Assessment of Long-term Finance Providers for Small and Medium Agribusinesses

Stocktaking, Lessons, and Case Studies

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Table of Contents

Abbreviations and Acronyms III

Executive Summary VII

1. Introduction 1

- 1.1 Study Purpose, Presentation and Methodology 2
- 1.2 Importance of LT Agribusiness SME Finance: Current Demand and Supply 2

2. Stocktaking Assessment of Long-term Financiers and Investors in Agri-SMEs 7

- 2.1 Methodology 7
- 2.2 Banks 8
- 2.3 Investment Funds 14
- 2.4 Agribusiness Companies 19
- 2.5 Other Suppliers and Instruments 23
- 2.6 Comparative Analysis 26
- 2.7 Country Context 28

3. Conclusions and Policy Recommendations 31

- 3.1. Policy Recommendations to Facilitate Long-term Finance for Agribusiness SMEs 33
- 3.2 Follow-up and Research Considerations 36

4. Case Studies 37

- 4.1 Bank for Agriculture and Cooperatives – Thailand 37
- 4.2 Farm Credit System - USA 47
- 4.3 Agriculture Credit Facility (ACF) — Uganda 55
- 4.4 FairTrade Access Fund 62
- 4.5 BANAGRO — Chile 69

References 77

Annex: Stocktaking List of Institutions 81

LIST OF BOXES

Box 1. Development Bank of Samoa ... 11
Box 2. Bank Case 1: Afriland First Bank ... 12
Box 3. Bank Case 2: Bank of Industry in Nigeria ... 13
Box 4. Bank Case 3: IFAD Project in Moldova ... 14
Box 5. Permanent Capital Vehicle ... 17
Box 6. Investment Funds Case 1: AgDevCo ... 19
Box 7. Investment Funds Case 2: A Partnership With Investment Funds (Alterfin, responsAbility, Rainforest Alliance, and ECOOKIM) ... 20
Box 8. Investment Funds Case 3: Fairtrade Access Fund ... 20
Box 9. John Deere ... 21
Box 10. Agribusiness Company Case 1: ECOM ... 23
Box 11. TEKUN NASIONAL ... 24
Box 12. Juhudi Kilimo ... 25
Box 13. Innovative Partnerships Case 1: Fahari Bishara ... 27
Box 14. Innovative Partnerships Case 2: International Development Enterprises (iDE) Agribusiness Financing Support to SMEs ... 27
Box 15. Moo-yim Toong Kham, Smart Farmer ... 44
Box 16. Kitchakood Organics Farm ... 46
Box 17. Young, Beginning and Small Farmer Loans ... 54
Box 18. Fairtrade Access Fund Technical Assistance Facility ... 66
Box 19. Perunor Long-term Loan for Specialty Coffee Development ... 67
Box 20. Feedback from BANAGRO borrowers ... 73

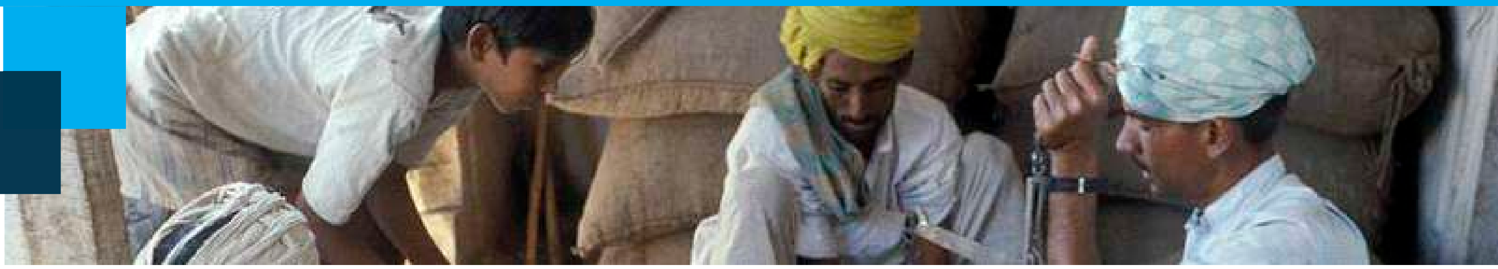
LIST OF FIGURES

Figure 1. Major Activities Requiring Long-Term Finance ... 3
Figure 2. Long-term Financial Instruments Used by Commercial and Development Banks ... 9
Figure 3. Type of Investment Fund ... 15
Figure 4. Financial Instruments Used by Investment Funds ... 16
Figure 5. Investor Return Expectations ... 17
Figure 6. Agribusiness Financing Instruments ... 22
Figure 7. ECOM - Using Economic Actors Effectively ... 24
Figure 8. Comparison of the LT Finance Providers — Banks, Investment Funds and Agribusiness Companies ... 29
Figure 9. Comparison of Long-term Agricultural Financiers ... 30
Figure 10. Positioning of LT Finance Providers Relative to Major Agribusiness Activities ... 32
Figure 11. Customer Segmentation ... 39
Figure 12. Farm Credit System Network Structure and Flow of Funds ... 47
Figure 13. Farm Credit Association Loan Portfolio (by loan type) ... 49
Figure 14. Commodity Group of AgCredit Loans ... 51

Figure 15. AgCredit Loan Type ... 51
Figure 16. Disbursement Procedures ... 58
Figure 17. ACF Disbursements and Commitments by Activities ... 60
Figure 18. ACF Loans by Size ... 60
Figure 19. ACF Disbursement by PFIs ... 60
Figure 20. Investment by Value Chain ... 67

LIST OF TABLES

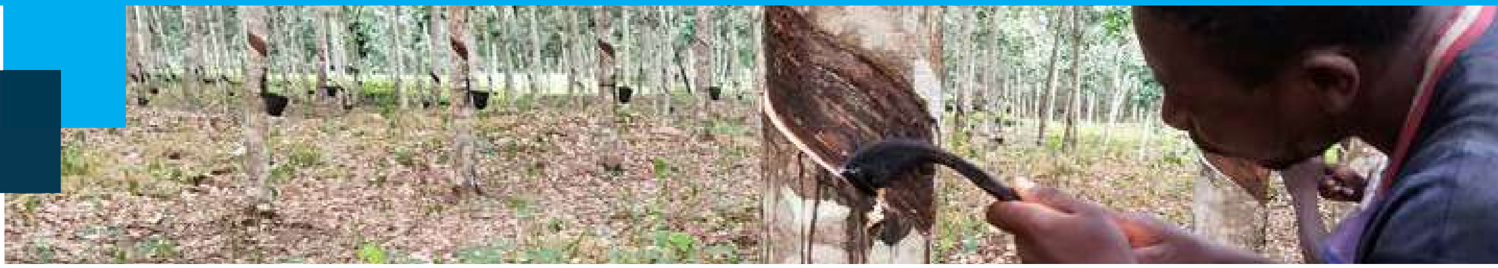
Table 1. Public Support – Challenges and Opportunities ... 33
Table 2. Agriculture and Agribusiness SME Finance Portfolio ... 40
Table 3. Short- and Long-term Loan Volumes ... 41
Table 4. Farm Credit System Regional Banks ... 49
Table 5. Eligibility Criteria ... 58
Table 6. Investment Products ... 65
Table 7. Loan Conditions ... 72
Table 8. Credit Portfolio by Product (US$) ... 74
Table 9. Evolution of Loan Portfolio 2017-2019 (Pesos) ... 74
Table 10. Loan portfolio quality (US$) ... 75



Abbreviations and Acronyms

ACF	Agriculture Credit Facility
ACfA	African Crowdfunding Association
BAAC	Bank of Agriculture and Cooperatives (Thailand)
BOI	Bank of Industry (Nigeria)
BoU	Bank of Uganda
ECOOKIM	Entreprise Coopérative Kimbre
EBTIDA	Earnings Before Interest, Tax, Depreciation and Amortization
FAO	Food and Agriculture Organization
FAF	Fairtrade Access Fund
FCA	Farm Credit Associations
FCB	Farm Credit Bank
FCS	Farm Credit System
FCSIC	Farm Credit System Insurance Corporation
FFCBFC	Federal Farm Credit Banks Funding Corporation
FI	Financial Institution
FSA	Farm Service Agency
GDP	Gross Domestic Product
GIIN	Global Impact Investing Network
GSE	Government-sponsored Entity
IADB	Inter-American Development Bank
ICT	Information and Communications Technologies
iDE	International Development Enterprise
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
LT	Long-Term
MFI	Microfinance Institution
MLR	Minimum Loan Rate

MoA	Memorandum of Agreement
MRR	Minimum Retail Rate
MSME	Micro, Small and Medium Enterprise
NPL	Non-performing Loan
PFI	Participating Financial Institution
SME	Small and Medium Enterprise
ST	Short-Term
TA	Technical Assistance
TAF	Technical Assistance Facility
THB	Thai Baht
UDBL	Uganda Development Bank Ltd.
UGX	Ugandan shilling
VC	Value Chain
VCF	Value Chain Finance



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Executive Summary

Agricultural transformation that involves the production of high-value food products and post-harvest processing offers significant business opportunities for agribusiness small and medium enterprises (SMEs), including producer organizations and farmers[1] in developing countries. A surge in the demand for high-value and processed food products observed in Asia and Latin America is also occurring in Africa. This profound change is attributable to the growth of middle-income populations spurred by economic development, urbanization, and corresponding dietary changes. Agribusiness SMEs — including producer organizations and farmers — try to seize on growing business opportunities, which require capital investment.

Long-Term (LT) finance is critical for investments in building infrastructure and agribusiness capacity, improved technologies, and equipment to make agriculture more productive, efficient, profitable, and resilient. However, LT financing for SMEs and farmers in the agriculture sector is more constrained than traditional short-term (ST) crop financing, as well as LT financing for SMEs in other sectors. The significant financing gap is caused by a combination of supply and effective demand[2] issues inherent in the agriculture sector as well as constraints in the enabling environment.

