 | 87,236 | 88,106 |
| No of Loan Officer | 108 | 188 | 9,929 | 10,225 |
| Age (Average) | 9 | 16 | 19 | 16 |

Source: ibid.

are categorized as personnel, and 10,225 as loan officers. The total employment shares of the small, medium and large peer group of the association are 0.28%, 1.01%, and 98.81%, respectively (Table 2).

f) Saving, Profitability and Efficiency: Savings among the MFIs have been increasing over the years. Total saving, which comprises compulsory and voluntary savings, that was mobilized in 2019 was ETB 40.618 Billion (Table 1). The shares of voluntary and compulsory savings in total saving were 86.7% and 13.3%, respectively. Saving mobilization by the small, medium and large peer group amounts to 1.116%; 11.744% and 87.141%, in that order. Looking into the mobilization capacities of some of the MFIs, such as ACSI, are huge where total saving and gross loan portfolio accounted for 40% and 45% of the total (Table 3).

Table 3: Percent of selected MFIs savings, loan portfolio and active borrowers of the total loan portfolio

| Particulars | Major MFIs | | | | All Other MFIs |
|---|---|---|---|---|---|
| | OMO | DECSI | OCSSCO | ACSI | |
| Total Saving | 10% | 14% | 19% | 40% | 18% |
| Gross Loan Portfolio | 9% | 23% | 11% | 45% | 13% |
| Number of Active Borrowers | 25% | 7% | 20% | 20% | 20% |

Source: ibid.

Table 4: Efficiency and productivity indicators by MFI peer groups (average)

| Particulars | MFI Peer Group | | | Average |
|---|---|---|---|---|
| | Small | Medium | Large | |
| Operating Expense /Loan Portfolio | 28.03% | 10.53% | 8.01% | 15.53% |
| Personnel Expense /Loan Portfolio | 18.53% | 6.59% | 5.26% | 10.13% |
| Cost per Borrower | 1,879 | 2,117 | 989 | 1,662 |
| Borrowers per Loan Officer | 122 | 421 | 505 | 349 |

Source: ibid.

Return on asset (ROA) , which reflects MFIs ability to use its assets productively and return on equity (ROE) which measures returns produced for the MFIs (owners) as well as the operational self-sustainability (OSS) and financial self-sustainability (FSS) are common measures of financial performance (profitability). An MFI is said to be profitable and sustainable if it has a positive return on asset (ROA) and returns on equity (ROE) and operational self-sufficiency over 100%. Larger figures of these three accounting measures indicate efficiency in the performance of the MFI operations as well as generating positive net income.

Table 5: Profitability of members by MFIs peer group

| Profitability/Efficiency Measures | MFI Peer Group | | | Average |
|---|---|---|---|---|
| | Small | Medium | Large | |
| Return on Asset (ROA) | (0.13) | 0.05 | 0.04 | (0.01) |
| Return on Equity (ROE) | (0.18) | 0.17 | 0.15 | 0.05 |
| Operational Self Sufficiency (OSS) | 61% | 125% | 133% | 106% |
| Financial Self Sufficiency (FSS) | 51% | 102% | 105% | 86% |

Source: ibid.

The financial performance of the MFIs in 2019 based on average figures for all the three peer groups are ROA of 0.01; ROE of 0.05; OSS of 106% and FSS of 86% (Table 5). Although the degree of performance varies among the groups, all achieved positive ROA and ROE - indicating the degree of efficiency in the utilization of company resources and all managed net earnings.

Table 6: Efficiency and productivity of MFIs by peer group

| Efficiency and Productivity Measures | MFI Peer Group | | | Average |
|---|---|---|---|---|
| | Small | Medium | Large | |
| Operating Expense / Loan Portfolio | (0.13) | 0.05 | 0.04 | (0.01) |
| Personnel Expense / Loan Portfolio | (0.18) | 0.17 | 0.15 | 0.05 |

Source: ibid.

On measures of operational and financial sustainability (OSS and FSS), all but the small group achieved over 100% showing that they were self-sustainable both operationally and financially. Medium and large groups had an OSS of 125% and 133%, respectively. The measures on FSS for medium and large groups were 102% and 105%, respectively (Table 5).

## Financial Cooperatives and Micro- insurance

In addition to commercial banks and MFIs, Saving and Credit Cooperatives (SACCOs), Cooperative Banks and Micro-Insurance are considered useful to achieve financial inclusion strategy that is set recently by the Ethiopian government especially for rural areas and unbanked communities.

**Savings and credit cooperatives (SACCOs),** which are widespread mainly in the rural areas, aim at building saving culture among members through financial literacy education which is expected to facilitate their savings mobilization, provision of credits and insurance services.

The SACCOs claim to be promoted to cooperative banks. Cooperative banks can be established and operate like any other commercial banks under regulations of the NBE as stipulated in its Banking Business Proclamation no. 592/2008, as amended by Proclamation no. 1159/2019. Over the last fifteen years, however, only one Cooperative Bank (viz. Cooperative Bank of Oromia) has been established and is the only one currently operating in the country.

**Micro-insurance** services are meant to protect low-income people including smallholder farmers from perils of natural or man-made origins including drought, fire and lightning, hail and storms, flood, rust, uncontrollable plant and animal diseases and pests, and excessive rainfall. In addition to the regular insurance companies, micro-insurance services are provided by MFIs. Establishment of cooperative insurance is demanded by cooperative societies. Nevertheless, there is currently no legal framework in the country allowing the establishment of cooperative insurance companies.

### Saving and Credit Cooperatives (SACCOs)

#### Background and Establishment

The establishment of cooperative societies in Ethiopia dates back six decades ago (1952 E.C.). Currently, there are about 92,895 cooperative societies (95,500 primary cooperatives; 391 secondary cooperative and 4 cooperative federations) with a total membership of more than 22 million. According to the Federal cooperative agency, however, less than half (45,000 cooperatives) are with organized office administrations. Of the total cooperative societies, 39%, 31% 25% and 5% provide their services to non-agriculture, agriculture, credit and savings, and consumers, respectively. Less than one third (31%) of the cooperatives are providing services to the agriculture sector. Only a quarter are organized as SACCOs whose services again are not exclusively for agriculture/ smallholder farmers.

Development of cooperatives, providing saving and credit services, was limited especially until early 2000 when 495 SACCOs with 119,799 members and capital of ETB 78,772,710 were operational. SACCOs are established with the free will of their members who democratically elect the leadership for effective management of the cooperative. The cooperatives provide their members a variety of financial services including saving, credit, investment loans and insurance services at reasonable prices. Dividends from the revenues generated by the cooperatives are distributed to members.

**Development and Services Provisions**

By mid-2018, the number of SACCOs grew to 20,719 (20,591 Primary and 128 Union categories) with 4.6 million (41.6% women) membership. This is about 23% of the total cooperative societies in the country. The number of SACCOs is inadequate to effectively provide financial (mainly saving and credit) services to the vast majority of smallholder farmers.

Having mobilized about ETB 11.562 billion from members, saving and credit cooperatives currently revolve capital of ETB 15.28 billion (of which ETB 3.718 billion capital is accumulated). Growth in the provision of credit services over the last three years (until 2018), especially in 2017 and 2018, was generally remarkable although it started from a narrow base. Number of creditors grew annually by 5.9% (2017) and 469.4% (2018) from their preceding years. Growth in volume of credits provided was 57.84% and 125.02% annually during 2017 and 2018 fiscal years, respectively. The following table shows the growth in the number of creditors and volume credits extended.

Table 7: Volume of credits supplied, and number of creditors served (2016-2018)

| Fiscal Year | Total Creditors | Annual Growth | Total Credits (ETB) | Annual Growth |
|---|---|---|---|---|
| 2016 | 97,243 | - | 995,223,585.00 | - |
| 2017 | 103,000 | 5.9% | 1,570,877,129.00 | 57.84% |
| 2018 | 586,504 | 469.4% | 3,534,921,624.00 | 125.02% |
| Total | 786,747 | - | 6,101,002,341.00 | - |

Source: Own computations from FDRE Cooperatives roadmap, October 2018

**Bottlenecks that SACCOs are facing in providing adequate financial services to agriculture**

According to the roadmap for cooperatives development, three concerns are identified as bottlenecks in the development of SACCOs in Ethiopia. These are:

- Weak and inconsistent process of organization political interferences - Cooperatives are organized without approved feasibility studies; operation, in same locality, of other cooperatives which could be merged together or consolidated their activities toward providing better services to members, unlawful interferences by government officials and other stakeholders, and inadequate participation of women and the youth;
- Limited financial resources and services to agriculture - communities' poor financial awareness challenges saving mobilization which affects provision of financial products including loan services to members, lack of effective and strong financial market linkages among cooperatives, and with other financial institutions to mobilize more funds; and
- Lack of modern financial management system, skill and knowledge – inadequate internal financial delivery system for providing savings, loans, interest rate calculation and other services, problem of modernizing financial services provisions to members, problem of designing and establishing market linkage with other cooperatives and financial institutions, limited skill and knowledge of responsible bodies in expanding financial products and inability to self-evaluate performance based on international financial standards.

In anticipation of upgrading the SACCOs to (rural) bank level, proposed interventions in the roadmap to address the bottlenecks currently facing them are recommended. These are (a) ensuring the establishment of strong, economically and financially feasible and well-functioning and organized SACCOs; (b) expanding financial services to provide adequate and efficient services to its members; and (c) resolving the skill and knowledge gaps and establishing modern operational financial system that supports financial management.

## Cooperative Banks

**Establishment and Guiding Principles**

Formation of cooperative bank in Ethiopia is a recent phenomenon when compared to establishment of cooperative societies for production (producers' cooperatives) and marketing (services cooperatives) purposes. The latter were widespread during the "Derg" regime which had promoted 'socialist' oriented development models. Aimed at stabilization of agricultural markets - mainly through product price control, operations of the then cooperatives were under strict government control - a situation which continued until regime change in the early 1990's.

Operational and guiding principles of the cooperative banks are reflections of those of the cooperative societies' such as values of self-help, equality, social responsibility and ensuring members' ownership, control, and fair economic benefits.

Proclamation no. 84/1994 was the legal ground for establishment of Cooperative Banks before recent proclamations, viz. the August 2008 proclamation (Proclamation no. 592/2008), as amended by Proclamation no. 1159/2019. These proclamations allow cooperative banks to participate in banking businesses as any commercial banks.

Practical and transactional needs of the vast cooperative societies (nearly 93,000) as well as the government's strong desire for the active participation of cooperative banks in the country's social and economic development should have motivated the formation of many such banks. Nevertheless, to date only one bank, Cooperative Bank of Oromia (COOPBoO), established in 2005 by cooperative (Primary Cooperatives; Cooperatives Union; and Cooperatives Federation) and Non-cooperative (organizations and associations; and individuals) shareholders, is operational. According to the recently adopted "cooperative roadmap of Ethiopia", the establishment of more cooperatives banks than only one has to be facilitated to allow them play vital roles in the country's social and economic development.

**Financial Services of Cooperative Banks**

The banking business, which the cooperative bank is also eligible to be engaged in, include receiving funds from the public (saving); using the funds for loans or investments; transfer of funds or any other activity recognized as customary banking business. Agriculture, over the last three years, accounted for less than 10 percent of the outstanding credits in the country with the bulk supplied to the more developed export sub-sector. The smallholders sub sector remained under served with negative implications. Lack of access to credits by smallholder farmers has been one of the major causes for inadequate growth in production and productivity of agriculture, of course, with undesired consequences such as inflation on food prices.

Based on the cooperative roadmap, a major objective of the cooperative banks is promotion of "culture of saving" among farming households in the rural areas. Moreover, facilitating access to financial products and services including borrowing, money transfer and micro insurance provision are services expected of the cooperative banks. The services in the latter category aim at improving linkages and integration of the market through using bank facilities to make payments on obligations or receive proceeds. Cooperative banks can actively involve in providing credits to farmers (members) for input purchases without collateral requirements.

**Achievements of Cooperative Bank of Oromia**

The bank has been growing both in physical presence (branch expansion) in "outlying areas", in mobilizing savings and disbursing loans to its customers. The bank, including the 31 new branches opened during the fiscal year, has as of June 2020 a total of 420 branches of which 80.5% are located in outlying areas.

Increasing continuously, the bank had mobilized savings value of ETB 45.52 Billion in 2019/20 from ETB 36.09 Billion in 2018/19 and ETB 25.77 Billion in 2017/18. Having injected fresh loans of ETB 16.66 billion to various sectors of the economy, outstanding loan portfolio increased to ETB 34.21 billion at the year-end June 2020. According to the Bank's latest report (2020), 31%, 29.6%, 20.6% and 18.7% of the total loans disbursed (ETB 34.21 Billion) during the fiscal year were to international trade, domestic trade, manufacturing, and others, respectively. However, among sectors of the economy to which loans and advances have been provided, agriculture is not separately reported on.

## Micro -Insurance Companies

Agricultural insurance provides multiple benefits to the farming and pastoral communities. Insurance protects them against loss of or damage to crops or livestock. It is a form of risk management aiming at protecting farmers/pastoralists when shocks occur to their properties (farms; animals). Moreover, insurance service creates credit and develops productive capital which raises farmers' production and productivity through improved farming technologies.

Nevertheless, agricultural insurance service in Ethiopia is not widely used. Among the challenges enumerated behind lack of the insurance services' expansion in the country are limited awareness about insurance, absence of or inadequate infrastructure (branches, financial technologies (Fintech), agent representation, etc.) and high premium are the important ones. Therefore, expansion of the services for the smallholder farmers/pastoralists may need, primarily, to work against the constraints. Modern secured transaction systems enable individuals and entities to use their movable assets as security for credit generating new productive capital, expands investments, create more job opportunities, increases production and productivity, creates opportunity to expand and foster access to financial products and services.

**Insurance Services in the Agricultural Sector**

At the time of this assessment, there were a total of 18 insurance companies (including the public insurance company) operating in the country. As is the case with other financial institutions in the country, insurance companies are operating under the auspices of the NBE which supervises and regulates their operations. Only few Insurance companies have been providing agricultural insurance services. This is not surprising for a country where the banked population is less than 5%.

Among the few insurance companies who have engaged in agricultural insurance, Nyala Insurance S.C (NISC) was the pioneer and has worked for a long period in the service. It has been providing micro - insurance services to smallholder farmers and/or pastoralists/agro- pastoralists over the last a decade and half. The insurance services were mainly donor-based projects.

The insurance services were delivered for the purposes of (i) Protection – Weather Index Based Crop and Livestock insurance for pastoral and agro-pastoralists who are direct food and cash transfer beneficiaries under the Productive Safety Net Program (PSNP); (ii) Promotion – in which the main product is a multi-peril crop and indemnity livestock insurance serving smallholder farmers practicing mixed farming in agro-pastoral and highland livelihood systems; and (iii) Loan Portfolio Protection - beneficiaries were medium and large scale commercial agricultural developers engaged in crop production and livestock development, and the insurance products that were transacted include crop insurance, coffee plantation insurance, horticulture insurance and livestock insurance.

According to NISC, the expansion and sustainability of agriculture insurance services have been constrained by multiple challenges, including (i) financial problem to subsidize insurance premium which is considered high; (ii) lack of technical knowledge and skill to design insurance products, process climate data and undertake pricing to scale up the product; (iii) absence of exit-strategy of pilot projects to ensure service continuity after the donor-based insurance projects phased out; (iv) huge loss faced by traditional crop insurance (from climate change impacts) products due to 'small pool', absence of technical expertise in loss adjustment and lack of adequate data and information on agricultural risks; and (v) lack of monitoring and evaluation support to assess project impacts providing facts for policy makers' and donors' decision promoting agriculture insurance.

**Financial Inclusions and Micro - Insurance Promotion**

The August 2019 proclamation on Movable Property Security Right (proclamation No. 1147/2019) is a landmark in establishing a modern secured transaction system by which the smallholder farmers and pastoralists/agro-pastoralists are to be included as beneficiaries of financial services. The proclamation, which is a move towards financial inclusion, promotes micro-insurance which protects low - income members of the community including smallholder farmers/pastoralists against natural hazards to their livelihoods, etc.

According to the Directive (No. MCR/01/2020) issued in August 2020, an autonomous registry office which uses "electronic registry system" in its operations has been established and housed at the NBE. To utilize the system, banks, MFIs and capital goods finance companies have to, among others, formulate and put in use policies and procedures and other relevant documentation for secured transactions. The study team came across no policy and procedural documents prepared by the banks, etc. nor a "registry" developed by the NBE.

To date, a directive, or a working manual to identify and/or value agricultural products, in general, and live animals, in particular, is not yet made public. As a result, financial institutions may be facing practical problems in attaching monetary value of a collateral item and its traceability after transaction when implementing the movable collateral rights proclamations.

**The Way Forward in Promoting Agricultural Insurance**

The weak motivation of insurance companies to engage in the risky nature of agricultural business and the inadequate emphasis given by the government to insurance services explain the underdeveloped status of the agricultural insurance sub-sector. This has directly affected the growth of the agricultural economy in Ethiopia as credit provisions mostly require either insurance or collateral, which most farmers are unable to meet.

In addition to what was enumerated above, expansion of insurance services has also been held back by less focus it received now than what it used to be four and half decades ago. It was witnessed then that the sector was strengthened institutionally by activities including establishment and running of an insurance training center with its regulatory body designed independent of the national bank.

Lack of financial awareness, coupled with inadequate expansion of infrastructure and digital technology to expand micro insurance in rural/pastoral areas, has greatly constrained expansion of financial services among smallholder farmers/pastoralists. Lack of agricultural insurance services, which are neither adequate, integrated nor made compulsory for farming activities, has negatively affected the provision of agricultural credits which could have contributed towards improvement of the backward farming technologies.

The recent proclamation by the NBE is believed to increase the demand for agriculture insurance among smallholder farmers/ pastoralists. The proclamation, which provide Movable Property Security Rights, facilitates smallholder farmers' access to financial resources through security provision for the banks and microfinance institutions. The financial resources thus accessed will promote farmers' production and productivity through productive investment.