Regarding the demand side, agribusiness SMEs require LT finance for a wide range of purposes, but not all perceived demand[3] is effective demand. For purposes of this study, agribusiness SMEs encompass producer organizations, farmers and SMEs. Agribusiness is more than farming; it includes the manufacturing and distribution of agricultural inputs and farm equipment, as well as the processing, storage and distribution of agricultural commodities, livestock and fish products. Typical investments that require LT finance can be divided into four major categories: (i) land-related investments; (ii) building infrastructure; (iii) movable assets and equipment; and (iv) expansion/new

[1] Farmers in this context tend to be large- and medium-sized farmers, and farming businesses actively engage in commercial agriculture. They can be family sole proprietary businesses, companies, or most any legal form. Among smallholder farmers, there is also a group of commercial farmers who are the primary market for financial solutions (Anderson and others 2019). In this study, agribusiness SMEs include these commercial farmers and producer organizations for commercial purposes.

[2] Effective demand can be defined as demand that can be realized in practice.

[3] Perceived demand can be defined as demand that is calculated to exist even though it may not be actually realized.

innovations. Investments in response to climate change are becoming more critical in the sector, and they transcend these categories. However, many of the potential borrowers who could benefit from the LT funding lack the capacity and/or required conditions to be able to access it.

The study presents a review of the major players and types of LT financing on the supply side. As such, it will provide a general synopsis of the situation relevant to policy makers, the World Bank and other development leaders working to address agribusiness financial market development. The research topic of LT finance for agribusiness SMEs is very broad and involves banks, investment funds of various types and agribusiness companies — all of which could be large studies in and of themselves. Thus, this document should not be considered a comprehensive study. It is also important to note that it is a desk review with information gathered from the literature, including over 250 websites, and direct contacts with providers of LT financing. This resulted in 100 of 200 institutions ultimately being selected for the stocktaking inventories including 33 banks, 48 investment funds, and 19 agribusiness companies (listed in the Annex).

The stocktaking analysis revealed some major differences and similarities between the key LT finance suppliers, including banks, investment funds and agribusiness companies:

- **Commercial bank** LT lending is often in the 5-10-year range, but it can be extended to 15 years depending mainly on the availability of the LT financing sources. Taking advantage of public funds, the **development banks** in the study can extend loans up to 30 years. The bank loans are usually provided based on the borrowers' past performance. Loans are secured through immovable and movable collateral as well as through guarantees. The development banks apply policy considerations in their appraisal. The LT loans are flexible in size, and the smaller-end can be in the several thousands of US dollars range.
- Equity from the **investment funds** is often limited to 5-7 years due to the finite fund structure of most funds. Their debt financing is generally shorter, at around 3-5 years. Equity and quasi-equity investments in agribusiness SMEs usually do not finance deals smaller than US$3 million, and there is a strong incentive to pursue larger transactions. Debt financing can be smaller at US$1-2 million or even lower. However, the deals below US$250,000 are limited due to the high fixed costs relative to expected returns. The investment funds are highly selective in identifying investees and often provide technical and managerial support. They also try to diversify risks by investing in different sectors and geographic locations. There are a growing number of impact investment funds[4] that target somewhat smaller and less developed agribusiness SMEs, many of which have technical assistance facilities to support investees.
- The LT debt and equity finance provided by **agribusiness companies** is smaller in size, but it is highly variable according to the purpose. The financing is usually an integral part of the business operations and is strictly limited to the partners (suppliers or buyers) of the agribusiness companies. The duration is generally about 1-5 years and varies depending on the business cycles of the lenders and the strengths of the borrowers. Long-standing business relationships are the first line of defense for the agribusiness firms. The repayments are often secured through purchases and deliveries of goods.

[4] Impact investment funds are defined as funds that explore impact investments. According to the Global Impact Investment Network (GIIN), impact investments are "investments made with the intention to generate positive, measurable social and environmental impact alongside a financial return. Impact investments can be made in both emerging and developed markets, and target a range of returns from below market to market rate, depending on investors' strategic goals."

The three distinct groups of suppliers contribute to the bulk of LT finance for agribusiness SMEs, but a substantial supply and demand gap remains. The LT financing is skewed to larger and established agribusiness SMEs specializing in processing and trading rather than in agricultural production. Both commercial banks and investment funds clearly prioritize the higher end of agribusiness SMEs with strong track records. Producer groups and individual farmers are mostly off their radar, except for specialty funds and leading banks in agriculture and rural finance. The development banks are tasked to finance priority sectors, including agriculture. However, many tend to focus on larger investments that require longer-term commitments unless the banks are capable of handling smaller loans for SMEs and producer groups. The agribusiness companies are active in financing only in accordance with their business interests in terms of selling their products or buying commodities. Thus, their coverage is limited in scope. One important caveat is that the demand and supply mix may differ significantly depending on the country context, the state of development within the finance and agriculture sectors and the enabling environment and policy interventions.

An underlying factor negatively affecting both the demand and the supply of LT finance concerns the lack of certainty regarding the long-term economic stability in developing countries. Stability, inflation and growth prospects have strong effects on LT finance and investment. Steady currencies and trade policies, creditor rights, contract enforcement, and market and price stability are shown to be important. In some cases, political instability may also affect investment.

Recommendations

Governments and development agencies must be aware of the significant gap in the supply of appropriate LT financing for agribusiness SMEs, particularly when it falls far short of the potential demand. Building awareness begins with reliable information and data about agricultural market trends and LT risks. Such data may be very limited. In addition, there are considerations such as agribusiness SME bottlenecks, for example, the constraints for meeting food safety and export certifications. Lending data — segmented by borrowers, duration, usage and conditions, and so on — may also be lacking. Data needs to be context appropriate and readily available. Without it, the financial sector will never be able to fully engage in LT financing as needed. Policymakers also require data to guide their decisions. Much of the needed data is a public good; hence, the public has to invest in and/or support data capture and platforms to make it more readily available.

The general policy recommendations to increase LT financing go beyond the financing of agriculture and agribusiness, and include:

- **Ensuring a stable macroeconomic and political environment** — specifically an enabling operating environment that provides assurance for longer-term growth and stability, including clarity and consistency about land and resource use rights.
- **Development of a stable financial sector** — financial infrastructure, savings mobilization, currency and economic stability, creditor rights, contract enforcement, and development of capital markets and domestic LT finance sources (pension funds, and so on).
- **Ensuring favorable agricultural policies** — market-friendly interventions, value chain development, production enhancement, organizations of farmers, and land titles.
- **Supporting measures to increase effective demand** — support investment readiness of agri-SME borrowers to meet the conditions of financiers and investors through capacity development initiatives and guarantee support mechanisms.

Conducive policies would help to expand the LT finance market in general. However, **there are no standard prescriptions to promote LT financing**

for agribusiness SMEs. Therefore, policy makers and development agencies must assess and address market failures that inhibit lending. They should support a combination of proper interventions, depending on their country contexts, priorities, and LT finance providers. A diagnostic study of a broad agriculture finance landscape would be required to identify bottlenecks and opportunities for interventions. Any public support should recognize that there are distinct suppliers who offer different types of LT financing for particular sub-segments of agribusiness SMEs. They face unique constraints which require specific policy interventions as follows:

Banks

- **Capacity development for lenders** to support for market intelligence, risk management and product development, and including expanded use of asset financing and alternative collateral products.
- **Credit lines** are often needed and effective if there is a lack of liquidity in the banking system and/or particularly when banks lack LT sources of funds. However, options to leverage existing liquidity sources should be considered based on the market analysis.
- **Partial credit guarantees and insurance** are shown to be effective, but a suitable mix of instruments should be explored based on the market analysis.
- **Direct lending by development banks may be required, but it must address market gaps,** including longer-term loans, for example 10 years or more, and risky segments that commercial banks do not touch. The caveat is that development bank LT lending is a "mixed bag" with both successes in well-managed banks and some others with high defaults.
- **Incentives and LT funding access for SME investments in climate-smart technologies.** The incentives can be both for agribusiness SMEs and/or financial institutions and would help to encourage them to provide increased financing for these investments. Examples include capacity development support, cost- and/or risk-sharing mechanisms for SMEs and long-term, lower-cost sources of capital for financial institutions (FIs).
- **Review of monetary and banking controls** to reduce risk in the banking and investment sector (for example, policies that unduly penalize unsecured lending), which may constrain the ability and interest of the financial sector in investing in LT agriculture.

Investment funds

- **Private sector-driven approach** — Private sector fund managers and teams with relevant skills are vital for expanding outreach and strengthening agribusiness investees.
- **Longer-term investments —** public investor as a patient capital provider, or impact investors with a long-term investment period. Alternatively, evergreen structures can be a viable option.
- **Risk diversification —** across sectors and geographic locations, while maintaining adequate focus and expertise.
- **Promote investment of local funds —** local sources of funding should be leveraged to increase the capital base and allow for local currency investments.

Agribusiness companies

- **Policies and regulation gaps** — There are gaps in the financial infrastructure that need to be addressed in many countries, both for agribusiness companies and others, that is, secured asset system development, including collateral registries, credit bureaus and financial lease regulations, among others, that affect operations of agribusiness lending.
- **Public incentives needed** — This includes support and incentives for the piloting and upscaling of agribusiness firms as well as partner financial institutions. Support can

include technical assistance, guarantees, financing, and so on.

- **Involvement of financial institutions** — Few agribusinesses have funds available for LT lending to suppliers or buyers. Therefore, to increase LT agri-lending, third-party arrangements with financial institutions will be necessary to fund the SME purchases from the agribusinesses and/or financing from FIs to the agribusinesses. This will allow agribusinesses to provide on-lending to their customers. (However, FIs may perceive increased risks when their funding to agribusinesses is used to on-lend to their agri-SME customers.)

Collaboration among public and private actors is indispensable. Policy makers must take the lead in promoting and developing solutions to close the gap in financing. At the same time, they can and must engage donor agencies, development finance institutions and private sector leaders to collaborate in addressing the challenges facing LT financing for agribusiness SMEs.

Although not covered in the present study, it is recognized that governments, policy makers, financial leaders and agribusinesses face increased pressures and constraints from the COVID-19 pandemic. Agribusinesses, indeed almost all businesses, are under strain and food systems have been disrupted. Increased long-term financing will be needed to overcome the crisis. This comes at the same time that resources are even more limited, highlighting the need for highly effective policies and strategies to maximize returns to the agribusiness sector.

1. Introduction

Agricultural transformation that involves the production of high-value food products and post-harvest processing is high on the policy agenda in many developing countries. A surge in the demand for high value and processed food products observed in Asia and Latin America is also happening in Africa (Reardon and others 2003, 2013). This profound change is attributable to the growth of the middle-income population spurred by economic development, urbanization, and corresponding dietary changes. Agribusinesses involved in production, processing, and trading have profitable growth opportunities in many regions, especially along with the high-value crops. Governments are eager to promote such businesses that can generate employment opportunities for the rural poor and youth. These businesses also promote exports and increase tax revenues.

Agribusiness SMEs, including producer organizations and farmers, require capital investment to exploit growing business opportunities. Leading value-chain actors (that is, processors and traders) of the high-value products, such as dairy, fruits and vegetables, and meat, need their suppliers to follow prescribed procedures and produce high-quality products in bulk. In response, these suppliers, who are often SMEs — including producer organizations and farmers in developing countries — need to make various investments, including in high-quality dry and cold storage facilities, tractors, and transport. Irrigation and adaptations to adjust to climate change are also priority investments. Some SMEs venture into food processing to seize the business opportunities, especially for local and regional markets. Highly in-demand tree-crops such as coffee, cashews, cocoa, and palm oil and forestry in general also need to expand their production by planting new trees and replacing the old ones.

A lack of adequate financing for capital investment is a major contributor to the limited mechanization and application of new technologies, which are critical to improving agricultural yields, productivity and incomes, as well as to addressing the risks of climate change along the entire agricultural value chain. Often constrained by their limited internal funds with few or no LT external financing options, agribusiness SMEs have a narrow prospect for growth and investments. Traditional external sources such as family and friends may not be suitable for large capital investments. However, formal financial institutions are still largely inactive.

Long-term financing for SMEs and farmers in the agricultural sector is more constrained than both traditional short-term crop and livestock financing and LT financing for SMEs in other sectors. In financing agriculture, especially SMEs, financial institutions are usually exposed to significant systemic risks and high transaction costs. As a result, many institutions refrain from actively financing the sector. Well-documented constraints in agriculture include seasonality, climatic risks, small and scattered farming households, and price volatility. The SMEs on the lower end of the chain, such as processors, traders and retailers, are dependent on the performance of the producers. As such, they are indirectly exposed to these risks. The risks are usually magnified over a long period of time. Therefore, even the financiers, who have found ways to lend successfully in the agriculture sector, tend to stay away from LT lending for agribusiness SMEs. Their LT financing for SMEs is often directed to the service and manufacturing sectors where the risks are perceived to be significantly lower. For these reasons, LT financing for agribusiness SMEs requires special attention.

In view of the growing market demand and significance of the agricultural transformation, and yet sluggish investment in it, many governments are striving to facilitate LT finance in the agriculture sector — especially for SMEs. Development banks, credit lines, and guarantees seem to be popular approaches to addressing the funding shortfall, but the results have been mixed. The public sector resources are scarce and the role of the private sector financiers cannot be overstated. The World Bank Group, among others, seeks to address the challenges, especially the concerns of policymakers, through various interventions in the agricultural and financial sectors. There are also numerous private sector-driven initiatives for expanding the supply of LT financing and investment.

1.1 Study Purpose, Presentation and Methodology

The purpose of this study is to increase the knowledge about the current situation pertaining to LT agribusiness SME finance, including demand, supply, and policy instruments. It also examines the needs of the LT finance providers, while determining what is working well that may be replicated. It focuses on understanding the literature available in this area and conducting a stocktaking with a classification of LT finance providers for agribusiness SMEs, including producer organizations and farmers. This information and analysis are augmented by five, in-depth case studies of various institutional approaches to LT financing.

The primary audience for this study consists of policymakers and development practitioners including the World Bank team leaders who design and implement agriculture and finance projects. The findings and recommendations are relevant for a wider set of stakeholders including development partners, financial institutions and agribusiness SMEs.

The study is structured as follows: The introduction contains a brief discussion of the importance of LT agribusiness SME finance. The second section provides a stocktaking analysis covering commercial and development banks, investment funds, and agribusiness companies. It then concludes with a comparative analysis. The concluding section offers overall observations, policy recommendations and suggestions for future research. In the final section, there are five in-depth case studies of distinct types of LT finance providers along with lessons learned.

1.2 Importance of LT Agribusiness SME Finance: Current Demand and Supply

Definition

Long-term finance is primarily used for capital asset investments, as opposed to Short-Term (ST)

working capital; it is most needed for financing expansion, larger projects and/or durable equipment and technologies, perennial crop production and infrastructure. To focus on the investment aspect of financing, this is the concept of LT finance used in this document. Other kinds of LT finance include renewable lines of credit, including dealer credit from manufacturers for inventory or for them to provide financing to their customers. This could also be considered LT financing, if the LT concept is defined as a repayment period of more than one year.

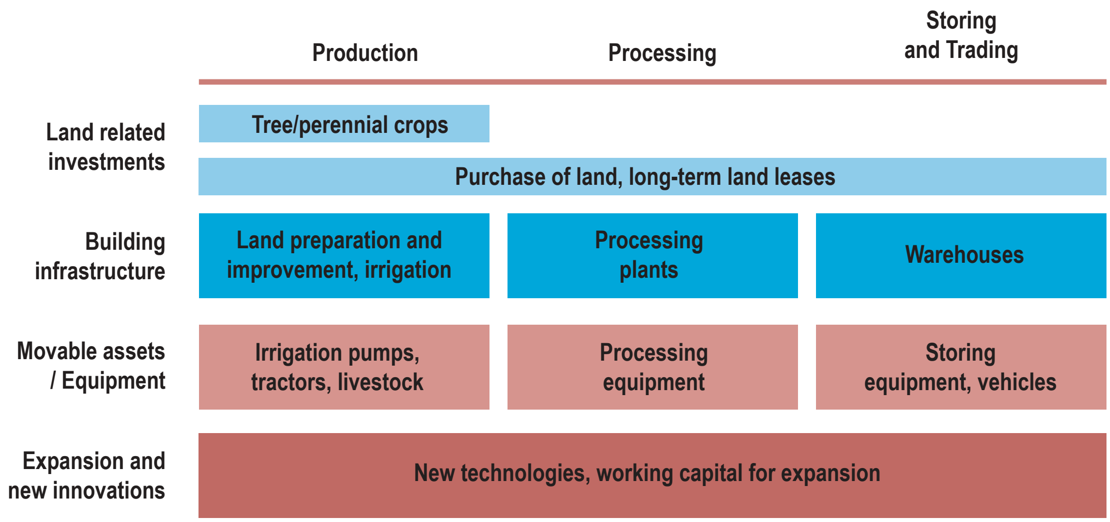
Demand

Agribusiness SMEs require LT finance for a wide range of purposes. For the purposes of this study, agribusiness SMEs encompass producer organizations, farmers and SMEs. Agribusiness is more than farming; it includes the manufacturing and distribution of agricultural inputs and farm equipment as well as the processing, storage and distribution of agricultural commodities, livestock and fish products. Major agribusiness activities for LT financing are summarized in Figure 1. The boxes describe typical investments in the various segments of agribusinesses (production, processing, storing, and trading). These investments can be divided into four larger categories: (i) land-related investments; (ii) building infrastructure; (iii) movable assets and equipment; and (iv) expansion/new innovations. It should be noted that investments in response to climate change are becoming more critical in the sector and they transcend these categories.

Supply

Agribusiness investments are financed by internal and external sources. As noted by Food and Agriculture Organization (FAO), the largest volume of investment comes from the internal funds of the agribusinesses that are reinvested (FAO 2012). Profits and savings are used in part to purchase more equipment, acquire land, and so on. However, faster growth and larger acquisitions require external financing. Those agribusinesses that most need financing include agribusinesses that are newly established, poor or lacking in resources; those that are expanding rapidly and require larger investments; as well as others may have suffered a disaster or downturn. Yet, these agribusinesses have the most difficulty in accessing external LT financing.

Figure 1. Major Activities Requiring Long-Term Finance



Source: Authors.

External LT financing sources for agribusiness SMEs vary, and their conditions and arrangements depend on the type of need and context of the borrowers. The sources include banks, investment funds, and agribusiness companies that offer various products such as debt, equity, quasi-equity, guarantees, or other products depending on the needs and purposes. For example, equity is used for different objectives, but it is most suitable for business expansion and innovations that may be too risky for debt providers. In some cases, other capital investments are more often covered by LT debt from banks and other lenders. Some loans are subsidized, especially those related to agricultural production. LT loans to agribusiness SMEs are frequently supported by partial credit guarantee schemes. Financial leasing (lease-to-own) is becoming more prominent in equipment financing. Although much of the financing is based on a profit motivation, it is also common to have LT finance coming from investors who value impact as a priority. These investors make investments in companies and/or projects (either directly or through investment funds) that have a positive social or environmental impact as an explicit objective — even though it may have a lower expectation of a financial return (FAO 2018).