Nevertheless, there isn't a roadmap yet showing future development of insurance in the agriculture sector, either. Therefore, formulation and implementation of policies relevant for the development of the insurance services is timely. In addition to the different measures outlined below, preparation and implementation of "agricultural insurance development roadmap" which will be the basis for identifying and formulating relevant policy options that is instrumental for the development of agricultural insurance in the rural areas is recommended.

The following initiatives have been among the identified action areas (along with the NBE initiatives) to promote insurance services, in general, and for the service in the agriculture sector of the country, in particular. These may include:

(a) working on financial awareness/literacy among smallholder farmers/ pastoralist and the public at large;

(b) technical capacity building for insurance personnel;

(c) reinstituting an autonomous body that provides special focus for the promotion of insurance services in the country;

(d) (promoting "smart" subsidy (integrating insurance service with other input services) system;

(e) provide premium subsidy for limited period;

(f) infrastructure development to widely reach farmers with quality services through branch expansion, digitization and agents.

## Regulatory Frameworks Governing Operations of Financial Institutions in Agricultural Financing

There has not been an organized program plan or a public body responsible for Agricultural finance in Ethiopia's development programs in the last five decades, even though the DBE was exclusively established and was delivering agricultural finance service before. Agricultural finance is fundamental for agricultural development to access production inputs, technologies, marketing, and agro-processing functions, etc. however, there has not been an institution mandated to plan the required level of financial resources for the agricultural sector, and ensure the availability, access and utilization of financial service. Agricultural development sector has been obtaining a certain level of finance from the financial institutions operating in the country. Particularly, the government has been directing the NBE, CBE and DBE to access for basic external inputs, mainly fertilizer, to be distributed to the farmers.

As an initiative of increasing financial access to the rural communities, the NBE established different levels of steering committees, technical committees and task forces at federal and regional government levels to accomplish the initiatives of financial inclusion in the country, including the execution of 5% loan-able fund to be allocated to the agriculture sector by all FIs.

Agricultural investment support desk of the MOA has been focusing on the large-scale farms, neglecting the majority smallholder farmers/pastoralists. The same is true with the DBE that is focusing on large-scale investment projects. On the other hand, farmers' cooperatives and MFIs were trying to provide certain finance for the smallholder farmers. Finance has been an important constraint with millions of the smallholder farm households and unemployed youth who could get employed in the agricultural sector. The disbursed and small sized nature of farms and undeveloped technology that do not use irrigation and mechanization contributes to the loss of interest by the side of FIs to finance agriculture investments. The current cluster farming and out-grower schemes would also be other lines of mechanisms where a number of smallholder farmers can get access for agricultural finance.

The institutional arrangement for the different financial services and products is not well developed, although the concept considers saving, credit and insurance, for a long time, and payment mechanisms, recently. There is no any institute dealing with the development of saving and deposits nationally, except the exercise different FIs are promoting for their own interest to increase their deposit savings. Credit service has been the main element that has been considered by FIs. Moreover, insurance service has been thinned, at least after the Emperor regime, as it has stayed shadowed under the NBE, and could not help providing insurance service for the agriculture sector. A number of NGOs and external finances were trying to pilot insuring agricultural investment risks, while the government body of so-called insurance desk of the NBE could not develop and scale-up the experiences of different donor based piloted insurance schemes.

The CBE and the DBE are the dominant FIs governing the financial market. They are indeed, policy banks, and are sources of the major loans and credit financing public projects, as for example CBE allocates more than 90% of its loan to public projects. DBE is the only FI providing long-term loan, while CBE uses the ratio of 40-40-20 for short term, medium term and long term loans, respectively. They are also supposed to act as wholesale banking while particularly the MFIs have been used as retail FIs. The farmers financial cooperatives and unions could be ideal retail banking institutes as they are located near the farming communities. The 18 private banks, 46 MFIs, and 92500 primary and 391 secondary cooperatives and 4 federations of cooperatives and unions are important foundations of private sector FIs. The financial regulation, in general, is still challenging for the private sector to be motivated and engage in agricultural financing as the minimum capital requirement is high for all FIs, and that there is no incentive (price and non-price factors) for the private sector to be motivated to involve at different levels, such as through equity financing, etc.

The FIs mainly exist and working with their physical establishment, and are not networked among themselves, undeveloped digital financing and interoperability among the FIs, in turn slows down financial transactions. Items, such as properties of different kinds are not registered and could not be easily used as collateral, which could help facilitate the credit provision as financial capital. Moreover, the vast majority of the rural population in Ethiopia are far from physical access to the formal FIs, except the few MFIs. In addition, electronic banking is undeveloped with the current developments of mobile banking and M-Birr technologies.

Accountability and rule of law were not enforceable in the public institutions, particularly with the DBE and others as financial services were provided not only on standards of predetermined criteria that are set but following personal behavior. In addition, there has not been determined technical business development support service that can ensure and make investment loans so profitable using economic evaluations of alternative decisions.

The agriculture sector, which has itself been known to be underfunded, has been used as a source of transferring capital to the non-agriculture sector in the country. This is evidenced from the operations of the MFIs and the financial cooperatives, who used to collect saving deposits from the rural population, and provide loans/credit mainly to non-agriculture sector due to both reasons of less profitability/high risk in the agriculture sector, and that the smallholder farmers are less capable to show collateral for their credit service than the potential borrowers from the non-agriculture sector. The regulatory system does not provide special treatment for smallholder farmers, SMEs or large-scale agricultural investment over other sectors; there is no also as such special financial treatment to help promote agricultural investment.

# III Agricultural Financial Policy and Regulator System Gaps and Challenges

## Policy Gaps and Challenges

Agriculture development program has never considered agricultural finance as an important area of development policy and strategy in the past decades. As a result, finance has been an important constraint with the millions of farm households and unemployed youth who could identify jobs and get employed in the agricultural sector. As there is no agricultural financial policy support to the agricultural sector, the disbursed and small sized nature of farms and undeveloped technology that do not use irrigation and mechanization contributes to the loss of interest by the side of the FIs to finance agriculture businesses. There is no clear policy to mobilize saving nationally. NBE could organize a desk for the purpose and develop a program of social and cultural transformation on saving, such as through media. Assets and properties of different kinds in the hands of individuals in rural and urban areas could also be valued and used as collateral to access loans from different sources, although it requires policy supported valuation and registry of such properties, and the need to regulate the market system. Policy incentives may also be thought of for the private sector to act directly in provision of financial service, including acting as agent banking.

There is no specific policy defining agricultural financial service/ product that fit into the agricultural sector circumstances. Smallholder farmers require special financial products different from that in urban or other sectors than agriculture; prices of these products should not be at par with corresponding prices in urban or other sectors; terms and conditions of financial market for smallholder and a beginner SME/MSE should be special. In addition, other dimensions of the agricultural sector, such as pricing policies and protection policies of agricultural products, its competitiveness in the global markets, access for importable inputs, such as fertilizer, and mechanization technologies and irrigation facilities do matter in its profitability and its demand for additional capital resources. The government may find and allocate special funds to protect and promote agricultural investment.

The NBE's stringent credit policy is criticized for it is associated with physical property of collateral; a revision of collateral conception from fixed item property to group lending (for smallholder farmers and poor borrowers) to movable property, including farmland certificate and warehouse receipts, and towards zero collateral, project collateral and lease financing may need to be developed. The credit management policy may need to be revisited such that strong monitoring and evaluation of loan, provision of BDS, use of insurance, and exercise of loan write-off in case of natural risk.

The government has been promoting a strategy of agricultural value chain to help link producers with actors and help through creating market access and selling their products. It can also be an optional mechanism to help smallholder farms/firms obtain financial services. This system, however, may tend to keep farmers with their conventional production system, and promoting transaction of the primary products without adding value . The relative governance power of the smallholder firms who used to sell their primary product directly to the upper-level actors may ultimately end up leaving the smallholder farmers to be claimants of the last remnant, with least share. In conditions where agribusiness development, including processing of its products, is a requirement to have a sustainable agricultural development sector, finance is binding to enhance the position of farmers in the global value chain. This may call for having a specific agricultural finance policy that can permit smallholder farmers obtaining credit independently of value-chain actors.

The government's adoption of the strategy of Financial Inclusion is indeed much appreciated. For this purpose, the NBE directed all Banks to allocate 5% of their loanable fund to the agriculture sector either directly or through the MFIs. However, certain elements are missing to get it implemented. The registry system of movable properties, including the transferability of use right of certified farm/forage land, unique identity for each person and traceability of individuals, standard valuation of assets and investment projects, etc. are among areas of further works. The financial inclusion policy can also be enhanced with development of electronic banking which is under development with the Ethio-telecom; where more intensive policy support may be required to link vital institutions and allocate adequate funds for the purpose. The policy would also be at ease for ensuring interoperability.

Agricultural insurance service has been institutionalized somehow by the support of international organizations, such as IFC, IFAD, etc., as there is no policy direction to take care of such a gap. Ethiopian Insurance co., Oromia Cooperative insurance co., Africa Insurance co., and Nyala Insurance co. have been providing insurance service. However, the service is not well accustomed; and risks are not compensated.

## Regulatory System Gaps and Challenges

Laws and regulations governing banks, non-bank financial institutions and insurance companies, including specifically,

1. Regulations governing collateral for loans
2. How the rules on collateral might interact with Ethiopian social norms (e.g., women entrepreneurs' access to credit),
3. Risk-related capital adequacy standards treatment of agricultural loans, including stress testing practices that drive financial institutions to invest in safe assets,

4. Bankruptcy protection for agriculture – e.g., access to limited liability corporate structures,

5. Rules regarding status of lenders in claims on bankrupts (e.g., relative to unpaid wages, taxes, etc).

Agriculture sector has been very much constrained by shortage of financial resource, as it has been cited repeatedly. It would have an effect on the commercial orientation of the agriculture sector, in general, as the cost of capital could enforce every user to be cost conscious, which is an important missing element in the production system of agricultural products. Financial literacy is an important missing element in the agricultural communities; as a result, many households are affected by high and extravagant spending culture during harvest times and running out of money and difficulty of financing their cost of food during the summer season.

The suboptimal use of financial capital in the agricultural sector contributes to the traditional production system that does not employ modern technologies-water, mechanization, processing, market facilities to attain quality standards, etc., and making the business less attractive to the private investor.

In Ethiopia with potential natural resources (land, water and climate), unemployment and poverty could significantly be reduced by encouraging millions of graduates or unemployed youth in the agriculture sector, given easy access for financial resources. Private sector could grow and develop significantly and help reduce unemployment and poverty, and manage the associated social and political crisis in the country if start-up capital could be easily accessible with vital basic business technical knowledge. This justifies the need to strengthen injecting agricultural finance into the agricultural sector.

The unchanging nature of smallness in the agriculture sector can also be explained with its attribution to the limited financial capital employed in the sector that characterizes the sector by traditional techniques of production and marketing, where processing and value-addition could not be developed. The low input and low output nature of the sector also results in a very limited output that is not able to supply the required raw material for the manufacturing industry.

Absence of formal institutions under the MOA has contributed to the underdeveloped conception of agricultural finance, and its limited use in the sector that resulted in the long-stayed traditional practices or least adoption of modern technologies. A focused body dealing on development of regulatory and delivery systems of agricultural finance is missing. Moreover, the agricultural investment support desk of the MOA has been focusing on the large-scale farms, neglecting the majority smallholder farming and the middle agricultural MSE and SMEs. The same is true with the DBE that is focusing on large-scale investment projects.

In general, a public body should be recognized to accomplish cultural transformation to let the society understand the importance of saving and obtain minimum financial literacy. Absence of a public body or focus on insurance funds has decreased the effort of FIs to finance agricultural investments, which are characterized with different risks. Unless and otherwise a public body on insurance is institutionalized, agricultural credit or loan cannot develop as required and the same for agricultural investment.

Retail financial institutions are not well developed in the rural areas, except the MFIs. As the financial cooperatives and unions are not recognized as FI by NBE, and both MFIs and financial cooperatives/unions face serious shortage of liquidity, retail banking is not well developed. In addition, the minimum capital for the establishment of MFI is so high it has become a vital barrier to enter into the financial market.

The presence of rural locations where rural populations could not easily travel and find banks to put deposit, save or take credit, and lack of retail banking system and the un-networked and undeveloped interoperability compromises the speed of transactions, and increased cost of providing the services.

The governance system in the pubic FIs, particularly the DBE has been known to have been leading the history of financial corruption and malpractices in the country by mismanaging the limited financial resource, developing selfish interest onto the minds of the public servants and has thinned institutional citizenship by the staff, and developed culture of irresponsibility by the side of potential customers, and the society at large. This also made selection of right investors challenging. Difficulty of proper identification of investors is not as such the issue of only information asymmetry; it is also due to the bad administrative governance with the banks contributing to high NPL as the loans were released irrespective of meeting the necessary requirements or credit conditions. This may call for all banks to have professionals for proper valuation of collateral assets and assessing feasibility and appraisal of projects.

The available loanable fund in the hands of banks has not been utilized effectively for the agriculture sector; as for example only about 40% of DBE's lending plan is achieved, and it is only 30% of the loanable fund allocated by the NBE taken by the DBE. In general, the actual demand is less than the supply. However, it can be explained that the real demand for credit is so latent that the restrictive conditions and investment environment prohibited borrowers to apply for credit. Inefficiency in the FIs is common in the insurance system. There is no adequate desk and expert team that can assess the agricultural risk due to an undeveloped institutional system that resulted in working in imperfect information.

Investment in the agriculture sector has not been motivating due to the absence of a regulatory system that provides special financial conditions for investors in the sector. Agricultural investment is characterized by risks associated with its dependence on nature, and the cost of administering or providing financial service/products is larger associated with the many smallholding farmers or fragmented parties located in a wide area that increases overhead costs, etc. The lending interest rate, insurance premium and premiums of different payment mechanisms demand subsidy by the government, if the agriculture sector is to be promoted for investment and to expect national development.

In terms of the institutional and regulatory system of financial administration, the main challenges observed include improper identification of investors. This is not as such the issue of only information asymmetry; it is also due to bad administrative governance with the banks contributing to the NPL as the loans were released irrespective of meeting the necessary requirements or credit conditions. Therefore, among the 5Cs of credit, determining the "character of an investor" is an important missing area. Low financial literacy, undeveloped bookkeeping, absence of national identity, lack of accountability, and the culture of default and loan write-off, etc. significantly contribute to the weak performance of financial institutions in the agricultural sector. Financial participation has been concentrated in cities and in the non-agriculture sector. All Banks are required to have professionals for proper valuation of collateral and assessing feasibility and appraisal of projects.

## Current Developments

Ethiopia's current development agenda, the "Home Grown Reform Agenda: Unlocking Ethiopia's Economic Potential," sets out the following high-level objectives:

1. Sustaining rapid economic growth
2. Building a resilient and diversified middle-income-level economy achieved by raising agricultural productivity and incomes of small-scale farmers, technological innovation, inclusive and sustainable industrialization, and an inclusive digital economy.
3. Eradicating extreme poverty and hunger, and reducing the proportion of people living in poverty by half.
4. Providing universal access to health care, education, drinking water, energy and transportation services.
5. Building a modern emerging-market-economy-level policy and institutional framework.
6. Building an efficient, resilient, and well-functioning financial system.

Given the importance of the agricultural sector in the social, economic, and political dimensions of the nation, it is clear that all of the objectives cannot be realized fully without agricultural sector development. Development of financial services is also important across the board, both in terms of serving as an important sector and employment generator, and as a means to inject capital into other sectors of the economy to underwrite their transformation. The agricultural sector has been very much constrained by a shortage of financial resources, as has been cited repeatedly. This weakened the commercial orientation of the agricultural sector. Financial literacy is also recognized as an important missing element in rural communities that characterize farming households as having extravagant spending during harvest times and run out of money and face difficulty in financing their cost of food during the summer season.

The ten-year development agenda of the government also considered foreign exchange as an important constraint to improving productivity and growth, as indicated by the fact that the productivity of capital is greater than that of labor or total factor productivity; scarcity of foreign exchange and access to finance are the first and the third vital bottlenecks of doing business in Ethiopia's agricultural sector. In addition, corruption; inadequate access to power, electricity, and raw materials; inefficient provision of inputs and services to develop R&D; undeveloped irrigation; and marketing/logistics; lack of access to ICT services, including digital payment systems, e-commerce, finance, and digital literacy are additional challenges in the agricultural sector.

Considering agricultural sector development as the priority area of the reform agenda of unlocking the national economic potential, it requires to fix the fundamental systemic bottlenecks of the sector – low productivity and growth , which is associated with the small-scale and rain-fed dependent production; limited use of technology and innovation; widespread prevalence of subsistence farming that is not commercially oriented; lack of product standards and traceability problems; exposure to crop and animal diseases, and difficulty of attracting and capacitating the private sector to engage in input supply, etc.

In order to address the challenges, the new ten-year development agenda and the Ministry of Agriculture's draft rural development policy framework recognized the importance of enhancing the functioning of financial markets, by addressing, among other things, the following issues:

1. Absence of an agricultural finance policy and strategy to provide access for actors engaged in the agricultural sector to bank credit and insurance services.
2. The limited agricultural credit service provision, which is below 10% of commercial banks' loan portfolios, and lack of access to these credit facilities for small-scale farmers given that credit provision is largely (more than 80%) targeted to large-scale investments.
3. The weak regulatory system of the DBE and the revolving fund of the government provided to MFIs, which have resulted in high levels of NPLs.
4. The traditional payment system, which results in smallholder farmers selling their produce to local collectors at low prices.
5. The weakness of the financial governance with Farmers' Cooperatives and Unions, which could not develop enough to provide financial services to as many farmers as possible.
6. Limited awareness of insurance services by smallholder farmers and other actors, which results in low demand for these services.

7. Difficulty to use and scale-up farmers' owned movable property (despite the financial inclusion strategy established in the Proclamation to Provide for Movable Property Security Right ) including through use of cattle, land certificates as the use right of farmland, warehouse receipts, etc. as guarantee for credit/insurance services by smallholders, in addition to group credit/insurance.

8. Absence of a modality for using foreign shares and capital in the agricultural sector.

9. Lack of harmonization of financial regulations governing credit and savings cooperatives/unions set by federal/ regional cooperative agencies and NBE regulations for banks and other financial institutions.