Other important external sources include strategic investors. For example, agribusinesses, especially larger ones, may have joint venture investment partners who provide financing. These vary from early-stage investors to those who prefer well-established agribusiness SMEs. Joint ventures have long been a favored way for facilitating larger, long-term investment financing in agriculture. In developing countries, investment in agribusiness firms in the downstream value-added segments of value chains is particularly attractive since it is where investment partners can most often bring their expertise as well as their financing. Land and primary production partnerships are also common, but they may suffer from a lack of support or acceptance from the neighboring communities. In some cases, they have been shown to have much weaker returns on investment (Luyt 2013). These strategic investors play a critical role in some types of LT finance. However, the data is limited and thus outside of the scope of this study.

Demand-Supply Gap

The unmet demand gap for LT finance to serve agribusiness SMEs would become much larger if the management systems of these agribusiness SMEs were strengthened to be able to grow their businesses. According to Dalberg (2016), formal financial institutions cover only 2 percent of LT finance requirements of commercial smallholder farmers in developing countries, which is estimated at around US$80 billion worldwide. Data about the LT financing requirements and the SME financing gap in agribusiness are not easily available. However, their demand is expected to be much larger than that of smallholders, considering the size of the businesses. Although it includes both ST and LT finance, the International Finance Corporation (IFC) estimates that the potential demand gap for micro, small and medium enterprise (MSME) financing in developing countries is over US$ 5 trillion (IFC 2017). Agribusiness is often one of the major economic activities in these countries, especially for MSMEs. One important caveat is that not all of the perceived demand is effective demand. Many of the potential borrowers who could benefit from LT funding lack the capacity and/or required conditions to be able to access the funding. The effective demand for LT finance would further increase if the agribusiness SMEs are equipped with solid management systems to respond to emerging business opportunities.

Long-term financing for agribusiness SMEs is a challenge because of the intrinsic risks in agriculture, as well as difficulties in the enabling environment. Farmers and producer organizations are exposed to numerous challenges inherent in agriculture, such as price volatility; limited access to high quality inputs and markets; changing climatic conditions; frequent political interventions; and often underdeveloped rural infrastructure. As a result, farmers tend to take a conservative approach and avoid LT investment and financing commitments. Moreover, these risks negatively affect the performance of agro-processors and crop traders further along the value chain that depend heavily on the agricultural producers. Financial service providers consider agribusiness SMEs much riskier than other clients, including SMEs operating in the services and manufacturing sectors. In response, the financiers do not invest in developing their capacity and products relevant to LT financing for agribusiness SMEs. In addition, the macroeconomy in many developing countries makes it difficult for SME agribusinesses to be assured of future profitability and competitiveness. Their vulnerability is heightened both by an uncertain operational environment and an underdeveloped financial sector. Stronger operational environments and more developed financial sectors would help to ease the ups and downs. Other important obstacles are as follows (Hollinger 2004; World Bank 2015):

- **Short-term sources of funds** — Banks and other financial institutions are generally funded by savings and deposits, which limits tie-up commitments for the long-term use of funds.
- **Collateral constraints** — Long-term financing depends largely on immovable assets as collateral, assets that many potential agricultural borrowers may lack. Receivables and inventory-based collateral are generally not suitable for long-term commitments.
- **Collateral risk** — This refers to the value of the collateral that will decline in value after the loan inception and be insufficient to liquidate the loan, as well as the high cost and time required to liquidate the collateral.
- **Operating environment risk** — Risk is inherent with higher uncertainties over time, including market and technological changes, policy changes and political and economic instability, as well as the systemic risks common to agriculture.
- **Regulatory constraints** — These include the lack of credit information and reliable industry data, which make lending even harder. In addition, Basel III raised the minimum capital ratios and liquidity ratios of banks, which do not favor SME lending, especially LT lending (Angelkort and Stuwe 2011). These issues can be exacerbated by unstable, often uncertain policies, as well as policies that are not market-friendly for the agriculture sector.

2. Stocktaking Assessment of Long-term Financiers and Investors in Agri-SMEs

The stocktaking analysis focused on banks, investment funds, and agribusiness companies including commercial banks, development banks, private equity and impact funds, agribusiness firms, and equipment suppliers. Collectively, they seem to provide the bulk of LT financing from institutional sources in the agriculture sector in developing countries, especially for agribusiness SMEs. The government policies often focus on the banking sector and try to influence LT financing by intervening, either directly or indirectly.

The inventory lists are not comprehensive, but they cover all regions and significant LT financing activities. They are sufficient to provide an understanding of the array of services, including their particular characteristics. The stocktaking strived to capture some of the most significant players who have a relatively large amount of LT agri-financing or investment in their portfolios. Most financial institutions or funds working with agriculture provide some LT financing, but the percentage of such funding is commonly found to be very small. As such, they are not included in the stocktaking.

2.1 Methodology

The information gathering and analysis relied heavily on networking, analytical works of the World Bank and the authors, and extensive desk studies conducted through the internet. The information on LT agribusiness SME financing is extremely limited in the public space. Much of the data being sought is not available, such as an adequate breakdown between ST and LT financing and differentiated data between agricultural and non-agricultural lending. Another challenge concerns confidentiality in terms of sharing some data. Finally, another difficulty relates to the fact that agriculture/agribusiness is a broad area with numerous regular and special financing activities — each with varied conditions, distinct targets and results.

The research methodology involved the following:

- Review of documents concerning agricultural finance and agri-investment.
- Announcement of research via email, calls and conference meetings with leading finance and investment organizations and key persons for their support in eliciting introductions to key agribusinesses, and so on.

- Follow-up research and correspondence to fill the missing gaps and refine the information.
- Organizing and analyzing the data collected to draw lessons and best practices.

The definitions and classifications used in the study are as follows:

- LT finance is defined as financing used for capital asset investments, business expansion, and/or durable equipment and infrastructure. Lending terms are generally for three or more years. This narrower definition is used in order to focus on investment finance activities rather than working capital and revolving funds.
- The research focus includes banks, investment funds and/or agribusinesses with a track record of two or more years of operations, and which have significant LT agribusiness SME financing. Whenever the data is available, the research parameter was to have at least 25 percent of their portfolio in LT agribusiness SMEs. Many investment funds in the analysis comply with this requirement. However, the banks have mixed portfolios of SMEs and large corporates in agribusiness and, therefore, limited segregated data availability. The agribusiness companies in the analysis generally finance their SME suppliers and buyers.
- Characterization of demands for LT agribusiness finance for SMEs are by type and by financial products.
- Suppliers of agribusiness SME financing are classified by type of structure, and categorized by the kinds of financial instruments employed.
- Policy interventions and support services are identified by the three categories of the LT finance suppliers.

The following sections describe key findings, challenges, public interventions, and notable cases of LT financing activities by banks, investment funds and agribusiness companies. This is then followed by a brief section about other suppliers, as well as a comparative analysis.

2.2 Banks

The stocktaking analysis of the banks covers 14 commercial banks and 19 development banks. The data was collected mainly from banks that shared LT finance information in various past engagements, as well as by a World Bank survey of the national development banks in 2017 (World Bank 2018). Although many more banks can be added, disaggregated LT financing information is not available and learning would likely not increase. The banks have mixed portfolios of agribusiness SMEs and large corporates, but the level of exposure to the former was not readily available. The analysis tried to focus on agribusiness SMEs, but the observations inevitably include banks' LT lending operations for large agribusiness companies.

Key Observations — Commercial Banks

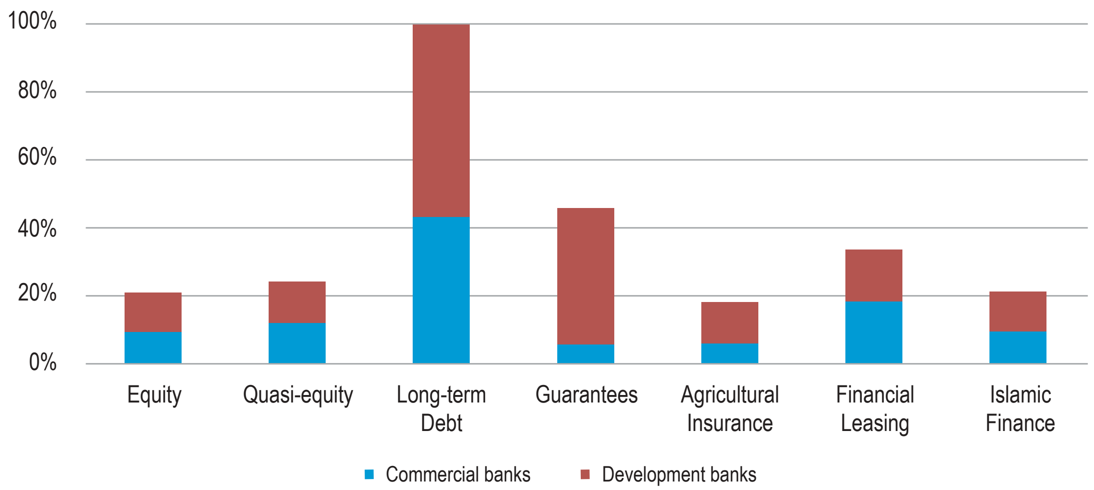
The loan portfolios tend to concentrate on a small number of agribusinesses and commodities. The banks usually focus on priority commodities and value chains that involve a large volume of transactions and well-structured markets and players. Such commodities often include coffee, tea, cocoa, palm oil, wheat, and maize. For example, in Ghana, bankers indicate they are only willing to provide LT financing for the cocoa sector. In the meantime, other sectors suffer, causing the Central Bank to develop a risk sharing and incentive program to spur financing to other sectors.