10. Instability of smallholder farm production, lack of value addition, difficulty of establishing creditworthiness, and absence of credit guarantees.

11. Lack of financial literacy and under-developed commercial orientation of smallholder producers and MSMEs/SMEs, and associated difficulties in establishing linkages with markets. The fact that firms/producers and other actors in the value chain lack efficient and effective operations results in difficulty in repaying loans.

The draft policy framework aims to establish agricultural and rural banks, to enhance credit and savings cooperatives and unions use of capital, and to upgrade cooperatives and unions to bank level, and boost access to agricultural insurance. However, while it recognizes the role of the private sector, it does not provide specific indicators to measure performance, including competition and growth criteria. Moreover, it does not establish pathways for the transformation of smallholder agriculture or the achievement of sustainable agricultural development.

Analyses generally show that lack of access to credit/financial services and foreign exchange are the most important challenges facing agriculture. At the same time, there is a general narrative that blames the weak repayment performance on agricultural loans, and the weak trust that lenders have in agricultural investors, on the low profitability of agricultural ventures. This narrative, however, needs to be revised: given cheap land and labor, the agricultural sector could be more profitable, if a proper enabling economic and business environment were put in place.

The policy framework should therefore specify the key elements in the business enabling environment that can make agricultural sector investment profitable at all scales and levels. Further it should set specific targets for job creation, increasing private investment (a means and an end of the reform agenda), and expanding demand, as well as facilitating access to financial resources. Specific mechanisms should be identified to achieve targets. In particular, the woredanet, revenue-net, etc. initiatives of the government should be strengthened .

Specific gaps in the draft policy agenda are as follows:

1. Identification of the special treatment in agricultural finance and investment that may be called for in terms of:
   a. the specific roles of debt capital, private equity, venture capital (including angel financing), lease capital financing, and equity financing;
   b. geographic distribution of funds for lowland pastoralist agriculture, highland crop production, and urban agriculture;
   c. agricultural investments -options must be identified for financing, risk-sharing, and concrete business development support services for smallholder farmers and start-ups who do not have property for collateral;
   d. financial support along the value chain: input supply, primary production, processors, aggregators, exporters, and different vital business development service providers; and
   e. the relative share of financing for food security versus growth.

2. Agricultural investment is characterized by risks of different kinds: production risks (weather, disease), market risks (price changes), financial risks (time variant in investing and revenue collection), institutional risks (changes in regulations), political risks (conflicts), etc. The policy suggests establishment of agricultural insurance institutions. However, it does not clarify whether the government exclusively finances insurance or whether other institutional arrangements could be considered for effective delivery of the service.

3. The policy fails to lay out the roles of the private sector, public sector and joint public-private investment: public investment is needed for macroeconomic business climate development, support in risk minimization, and the development of national security and poverty reduction social protection investments; meanwhile private investments can be expected to target profitable growth-oriented areas.

4. "Investment in job creation" is suggested as one initiative. However, there are no specific indicators of the scale of the investments needed, or the institutional arrangements for financial service provision to help create jobs in the agricultural sector.

5. "Finance for consumers" is suggested as one initiative. However, there is no specific outcome indicator given to explore opportunities of agricultural development through financing consumers' demand.

6. "Privatization plan" is suggested as one initiative. However, there is no specific outcome indicator of privatization or privatization conditions given to explore opportunities of agricultural development through the privatization plan.

7. Resource mobilization is mentioned: sources include domestic savings, privatization proceeds; and multilateral and bilateral partners. What market-based arrangements can be considered to generate as much agricultural financing as possible?

8. What options or modalities can be created to ensure the repayment capacity of borrowers based on characteristics of business owners (education, skill, other personal risks), business development support service provision, or other enforceable tools?

# IV Experiences of Other Countries

This section reviews techniques that are used effectively internationally, with a view to identifying options that might be transported to Ethiopia. Given the analysis of gaps in Ethiopia's agricultural finance capacities and the needs of the agricultural sector, a special focus is given to Fintech and microfinance techniques.

## India

### Policy Reforms

India has a long history of government involvement in the development of the agricultural sector. Since the 1960s, the government has engaged in both direct and indirect interventions in agricultural markets and prices. While wheat and paddy rice markets were the first segments, over time programs have expanded to include other crops and other aspects of domestic trade. Currently, the government's interventions are focused on regulatory measures, market infrastructure and institutions, and agricultural price policy.

### Contract Farming

Contract farming arrangements of different types have existed in India for centuries, but it is only as markets were liberalized that the concept of the private sector (national or multinational) entering into contracts for not only the marketing of agricultural goods, but also the provision of technology/ capital to contract farmers, has gained importance. Contract farming, in India, did not have legal backing until the Model APMC Act (2003).

This legislation permitted contract farming and the local APMC was given the responsibility to record the contracts. The APMC was also given dispute resolution authority over these contracts. The contracts are subject to market fee and other levies/charges imposed by the APMC.

In 2018, the Ministry of Agriculture issued a draft of the Model Contract Farming Act to establish the regulatory and policy framework for contract farming for the states to enact laws to conform to this framework. Under this model contract farming framework, agricultural production (including livestock and poultry) can be carried out based on a pre-harvest agreement between buyers (such as food processing units and exporters), and producers (farmers or farmer organizations). The producer can sell the agricultural produce at a specific price in the future to the buyer as per the agreement. The framework allows producers to reduce the risk of fluctuating market price and demand; buyers meanwhile reduce risk of non-availability of quality produce.

Under the draft Model Act, the producer can get support from the buyer for improving production through inputs (such as technology, pre-harvest and post-harvest infrastructure) as per the agreement. However, the buyer cannot raise a permanent structure on the producer's land. Rights or title ownership of the producer's land cannot be transferred to the buyer.

These contracts can address the capital shortage faced by the smallholder farmers who generally cannot invest in land improvement and modern inputs. The contracting party assists by providing the farmers with quality inputs, technical guidance and management skills. These inputs and services could include seeds; fertilizers; pesticides; credit; farm machinery; technical advice, etc. Over time, the farmers' will increase their knowledge and skills which can lead to improved outcomes for all crops.

Success stories include Pepsico India contracting for potatoes, tomatoes, groundnuts and chilli in Punjab; safflower in Madhya Pradesh; oil palm in Andhra Pradesh; hybrid seed companies for seed production; Amul and NDDB for milk procurement; sugarcane cooperatives in Maharashtra, and prawn-aquaculture in Andhra Pradesh. The sugar cane and poultry sectors have seen the most successes with contract farming. These resulted in better returns for the farmers. The government sees contract farming as an important development as small and marginal farmers cannot compete without access to modern technologies. (Inter- ministerial Task Force Report).

Contract farming overall, has not taken off on a large scale despite successful models. Corporations (processors and retailers) often prefer to go through a middleman – an "organizer" – rather than enter into formal contracts with large numbers of individual farmers. Informal contracts are also common. In West Bengal, for example, chip grade potatoes are grown under contractual arrangements that generally are not in writing.

There are concerns that the government will support farmers when there are defaults despite the merits of the corporation's case. For example, in 2019, several Gujarat farmers were sued by PepsiCo for illegally growing and selling one of its registered potato varieties. The state government intervened, and PepsiCo withdrew the contract for complaint. The incident, however, does raise concerns over the viability of contract farming when a poor farmer is pitted against a multinational.

Another area of concern is the role of the Minimum Support Price (MSP) in these agreements and as can be seen from recent protests in India, the farmers are concerned about ensuring that MSPs stay in place.

**Case Study 1: Seed Producers**

Seed producers are supported through contracts with seed companies. The seed company provides the farmer with the starter seeds and the farmers can then sell back certified seeds. The National Seed Corporation, for example, has a well-defined process and farmers receive a price higher than the MSP and prevailing APMC prices. The seed farmers generally do not default on their obligation to deliver seeds. Farmers receive 25% of the contract value upon delivery. The balance is held back until genetic testing is completed which takes 70-80 days. The 2020 legislation calls for payment of 66% of contract value upon delivery and 34% upon certification. In addition, payments are to be made in full within 30 days. It is unclear how the seed companies will adapt to these changes.

**Case Study 2: Broilers**

A 2015 study of contract farming of broilers found that "though production cost was significantly low, the total returns were also significantly low in contract broiler farming (CBF) because efficiency surplus is largely taken by contract companies. On the other hand, though production cost was high, farmers in non-contract broiler farming (NCBF) were gaining a margin of Rs. 5.99 per bird despite facing investment, production and marketing risks. This leads to the conclusion that contract and non-contract farmers incur significantly different production and marketing costs and earn different marketing margins.

CBF does not enable contract farmers to make better profits than non-contract farmers; rather, it gives a lower but assured and almost fixed return. Despite low returns, farmers are participating in CBF largely because of low input costs, assured income, and the absence of marketing risk. On the other hand, through improved technology, low margins on inputs, economy of scale and stringent norms, the companies are reducing production cost, leading to lower retail chicken prices for consumers. All these factors resulted in successful value chain development through CBF. Nevertheless, in the absence of a regulatory body, all privileges and rights were in the hands of contract companies. With meager rearing charges, stringent production cost incentives and penalties, the agreements clearly favored the contract companies." (Sasidhar & Suvedi, 2015).

Of note is that the contract farmers were found to have more sheds, had more hired, but produced fewer batch a year than noncontract farmers. The study recommendations included, among others, the establishment of a regulatory body to oversee the relationships to ensure there is a balance in the profits allocated to the contractor and the farmer as well as the environmental and welfare issues inherent in the program

## Agricultural Credit Institutional Framework

Agricultural credit is available through multiple channels in India which can be classified into two main categories: institutional and non-institutional sources.

Institutional sources include the National Bank for Agricultural and Rural Development (NABARD), the Reserve Bank of India (RBI), commercial banks like the State Bank of India (SBI), and co-operatives. A key objective of these institutions is to increase agricultural productivity in order to increase farm income.These institutions tend to have better rates and the lending practices are perceived to be supportive not exploitative.

Development of institutional sources for rural financial services has been a government priority. Access to agricultural credit has been expanded by the creation of the Regional Rural Banks (RRBs), improvements to the Cooperative Credit segment, and the establishment of private sector banks, Micro Finance Institutions (MFIs), Non-Bank Finance Companies (NBFCs) and Small Finance Banks (SFBs). In addition, digitization, financial inclusion initiatives, simplification of documentation requirements, and launching of credit instruments like the RuPay kisan credit cards have also made it easier for rural borrowers to access funds. Notwithstanding these efforts about a third of agricultural households still seek loans from non-institutional sources.

Non-institutional sources, which account for almost half of the credit provided to farmers include relatives; landlords; traders; commission agents; and money lenders. Interest rates from these sources are high despite being secured by land or other assets. Below, the various institutional sources of agriculture loans are discussed briefly.

### National Bank for Agricultural and Rural Development (NABARD)

NABARD, established in 1982, was set up as a development bank to promote agriculture and rural development. It provides both long-term and short-term credit at highly competitive interest rates. The NABARD created the Rural Infrastructural Development Fund (RIDF) to support rural infrastructure projects and it has been engaged in supporting micro-credit through Self-Help Groups (SHGs). It monitors institutions engaged in agricultural lending and is a funding source for them. The NABARD also promotes research in agriculture and rural development.

### Small Finance Banks (SFBs)

In 2014, the Reserve Bank of India (RBI) supported the launch of private sector SFBs to provide basic banking services – savings vehicles and credit facilities – to unserved and underserved segments of society, especially in rural areas. This included small businesses – specifically small and marginal farmers; Micro, Small and Medium Enterprises (MSMEs); and other low-income customers including migrant workers. It was envisaged that the SFBs would provide these services through high technology-low, cost operations.

The guidelines for the licensing of an SFB allowed for existing domestic Non-Banking Finance Companies (NBFCs), Micro Finance Institutions (MFIs), and Local Area Banks (LABs) to convert to an SFB. They are fully regulated by the RBI. The initial minimum paid-up equity capital of INR. 100 crore (USD 13.7M) was increased to INR. 200 crore (USD 27.5M) in December 2019. In September 2019, the RBI put out draft guidelines for 'on tap' licensing SFBs which should increase the applicants for such a license.

Most of the existing SFBs were previously MFIs and hence had well-developed networks of customers. The change to convert to an SFB was driven by the access to lower cost of funds that came from having access to deposits. Despite increasing the deposit base, SFBs still have relatively high cost of funds compared with the Scheduled Commercial Banks (SCB), which have a larger share of total savings and current accounts (41% vs 15% as of March 2020).

As of March 2019, there were 10 SFBs, holding 0.4 % of total assets of the financial sector. The SFBs had 4,307 branches as of March 2020 with 39% in semi-urban areas and 26% in urban centers. As of March 2020, the top three banks held 60% of the SFB's total assets showing a high degree of concentration, although assets at some of the smaller SFBs have been growing at a faster rate more recently.

While the SFBs are concentrated in regions/states that are already well-banked (only 18% of branches were located in rural areas with low population counts as of March 2020), they are serving economic sectors that are relatively under-served by other financial institutions (agriculture, small scale trade and professional services). As of March 2020, 65% of total credit had been extended for agriculture, trade and professional services. The RBI is of the view that they have been reasonably successful in serving their target segment as the priority sectors accounted for 75% of outstanding loans. As of March 2020, 99.9% of accounts and 83% of assets had credit limits below INR 25 lakh (USD $.034M) and within that, very small accounts (credit limit of INR 2 lakh) accounted for 96% of accounts and 48% of assets.

ROA for the SFBs is higher than their peers in the bank segment, but it is lower than the ROA of the MFIs as these institutions have higher spreads. The ROA has also been helped by better performance of the loan portfolio as the SFBs have been managing the credit risk effectively.

## Co-operative Credit Institutions

Co-operative institutions represent an alternative for financial inclusion, given their geographic and demographic reach. India has long had a cooperative credit movement; in its modern form, it is broadly divided in urban and rural segments. We focus here on the rural segment, which dominates India's overall cooperative credit system. Rural cooperatives are further subdivided into short and long- term credit institutions.

The short-term segment comprises the State Co-operative Banks (StCBs), District Central Co-operative Banks (DCCBs) and Primary Agricultural Credit Societies (PACS). These hold about 95% of the total assets of rural co-operatives. They provide short-term crop and working capital loans to farmers and rural artisans. Their market share has been increasing steadily over time.

The PACS operate at the grassroots level and deal directly with individual borrowers. They cover almost 86% of all villages which accounts for 36% of the rural population. They are considered to be the best and cheapest sources of agricultural loans. StCBs and DCCBs are self-funding from deposits while the PACS rely on funding from the StCBs and DCCBs. However, over time the PACS have been increasing their deposits with a view to meet their own funding needs.

The long-term segment comprises the State Co-operative Agriculture and Rural Development Banks (SCARDB) and the Primary Co-operative Agriculture and Rural Development Banks (PCARDB). These institutions provide longer-duration loans for investments in agriculture such as land development, farm mechanization, smaller irrigation projects, rural industries, and housing.

Table 8: Profile of rural cooperative credit institutions, 31 March 2019

| Item | Short-term | | | Long-term | |
|---|---|---|---|---|---|
| | StCBs | DCCBs | PACS | SCARDBs (P) | PCARDBs (P) |
| Number of Co-operatives | 33 | 363 | 95,995 | 13 | 602 |
| Deposits (USD millions) | 18,589 | 51,933 | 18,262 | 334 | 179 |
| Loans and Advances (USD millions) | 20,406 | 41,194 | 28,269 | 2,835 | 2,141 |
| Institutions with a profit | 30 | 303 | 46,930 | 8 | 271 |
| Net Profits (+)/Loss (-) (USD millions) | 160 | 98 | -236 | -7 | -61 |
| Non-performing Assets as percentage of Loans Outstanding (percent) | 4% | 12% | 45.16%* | 27 | 39 |
| Recovery of Loans to Demand Ratio**(percent) | 94 | 72 | 74.5 | 46 | 41 |

Notes:

1.StCBs: State Co-operative Banks; DCCBs: District Central Co-operative Banks; PACS: Primary Agricultural Credit Societies; SCARDBs: State Co-operative Agriculture and Rural Development Banks; PCARDBs: Primary Co-operative Agriculture and Rural Development Banks.

2. * percentage of overdues to total outstanding.

3. ** This ratio captures the share of outstanding non-performing loan amounts that have been recovered

Source: NABARD and NAFSCOB. Exchange rate from rupees to USD = 72.834.

Table 8 below provides a profile of this segment as of March 31, 2019. The PACs have the largest market share in this segment but also the largest losses with only 48% showing a profit and they hold the largest share of non-performing assets.

### Regional Rural Banks (RRBs)

RRBs have been lending to agricultural laborers, small and marginal farmers, and rural artisans and small entrepreneurs since 1975 when almost 70% of the population was rural. The RRBs are government banks and were originally conceived as low-cost institutions with a local focus. The goal was to provide banking services, debit and credit card facilities, promote trade, commerce and entrepreneurship, and to distribute pension and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) payments.

However, most RRBs proved to be unprofitable as the cost structure was more expensive than originally envisaged. Amalgamations ensued and as of March 31, 2020, there were 45 RRBs still operating from a peak of 196 in 1990. Each RRB is sponsored by the Government of India (50% ownership share), its own State Government (15%), and a commercial bank (35%). The RRBs are regulated by the Reserve Bank of India (RBI) and supervised by NABARD. All the states have RRBs except Sikkim and Goa.

### Payments Banks (PB)

Payment Banks (PBs) launched a new type of private sector financial institution to provide small balance savings accounts and payments/remittance services to migrant laborers, low-income households, and small businesses, with the aim of increasing financial inclusivity. At the launch of Airtel Payments Bank in 2017, the Chairman of Bharti Enterprises noted that “Just like mobile telephony leapfrogged traditional telecom networks to take affordable telecom services deep into the country, Airtel Payments Bank aims to take digital banking services to the unbanked over their mobile phones in a quick and efficient manner. Millions of Indians in rural areas will get their first formal banking experience with Airtel Payments Bank."

However, out of the 11 applicants who sought PB licenses from the RBI in 2015, three dropped out in 2016 and another closed less than 2 years after opening. Airtel PB has remained in business. The minimum paid-up equity capital is Rs 1 billion or about USD 14 million at current exchange rates. Only 25% of deposits can be placed with a small commercial bank and the balance has to be held in one year government securities (G-sec). Customers are restricted to a maximum of INR 100K on deposit (about USD 1,400); this restricts the ability of the PB to grow and ensures they do not compete with the commercial bank. Interest income is restricted by the limited deposit base, the relatively low yields on one-year G-Secs, and restriction on lending.

PBs can charge up to 1% commission on transactions they support, namely: remittance services; day-to-day banking services (mobile payments, bill payments, fund transfer, ATM and POS access via debit cards); distribution of third-party financial products such as insurance; and execution of transactions for other banks through Business Correspondents (BCs).

Although the PBs opened with high deposit interest rates to attract customers, within three years they reduced the rates to protect their margins as costs proved to be higher than anticipated. As of November 2020, their rates were below market rates for low-value savings deposits, which may lead to a shrinking customer base and, in turn, lower revenues. With thin margins, these banks need scale (including in the fee-based transactions business) to thrive. However, with the PBs being used more for transactions than for holding savings, they are not fulfilling the mandate to provide small savings accounts to the under-served.

In addition to the income challenges, the PBs were confronted with a major new source of competition for transactions business with the widespread adoption of the Unified Payments Interface (UPI) in India following its introduction in 2016 (section 4.1.4). The PB model is now considered an experiment that did not work and the PBs are being allowed to apply for SFB licenses after five years of operations.

### Other Providers

Since 2008, the World Bank's International Finance Corporation (IFC) has been involved with the microfinance business in India. By 2018 it had invested $564 million in the country and the financial institutions it supported generated almost half of all micro-lending in India—reaching up to 70 million people, directly and indirectly.

The Small Industries Development Bank of India (SIDBI), established in 1990, has a mandate to be the prime financial institution and coordinate with other agencies to develop the Micro, Small and Medium Enterprises (MSME sector). SIBI undertook the Prayaas initiative to lend directly through partnership arrangements at below market rates SIBI has extended small ticket size loans of INR 50,000 to 500,000 (about USD 700 to 7,000) to micro borrowers.

## Microfinance

The global microfinance industry has grown rapidly in recent years (11.5% per annum), with over USD 120 billion disbursed to about 140 million borrowers, including 80% women and 65% rural (SIDBI; PwC India, 2019). India has contributed in a major way to this growth: as of June 2019, the microfinance industry in India had a loan portfolio of over USD 16 billion, disbursements were growing at a rate of 20%, and the industry had provided credit access to 64 million unique borrowers for whom traditional financial services were beyond reach.

India’s experience with microfinance is instructive as it encountered and had to solve numerous problems. Microcredit, which was initially developed by not-for-profit organizations, was seen as a promising path for poverty alleviation: “In recent years, foundations, venture capitalists and the World Bank have used India as a petri dish for similar for-profit “social enterprises” that seek to make money while filling a social need.”

By 2010, however, the industry was in a crisis that originated in Andhra Pradesh: high levels of defaults, borrowers with debts that they could not repay, and claims of abusive collection practices by the lenders that were leading to suicides. The RBI responded with regulations that limited the maximum income of the clients (INR 60,000 or about USD 825 for rural clients), size of indebtedness (not to exceed INR 50,000 or around USD 700), extent of loan that can be used for consumption (maximum 25%), amongst others. The RBI also imposed a cap on both the interest rate chargeable for loans (a maximum of 26%) and on the net interest margin (12%).

The Microfinance Institutions (Development and Regulation) Bill 2012 strengthened the regulatory framework and consumer protection norms of the industry. The bill targets "facilitating access to credit, thrift and other microfinance services to the rural and urban poor and certain disadvantaged sections of the people and promoting financial inclusion." In the bill, microfinance includes lending, savings, insurance, money transfers, etc. Non-banking Financial Companies (NBFC) and Microfinance Institutions (MFIs) are now subject to the law in addition to NGO-MFIs. MFIs are no longer subject to the Money Lender Act. The RBI is designated as the sole regulator of NBFCs and MFIs and is authorized to specify sector-related benchmarks and performance standards pertaining to methods of operation, including fair and reasonable methods of recovery of loans advanced by MFIs.

Advisory councils, at the central, state and district level, along with restrictions on pricing and profitability strengthen client protections. A microfinance development council provides advice to the government on policies that promote the development of MFIs. State Micro Finance Councils report to the Central Government on activities to promote and develop the MFIs at the state level. A Microfinance Development Fund set up by the RBI provides loans, grants, seed capital or training for the MFIs.

In addition, two credit bureaus—Equifax Credit Information Services Pvt. Ltd and CRIF High Mark Credit Information Services Pvt. Ltd—have been established to aid in appropriate credit decisions. A code of conduct has been introduced to the industry to address governance and client protection concerns and a framework for responsible lending.

Following the regulatory changes, the industry continues to thrive. The MFI sector has expanded at a 26% compound annual growth rate (CAGR) over the past decade and is seen by analysts as one of the most attractive plays in the financial services sector. Despite the fast growth there is still room for increasing market share with penetration levels below 40 percent on a national basis. Key factors for continued growth include increased adoption of the UPI system payments and associated technology, as this facilitates making connections between borrowers and lenders as well as reducing the overall costs of the loan through its life cycle from application, approval, disbursement, repayment and if necessary, collection.

**Case Study 3: SKS Microfinance Ltd**

Microlending, which began as philanthropy was commercialized in 2003 when Vikram Akula, reorganized his microlending foundation SKS into a for-profit company. His view was that microlending would be of greater benefit if it could grow capital. In 2010 it was the first Indian microfinance company to go public. Indian bank regulations created an environment that encouraged the growth of firms like SKS as banks could meet their regulatory requirement that 40% of its loan portfolio had be in "priority sectors" by lending money to and buying loans from microfinance companies like SKS. During the period 2005-2010, the microfinance industry in India grew rapidly with a CAGR of 70%. This growth, however, had a dark side as it came at the expense of more and larger loans being advanced to the same borrowers who then struggled to repay them. The regulatory interventions with the MFI crisis seriously affected SKS. Its stock value crashed – losing 95% of the value and Vikram Akula resigned as CEO. In 2015 the RBI refused to grant it a small bank license. In 2016, the firm was renamed Bharat Financial Inclusion Ltd. In 2017 a loan approval process using Adhaar was launched along with the opening of the Kirana store service providing a physical presence for its customers. BFIL regained its status as a leading microfinance company and in 2019 it merged with IndusInd Bank Ltd.

**Case Study 4: Ujjivan**

Ujjivan, a Bangalore-based small finance bank, started in 2017 as profit-orientated, non-banking finance company offering microloans. It now offers a full array of banking services – deposit products, ATM access along with the loans. "Microfinance only provides loans and very small loans at that," says Samit Ghosh, Ujjivan's founder and managing director. "To transform lives, you have to provide multiple services that people need to survive and grow — whether it is deposits, remittances, insurance or investments." Ujivan was located in urban areas rather than rural locations, lent funds for purposes beyond income-generating activities, and expanded the customer base beyond groups of self-employed women to salaried urban workers. By 2018 the bank had assets of $1.1B with a loan customer base of 4 million – 700,000 of which had also opened bank accounts – and located in both urban and rural areas across 24 states. The loans have been providing working capital to small business beyond farming to allow the business to scale up (Kazim, 2018). Ujjivan went public late in 2019 and was the most subscribed IPO of the year. COVID-19, however, is taking its toll as about about 47% of its loan book was subject to the RBI ruling to grant a moratorium on payment of instalments of term loans falling due between March 1, 2020, and May 31, 2020, and then extended to August 31, 2020. While this rate has fallen from the 80% level in May 2020, it still means that Ujjivan faces high asset quality risks.

Challenges the industry still faces include financial and technical literacy on the part of the consumer; development of a robust risk management culture; access to basics for lending such as credit history and collateral for the lender; and a still cumbersome customer acquisition process. Further reforms in the regulatory environment are considered critical for the microfinance industry to thrive. In this regard, the RBI has launched a number of initiatives to help the sector, including imposing data localization requirements; capping multiple lending; implementing a regulatory sandbox; and establishing a public credit registry.

### Unified Payments Interface (UPI)

The (UPI), which was introduced in 2016, is promoted by the National Payments Corporation of India (NPCI). It enables money transfer, bill payments, and other transactions including merchant payments through a mobile device around the clock (although subject to a daily limit). The UPI app is not subject to banking regulations and can be initiated without the need for additional "know your customer" or KYC procedures due to single click two factor authentications. Major platforms like Google Pay, Whatsapp (and China's Xiaomi's Mipay before it was banned from India) use UPI as its interface., for example.

### India Stack

A technology stack consists of all the technologies required to operate an application: computer languages, architecture, libraries or lexicons, servers, user interfaces and experiences, and software – the apps themselves – and the tools used by developers, such as Application Programming Interfaces (APIs) (Nilekani, 2020).

The so-called "India Stack" (Figure 3 below) is the product of merging the identity and authentication capabilities of the Unique Identification Authority of India (UIAI) and the digital payments products of the NPCI. Created in 2009, the mandate for the UIAI was to issue a Unique Identification (UID) number ("Aadhaar") to every resident of India. The Aadhaar is now the largest biometric identity database globally.

Aadhaar is the base layer that enables the delivery of programs/services by the government and private sector (Fintech companies, banks, healthcare providers, etc.). Services deployed include e-KYC (know your customer), e-documentation, and instant payments and the NPCI's National Financial Switch (NFS) ATM Network. The owner of each of these layers is a government department, agency or the RBI.

Figure 3: India stack

| India Stack | What is it? | What is in it? | Who is the owner? |
|---|---|---|---|
| Consent layer | A modern privacy data sharing framework | Open personal data store | Reserve Bank of India |
| Cashless layer | An electronic interoperable payment network | IMPS, AEPS, APB, UPI | National Payments Corporation of India |
| Paperless layer | Easily store & retrieve information digitally | Aadhaar e-KYC, e-Sign, Digital Locker | Department of electronics & Information Technology |
| Presence-less layer | Unique digital biometric identify with open API access | Aadhaar card, Mobile Aadhaar | Unique Identification Authority of India |

Source: FinTech Futures: What is the India Stack and why is it no longer the dream it used to be?, March 26, 2018

There are now 1.27 billion Indians registered on Aadhaar. To date 40 billion authentication and 8.8 billion eKYC transactions have been conducted . While a mobile number is not required for the ID, the services are limited without a registered mobile phone. Aadhaar has replaced most of the documents/processes that were required for proof of identification and is now often the only ID requirement to access government services such as driving licenses, scholarships, cooking gas subsidies, passports, pensions etc. Aadhar has also become the most popular form of photo identification, although it was not designed to do this.

There have been multiple security breaches and given the range of data and the sensitivity of the data, there is concern in India about this program. In 2018, the Supreme Court ruled that the Aadhaar project was constitutional and allowed for the mandatory linking of Aadhaar to tax returns as well as to access welfare programs.It did, however, remove the requirement that had evolved to link bank accounts and SIM cards to the Aadhaar. In addition, corporations and individuals were no longer allowed to require the Aadhaar for the provision of goods and services.

Despite these limitations on the private sector, and a requirement by the court to enact a strong data protection law, there is still concern that the ruling did not sufficiently constrain the government from potential abuse of the program, nor to limit the information collected as part of the program, raising concerns that India would become a surveillance state (Jain, 2019).

Through the NPCI, payments projects have proliferated to cover a growing range of services such as road tolls and domestic remittances. The UPI supports person-to-person and person-to-merchant transfers as well as recurring payments through the Autopay feature. In January 2021, there were 207 participating financial institutions on the system, processing a monthly volume of 2.3 billion transactions, with a value of INR 4.3 trillion (~USD 59 billion). Consumer-oriented products launched by NPCI include:

1. RuPay is a domestic card payment network, issuing credit cards and prepaid cards with access at ATMs, POS devices and e-commerce websites across India.
2. Bharat Interface for Money (BHIM) is an app that supports bank-to-bank payments, make payments and send and receive funds via the mobile device.
3. Immediate Payment Service (IMPS) supports real time interbank electronic fund transfer service that could be accessed on multiple channels like Mobile, Internet, ATM, SMS.
4. Bharat BillPay supports bill payments through various types of cards (Credit, Debit and Prepaid), NEFT Internet Banking, UPI, Wallets, Aadhar-based Payments and cash, with instant confirmation of payment via an SMS or receipt. Utility bills and other recurring payments like insurance premiums, tax payments etc. are supported.
5. *99# service is a banking service, offered by 41 banks, that is accessible by calling *99# on the mobile phone and transact via an interactive menu. The number *99# is a common number for all Telecom Service Providers (TSPs). Consumers can send and receive funds through interbank accounts to account transfers, balance inquiry, change PIN etc.
6. The National Financial Switch (NFS) ATM network has 1,174 members connecting more than 250,000 ATMs.
7. Aadhaar enabled Payment System (AePS) is lab-level Proof of Concept (PoC) of leveraging the Aadhaar to enable the customer to use Aadhaar to gain access to an Aadhaar-enabled bank account and perform basic banking transactions like cash deposit, cash withdrawal, intrabank or interbank fund transfer, or balance enquiry and obtain a mini statement. AePS would support eKYC among other services.
8. BHIM Aadhaar Pay enables merchants to receive digital payments from customers over the counter through Aadhaar authentication. The merchant's bank must be an acquiring bank on BHIM Aadhaar Pay but they can accept payment from customers of any bank by authenticating the customer's biometrics.

## Nigeria

### Policy Initiatives

After many years of focusing on the oil industry, the government of Nigeria embraced a policy of economic diversification in the early 2010's, including for agricultural sector development. Notwithstanding the oil reserves, agriculture is the largest sector in the Nigerian economy, contributing typically about 20% to the country's GDP. Crop production (rice, millet, cassava and yam, sweet potatoes and groundnuts, and cocoa) dominates, representing 88% of total agricultural production, with livestock, forestry and fishing accounting for the remaining 12% (PwC, 2018). It is well-watered in most of its territory and features some of the richest natural resources for agricultural production in the world.

However, notwithstanding this potential, according to the National Bureau of Statistics, credit supply to Nigeria's agricultural sector lagged well behind its contribution to GDP: agricultural credits accounted for only 3.26% and 3.36% of total credit to the private sector in 2016 and 2017 respectively (PwC, 2018) and received only 1.6% or USD 195.7 million of the total capital inflows into the country in 2017. Accordingly, reforms are needed to unlock the flow of funds to the sector, in particular, de-risking investment.

In the first phase of the policy reforms, from 2011 to 2015, the Agricultural Transformation Agenda (ATA) was launched to introduce business-like practices to the agricultural sector. Among notable initiatives were the following:

1. The Growth Enhancement Support Scheme (GESS), which launched in 2011, enabled farmers to obtain vouchers for subsidized fertilizers and seeds in an electronic wallet provided by Cellulant, a mobile payments provider.
2. The National Agricultural Payment Initiative (NAPI), an extension to GESS, involved a chip-based national identity card held within an e-wallet to support farmers' access to financial services, including loans, in addition to the GESS subsidies.

In the next phase, 2016-2020, the government launched the Agriculture Promotion Policy (APP) with the ambitious aim of turning Nigeria into an agricultural export powerhouse. Elements include:

1. Anchor Borrowers Programme (ABP) which is discussed below.
2. The Presidential Fertilizer Initiative (PFI) with the mandate to make high quality fertilizer available to farmers at the right time and at an affordable price.
3. The Youth Farm Lab which aims to provide young people opportunities in agriculture.

4. The Presidential Economic Diversification Initiative (PEDI) to support new investments, reduce regulatory bottlenecks and enable access to credit – especially in agro-processing.
5. The Food Security Council whose objectives involve developing sustainable solutions to agricultural challenges.
6. The Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) which aims to de-risk bank lending to the agricultural value chain through a risk-sharing facility, an insurance facility and a technical assistance facility.

## NIRSAL

NIRSAL, PLC is a US$500 million Non-Bank Financial Institution wholly-owned by the Central Bank of Nigeria (CBN), launched in 2011 and incorporated in 2013. The Federal Ministry of Agriculture and Rural Development (FMARD) and Nigerian Bankers' Committee participated in the development of NIRSAL's mandate, which is, to stimulate the flow of affordable finance and investments into the agricultural sector by de-risking the agriculture & agribusiness finance value chain, fixing agricultural value chains, building long-term capacity, and institutionalizing incentives for agricultural lending through its five strategic pillars, namely: Risk Sharing, Insurance, Technical Assistance, Incentives and Rating. (NIRSAL, PLC, 2021)

Earlier programs encouraged banks to lend but they had no strategy on fixing the agricultural value chains to make lending effective. NIRSAL addresses both the agriculture and agricultural financing value chains together. In addition, rather than focusing on just one size of producer and/or one segment of the value chain, NIRSAL sponsored lending must span the value chain and all sizes of producer.

### Risk-sharing Facility

The NIRSAL Credit Risk Guarantee (CRG) is a core service which protects lender/investors from losses through a risk sharing where NIRSAL indemnifies the lender for principal and accrued interest up to a pre-agreed limit. This limit ranges from 30% to 75% of the loan value based on the category of borrower (e.g., smallholder farmers are eligible for 75% coverage). The loans are covered over the life of the credit contract. The cost for the credit insurance is 1% of the loan value at disbursement and then on outstanding balance annually.

NIRSAL also operates an Interest Drawback Scheme which provides a discretionary rebate of up to 40% of interest paid on loans that are backed by a CRG to borrowers with good repayment behavior, effectively reducing the interest rate for borrowers with a good credit history. If approved for the scheme, the borrower will receive rebates quarterly.

NIRSAL's Loan Facilitation services assist the borrower to understand financial requirements and identify finance and investment options.

### Technical Assistance Facility

NIRSAL, provides training and capacity building programs for entities participating in the agricultural value chain. Strengthening the capacity of financial institutions and/or investors to understand the sector, streamlining credit assessment processes, and development of new financial products, etc. are seen as critical in building agribusiness and the financial institutions that support it.

In February 2021, the National Directorate of Employment (NDE) trained about 1,000 entrepreneurs on how to access NIRSAL's Agri-Business/Small and Medium Enterprises Investment Scheme (AGSMEIS) loan – a NIRSAL loan facility – teaching them to prepare business plans and feasibility studies to support their loan requests.