The commercial banks use short-term lending and partnerships with value chain actors to get to know the client and SME business. It is unusual for banks to provide LT loans to new clients in high-risk business areas such as agriculture and SMEs. For example, the Opportunity Bank in Uganda monitors their potential LT borrowers through short-term transactions while building ample track records (of at least two years). The lenders also gain insight into the creditworthiness of borrowers and associated risks from working with leading value chain actors (that is, off-takers – large processors and traders and agricultural input providers). Although the banks recognize the growing demand for LT finance, they cherry-pick creditworthy clients with solid cashflows and immovable assets for collateral. This cautious approach may be a prudent way to engage LT lending. However, at the same time, it tends to lead to a concentration of the LT portfolio in certain sub-sectors and certain borrowers.

Long-term debt is the main financing instrument. All the commercial banks offer LT loans. The maximum loan terms are highly variable. However, many are in the 5-to-7 year range with some up to 15 years. The mean average is 9.7 years, and the median is 10.0 years — both of which can sufficiently cover smaller investments such as equipment. However, these time frames are relatively short for more complex investments, including infrastructure and new business ventures in agribusiness. The loan size varies and caters to the specific investment needs of the agribusiness SMEs. The interest rates vary widely from 7.5 to 24 percent nominal rates, with a median of 14.8 percent and a mean of 15.4 percent.[5] The LT debt is often available in local and hard currencies. The use of LT financial instruments is shown in Figure 2.

Financial leasing is offered by about 40 percent of the commercial banks. Judging by the analysis, financial leasing is growing in importance as the trend is for more institutions to use it within their organizations. This trend is being stimulated by the increase in countries with leasing and secured transaction legislation, as well as an increased familiarity with its use. For example, it is heavily used in automobile financing and large equipment. It is a type of asset-backed lending and helps solve the collateral constraint of borrowers by not transferring ownership until repayment is made. Financial leasing and other products, such as guarantees and insurance, may be directly provided by the institution. However, more often, it is done through

Figure 2. Long-term Financial Instruments Used by Commercial and Development Banks



Source: Authors', Stocktaking data

[5] These rates are for reference purposes only, as they may change depending on the duration and the borrowers' profile. They are also influenced by the country's macroeconomic context. Some banks suggested a range of typical interest rates, for example, 6-14 percent per year. The analysis then used the midpoint of these ranges, that is, 10 percent.

a subsidiary of the institution. Although the figure shows Islamic finance as a financial instrument, it really is an approach to finance. Its products, some of which provide LT finance, fit across the spectrum. For example, Ijarah is the Islamic near equivalent of financial leasing. Islamic finance can be attractive for SMEs because the direct participation of the banks in sharing the risks and returns with SMEs in some of the Islamic financing modes can unlock credit that may otherwise be difficult to access in a conventional financing practice.

Key Observations – Development Banks

Agriculture and agribusiness are a major focus of development banks in many countries. Governmental development banks, including agricultural banks, focus on providing capital to the priority sectors of government, as well as areas where commercial interests are lacking — which usually includes agriculture and SMEs. Many of them tend to focus on larger investments that require a longer-term commitment. Agricultural development banks can also be effective in handling smaller loans for SMEs and producer groups, and many of them have developed successful risk management strategies for LT finance. (See the Bank for Agriculture and Cooperatives case in Section 4.1). Government-owned banks are expected to support governmental priorities and target groups, among others. However, this exposes them to criticism of being vulnerable to political interests, and/or not being profitable and having higher levels of non-performing loans. This in turn leads to the need for injections of capital from their governments or other agencies. Yet, there are many well-performing agricultural development banks.

Regarding LT bank financing of agribusiness needs, national and regional development banks, including cooperative development banks, are the principal players. This is the case in many developing and developed countries, including Japan, Thailand, the United States and Vietnam (See Section 2.7 and Case Studies in Section 4). Their LT lending helps to fill a needed gap in their respective markets. Development banks may operate as retail and/or wholesale lenders to the agricultural sector. Concessionary retail loan terms offered through development banks can "crowd out" commercial lenders in retail lending, but often operate where commercial banks are not interested in lending. As wholesale lenders, they and their national governments often partner with commercial lenders and offer them concessionary incentives to encourage more LT lending from private sector commercial banks. Concessionary LT loans from development banks are often targeted to particular sectors and/or disadvantaged groups. Some of the funding they receive has conditions attached, such as lending rates and strict targeting to specific borrower groups imposed by the providers of the financing, who are usually governments and donors.

Long-term loans from development banks are longer term and cheaper on average than the terms offered by the commercial banks. In addition to ST lending, all the development banks in the stocktaking analysis provide LT loans. The LT loan duration can be up to 30 years, whereas some of the development banks lend only up to 5 years. As a result, the mean duration is 11.4 years, slightly longer than that of the commercial banks. However, the median remains at 9.0 years. The loan size is highly variable depending on the target of the banks. In this context, many tend to offer larger loans to a smaller number of companies, whereas others are capable of lending smaller loans to a large number of farmers and SMEs. The interest rates are much lower than those of the commercial banks. They range from 0 to 18 percent. The mean and median are 10 and 9 percent, respectively.[6]

[6] Interest-free loans are not included in the calculation. The midpoints are used when the rates are shown in a range.

Many development banks offer guarantees, insurance and may even participate with equity. In order to address the lack of collateral, close to 70 percent of the development banks (13 out of 19) offer guarantees for ST and LT financing at subsidized costs. Agribusiness insurance products — including indexed, yield, and livestock insurance that are frequently linked with public projects — are used to manage risk in LT financing. Equity and quasi-equity are used by development banks for investments in government companies or in co-investments for government initiatives to promote investment in priority sectors. A common thread across the spectrum of equity, quasi-equity/subordinated debt, guarantees, and insurance is that all deal with ways to address collateral shortages and risks to facilitate LT debt (Figure 2).

Challenges – Commercial and Development Banks

The commercial banks have been found to have relatively little LT financing in their portfolios, especially for agriculture, and they often direct their LT loans to established agribusiness borrowers. Their ST deposit sources of capital inhibit their options unless LT funds from wholesale lenders or special credit lines are accessible. However, even with long-term funds from government or development agencies to on-lend, there is often a reluctance to do so because of the risk and the transaction costs in relation to the expected earnings. The limited capacity of loan officers exacerbates their risk averseness.

Much of the risk comes from the lack of capacity from the borrowers, who may or may not be capable of managing their loans over time, coupled with a lack of reliable records to provide lenders comfort about their ability to repay, as well as their history of repayment. Moreover, **agribusiness SMEs struggle to meet the collateral requirements of most commercial banks.** However, those that are active in asset-backed finance, such as financial leasing or registered moveable collateral lending approaches, are able to address this common bottleneck.

Box 1. Development Bank of Samoa

In Samoa, the National Development Bank provides highly concessional loans to agriculture. However, due to their lack of liquidity stemming from loan losses, they require monthly loan repayments for all loans, thereby limiting the ability of agribusinesses to borrow from them.

Source: Authors.

Some of the development banks suffer from high non-performing loans (NPLs) and operational losses, often caused by subsidized lending; yet other, well-run ones, are almost continually profitable. They are also exposed to political interventions, which can contribute to a lesser willingness to repay by some clients. However, since the cost of LT finance is a major concern for SME agribusinesses, their access to development bank financing with generally "softer," government-supported conditions can better facilitate their capacity to repay their loans if structured appropriately (Box 1).

Public Interventions – Commercial and Development Banks

Governments and donors often provide incentives, such as technical assistance, credit lines, and guarantees, to facilitate LT finance. A majority of the assistance is provided through government-related financial institutions. However, incentives are also commonly available to private sector banks, microfinance institutions (MFIs) and credit unions. Credit lines with longer durations are one avenue since they allow banks to provide LT finance without restricted by their primarily short-term sources of capital. A notable example includes the Agriculture Credit Facility in Uganda (See Section 4.3). Risk sharing is another critical intervention. Indeed, the growing use of guarantee mechanisms to mitigate risks is especially important for banks because they do not need to carry the full burden of the accounting risks and reserves of LT lending on their books. The effectiveness of guarantees as an incentive for finance depends to a large extent on the efficiency of the guarantee schemes (FAO 2013). Some guarantee funds have long processes for recovery and lose their attractiveness.

The heavy involvement of governmental financial institutions can "crowd out" or deter the private sector. Many governments subsidize the interest rates of development bank loans and introduce interest rate caps on commercial loans along with other mechanisms, such as lending quotas which specify that a portion of the lending be directed to the agriculture or target sectors. These force banks to lend with lower interest rate margins that often lead to mixed results and cause unintended side-effects including the exclusion of smallholders and higher-risk SMEs (Maimbo and others 2014). A second hindrance is the culture of dependency that can be created by such lending, especially if loan repayment compliance is not strictly enforced.

Blended finance, which contains grant support as well as financing, has been shown to improve the capacity of the borrowers and lenders, and reduce the costs of outreach into agricultural areas. The effective use of blended finance can involve various forms, such as reducing the costs of the financing or reducing the costs of the assets financed by matching grants, and so on. In doing so, it reduces the debt relative to equity and financing risks. Public support is also provided in other critical areas, such as the capacity development of borrowers and lenders. The support for lenders addresses some of the high set-up costs of LT lending including the development of new products, procedures, and staff training (Hollinger 2004).