In response to identified gaps, NIRSAL develops bespoke business models for agricultural value chains and value chain segments. These business models are developed to guarantee value chain optimization, provide cash flow stability and maximize the financial return, in particular for the smallholder farmers.

NIRSAL's financing frameworks present a window of financing to address working capital constraints associated with specific segments of agricultural value chains for transactions fulfilling a set of conditions; and falling within NIRSAL business models that have been pre-agreed with financial institutions under the NIRSAL guarantee.

NIRSAL provides comprehensive project monitoring services through staffed offices and remote sensing using satellite-based multispectral imaging and UAS- based drone monitoring systems.

### Insurance Facility

The Insurance facility is aimed at reducing risk costs and improving lending by providing farmers with a substitute for collateral. NIRSAL has been working with the Nigerian Agricultural Insurance Corporation (NAIC) and the private sector (both local and international insurance entities), to facilitate the development of innovative insurance products that protect farmers' investments and encourage improved production.

The goal is to increase the coverage of products currently in market and provided by the NAIC, as well as offer new products: weather index insurance; pest and disease insurance; life insurance; and yield and price index insurance.

In May 2018, a partnership with PULA, an insurance and technology company, was announced to develop innovative insurance products that would protect farmers' investments and encourage improved production. The first product, the Area Yield Index Insurance (AYII) covers the farmer for his input costs as well as his projected revenue. The Fertilizer Producers and

Suppliers Association of Nigeria (FESPSAN) participated in the development of AYII which covers risk arising from climate change, including climate-induced drought, excessive rainfall, pests and diseases or other issues that can affect farmers' ability to acquire goods yields and income. AYII is expected to provide coverage for 19 million farmers by 2025. FESPSAN believes that with the addition of insurance, farmers will be more resilient and increase adoption of fertilize. Further, banks are more willing to lend given that the loan value is covered.

In August 2018, NIRSAL launched an insurance product to mitigate the impact and losses of agricultural yields and market price risks for smallholder farmers - the NIRSAL Comprehensive Index Insurance (NCII). The new product is a combination of yields, price index and life insurance. This product is "an innovative form of revenue insurance is unique in Africa. It is also the first of such products to be achieved without government subsidies on the premium." (Nigeria News, 2018). The NCII was developed with NAICOM, NAIC and members of the consortium including Axa Mansard, IGI, Leadway, Royal Exchange and Pula Advisors.

In September 2020, NIRSAL launched the Hybrid Multi-Peril Crop Indemnity-Index Insurance (HM-II) which is designed to protect farmers from losses during a planting season caused by bad weather (low & high rainfall, early & late season dry spells, lightning, hailstorms and thunderstorms), pest outbreak, disease outbreak, fire outbreak and permanent disability or death of the farmer. This new product aligns with the goal to increase insurance products to farmers by 2026. To date it has already reached 1,476,289 smallholder farmers out of the 3.6 million farmers nationwide.

NIRSAL has been able to crowd in private insurance companies into the agriculture insurance space via the formation of a consortium of four insurance companies in 2017 which has now grown to 10 insurance companies, including Royal Exchange General Insurance Company (REGIC), in three years. (Premium Times, 2020) NIRSAL's Managing Director noted that the launch of HM-II "is a testament to the progress NIRSAL Plc is making in the Agricultural insurance space, prior to NIRSAL Plc's intervention, private underwriters were not insuring agriculture. However, leveraging on NIRSAL Plc's Insurance Pillar and in collaboration with the NAIC and the National Insurance Commission (NAICOM). We have brought about the inclusion of underwriters other than NAIC in underwriting agricultural transactions and stimulated the development of new and innovative agricultural insurance products." (Esa, 2020)

**Case Study 5: PULA**

PULA is both an insurance company and an agro-tech company. PULA partners with local insurance companies and global reinsurance firms to underwrite risk, while it manages the delivery of insurance to farmers, including field operations, farmer onboarding/education and claims assessment and payouts, through technology.

PULA uses satellite technology and farm level yield data to structure its insurance products automate compensation in case of losses. It insures the crops and livestock of unbanked, uninsured and underserved farmers. Thomas Njeru, a co-founder, notes that "Agriculture insurance is a cemetery of pilots and trials. As a result, there is skepticism around whether it's possible to build sustainable enterprises for insuring smallholders." (Mayersohn, 2019). Since 2015, PULA, has been working with governments seed/fertilizer companies, loan providers, and other agriculture value chain partners to embed the cost of insurance with farm inputs such as seed, fertilizer and credit, so there is no separate direct charge to the farmer. The insurance policy would be subscribed to automatically through the purchase the product. Insurance products include weather index insurance which uses rainfall data to cover failures of seed germination; yield index insurance, provides replacement seeds/fertilizer the event of a poor harvest; and the Index Based Livestock Insurance (IBLI) which insures the value of fodder required to keep livestock alive when grazing ranges are insufficient due to weather. Experience from 10 countries has shown that companies adding insurance can see a 30% in in their customer base in one year. (Okunade, 2019)

PULA operates in 13 markets across Africa: Senegal, Ghana, Mali, Nigeria, Ethiopia, Madagascar, Tanzania, Kenya, Rwanda, Uganda, Zambia, Malawi and Mozambique. It has 4.3 million farmers, and it has 50 insurance partners and six reinsurance partners.

## Holistic Bank Rating & Bank Incentives Facilities

These are the last two mechanisms to be launched by NIRSAL with a pilot in 2019. NIRSAL has developed a scoring methodology for banks, insurers, and state governments. Banks will be rated on their organizational commitment to agriculture, the quality of their agricultural portfolio, financial inclusion of smallholder farmers, and innovation in their agricultural lending activities. Insurance Companies will be rated on products developed, customer acquisition and processing of claims. State governments will be rated for the ease of doing agribusiness and if the regulatory environment is supportive of agr-ibusinesses. The results of this ratings exercise will be used to develop an Incentives program for the three classes of participants to reward innovation and encourage competition in supporting the agribusiness sector and improve smallholder farmers' inclusion. (Agro-Business Times, 2017)

## Anchor Borrowers Program

The Anchor Borrowers Program (ABP), created by the CBN, links state governments and the private sector to provide farm input loans and cash for farm laborers and small farm holders. "The scheme supports farmers with low interest rate loans and farm inputs on the condition that the individual farmer is part of a larger group of farmers and linked to an anchor (agro-processor) or state government that stands as a guarantor for the farmer. The farmer repays the loan after selling the farm produce to the anchor who processes the produce for sale or storage. In essence, the blueprint of the ABP is to increase food production by providing credit facilities to farmers and reduce food waste by linking farmers to agro-processors." (Ekeruche, 2018).

This program is similar to contract farming which has been used in India wherein the farmers enter into forward agreements with processing and/or or marketing firms for the production and supply of agricultural products. The Indian experience shows that "contract farming is found to have significant influence on the capital formation at the farm household level. Possession of capital assets like pesticide sprayers, farm buildings, bore wells and drip/sprinkler irrigation implements is found to be significantly more among contract farmers of hybrid chilly seeds as well as gherkin compared to their counterparts with non-contract farming." (Bommanahalli & Rangappa, 2016).

In late 2017, in order to reach more small farmers, the CBN began engaging agricultural commodity associations in strategic partnerships. The CBN's Acting Director in charge of Corporate Communications Department (CCD), Isaac Okorafor, noted that "the CBN is forming these partnerships to further ramp up domestic production of identified commodities by leveraging the existing organized structures of the agricultural associations nationwide, thereby providing huge economies of scale in the implementation of the program." (Vanguard News, 2017) For example, it was expected that 300,000 rice farmers would participate through the Rice Farmers Association of Nigeria (RIFAN) Anchor Borrowers' Program with the Bank of Agriculture. By June 2019, the ABP had 1.1 million farmers producing 17 different agricultural products.

However, while the ABP had been accessible for large-scale private sector organizations, the smaller producers, those responsible for over 80% of production, had not been able to take advantage of the program. Critics of the program indicated that the ABP, while increasing rice production, was not achieving the goal of bringing the farmers into the agribusiness value chain but merely supporting subsistence farming. The report also noted that as the GESS had not yet been fully implemented, the limited funding available to farmers resulted in challenges to access to the fertilizers and other inputs the farmers need to increase yields. (GAIN Report, 2019) In its 2020 update, issued in September of this year, the USDA notes that declining government revenues will constrain funding available for ABP in the short term. (GAIN Update, 2020)

Farmers have also struggled with loan repayments and thousands have defaulted. For example, by early 2018, of the ₦950 million of loans issued in Kano State, only ₦6 million had been repaid and 4,500 farmers had defaulted. In Kebbi State, over 5,000 farmers were imprisoned for defaulting on state-guaranteed loans. Reasons for defaults included poor agreements that the farmers did not understand (e.g., loans taken out based on planting a hectare but planting only an acre); borrowers who saw the opportunity to 'share in the national cake' with no intention of repaying the funds; and poorly timed loans that were issued after harvests etc. (Ekeruche, 2018)

In their study of the effects of the ABP on technical efficiency, (Ayuba, Abba, & Abubakar, 2020) note that Nigeria saw a significant increase in paddy production beginning in 2013 as fertilizer availability increased under GESS and the Fadama II and III programs in collaboration with the World Bank, Kebbi State Agricultural Development Programmes. They found that, notwithstanding the overall inefficient use of resources by all farmers, the technical efficiency of the rice farmers in Kebbi State that participated in the ABP was higher. They concluded that increasing participation of farmers in existing sectors and extending the ABP to other agricultural sectors would lead to improved outcomes for agriculture production in Nigeria. (Ayuba, Abba, & Abubakar, 2020)

There is also a view that attention is needed on the processing of raw agricultural produce rather than simply exporting unprocessed produce. In their review of the ABP, Okoye & Uchenna (2017) note that more than 80% of the "value in the global food industry is in value-added components such as sorting, cleaning and packaging fruits and vegetables. The various forms of value-addition provide opportunities for the private sector to expand their commercial activities and access higher-value markets, either for domestic consumers or exports. Not only do they provide employment at all levels, but they have proven time and time again to drastically change the economic landscape of countries. The Nigerian government needs to develop agro-allied industrial zones and staple food processing zones in rural areas. These zones should be supported with consolidated infrastructure, including roads, water, electricity, to drive down the cost of doing business for private food and agribusiness firms. Such zones would create markets for farmers, boosting economic opportunities in rural areas, stimulating jobs and attracting higher domestic and foreign investments into rural areas. In this light, the ABP is a right step in the right direction." (Okoye & Uchenna, 2017)

## Agritech

In the GSMA report, AgriTech in Nigeria – Investment opportunities and challenges, Rishi Raithatha noted that "agritechs faced three types of funding gaps – limited sources of local capital beyond the pre-seed stage; low availability of institutional investors; and an inability to attract big-ticket investments. ...[while] local incubators and accelerators had played a pivotal role in enabling startups to receive their first institutional investment." Raithatha noted that the 80 Agritech companies and start-ups that emerged in the private sector to support the agricultural sector over the past decade face barriers to scaling up.

Table 9 below, provides some statistics for selected start-ups. The most successful, in terms of users is AgroMall that provides both digital procurement and digital finance services. Over a three-year period, they have engaged with over half a million users. AFEX which operates in the same segment has only engaged with 106,000 users and has been operating since 2014 – an additional 2 years. It is important to note that both of these firms have benefited from the ABP.

Table 9: Selected agritech start-ups in Nigeria

| Company | Founded | Use cases | Cumulative users* |
|---|---|---|---|
| AFEX | 2014 | Digital Procurement /Finance | 106,000 |
| Verdant AgriTech | 2014 | Digital Finance | 8,000 |
| AgroMall | 2016 | Digital Procurement/Finance | 530,000 |
| FarmCrowdy | 2016 | Digital Procurement/Finance | 25,000 |
| Thrive Agric | 2016 | Digital Procurement/Finance | 22,000 |
| Crop2Cash | 2018 | Digital Procurement/Finance | 1,000 |
| TradeBuza | 2018 | Digital Procurement/Finance | 2,000 |

Source: (Raithatha, 2020); * Cumulative users refers to the total number of historical users up to November 2019.

**AFEX** provides a warehouse receipt system in four states, in partnership with the Federal Ministry of Agriculture and Rural Development (FMARD). They provide access to secure, approved warehouses and the receipts can be used as collateral for loans. AFEX expanded to become a commodities exchange platform and was an aggregator for the ABP.

**AgroMall** provides farmers with a digital profile and access to bank accounts. These enable the farmers' access to input loans from financial service providers (FSPs) registered under the ABP. They can also receive market-rate payments when selling their crops at aggregation centers with the proceeds being deposited to the bank account. More recently the APP, with its aim to foster agricultural development, has led to the emergence of new digital solution providers, including, inter alia, Farmcrowdy, Crop2Cash, Thrive Agric, Tradebuza, and Verdant AgriTech.

**Farmcrowdy,** founded in 2016 was Nigeria's first agricultural crowdfunding platform with the objective of connecting small-scale farmers with sponsors who can be local or in foreign markets. Sponsors invest between $200 and $750 in production cycles which range from 3 – 9 months. Profit generated from sale of the produce is shared with farmers, sponsors (who can receive between 6% and 25% returns on their investments) and Farmcrowdy which retains 20% of the proceeds. Farmcrowdy now looks for foreign funding although the initial investors were a local angel investor and private equity firm. They started with a web-based solution and in late 2017 launched a mobile app. In 2017 the firm raised seed funding of US$1 million from local and foreign investors including: Cox Enterprises, Techstars Ventures, Social Capital, Hallett Capital and Right-Side Capital, as well as angel investors Tyler Scriven, Michael Cohn, Josephine Group, FC Agro Allied SPV and Dr Christof Walter. In March of 2019 they secured an additional US$1 million in private equity funding from Cox Enterprises, Techstars, and Ajayi Solutions. In 2018, Farmcrowdy won the African Digital Business of the Year Award for its crowdfunding platform.

**Crop2Cash,** founded in 2018, is a platform that links vetted farmers with financial institutions and lenders and enables payments to and by farmers. The lenders can fund the farmers directly and manage their portfolio and track usage of the credit lines with Crop2cash. (Raithatha, 2020) "Through us, farmers can get access to one-click insurance, mechanization, seeds, chemicals and, most importantly, credit," according to Michael Ogundare, one of the founders. They have taken an expensive process and transformed into one that provides a decision within 24 hours. He noted that with only 7% of farmers having access to credit "there's a lot of productivity that can be unlocked if someone can solve this". Ogundare expects to be able to leverage the Nigerian experience and expand to other markets in Africa. (Jackson, 2020). Last year Crop2Cash was selected to attend the Seedstars World Summit 2020 in Switzerland where they can pitch global investors and compete for the $500,000 cash prize.

**Thrive Agric,** also founded in 2016, is another crowdfunding platform similar to Farmcrowdy. It along with Crop2Cash secured local funding only after being validated by foreign investment in its early stages which was the reverse for Farmcrowdy which needed the initial local funding for validation.

**Tradebuza**, founded in 2017, is a cloud-based web and mobile platform supporting outgrowers, commodities aggregators, exporters and agricultural processors that: manages agricultural outgrower sourcing activities; facilitates commodities trade & brokerage to a network of buyers; and enables LPO Financing for agro commodities merchants. Working with sources of funding, Tradebuza also is a source for unsecured working capital loans to commodities suppliers.

**Verdant AgriTech**, founded in 2014, uses simple technologies (like simple feature phones) to deliver services to farmers, cooperatives, governments, financial institutions, and farm input companies. The platform supports digital profiles for lending, tracking location, farm size, crop yields, certification status etc. The goal is to provide information to farmers "in a convenient manner that will enable precise decision making on the farm and also offer them unique services like access to market, agricultural credit, index insurance and warehousing so as to get more productivity and value out of their farming and thereby guarantee food security and improve living standards. Verdant brings together all the stakeholders and major players in the agricultural value chain as well as the overall industry under one platform. This involves the farmer, buyers & agro-industries, research agencies, governments and financial institutions."

## Indonesia

### Policy Context and Reforms

Agriculture contributes an important, albeit declining share of Indonesia's GDP (trending down to marginally below 13% since 2017). However, this does not appear to be because of significant financial constraints. Indonesia's banking system features extensive branch networks, including commercial and specialized banks, membership-based groups, and Fintech organizations that can service the agri-food sector (World Bank, 2020).

Downstream economic linkages are well established, with fast-growing food and agriculture SMEs as well as several large food manufacturers that can organize vertical integration of these firms into value chains and provide financing for those value chains.

As regards to policy direction, the Indonesian government is aiming to diversify the country's agricultural sector by developing horticulture and small ruminant livestock and has been actively promoting the creation of farmer organizations to aid the process. It is also focused on developing high-value-added and more nutrient-rich value chains (World Bank, 2020).

### Access to Credit

Insofar as there are constraints on the flow of funds to agriculture, these principally reflect the characteristics of the borrowers. Indonesia's independent smallholder farmers dominate the agricultural sector, managing 85% of the rubber plantations, 90% of the coffee plantations, 95% of the cocoa plantations and 30% of oil palm farms (SIIA Working Paper, 2018).

Some of the factors that impinge upon their ability to access credit include (World Bank, 2020):

1. Limited farmers' bankability, due mostly to lack of collateral, small farm size, and information asymmetries between borrowers and lenders.
2. Rural location means here may be limited access to banks and other formal financing institutions. Funds are then sourced through locals who offer loans with short term and high rates;
3. Existing farmer organizations do not have direct access to bank funding. The legalization requirements for farmer organizations are stringent which additionally impedes their access to credit.
4. Bank documentation requirements for underwriting a loan (official land title, quality of collateral, access to guarantors, documented cash flow, existing debt, production risk, lack of crop insurance – due to price or lack of product in the market) make it difficult for smallholders to qualify.
5. Administrative costs and small loan size can make these loans less attractive to a bank. This is compounded by fluctuations in the income of the smallholders over planting seasons creating challenges in setting an appropriate loan repayment schedule.
6. One area where improvements have been flagged as possible is in terms of off-taker/producer partnerships that could further enhance capital access for farmers.

To address these challenges the government has undertaken various initiatives to reduce the impediments to credit for the smallholder. However, the various programs have met with limited success as the primary issues of remote location and documentation etc. have not been overcome.

1. In 2015, regulations governing branchless banking and microfinance, issued by the Indonesian Financial Services, came into effect. The intent was to encourage domestic banks to provide basic banking and insurance services to low-income clients located in sparsely populated regions. Many microfinance providers still operate in larger towns and districts so those farmers in sparsely-populated rural areas continue to be underserved. The branchless banking initiative led to the commercial banks recruiting local agents to provide savings and payment services on their behalf. Lending, however, is generally not available through these agents and the terms of the loans, when offered, are often not suitable to meet the smallholder's capital requirements.
2. The SME Loan Mandate and Kredit Usaha Rakyat (KUR) resulted in regulations requiring that 20% of a bank's outstanding loans be offered to SMEs by 2018. The KUR, created in 2007, provides government subsidies to state-owned and regional banks to offer discounted microfinance loans with loans of up to 500 million IDR which meets the smallholders' capital needs. Issues still exist, however, with documentation, collateral and guarantors that limit smallholder access to these loans.
3. Funds like the Oil Palm Estate Fund (Badan Pengelola Dana Perkebunan Kelapa Sawit – BPDPKS), have been set up to help farmers improve their production and conduct replanting through subsidies. The DPDPKS funds a replanting program, launched in 2017, in which farmers get free seedlings to replant the aged trees; free corn seeds for intercropping as a source of income until the oil palm trees are productive; and assistance in getting land title certificates. However, there are challenges with the smallholders' gaining access to the funds. "Only 1 percent

of last year's [2017] fund went to small farmers in the form of funding for a state-run replanting program. By contrast, 89 percent of the funds collected by the BPDP-KS were channeled to 19 large companies as biodiesel subsidies. The rest of the money was used for human resources development, research, and promotion" . As a consequence, the oil palm farmers are suing to get a bigger share of the funds arguing that the fund is being misused to subsidize biofuel producers.

4. Consideration is being given to creation of a blended finance facility that could help amplify the effects of the value chain projects; the Tropical Landscapes Finance Facility (TLFF) is a proof of such a concept that is working well in Indonesia.

### Plasma Smallholders Program

Plasma smallholders are those that participated in the government's Plasma Transmigration Program in 1987 (Asian Agri, 2018). Through this program the government relocated farmers to oil palm growing areas and gave them two hectares (ha) of land to farm, as well as another 0.5 ha for their housing and food crops. The farmers were linked with a larger agricultural business which provided local employment for over 4 years while the farmer's land was prepared, and the oil palms were ready for harvesting. The company provides technical support and is the buyer of choice for the crop which is sold at a price set by the government.

An early participant in this program was Asian Agri, which by May of 2018 had partnered with 30,000 plasma smallholders farming 60,000 ha of oil palm plantations. Asian Agri assists the smallholder farmers to increase their productivity by using sustainable and productive farming techniques (and seeds) as well as assistance in both getting bank loans and repayment. The company also helps with finding alternative sources of income, like catfish breeding, during the period when the farms are being replanted.

In 2019, Asian Agri paid out IDR 4 billion (close to USD 300,000) in premiums to its farmers from the sale of certified sustainable palm oil in 2017. These farmers had obtained Sustainable Palm Oil Certification which is important to export markets, in particular the European Union. "The sharing of premiums is part of our partnership program to help smallholders prosper and encourage them to manage their plantation sustainably" according to Asian Agri. (Asian Agri, 2019).

It has become a symbiotic relationship - Asian Agri provides technical assistance, farmers implement the sustainable plantation practices which then allows Asian Agri to become an industry leader and meet the requirements of foreign markets for sustainability, and then share the premium with the farmers. Those smallholders that do not participate in the Plasma Transmigration Program need to find support through other channels.

### Crowd(e) Funding

An interesting initiative in Indonesia is a start-up, CROWDE, which has developed an application that facilitates P2P investment (people investing in Indonesian farmers and sharing in the profits. Agents for CROWDE go into villages to persuade farmers to sign up to the program. CROWDE farmers do not receive cash, but instead get equipment like tools, seeds, fertilizers, and pesticides, which CROWDE buys at a lower rate from agricultural suppliers. When crops are harvested or animals slaughtered, CROWDE links farmers with buyers and suppliers to get them the best deals, and already has agreements with major supermarkets. Accordingly, it uses its buying power and marketing to capture better returns than farmers could get and captures its percentage. To date, it boasts 3,392 active borrowers and has lent out a total of about USD 18 billion since its inception in 2017.

## Tanzania

### Context and Policy Reforms

The Tanzanian agriculture sector is an important sector for the country. Smallholder farmers farm over 90% of cultivated land, account for 77 % of employment and provides a livelihood to more than 70% of the population. The sector accounts for 29% of GDP, 30% of exports and 65% of the inputs for the industrial sector. Tanzania has been active in developing policies for this sector.

#### Agriculture Sector Development Program II

In 2017 the government of Tanzania issued the Agriculture Sector Development Program II (ASDP II) which is a 10-year program delivered in two five-year periods. This follows the ASDP I program, which ran from 2006- 2014.

The government learned from ASDP I that public investment in the agricultural sector facilitates the private sector (farmers and commercial partners) to deliver the expected results rather than achieving them directly. To develop a successful, well-resourced, and decentralized system, agricultural development planning and implementation resources need to focus on areas that also strengthen upstream value chains in addition to increasing productivity. Governance of the programs, investment in the sector, enablers within the sector, and empowerment of the farmers themselves, all contribute to success of the endeavors.

ASDP II aims to transform the agricultural sector with increased productivity and commercial activity as well as improving the livelihood of the smallholder farmer. The strategy is to move smallholder farmers from subsistence farming to sustainable commercial farming. It targets specific commodities with sustainable production systems and market linkages to increase commercialization of the crops and development of the value chain.

While the ASDP II will cover all regions from a public service delivery basis, the investments will focus on high potential commodities along the Value Chain (VC) and Agricultural Ecological Zones (AEZ). These will be identified based on the crops´ contribution to food and nutrition security; the improvement to smallholder farmers' livelihood; the availability of technology to improve productivity and profitability of the crop; local and foreign demand; and the contribution to the national development agenda.

## National Financial Inclusion Framework

The first National Financial Inclusion Framework (NFIF1), launched in 2013, established a goal to have half the population owning an account by 2016. Within that were goals to achieve 50% of account holders using the account regularly; 25% of adults having two weeks of income deposited in a formal savings account; and 25% of adults with a personal electronic financial record.

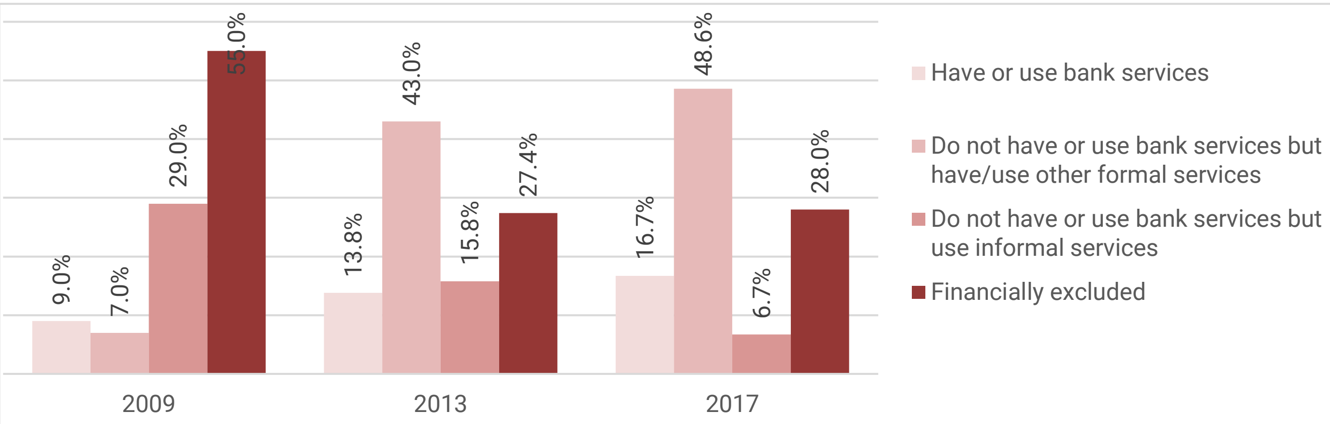
The actions undertaken to achieve these goals included enhancing access channels (agent banking, mobile telephony financial services, etc.); improving payment platforms to facilitate cost effective access; easy client on-boarding (credit bureaus, Know Your Client requirements, etc.); consumer protection mechanisms; and financial education.

The National Financial Inclusion Framework 2018-2022 (NFIF2) builds on NFIF1. With NFIF2, there is a demand side focus on households and micro, small & medium enterprises, with a special focus on women. The supply side considers what is required for solutions that are innovative, affordable and meet the needs of individuals and businesses; and ensuring these are supported by appropriate policies and regulations. More specifically the framework identifies the following areas for development: accessibility of financial access points; mobile phone ownership; unique and verifiable identification; an integrated reference system for financial profiles; universal use of formal financial services to save, borrow, transact and mitigate financial risks. These will be more readily achieved if the financial products and services on offer meet their needs and are affordable and convenient to use and confidence in the financial service providers is high.

Specific objectives for NFIF2 include digital IDs issued for all adults; a tiered Know Your Customer regime to increase access to low-value accounts by reducing KYC requirements; any-to- any digital payments system interoperability between banks and mobile money wallets; increasing the number of rural agents to support cash needs in the community; and enabling rural agents to work with multiple financial institutions.

Figure 4 shows the improvements in financial inclusion from 2009 to 2017: the level of financial exclusion has almost been halved falling to 28% in 2017 from 55% in 2009; usage of informal financial services declined from 29% to 7%; and the percentage using formal financial services has quadrupled – including a six-fold increase in new participants engaging with the formal financial services providers. The majority of the 28% of the population still excluded are those located in rural areas, smallholder farmers, youth and women.

Figure 4: Access and usage of financial services-2009 to 2017




Source: (Tanzania National Council for Financial Inclusion, 2017)

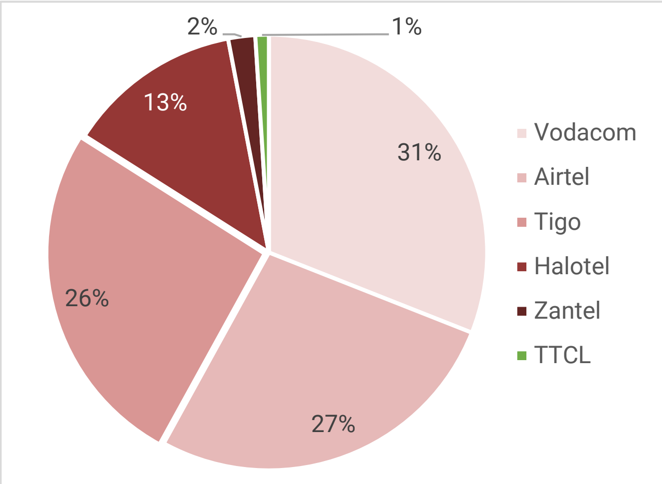
## Mobile Network Operators

This increased participation has been driven by the adoption of electronic platforms – primarily mobile money services – with flexibility in the regulatory environment and private sector investment in distribution as key enablers.

Mobile network operators (MNOs) became active in the Tanzanian financial sector in 2008 with the introduction of mobile wallets. Vodacom was an early entrant with M-Pesa. There are currently eight MNOs in Tanzania: Airtel, Smart, Smile, Halotel, Tigo, TTCL, Vodacom, and Zantel. Figure 5 shows the market share by player for the top 6 companies. Smart and

Smile each have less than 0.1% market share. These market participants have invested USD 2.6 billion primarily in network infrastructure and this is expanding broadband coverage. By 2016, Tanzanians were the first users globally, to be able to transact directly to each other, regardless of their mobile money provider, as the MNOs had full interoperability.

Figure 5: MNO market share




Source: https://www.tanzaniainvest.com/mobile

Although mobile internet penetration quadrupled from 2010 to 2018, it only reached 18.5% of the population; 40% of the population remains offline and 20% does not have broadband access.

Mobile money dominates consumers to consumer payments. In June 2020, some 272 million mobile money transactions took place, for a total value of USD 4.6 billion. Six of the MNOs offer mobile money services: Vodacom with M-Pesa (39%), Tigo with Tigo Pesa (30%), Airtel with Airtel Money (20%), Halotel with Halopesa (7%), TTCL (3%), and Zantel with Ezy Pesa (1%). It should be noted that the MNOSs act as operators of the mobile money scheme and the banks are the holders of the deposits and it is their customers that are conducting the transactions. The 2017 FinScope report by the Financial Sector Deepening Trust (FSDT) had some interesting insights:

1. 35% of the 43% of adults that save do so through their mobile wallet;
2. 4% of the 44% of adult Tanzanians who borrow do so via mobile money;
3. From 2013 to 2017, usage of financial services by adults grew by 15% and the usage of mobile financial services grew by 38% (Financial Sector Deepening Trust, 2017).

*"In 2016 half of Tanzania's GDP went through the mobile money system. By 2016, there were more than 260,000 active mobile money access points throughout the country, or one for every 103 adults. These services have reached out to customers, educated users how to use m-wallets to transact, offered cash-in, cash-out (CICO) and other services."*

## Financial Services

At the end of 2019, Bank of Tanzania (BOT) reported that there were 38 commercial banks, 2 development banks, 6 community banks, and 5 microfinance banks. There were 7 MNOs, around 100 microfinance institutions, approx. 6,000 SACCOs and many VICOBA groups.

Table 10 provides a breakdown of the banks in Tanzania over the period 2015-2019. There has been consolidation in the sector with 5 fewer institutions at the end of 2019. Notwithstanding this, the number of Pont of Sales (POS) devices has increased dramatically over this time frame. Bank branches have grown marginally, and the number of ATMs deployed peaked in 2017. The number of bank agents, however, has seen explosive growth over the 5-years period fueled in part by a regulatory change in 2013 that allowed banks to appoint retail agents for their banking services. This allowed the banks to extend their services to the unbanked lower income individuals located in rural areas.

Table 10: Number of Banks and Other Financial Institutions in Tanzania , 2015-2019

| Category | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|
| Commercial banks | 36 | 38 | 38 | 40 | 38 |
| Development banks | 2 | 2 | 2 | 2 | 2 |
| Microfinance banks | 3 | 4 | 5 | 5 | 5 |
| Community banks | 12 | 12 | 11 | 6 | 6 |
| Financial institutions | 3 | 3 | 3 | - | - |
| **Total** | **56** | **59** | **59** | **53** | **51** |
| Automated Teller Machines (ATM) | 1,771 | 1,959 | 2,158 | 2,153 | 2,071 |
| Point of Sales (POS) | 8,441 | 13,751 | 14,300 | 24,386 | 34,502 |
| Bank Branches | 728 | 810 | 815 | 878 | 957 |
| Bank Agents | 3,299 | 5,676 | 10,665 | 18,827 | 28,358 |

Source: Bank of Tanzania: Financial Sector Supervision Annual Report 2019 23rd Edition

FinScope Tanzania 2017 found that 86% of Tanzanian adults live within a 5km radius of a financial access point (78% for rural). The majority of the access points were mobile money agents, 55% providing services for multiple providers.

### Commercial Banks

The banking sector is highly concentrated and dominated by two former state banks; CRDB Bank Plc and NMB Bank Plc. The top 10 banks held 74% of deposits and 72% of assets in the banking sector at the end of 2019.

The sector has faced continuous regulatory changes with dramatic impact. In 1967 the government nationalized financial institutions and merged them into a handful of state-owned institutions – the largest were National Bank of Commerce and the Cooperative Rural Development Bank. In 1991, the Banking and Financial Institution Act liberalized the sector and in 1997 National Bank of Commerce was split into three entities: NBC Holdings Limited; NBC (1997) Limited (NBC); and National Microfinance Bank (NMB)

In 2000, the South African financial services group Absa Group Limited acquired a majority stake in NBC, the government retained a 30% share and the International Finance Corporation (IFC), a member of the World Bank Group, owns 15%. The bank was renamed and is known as the National Bank of Commerce Limited (NBC) and is a full-service bank.

Initially, the government retained full ownership of NMB, but in 2005 in a move to privatization, 49% was sold to Rabobank of the Netherlands. The government divested a further 21% share in 2005 following an IPO. Rabobank has recently applied to allow the transfer of its share to a Sub- Saharan Africa-focused investment company, Arise which was formed in 2017 by Rabobank, FMO, a Dutch entrepreneurial development bank and Norfund, the Norwegian State owned development fund.

The Cooperative Rural Development Bank, whose objective was rural and agriculture development projects financing, was privatized, recapitalized and restructured in the 90s and emerged as the CRDB bank in 1996. DANIDA, the Danish government's development cooperation, played a significant role in the restructuring. The bank remains a primary source of agriculture finance in the country.

Following deregulation, new entrants continued to establish operations: local banks (Exim Bank, Access Bank, Azania Bank, etc), East African regional banks (CBA, Equity Bank, etc.), Pan African banks (Stanbic Bank, UBA, Ecobank, etc) and global banks (Citi and Barclays).

**Case Study 6: TPB Bank**

The Tanzania Postal Bank, created by an Act of Parliament in 1991, began operating as a non-bank financial institution with a mandate to promote local saving. It was not allowed to provide credit and as "postal banks in other countries in Africa and elsewhere – the institutions are able to take advantage of their widespread presence in carrying on the traditional business of accepting and safekeeping of savings deposits. However, physical presence alone is not sufficient for carrying out micro-credit business; the postal system does not have, and probably be too costly for the entity to acquire the specialized technical staff skills and information and operating systems required to conduct micro-credit business." (Randhawa & Gallardo, 2003). Over time it entered the microfinance market and provided credit facilities to rural and micro-enterprise. It received support in the development of this line of business from UNDP, USAID, and The World Bank. In 1998, 1.6% of its assets were in loans. In the past few years TPB Bank PLC merged with other banks that were struggling (Twiga Bancorp and Tanzania Women's Bank in 2018 and TIB Corporate in 2020). Today its mission has evolved to promote financial inclusion and supporting Tanzanians to develop a saving culture and provide access to credit. TPB Bank remains a state-owned financial institution.