Special support is required for LT financing of youth seeking to start agribusiness activities and farming. Long-term funding, with grace periods and lower payments, guarantee mechanisms and capacity development has been found necessary. In the case studies of the Bank of Agriculture and Cooperatives (BAAC) in Thailand and the United

Box 2. Bank Case 1: Afriland First Bank

Afriland First Bank, the largest commercial bank in Cameroon, is the most active in long-term financing in the agriculture sector, employing various innovations including:

- Forming a private equity fund supported by the Dutch development bank, the Entrepreneurial Development Bank (FMO) and the European Investment Bank to provide funds to start businesses, and conduct performance monitoring, management consulting and technical support to nurture the investees.
- Providing a syndicated loan of West African Franc (CFA) 35.5 billion (US$ 64.5 million) for the Cotton Development Cooperation (SODECOTON), a Cameroonian parastatal company, for the launching of the cotton campaign.
- Smallholder plantation financing in a multi-party arrangement. It provided 7-year financing to oil palm and rubber growers to purchase land use/right leases and replant trees, with payment through sales contracts with the off-takers. The financing involved mutual finance associations, a German Investment Corporation (DEG) partial guarantee, a non-governmental organization (NGO), and a training/monitoring agency, as well as producer cooperatives and rubber and oil palm companies.

Source: Authors.

States Farm Credit System found in Sections 4.1 and 4.2, respectively, special programs for youth provide LT blended finance to promote their entry into agribusiness.

Cases – Commercial and Development Banks

The two cases below highlight a commercial bank and development bank that are active in LT financing for agribusiness SMEs. In the first case, the bank's LT financing involved a complex structuring of partnerships among multiple players (Box 2). Commercial financing conditions were applied, but support was given for capacity development for some of the players. In the second case, the Bank of Industry of Nigeria builds on the governmental agricultural financing subsidy and support mechanisms (Box 3).

The third case describes how a development project works with development banks. The arrangements and the financing conditions are often stipulated by the project (Box 4). The conditions are favorable to the agribusiness SMEs, although the repayment risks of these the LT loans with long grace periods and high-risk borrowers are yet to be known (IFAD 2018).

Box 3. Bank Case 2: Bank of Industry in Nigeria

The Bank of Industry (BOI) in Nigeria is a large governmental development bank with over US$930 million in assets. It is active in LT financing with 45 percent of its portfolio in agribusiness and 35 percent allocated to SMEs. It lends to enterprises, companies and cooperatives, offering LT financing through equity participations, loans and financial leases. Loan terms are 5-7 years for LT loans. The interest rate of 10 percent per year are considerably less than for ST and LT SME loans offered by commercial banks or most other types of loans. It is also slightly less than the inflation rate of 11 percent.

The BOI has numerous special programs for youth and women, as well as for special projects such as solar, and so on. It offers finance in more favorable conditions or even grants in some cases. Its general conditions for LT SME lending are as follows:

- Collateral deposits of at least 10 percent in a commercial bank in the name of the BOI.
- Credit risk guarantee of 50 percent (75 percent for MSMEs) through the Central Bank's Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) guarantee fund.
- Insurance requirement for equipment or buildings financed with first loss for the BOI.
- Deposit of sales proceeds with selected/nominated commercial banks (as insurance against diversions, as well as to discount repayments and interest).
- Personal guarantees of borrowers with notarized statements of net worth.
- Mortgage of pledged property or asset debenture over assets or 50 percent commercial bank guarantee (in addition to the NIRSAL guarantee noted above) for medium and large SMEs.
- Equity contribution from the borrowers of at least 25 percent of the debt.

Despite these tough lending conditions for security, its agribusiness lending has a non-performing loan ratio that is three times higher than for other types of lending.

Sources: Aysha Onyize Ahmad, BOI Agro Processing Group and BOI data.

Box 4. Bank Case 3: IFAD Project in Moldova

In Moldova, the International Fund for Agricultural Development (IFAD)-supported Rural Resilience Project provides small SMEs with loans through development banks. The amounts of these loans are up to US$ 250,000 for a term of up to 8 years, with up to a 4-year grace period. The borrowing SMEs include agricultural producers, agribusinesses, agriculture services and agro-tourism. As much as 20 percent of the loan can be used for working capital purposes linked to the investment. For young entrepreneurs, loan amounts of up to US$ 100,000 are provided to help increase their investment options.

Source: Interview with IFAD project manager.

2.3 Investment Funds

Investment funds are unique LT financing providers compared to the traditional banking sector and have several advantages. Firstly, they can bring patient capital to the market where LT finance is critically lacking. Many funds are structured to raise LT capital from various public and private investors, many of whom seek development impact. Secondly, the investment funds can bring management expertise, market linkages, and innovation. In addition, the funds often strengthen investees' corporate governance and transparency. These benefits are critical for SME investees in developing countries that often require wide-ranging support in addition to LT finance.

The study analyzed 48 investment funds selected from over 100 agriculture and SME funds. The stocktaking of the investment funds drew from a similar analysis conducted by the FAO with an intention to present an overview of the current state of the investment funds for agribusiness SMEs. The FAO analysis defines an agriculture investment fund as "a financial vehicle to pool the capital of different types of investors to provide capital to different agricultural stakeholders, especially agro-enterprises and agribusinesses" (FAO 2018). This broad definition focuses on the target sector of agriculture. As a result, it captures various kinds of financial vehicles, including private equity funds with a limited partnership structure, as well as investment vehicles that sell shares to a wider group of investors. Some make equity investments in growing SMEs, whereas others provide short- and long-term debt to well-established producer organizations. Many of the funds investing in agribusiness SMEs have a strong emphasis on development impact.

The stocktaking analysis started with an update of the fund information in the FAO database. This entailed the removal of those funds not providing significant LT financing, and those with an agribusiness investment portfolio of less than 25 percent. New funds were added based on a desk study and expert interviews. The analysis focused on the major attributes, such as target regions and investees, instruments, investment size and duration, and return expectations. As such, they allow for a high-level comparison of the funds despite the limited public data. New funds without a track record of two years were excluded. A few funds are winding down or already closed. However, most are operational. In this context, the operational details and the results are not publicly available for many funds.

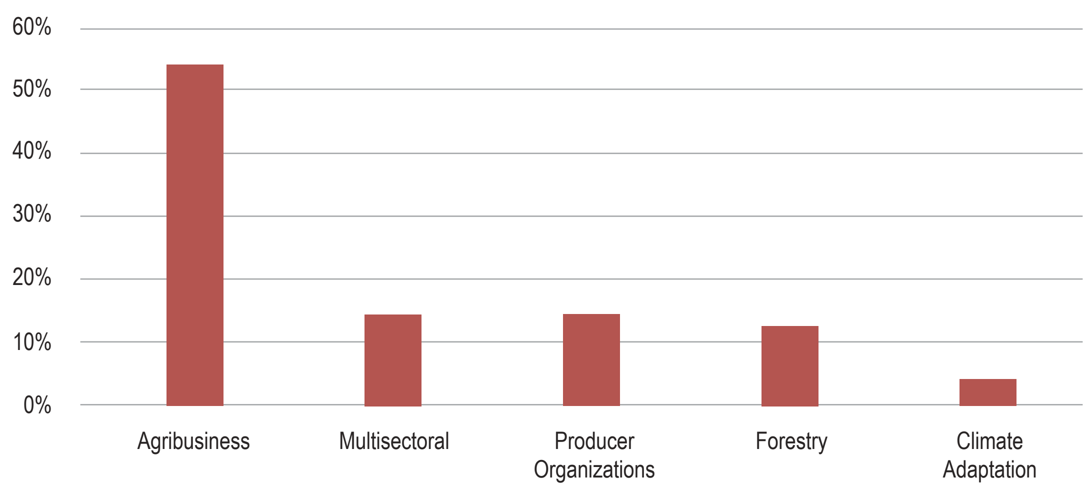
Key Observations

The investment funds are filling critical financing gaps, especially in Africa. Indeed, about 45 percent of the funds focus on Africa. For the funds with a strong impact focus, it is logical for Africa to be a priority region since the continent has the highest untapped agricultural potential, as well as a significant need for an increase in finance and investment, especially LT financing. Compared to other regions, it has a much younger population and a high percentage of women in agriculture. Both groups face constraints in access to financing. Latin America, which leads in microfinance investment funding, has a much lower share (13 percent) — although there is considerable involvement of investment funds in coffee, with some providing LT financing for coffee plantation replanting. Asia has also less prevalence (the share of 13 percent). The remaining fourteen of the 48 investment funds (29 percent) work in multiple regions. There is likely a higher presence of funds for agribusiness SMEs than shown. It should be noted that the purely private investment funds, many of which are sector-neutral funds, may also be understated since the information is not readily shared. In addition, the presence of national investors and investment funds should be noted, many of which were not possible to capture in the present study.

There are not many agriculture-specific funds. There are agriculture-only focused funds, but sector-neutral funds that invest in the agriculture sector seem to be more prevalent. Investment fund managers generally prefer to have diversified portfolios to reduce their risks associated with the sector. According to the Global Impact Investing Network (GIIN), 57 percent of 226 impact investors, including fund managers, have some allocation to agribusiness. However, the sector comprises only 6 percent of their total asset allocations (GIIN 2018). Similarly, a vast majority of those reviewed had less than 10 percent of their investments in agriculture and agribusiness enterprises, and thus were not included in the stocktaking.