### Regional/Community Banks

There are a handful of regional banks that have evolved from cooperatives and become banks following regulatory changes that allowed this transition in 1995.

The Kilimanjaro Co-operative Bank Limited (KCBL) is one such regional bank. It started as a Co-operative Society and was granted a bank in 1995. KCBL offers traditional banking products and services (savings, current, time deposits, loans and overdraft) along with loans to permanently employed individuals with a guarantee by their employer, coffee financing, warehouse receipt system and Simu banking. The banks' operations are limited to the Kilimanjaro region. This structure is not always successful. In 2018 the BOT revoked the bank license for five community banks due to capital and liquidity challenges.

### Microfinance Institutions

Microfinancing in Tanzania started in 1995 via SACCOS and the financial NGOs. The Microfinance Act 2018 imposed regulation on various categories of MFIs in mainland Tanzania. MFIs are required to register with, and submit information to, the Bank of Tanzania (BOT), which is responsible for licensing, regulating, monitoring and supervising MFIs. There are four categories of MFIs in the legislation which allows the BOT to regulate the MFI based on the nature of its business. The four tiers are:

1. Tier 1 - deposit taking MFIs;
2. Tier 2 - non-deposit taking MFIs such as individual money lenders;

3. Tier 3 -SACCOS; and
4. Tier 4 -community microfinance groups.

MFIs are required to report to both the BOT and a credit bureau information on credit extended to their customers and loan performance. This reporting should lead to reductions in non-performing loans as MFIs can access an applicant's credit history when making underwriting decisions. The MFIs will be required to provide full disclosure of the terms and conditions for the loan, ensuring that customers are educated, and have a complaint and dispute resolution process. Additional provisions required the MFIs to meet minimum capital adequacy regulations.

Of note is that foreign-owned MFIs operating in Tanzania are subject to the same registration and operational requirements. In addition, they are required to employ and train Tanzanians and have a plan to have Tanzanian nationals hold senior management positions. There is a risk that the new regulatory framework for smaller microfinance institutions may effectively become a barrier to entry and may put institutions that cannot meet the requirements at legal risk.

Although the registration with the BOT was to be completed in October 2020, the deadline has been moved to the end of April 2021, to give MFIs additional time to submit their applications. The major microfinance institutions are the National Microfinance Bank, Akiba Commercial Bank and Yetu Microfinance Bank.

**The National Microfinance Bank of Tanzania** is an independent institution that takes deposits and makes loans to micro and small businesses for inventory, supply of goods and services. It also provides a collection and payment service to large corporate clients to and from micro and small enterprises, as well as an add-on service for money transfers and payrolls.

**Akiba Commercial Bank** was founded to meet the needs of the "unbanked" and "commercially ill- equipped" in Tanzania. It makes micro loans for business working capital and home improvement of up to 20 million Tanzanian Shillings (about USD 8,700).

**Yetu Microfinance Bank** similarly targets the unbanked population. It offers "solidarity group loans" which it defines as a "system of group lending where an organized group of five enterprising youth, women and other micro entrepreneurs acting under the principle of co-guarantee apply for micro loans. Clients are organized into groups whose members serve as an informal bank and cross guarantee each other's loans." It also makes small business loans to individual members who have reached their cap loan limit of 4 million Tanzanian Shillings (about USD 1,700) provided they have a good track record and security.

## Savings and Credit Co-Operative Society (SACCOS)

A SACCOS is a co-operative that is owned, governed, and managed by its members who agree to pool savings and make loans to each other. Tanzania requires a minimum of 20 founding members and initial working capital of at least Tanzanian Shillings 5 million. The SACCOS has to be registered with a co-operative officer at the local government office. The members are the owners, and the members decide how their money will be used for their own benefit. Loans are made on a cost recovery basis with no payments to 3rd parties or to internal owners.

Loans are made for the following: business purposes; agriculture; storing crops to defer sales; leasing loans to rent equipment; housing loans; short-term emergency loans; and social loans to pay school fees or to make home repairs; Chap chap loans which are short term loans to allow the borrower (often market traders) to buy goods at cheap price and then sell quickly for a profit; and group loans that are made available to a group of non-members (usually groups of 5 to15 women) to allow them to build up their income to the point that they can join the SACCOS.

Savings and Credit Co-Operative Union of Tanzania (SCCULT) is the national association for registered SACCOS. This group represents the SACCOS to the government, and provides services such as accountancy training, internal inspections, bulk SMS, risk management, legal advice and marketing support. The SCCULT, in 1998, launched the Central Finance Programme (CFP) which provided competitively priced development loans to SACCOS.

The Co-operative Audit and Supervision Corporation (COASCO) was established in 1982 to provide audit, supervision, and consultancy services to the SACCOS. Tanzanian law requires that each SACCOS is inspected annually and prohibits political leaders from being appointed to the SACCOS board of directors.

In 2005, new regulations brought SACCOS with total savings and deposits above 800 Million Tanzanian Shillings (TZS) under the supervision of the Central Bank of Tanzania (BOT) and they were also licensed as a financial cooperative.

According to the acting head of COASCO, as of October 2020, there were 6,021 SACCOS operating in Tanzania. Of the 2,270 SACCOS that COASCO audited in the prior fiscal year, only 10% or 227 had clean audits. The remaining 90% of audited SACCOS had problems with their financial statements. He noted that most of the cooperative societies do not have proper systems and lack qualified accountants to manage the funds and to maintain proper records.

In Table 11 the Bank of Tanzania (BOT) reported that there were 3,413 SACCOS operating providing services for 651,675 members. These SACCOS would be the larger entities that are subject to BOT oversight. As of September 30,2020, they had loan assets of TZS 431 Billion and liabilities of TSZ 203 Billion.

Table 11: Performance of savings and credit cooperative societies, September 2020

| Indicators | Performance |
|---|---|
| Number of SACCOS | 3,413 |
| Members | 651,675 |
| Share's value (Mil. of TZS) | 47,556 |
| Savings (Mil. of TZS) | 202,511 |
| Deposits (Mil. of TZS) | 45,574 |
| Loans issued (Mil. of TZS) | 921,644 |
| Outstanding loans (Mil. of TZS) | 430,856 |

Source: Bank of Tanzania; Consolidated Zonal Economic Performance Report for the Quarter Ending September 2020; https://www.bot.go.tz/Publications/Filter/36; data is provisional.

### Village Community Banks (VICOBA)

The Village Community Banks (VICOBA) concept brought to Tanzania in 1996 is mostly informal small groups mobilizing financial resources by saving and giving out loans among people within groups. Capital is raised from the members who buy a predetermined number of shares.

This is a participatory grass root development model operating through self-selected groups of people of 25-30 members who are organized in smaller groups of five called collateral groups (the work to maintain peer pressure). Members elect a management committee; members receive training in business management, entrepreneurship and group management. VICOBAs have proved to be a success in boosting and raising incomes among different community members in Tanzania over the years as commercial banks are reluctant to lend to the agricultural sector and have limited capacity to reach rural communities.

### Social and Economic Development Initiatives of Tanzania

The Social and Economic Development Initiatives of Tanzania (SEDIT) is a member based, Tanzanian NGO that works to expand financial inclusion. It works with savings groups using VICOBA and VSLAs, Rural development, Sustainable livelihoods, microfinance, enterprise development, environmental conservation and natural resources management, health, and sanitation etc.

### Warehouse Receipts System (WRS)

The WRS provides the smallholder farmers another access point to finance their agricultural activities. In this system, the farmers store their produce in a Licensed Warehouse. The owner of the commodities is issued a Warehouse Receipt certifying the details of the commodities stored (value, type, quantity and quality). This process enables future trades to get better prices or to use the stored goods as collateral to access credit.

In 2005 the Warehouse Receipts Regulatory Board (WRRB) was established to both regulate and promote the WRS. The WRRB is responsible for licensing the warehouse, warehouse operators, and inspectors.

### National Cooperative Bank

In 1962, following independence, the cooperative movement formed their own bank which became the National Cooperative Bank (NCB) to provide credit for both purchasing crops and the supply of farm inputs to co-operatives. The co-operatives were shareholders and held funds at the NCB. It proved to be a successful initiative and Tanzania saw an increase in cash crops as farmers had the benefit of access to required farm inputs as well as timely payments for their crops, encouraging higher production.

The National Cooperative and Development Bank Act, 1964 provided the NBA and National Development Credit Agency (NDCA) with legal underpinning. The NDCA was a subsidiary of the NCB to support the agricultural sector with cultivation and development loans. The NDCA was able to fund 100,000 farmers annually through the co-operatives. The NCB provided credit to farmers that were not members of a co-operative as well. In addition, loans were made available to invest in processing, wholesale and retail trading, etc.

In 1970, the NCB and NDCA were dissolved, and it was only when the Cooperative Societies Act of 1991 came into force that co-operatives at district or regional levels were able to establish their own banks. The Kilimanjaro Cooperative Bank was formed in 1996 and the Kagera Farmers' Cooperative Bank in 1999, and both are regulated by the BOT. The local co-operatives behind these institutions were dissatisfied with commercial bank services. These two banks focus on personal loans, small business loans and loans to co-operative societies to buy crops under WRS. (Mruma, 2014)

The Tanzania Cooperatives Development Commission (TCDC) is working to get a National Co-operative Bank established as an apex national level institution to develop the cooperative sector. (Tanzania Cooperative Development Commission, 2016) There is a view that the financial needs of the agricultural marketing cooperatives cannot be met by commercial banks given their lending criteria and hence the interest in forming a National Cooperative Bank which is wholly owned by the cooperatives and able to provide them with the capital they need to flourish. This is a pan-African effort. In 2017, the International Cooperative Alliance – Africa Alliance held a conference with national and regional co-operative banks and SACCOS on the topic of "Fostering Sustainable Financial Inclusion in Africa through

National Cooperative Banks". The intent was to align "Alliance Africa members, governments, partners, stakeholders and collaborators on the current priorities facing African financial markets and how national cooperative banks could address their challenges while contributing to financial inclusion with the goal of Promoting National Co-operative Banks across Africa. The vision is to establish a Pan African cooperative bank in Africa." (Alliance Africa, 2017) The Tanzania Federation of Co-Operatives (TFC) notes on its website that it is working on this initiative on behalf of the national co-operatives.

### TIB Development Bank

TIB Development Bank, formerly known as Tanzania Investment Bank, is the first development financial institution established by the Government of Tanzania. Established in 1970 with the mandate to specialize in medium- and long-term lending for industrial development (large-scale commercial agriculture, development of manufacturing, assembly and processing, and the development of the engineering, construction, transport, tourist and mining industries).

In 2005, the bank was designated a Development Finance Institution (DFI) in response to challenges the industry was facing in obtaining long term funding from existing financial institutions. The bank's primary focus is on lending for infrastructure, industrialization (agro-processing, mining, and general manufacturing) and the oil and gas and services sector.

TIB has an SME lending program in response to its mandate to facilitate and support SMEs business growth. The program includes direct lending to SMEs that are registered entities, e.g., LLPs; program lending for industrial infrastructure development; wholesale lending to community banks, microfinance institutions, commercial banks, etc.; and technical assistance and advisory services.

## Vietnam

### Context and Policy Reforms

The Vietnamese government operates with 5-year plans to address areas of importance and created programs to address areas of concern or interest. They heavily intervene to achieve the policy goals that are set out in these 5-year plans. These can take the form of subsidies, training, regulatory changes etc. Vietnam's objective to be a participant in the global economy, through trade agreements such as the Comprehensive and Progressive Agreement for a Trans-Pacific Partnership (CPTPP) and the EU-Vietnam Free Trade Agreement (FTA) brings opportunities and places constraints on the government's activities.

The Strategy for Development of Agriculture and Rural Areas has established the goal to develop agriculture into a major strategic export sector by 2030. To achieve this, the sector needs an annual growth rate of 3-3.2% in agricultural GDP as well as increase value-added processing and agribusiness by 35%.

The agro-food sector is well integrated with international markets. Agro-food exports have increased eight-fold since the early 2000s, and Vietnam is now one of the world's largest exporters of a wide range of agricultural commodities, including cashews, black pepper, coffee, cassava and rice. Two-thirds of Viet Nam's agro-food exports are delivered to foreign consumers without further processing. Agro-food imports have also increased significantly. The majority of agro-food imports form intermediate inputs into Vietnam's processing sectors." (OECD, 2020)

Recent interventions in agriculture include:

1. Decree No. 98/2018/ND-CP encourages the linkage of farming households, co-operatives and enterprises to increase the quality and productivity in the production process and the sale of agricultural products and contemplates joint investments at different stages of the value chain: supply inputs; purchase of agricultural products; land preparation and harvesting; etc. The government provides support to establish a linkage project, including resources to hire outside consultants; investment in machinery; infrastructure facilities; subsidies for agricultural extension and training, and for plant varieties, livestock breeds, packaging and labels.
2. Decision No. 461/2018/QD-TTg provides approval to develop 15,000 agricultural co-operatives and unions of co-operatives. This program contemplates improving existing agricultural co-operatives and creating 5,200 new co-operatives while promoting the application of high technology to agricultural production.

   Decree No. 116/2018/ND-CP amends the credit policy to enable farming households, co-operative groups and other organizations that are not legal entities to borrow funds. The requirement for a farm economy certificate from competent authorities for farm owners (farming households operating above a defined minimum scale and level of sales) has been lifted. The unsecured loan amount for farming households and farm owners was doubled. Hi-tech agricultural enterprises can now access up to 70% of a project's value without collateral. Firms with hi-tech agribusiness plan but without a hi-tech agribusiness certificate, can also participate in this borrowing.

4. Decision No. 490/2018/QD-TTg (part of the National Target Program for New Rural Development for the period 2016-20) approved the "One Commune, One Product" program through 2020. The objective is to assist the communes to develop products and services – both agricultural and non- agricultural. The government will be assisting with planning production areas; managing and supervising product quality standards; and providing support for education, training, technical advice, the application of science and technology, branding, trade and product promotion, and credit.

5. Decree No. 58/2018/ND-CP on agricultural insurance provides subsidies for insurance premiums of up to 90% (if below or near the poverty line) and up to 20% for all others for the following: crops (rice, rubber, pepper, cashew, coffee, fruit trees and vegetables); livestock (buffaloes, cows, pigs and poultry); and aquaculture production. Subsidies up to 20% of premiums will be available to businesses that are engaged in applying high-techs in large-scale agricultural production.
6. Decree No. 77/2018/ND-CP provides support to the development of small-scale and on-farm irrigation through investments in, and the construction of, water storage facilities; advanced and water-saving irrigation systems; and electric pumping stations, culverts and solid canals.
7. Decree No. 109/2018/ND-CP provides support to enterprises producing organic agricultural products through priority access to investment and funding for science and agricultural extension.
8. In December 2018, the Ministry of Agriculture and Rural Development (MARD) identified 13 products (rice, coffee, rubber, cashews, pepper, tea, vegetables and fruits, cassava and products thereof, pig meat, poultry meat and eggs) which would be eligible for preferential treatment. These include exemptions/reductions in land/water surface rents; preferential access to credit; support for the transfer and the application of high-technology in agriculture; human resources training; market development and promotion activities; and support for investments in facilities and equipment.

While primary agriculture has fallen from 30% of GDP to 13% over the past two decades, the sector is still an important source of employment, with 45% of the active labor force engaged in agriculture activity.

The majority of Vietnam's farms are very small (<0.2 ha) with 70% of farms less than 0.5 ha. This means that farmers do not have access to large pools of assets to serve as security for loans which leads to constraints on their ability to scale up. Rural households are increasingly relying on non-farm income – which both helps them finance the farming activity and gives them a diversified income stream.

The government is involved in supporting access to credit for farmers and fishers through state banks such as the Vietnam Bank for Agriculture and Rural Development (Agribank) and the Vietnam Bank for Social Policies (VBSP). This support supports commercial activities but also plays a social welfare role as the rural population are generally low-income.

### Financial Services

Vietnam's economy runs "on cash and a majority of adults still don't have formal financial services such as a basic transaction account. Moving to a "non-cash" system is a priority for the government to increase efficiency, promote business and economic development and reduce poverty including in remote rural areas which traditional financial providers have difficulty reaching.

Just under a quarter of rural adults have an account at a financial institution vs 30% nationally and only 2.3% e-wallet accounts. The primary institutional sources for financial services in rural areas are: Vietnam Bank for Agriculture and Rural Development (Agribank); Vietnam Bank for Social Policies (VBSP); the network of People's Credit Funds (PCF); and other microfinance institutions (MFIs). Agribank focuses on middle-income and high-income clients in rural areas, while VBSP, MFIs, and PCFs focus more on low-income clients and the poor. Although just over half of rural adults borrowed money less than a quarter of the borrowers took loans from formal financial institutions.

The primary institutions in the Vietnamese banking system are the commercial banks: 5 state-owned, 33 joint stock, 5 joint ventures and 9 wholly owned foreign owned. There are some 49 foreign bank branches and 52 representative offices in Viet Nam as of June 30, 2019 and December 2018 respectively. The state-owned banks have a 40% share of the market.

Financial services in Vietnam, however, are rapidly changing. By the end of 2017, Viet Nam had 64 million people connected to the internet and it "sits at the beautiful intersection where personal finance meets inevitable innovation. In the last five years alone, Vietnam has experienced the entry of over 40 new fintech players, such as online payment platforms Mobivi and Momo, as well as the country's first fully digital bank Timo."

Vietnam's banks are seen to be in the first phase of the digital revolution and have been seeking opportunities for foreign collaboration. For example, VietinBank (state-owned bank with a strategic partnership with Mitsubishi UFJ Financial Group (MUFG)) is collaborating with the UK fintech Opportunity Network to providing SMEs with access to their platform to make connections to "expand operations into new markets, increase cross border trade, maximize assets utilizations, raise capital, and grow business domestically and internationally."

The common banking framework that is part of the economic integration of the Association of Southeast Asian Nations (ASEAN) and the trade agreements like CPTPP and the EU-Vietnam Trade Agreement will continue to bring change to ownership and investment in this sector as well as bring domestic practices closer to international standards.

The Vietnam Association of Financial Investors (VAFI) is proposing regulatory change to enable domestic banks to attract both capital and governance experience from foreign banks. "In 2010, Vietnam made progress in strengthening the country's banking sector by officially publicizing the Law on Credit Institutions and Circular 13 (and subsequent amendment Circular 19) on prudential ratios for credit institutions. While these new regulations are aimed at improving the capital position of the banking industry, they have also introduced new requirements and restrictions, such as those for calculation of capital adequacy ratios that can cause compliance-related difficulties"

While the consumer finance and lending segment has great potential for growth, finance companies and banks face risk management issues as the legal framework needs to be strengthened. Ownership of land is not permitted but ownership of the property is allowed. In 2017 the government introduced Resolution 42/2017/QH14 that improved the ability of banks and Vietnam Asset Management Company (VAMC), the state-owned company that buys non-performing loans, to repossess collateral when there is a borrower default.

In February 2020, the SBV announced that it will be recommending the removal of the 49% ownership limit on payment intermediaries. This will be submitted in June 2020 to the Prime Minister with no implementation date at this time. The SBV had “received opinions that because payment intermediary is a new service tapping technology advancement, foreign investment plays a critical role in developing the business. In addition, some startups have already had overseas investments exceeding 49 per cent equity. … To date, the local central bank has granted digital payment licenses to a total of 32 companies including MoMo, VNG’s subsidiary ZaloPay, Sea Limited’s AirPay, SenPay – associated with e-commerce major Sendo, Moca – Vietnamese strategic partner of Grab, and Monpay that was acquired by Vingroup.”

## Vietnam Bank for Agriculture and Rural Development (Agribank)

Agribank was established by the government in 1988 and is the leading state-owned commercial bank in Vietnam. With 2,300 branches it has a presence in all regions. Agricultural and rural lending accounts for 70% of total loans. Agribank has over 50% share of the agricultural and rural credit market. As a state-owned bank, it can be counted on to support the government’s policies, and in particular to implement credit policies that enable agricultural and rural development.

There are seven policy areas that Agri Banks' credit programs address: agricultural and rural development; individual lending through loan/affiliate groups; policy to reduce agricultural losses; loans for cattle and poultry farming; loans for coffee replanting; fisheries development; “Clean agriculture" lending; support for two National Target Programs - New Rural Construction and Sustainable Poverty Reduction. Agribank is also engaged in the implementation of the National Strategy for Financial Inclusion and supporting the accelerating non-cash payments in the country.

## Fintech

As regards to the rapidly developing FinTech sector, this appears to be at a take-off stage and appears to feature fewer apparent entry barriers and much interest in attracting foreign participation. As noted by the British Business Group, “Vietnam currently ranks second amongst ASEAN member states in the number of incubators, accelerators, and innovation labs in the region. The Vietnamese Fintech market was worth $4.4 billion in 2017, and is predicted to reach $7.8 billion by 2020, equaling a 77% increase over three years. Fintech development in Vietnam is accelerating with companies in the sector attracting US$117 million in start-up capital, surpassing e-commerce at US$104 million and other sectors which makes Fintech the most funded sector for start-ups in 2018. The Vietnamese Fintech start-up ecosystem is now home to more than 120 companies and brands covering a broad range of services, from digital payments and alternative finance to wealth management and blockchain.”

Vietnam’s FinTech sector benefits from a number of government programs that support innovation:

1, The National Agency for Technology, Entrepreneurship and Commercialization Development (NATEC) was established in 2016 as part of the national program to promote the “Start-up Economy”. NATEC provides training, mentorship, business incubation and acceleration and financial aid to new start-ups.

2. In 2015 the National Technology Innovation Fund (NATIF) was set up to provide financial support for research and development activities.

3. Preferential tax rates for businesses in high technology sectors or in high-tech zones.

Figure 6: Fintech landscape in Vietnam


Source: https://fintechnews.sg/vietnam-fintech-startups/

4. Accelerator programs like Vietnam Innovative Start-up Accelerator (VIISA) which is a “business acceleration program and a seed-stage investment holding that invests to build global-ready start-ups in Vietnam”.

The government support will continue to be enhanced. In February 2020 the Prime Minister issued a directive for the various agencies involved to improve conditions for start-ups. This directive included business registration agencies to expand the lines of business to be supported; amendments to the Investment Law to make it more attractive to foreign investors to participate in start-up investment funds ; review of the incentives and policies for the National Innovation ; the Ministry of Science and Technology to continue its efforts to build the innovation start-up ecosystem and technology incubators; the creation of three innovation and start-up centers at three universities; promotion of the start-up ecosystem within the education sector; establishment of a capital trading platform for start-ups; and a favorable legal environment to support the start-ups.

## Other Initiatives

AgroFides Inc is a privately held US based firm, founded in 2019, with a mission to deploy technology to assess creditworthiness of small and medium-scale farmers in developing countries and emerging markets to support their access to secure capital and services. They provide a Fides Score to lenders to identify good prospects for lending. AgroFides claims that the “Fides Score is more than an analytical tool; it comprises the process that ensures proper client selection and appropriate loan size to meet farmers' needs and potential.”

The Fides Score is based on five criteria: character of the farmer and commitment to the farming operation; capital that the farmer has invested in the farming operation; collateral available to secure the loan; capacity of the farmer to repay the loan; and condition of the loan – whether the terms of the loans are appropriate to the farmer and his operation. This score is comparable to the various scores, such as the FICO score, used by financial institutions globally in assessing consumer and small business loan applicants which are based on the following: credit history; capacity to repay; capital; the loan's conditions; and associated collateral.

Lenders, through AgroFides platform, can identify farm operations based on their personal risk profiles that are attractive potential clients. The platform supports the lending process, ensures that the loans are used for agricultural purposes, and facilitates repayment. AgroFides also works with the farmers and cooperatives to educate them on research-based farming techniques and agrarian practices to ensure the farmers will have the capacity to repay the loans. They also provide access to agricultural tools that would be cost prohibitive for an individual farmer to acquire.

# V Recommendations

The following recommendations are identified to help develop agricultural finance system in Ethiopia, at this very time where the government of Ethiopia is trying to make reforms of macroeconomic policies, including that of agricultural and financial institutions. The recommendations are forwarded under two broad categories, "policy revisions or changes" and "regulatory frameworks considerations" and organized under seven broad areas.

## Supply of and Demand for Financial Resources for Agriculture

High transaction costs; weak business case of the agriculture sector; and inadequate development of the financial market as a business have limited the supply of financial services to the sector. Conversely, lack of long term national financial demand estimates for transforming agriculture; poor perception that financial credits are only for fertilizer and seeds; and inadequate motivation to borrow for and/or invest in agriculture have constrained the growth of demands for financial resources to transform agriculture.

Therefore, to improve the supply of and demand for agricultural credits, the following policy agenda is recommended. The institutions indicated in brackets at the end of each recommendation are suggested to be responsible for implementation of the recommendation action points.

1. Reinstate agricultural bank (Agricultural Bank of Ethiopia; ABE) with mandates to monitor institutions engaged in agricultural lending; oversee the operations of the rural banks; warrant provision BDS services to agriculture finance customers; reintroduce the rural institutional structures for revival of moral values on credit repayment; ensuring strict follow up of credit provisions adhere government priority set for sub – sectors; and promoting research in agriculture & rural development in addition to its credit and wholesale services (NBE; MoA; DBE/ABE);
2. Credits demands for agriculture are encouraged/ incentivized through differentiated interest rate (NBE; all banks);
3. Rural and commercial banks are set to provide higher (% to be determined) proportion of their loan portfolios than the current (5%) until Ethiopian agriculture is considered "structurally transformed" (NBE);
4. Define and specify financial demands for transformation and strategic growth of agriculture (MoA; Agri-inputs manufacturers/suppliers /Agri–commodities marketing organizations);
5. Renovate financial markets & promote full access regardless of sector (NBE, Ethio-Telecom and IT companies); and
6. Pursue policy & strategy to mobilize savings nationally; (NBE, banks and MFIs).

## Financial Accessibility and Agent Expansion

Inadequate number of FIs and their branches/agents; lack of specialized banks serving the agriculture sector; underdeveloped digital banking; inadequate loan appraisal procedures and strict follow up as well as lack of widespread intangible collateralization have affected bank services expansion to the agriculture sector. To improve the agriculture sector's accessibility to financial resources, the following are recommended.

1. Upgrade MFIs and credit and saving cooperatives to rural/agricultural banks (NBE; federal cooperative agency);
2. Promote further private firms to engage in agricultural financial markets including 'equity finance', 'angel investment' or 'agent'; (NBE; Finance sector players) and
3. Promote digitization and interoperability of FinTech (Ethio-Telecom, IT companies).

## Ease of Financing

Stringent lending conditions; uniformity of interest rate for all sectors including agriculture; dominance of collateral based (material) project financing; lending procedural emphasis more on non-effectiveness aspects of projects than on their ease of implementation or profitability; and inadequate regulations and/ or systematized procedures ensuring importation of genuine capital goods have affected ease of agricultural financing. The following 'policy' and 'regulatory' issues are recommended.

Policy issue: (i) Provision of special considerations for agriculture on prices of financial products; (ii) Expanding intangible collateral system by focusing more on ease of implementation, profitability and effectiveness of agricultural projects.

Regulatory issue: (i) Introduce detail procedures ensuring importation of genuine capital goods with accountability at both ends in case genuine nature and quality of machineries, etc. are compromised; (ii) Develop system of registry providing proper valuation of assets, assigning unique identity of agricultural product collaterals; (iii) Devise and implement appropriate system ensuring traceability of individual borrower and agricultural product collaterals; and (iv) Provide an appropriate system to facilitate transferability of use right of farmland used as collateral.

## Financing Smallholder Farmers

Backward technology, low level of production and productivity, small farm size and scattered plots are typical of Ethiopian smallholder farmers who are overlooked by financial institutions to which business case is also weak for land size less than 20 hectares. The land policy, which prohibits ownership rights and thus consolidation through change of ownership, has also affected mechanization efforts.

Moreover, utilization modalities of the huge financial resources available under poverty eradication programs (Food Aid; PSNP) fall short of emboldening smallholder beneficiaries to be productive and self-sufficient. Therefore, the following are recommended to improve smallholders' productive financing.

1. Focus on financing micro and small-scale farms (M&SEs) to promote agricultural development and due to their relative importance and advantages towards employment (NBE, all Banks, MFIs and insurance companies);
2. Transform PSNP budget utilization modalities into credit-based and market-oriented safety net programs that encourage beneficiaries to be productive and self-sufficient (MOA; MoF and donors);
3. Introduce some changes to provisions of existing land policy, encourage current clustering efforts toward land consolidation to promote farm mechanization and facilitate financing (MOA);
4. Emphasize on return on investment (ROA) performances of a farm project instead of the prescribed 20 hectares farm size requirement for accessing credit (All Banks, MFIs and insurance companies).

## Agricultural Finances & Business Development Support

Inadequate BDS to borrowers in the processes of financing; limited financial literacy level of most borrowers; lack of innovative measures to reduce insurance premiums; and weak post – credit follow up on effectiveness have been identified as weakness toward promotion of agriculture finance. To improve observed shortcomings, the following are recommended.

1. Make BDS mandatory among all financial services providers (NBE, all Banks, MFIs and insurance companies);
2. Design and make operational a system ensuring strict project appraisal procedures; (NBE, all Banks, MFIs and insurance companies);
3. Make project implementation follow-up and independent project impact assessment procedures mandatory with national award for the latter (Designated body; MOA).

## Monitoring and evaluation of agricultural financing

Utilization of credits for activities specified in the loan agreement is not followed-up strictly as a result misallocation of the resource outside the anticipated project is widely prevalent; system to strict follow up the efficient utilization of credits is inadequate; and institutionalized and objective inquiry on effective utilization of disbursed loans is not conducted. To encourage and ensure efficient and effective utilization of financial credits, the following are recommended.

1. Establish an agriculture - specific "M&E desk" centrally mandated with conducting surveys and studies aimed at ensuring efficient and effective utilization of loaned out financial resources in the country; (NBE, MOA);
2. Undertake periodical impact evaluation on completed projects with a national reward; (NBE, Designated body).

## Agricultural Insurance

High premium and undeveloped demand for (due to low awareness level) insurance and supply of insurance products; inadequate development of infrastructure and digital system; limited distribution of branches, agent services and insurance products; inadequate focus for the insurance sector; lack of government initiative to promote agriculture insurance through premium subsidy, etc.; absence of legal framework on modalities how to offer agricultural insurance to different potential customers by different categories of services and suppliers (retail; integrated; agents; etc.) have been some of the factors hampering expansion of agricultural insurance services in Ethiopia. To address the problem and promote agricultural insurance services widely, the following are priority policy areas recommended.

1. Allocate public fund aimed at reducing insurance premiums; (NBE, MoF);
2. Expand insurance products including smart (pool system, integrated with other input services) weather index insurance along with digitization and Fintech promotion (NBE; Ethio-Telecom; National Meteorology Agency, Ethiopian Mapping Agency and IT companies).
3. Step up public awareness in general and farmers' literacy level in particular about insurance; (Insurance Training Institute; Educational institutes – TVET, Universities, and elementary schools).
4. To ensure the sector receives the required focus, the insurance wing at the NBE needs to be reorganized as an independent and autonomous body (NBE and insurance companies).
5. To address lack of technical knowledge and skill on insurance related tasks and build adequate capacities, re-establish insurance training institute (NBE and insurance companies);
6. Confirm that donor financed agriculture insurance projects have "exit strategy" ensuring service availability after project phase-out. (MOA and insurance companies).
7. Devise a mechanism (directives, etc.) for valuation of and traceability of agricultural products, particularly live animals, when used as guarantees for insurance coverage (NBE; MOA and insurance companies).
8. Introduce low making agricultural credits integrated with Insurance services. (NBE; MOA and insurance companies).

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# Annexes

Annex 1. Minimum Commercial Farm Size

| No | Description | Minimum farm size eligible for DBE finance in hectare |
|---|---|---|
| 1 | Cereal crops production | 300 |
| 2 | Pulses | 300 |
| 3 | Oil seeds production | 150 |
| 4 | Coffee plantation and development | 150 |
| 5 | Cotton farm | 200 |
| 6 | Vegetable farm | 20 |
| 7 | Tree fruit farm | 150 |
| 8 | Bio-fuel | 1,000 |
| 9 | Basic seed multiplying projects | |
| | 9.1. Cereal seeds | 150 |
| | 9.2. Pulses seeds | 150 |
| | 9.3. Oil seeds | 75 |
| 10 | Other projects which are not listed herein | Minimum farm size eligible for DBE finance shall be determined by the Research Process |

N.B: The minimum size specification indicated above applies for both mixed crop and phased projects. Further, the initial phase of phased projects should also meet prescribed minimum size.

## Annex 2. Targeted Areas Under Agro-processing

1. Food processing plants including pasta production integrated with milling;
2. Cotton production and ginning;
3. Dairy:
    a. Pasteurized milk production;
    b. Cheese production; and
    c. Butter production.
4. Animal feed production and processing;
5. Bovine animals and/or shoats production and processing and/or canning;
6. Poultry farming and processing;
7. Crocodile farming and processing;
8. Palm oil plantation and processing;
9. Tea plantation and processing;
10. Sugar cane and similar plants production and processing;
11. Spices, medicinal plants and essential oil production; extraction and processing;
12. Fish farming and processing;
13. Swine farm and processing;
14. Ostrich and duck farm and processing;
15. Coffee processing (roasting and grinding, e.g. instant coffee);
16. Edible oil extraction and processing: margarine, refined edible oil, sesame, i.e. Tehina;
17. Fruit juice production;
18. Bio-fuel production and processing;
19. Malt processing;
20. Organic fertilizer production;
21. Fiber (sisal) crops production and processing;
22. Oil seeds (including sesame) farming and processing;
23. Other commercial scale agro-processing projects falling in priority area of the Bank;
24. Other priority area commercial scale agro-processing projects shall be determined by the Research Process of the Bank when and as required

## Annex 3 . Targeted Commercial Farms

1. Production of horticultural products, vegetables, fruits, mushrooms and the like;
2. Improved seed multiplication;
3. Food grain (wheat, maize, rice, etc.) farming;
4. Coffee plantation and development;
5. Cotton farming;
6. Fiber (sisal) crops production;
7. Bio-fuel plantation (jatrophia, castor oil plant, etc.);
8. Tea plantation and development;
9. Rubber tree plantation and development;
10. Silk worm farming;
11. Stockbreeding with ranch development;
12. Apiculture
13. Bamboo plantation and development;
14. Other commercial scale agricultural projects falling in priority area of the Bank.
15. Other priority area commercial scale agricultural projects shall be determined by Research Process of the Bank when and as required..

## Annex 4. Requirements for Rain Fed Commercial Crop Production and Rain Fed Agricultural Projects

1. Requirements for Rain Fed Commercial Crop Production
   a. The farms must be located within suitable agro-climatic zones of the country with historically reliable rainfall record;
   b. All such farms must be insured against the relevant potential risks cited under the new crop insurance policy.
2. Requirements for Rain Fed Agricultural Projects
   a. The agro climatic condition of the area has to be carefully examined;
   b. The adequacy and reliability of moisture content for a specific crop must be confirmed by the Research Process;
   c. In cases where moisture data is not readily available from the Research Process, ASP/ATR should collect the required rain fall data from the relevant government organs for verification and final approval by the Research Process.

## Annex 5 . Classification of AEMFI members by scale

| Category | Definition/ Gross Loan Portfolio | MFIs under the category |
|---|---|---|
| Small | Up to 50 Million Birr | Rays; Leta; Debo; AVFS; Sheger & Lideta |
| Medium | Between 50 and 200 Million Birr | Kendil; Eshet; Dynamic; Meklit; Harbu; Nisir & Harar |
| Large | Greater than 200 Million Birr | ACSI; Agar; Benishangul; Bussa; DECSI; Metemamen; Ocssco;Omo; PEACE; SFPI; Wassa; Vision; Fund; Dire; Somali; Sidama & Adeday |

Source: 2020 Bulletin – 14; Association of Ethiopian Microfinance Institutions (AEMFI)

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