Agribusinesses, including SMEs, are the main targets of investment funds in agriculture, with much less direct funding to farmers and farmer organizations. Figure 3 shows that 54 percent of those studied invest primarily in agribusiness companies mainly SMEs, and 15 percent have a multi-sector approach to investment in SMEs — with agribusiness being at least an important aspect of their investments. Investment funds for producer organizations represent 15 percent. Forestry, which is a part of the agriculture sector, is noted separately due to its characteristics. It comprises 13 percent of the funds' investments. The smallest subsegment of funds is climate change adaptation, including natural resource management, which is an area of growing interest. These funds are newer and are financed in part by international development agencies. Most of the investment funds focus on the

Figure 3. Type of Investment Fund



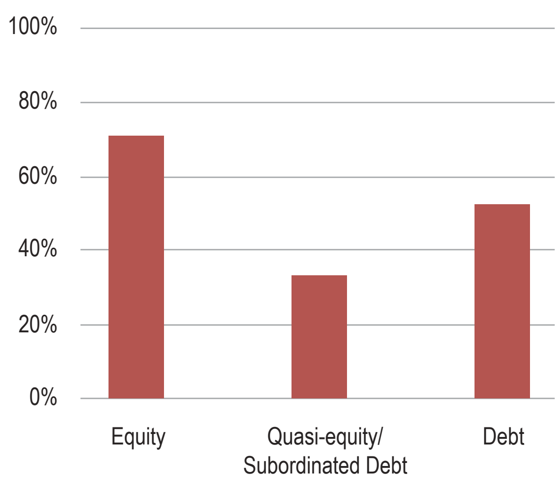
Source: Authors.

companies in growth or mature stages, given the high-risk environment. There are not many funds that invest in early-stage companies in agriculture. Some of these companies may be covered by local angel investors, sector-neutral venture capital funds, and some impact investors.

Equity is the main instrument, and it is often combined with others. These investment funds worked with three types of financial instruments. Of the 48 investment funds, 71 percent provided equity and 52 percent provided debt financing (Figure 4). One-third of the total used quasi-equity and subordinated debt. There are various forms of quasi-equity instruments found among the investment funds, including convertible debt, and subordinated debt with profit-sharing arrangements. Mixed debt and equity funds are also common.

Instruments vary depending on the target investees and return expectations. Equity is often used by investment funds with commercial return targets and larger investments. Equity investment works best for larger agribusinesses in which exit options are available and the potential upside is high. Its use is more limited for smaller agribusinesses since the transaction costs of investment, including due diligence, are often too high compared to the expected return. Quasi-equity instruments are often observed in funds with a multi-shareholder class structure, such as development agencies holding first-risk positions to enhance the financing for private investors to invest their capital. These funds are generally focused on development. They mainly target agribusiness SMEs that may have limited scope for exits. As such, the quasi-equity instruments are useful to ensure self-liquidation and prevent heavy equity dilution for the promoters. The use of senior debt and subordinated debt instruments was more common for the funds with a focus on impact, especially funds for producer organizations. These funds typically start with ST lending and move to include LT debt investments (See FAF case study in Section 4.4). This gradual process allows the funds to manage transaction costs and risks when engaging in LT finance.

Figure 4. Financial Instruments Used by Investment Funds



Source: Authors.

The target investment size of the investment funds is relatively high compared to other LT financing sources. Due to high fixed costs in investment sourcing and management relative to the number of portfolio companies, fund managers have a strong incentive to pursue larger investments. Accordingly, most funds target investments of at least US$3-5 million. However, some funds with a significant development focus deliberately pursue smaller investments, specifically from US$250,000 to US$2 million — or even lower to reach out to the missing middle segment.

The majority of the funds place a strong emphasis on development impact driven by public and impact investors. Most of the funds are managed by specialized professional fund managers and funded by public and private investors. Figure 5 indicates the return expectations of the investors in the funds.[7] Since agriculture and climate change are

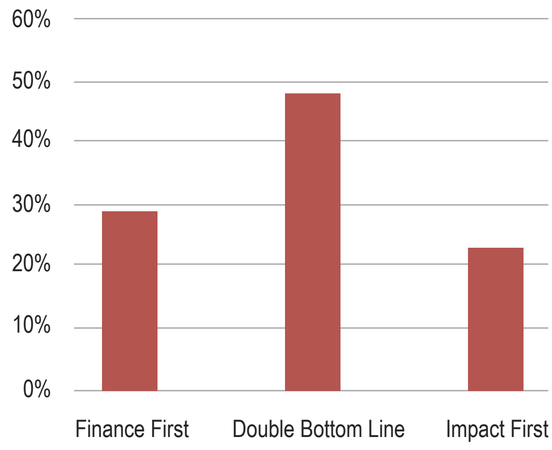
[7] The categorization of the funds is based on the FAO report (2018).

priority areas of interest, it is not surprising that 73 percent have an explicit social and/or environmental impact emphasis in their investing ventures (for instance, a 'double bottom line' and 'impact first' funds). They are collectively considered to be impact investment funds, that is, investment funds that conduct impact investments. These funds target smaller and less developed agribusiness SMEs, and they are often supplemented by technical assistance facilities. About half of the total investment funds expect an acceptable financial return beyond that impact emphasis (double bottom line funds). The 'finance first' group are driven by their returns on investment. It is not surprising that all the funds in this category provide equity financing which can have the highest returns.

The investment duration is about 5-7 years based on a traditional private equity fund structure. Most funds are limited partnerships with a finite life. The duration is usually up to 10 years, which allows for investments of 5-7 years before the liquidation. Investments through the use of debt are usually shorter in duration, ranging from 3 to 5 years. Several funds use a permanent capital (open-ended) vehicle structure for longer-term investment strategies which may be more suitable for investments in the agriculture sector (Box 5).

Investee companies are supported through technical assistance (TA). Given the prevalent low capacity among agribusiness SMEs and the development focus as part of the funds' investment strategies, many funds are accompanied by technical assistance grant facilities or funds. Others may rely on partnerships with TA projects. Most TA

Figure 5. Investor Return Expectations



Source: Authors.

Box 5. Permanent Capital Vehicle

Some fund managers indicated that a permanent capital vehicle would be suitable for agribusiness investments that take time to grow. These investments are also heavily exposed to external factors, such as international commodity market price fluctuations and climatic events. However, the permanent capital structure has inherent disadvantages. One of the biggest challenges is offering a clear exit option for investors while managing the investment portfolio (Valentine 2018). As the investments are difficult to divest, funds would require alternative mechanisms for liquidation. For example, Zeder investments in South Africa are listed on the stock market, which allows for flexible entrances and exits for investors. Incofin's Fairtrade Access Fund requires at least one year's advance notice of divestment by its core investors. It also has a 15 percent liquidity reserve from which it can pull funds for exiting investors. Its mix of short- and long-term investments also contributes to this flexibility[a] In another case, AgDevCo, like many development funds, relies on a group of investors who make long-term investment commitments.

Source: Authors.
Note: [a] Author's personal Fairtrade Access Fund Board experience.

specializes in providing various managerial kinds of support needed for the entrepreneurs after the investments are made. Such assistance increases the probability of successful investments, as well as the effectiveness of the fund managers. It is also expected to create an incentive for the fund managers to explore investment opportunities in smaller and less sophisticated companies (Divakaran and others 2014).

Challenges

Limited viable agribusiness SMEs for investment: The situation differs by country and is dependent on the target segments within agribusiness SMEs. However, the vast majority of the agribusiness SMEs are small, family-owned concerns. They are characterized by slow or moderate growth companies that would not be a suitable target of investment funds (Dalberg 2018). Even within the growing companies with high ambitions, managerial capacity is often lacking, leaving their business and financial prospects uncertain. To this end, many investment funds provide TA support, but often exclusively during the post-investment phase. Thus, pipeline development remains a significant challenge.

Inherent limitations in the traditional private equity fund structure: Many investment funds are limited partnerships with fixed terms of about 10 years, thereby requiring fund managers to exit from investments after 5-7 years. For agribusiness SMEs highly susceptible to climatic and market conditions, this finite structure may hinder the efforts of the fund managers and the SMEs in maximizing the growth and returns. Many agribusiness ventures, especially in production and processing, require more time to realize their potential, especially in a volatile environment. Another structural limitation concerns the strong incentive to seek larger deals due to the high fixed costs of investments, regardless of the size. There are funds that are strongly committed to investing in smaller deals below US$ 2-5 million, but they are usually driven by public funders. As such, they may not be attractive for private sector investors. Moreover, funded mostly by foreign investors, investment funds conduct their finance primarily in hard currencies, which reduces the number of potential target SMEs. It also raises investee risks. Alternatively, if the transaction is in a local currency, then there is an additional currency risk to be hedged, thus raising costs.

Challenges in scaling up: In view of the existing financing gap, there is a significant demand for investment funds. However, their scalability is subject to various constraints, such as limited public funds and interest on the part of private sector investors. More importantly, the fund managers with solid track records in agribusiness SMEs in developing countries are critical to their success according to the existing funds. However, such managers are rare. The combined expertise in finance and agriculture seem to be important because investments in agriculture often require a "high-touch" approach entailing active engagement with the investment partners.

Public Interventions

The public sector actively supports investment funds in serving as investors and grant contributors for technical assistance. Public and private investment funds are common and increasing in importance in agriculture in general and agribusiness in particular (FAO 2018). Food security, rural development, job creation, and climate change are all contributing factors to public investment interest. There are usually significant differences in interests between public and private investors. Whereas private investors generally seek more rapid profits, public investors maintain a higher focus on developmental impacts with a longer-term horizon. Yet, despite the mismatch of interests, since public financing is much more limited, a model based on public-private participation allows public investors to leverage their investment funds and impact. In addition, technical assistance is mostly funded by the public sector donors to address the limited capacity of the investee companies. The differences of return expectations between the investors are often addressed through differentiated share classes in the investment. Examples of this can be seen in preferential returns or reduced risks for private investors, such as first-loss arrangements whereby the public investors carry more risk. The fact that they can offer “patient capital” that is willing to forego immediate returns in anticipation of more sustainable returns is particularly important to the agribusiness SME investees. However, public investment can deter private investors even when the terms are more preferable than those of other investors/lenders, if public investors are perceived to be mainly interested in impact rather than seeking the highest returns on their investments.

Cases

The following three cases describe the different kinds of investment funds specialized in the agriculture sector.

AgDevCo is a donor-driven investment fund targeting agribusinesses in Sub-Saharan Africa. Rainforest Allianz is a specialty focused development agency, and its project involves a large farmer organization and impact investment funds. INCOFIN manages the open-ended Fairtrade Access Fund (FAF), an impact fund for supporting producer organizations, but with a LT financing mandate as part of its mission. It provides both ST trade finance as well as LT finance in the same fund. AgDevCo and FAF provide grant funds for specific TA activities through a special department and a separate facility, respectively, but under the same fund management. In the Rainforest case, the TA funding is from one of the impact investor’s TA facility. (See Boxes 6-8).

2.4 Agribusiness Companies

A total of 19 agribusiness companies were selected as a fair representation by which to analyze LT financing. These were among those identified through personal and institutional networks, as well as by informed internet searches. Financing is not the goal of these companies, so the financial information provided by them is naturally tied with their main business services. Agribusiness firms do provide significant amounts of financing to support their core business activities of procuring raw materials or selling products. Most of the financing is short term, often ranging from 60-day delayed payments to loans repaid at harvest. However, LT lending is inevitable for the companies selling equipment and infrastructure or dealing with LT business activities, such as plantation agriculture. Even with ST loans, many of them struggle with unpaid accounts receivable and broken contracts. Most smaller agribusinesses also struggle with sufficient funding of their own to be able to finance their clients. Some use third-party partner collaboration arrangements for their client financing. For their

Box 6. Investment Funds Case 1: AgDevCo

AgDevCo, a United Kingdom (UK) and Norwegian government-supported NGO, is an investment fund for Sub-Saharan Africa that offers long-term debt and equity for an average of 7 to 10 years, with investments typically ranging in size from US$2 to US$10 million. As of 2019, it has a portfolio of 43 investments in 11 countries at all stages of agricultural value chains, that is, from inputs, production, processing to logistics across various crops and livestock. Agriculture production accounts for 60-70 percent of its portfolio, and many include processing. In addition, the Lending for African Farming Company, a sister facility, provides ST and LT working capital loans that can be smaller than US$2 million. Its smallholder development unit can provide grants to help establish sustainable smallholder farmer outgrower schemes. The Fund has a strong local presence in multiple African countries where half of their staff works.

Source: AgDevCo.

Box 7. Investment Funds Case 2: A Partnership With Investment Funds (Alterfin, responsAbility, Rainforest Alliance, and ECOOKIM)

Rainforest Alliance launched a pilot project to provides LT finance for cocoa farmers in Côte d'Ivoire. The project's aim was to rejuvenate the cocoa plantations. Funding was from a debt investment fund, Alterfin, and co-financing came from the Union of Cooperatives, Entreprise Coopérative Kimbre (ECOOKIM). Alterfin provided a long-term loan for rejuvenation activities, and responsAbility's technical assistance facility supported the project with technical assistance grant funding. The loan funding is channeled through ECOOKIM in the form of a multiyear package of in-kind loans to its members. This funding covered inputs and services for renovation and rehabilitation. Three different loan packages for small cocoa producers were designed, and extended grace periods were offered according to the farmers' long-term needs.[a]

Source: Rainforest Alliance

Note: [a] https://www.rainforest-alliance.org/articles/rejuvenating-cote-divoires-cocoa-industry

Box 8. Investment Funds Case 3: Fairtrade Access Fund

The Fairtrade Access Fund (FAF) is an impact investment fund that provides short- and long-term lending to smallholder organizations and agribusinesses in Latin America and Africa. The Fund maintained a specific covenant to have 50 percent of its portfolio in LT loans during the initial years. The fund is successful in its operations. However, achieving the required loan volume in LT loans was too challenging, causing it to miss the target. The covenant was then lowered to 30 percent and LT lending, with a duration of up to 5 years. As of the end of 2019, it consisted of 28 percent of its investment portfolio.

The largest portion of its portfolio is in trade finance. The main constraints in LT financing are insufficient SME capacity for LT commitments, smaller LT loan sizes, and a lack of collateral. By comparison, trade finance arrangements, which do not require fixed collateral, can be financed more easily. A majority of the LT loan investees also have ST loans, or started with ST loan arrangements. Additional details are available in Section 4.4.

Source: Authors.

part, large agribusinesses can form their own financing facilities. Although the information is far from sufficient, their LT financing seems to be much smaller collectively and individually than those from the banks and investment funds, given their limited scope and capacity of financing.

Key Observations

More than an interest in financing agriculture, financing is a way to do business, for example, for the procuring of crops or the selling of tractors and irrigation equipment. Some of the agribusinesses do provide long-term loans, but many of these do so only for their well-established and proven clients and under terms and conditions influenced by the context and relationships.

Plantation companies and forestry industries are often forced to provide LT financing to support those on whom they depend for procurement. Coffee, cacao, perennials including fruit and other tree crops, and even sugar cane follow similar patterns. Planting or renovations of these crops require LT financing. The agribusinesses often source LT financing through equity arrangements, and they may hold financial stakes with some of those producers from whom they procure their commodities. If it is a "captive" firm in which the commodity producers have only one feasible option for selling their product, some of these firms can then provide LT financing secured by LT purchase agreements with them.

For some supplier or buyer agribusinesses, their most important area of financing is to their purchasers through asset financing or financial leases. Indeed, it is integral to their business proposition. Without the provision of financing, either done directly or via a partner financing entity, many potential customers could not afford the inputs or equipment. They would then seek options from competitor companies. Equipment dealers, companies with long-term procurement contracts and long-term infrastructure sales companies provide LT financing to clients to secure purchases and effect sales and services. They are able to sell their equipment through asset-backed loans or financial leases, whereby the equipment or goods serves as the guarantee. In both cases, the financing functions as installment sales for the companies — but with the security of the agribusiness maintaining ownership of the equipment until the lease payments are completed.

Some of the firms have subsidiary companies or partnership arrangements with financial service entities. This appears to be more efficient when feasible, in keeping with the focus on the core business, as well as for the financing subsidiary in raising capital investment for the financing activities. Larger companies, such as John Deere, have in fact become a major financier in Africa, working through their subsidiary company, John Deere Capital Corporation (Box 9). Case International follows a similar model with CNH Industrial Capital for financing and CNH Industrial Capital for Insurance. Also, AGCO — representing many lines of equipment (Massey Ferguson, Fendt, and so on) and sales throughout the developing and more developed world — provides such financing through AGCO Finance. Their financing arrangements provide these firms with a distinct advantage over their competitors. Financial leases of equipment are commonly made with the final equipment purchaser. However, the security of asset financing or financial leases can also support dealers to hold equipment in inventory for sale. Consignment-type inventory financing or LT lines of credit allow the dealers to offer a larger inventory for sale that can facilitate their sales. It can also provide equipment manufacturers with increased sales through the dealers.

There is a direct correlation between the type of agribusiness and the financial instruments used (Figure 6). Based upon the survey data, among the first three instruments shown, LT finance through equity is found to be used for plantation and forestry finance. However, it is rarely used by equipment providers. Conversely, long-term debt is less prevalent for plantation and tree crop buyers because of the many risks of repayment over time. Regarding plantation industries, some buying agents for companies may have LT credit advances for securing purchases of their needed raw materials, such as rubber or cacao. However, information about

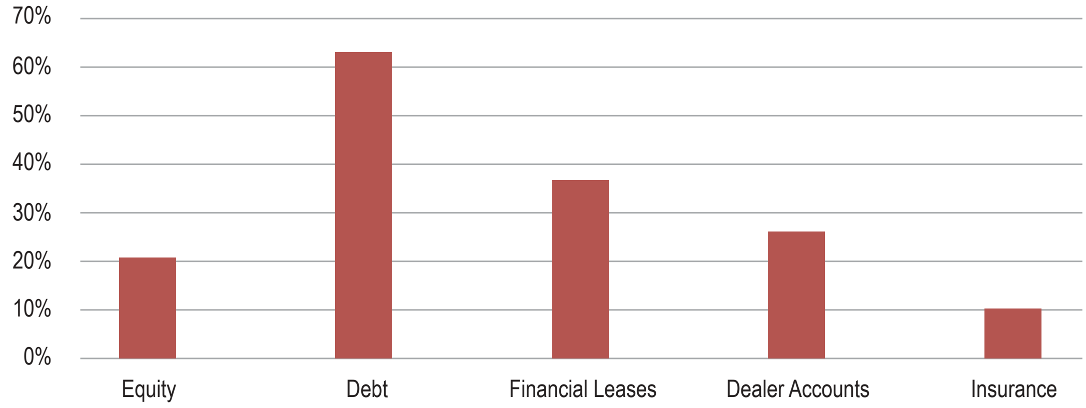
Box 9. John Deere

John Deere offers various options for long-term financing to purchase their equipment including:

- Financing the equipment with an installment loan.
- Supporting arrangements for a bank loan.
- Providing a financial lease for multiple years, with an option to:
    - Renew/extend the lease for an additional period of time
    - Return the equipment to a dealer
    - Purchase the equipment

Source: Authors.

Figure 6. Agribusiness Financing Instruments



Source: Authors.

such arrangements is not commonly shared. Long-term loans backed by the purchased asset are the most common for equipment and manufacturing firms. Financial leases are increasingly provided by the agribusinesses shown in the data. Where there are conditions and a national legal framework for financial leases, some of the firms are moving to use financial leases rather than asset-backed loans. The significance of dealer accounts in the figure highlights that many agricultural firms do not want to become directly involved in providing financing down the value chain. However, they are willing to do so with their dealers, who are required to bear the financing risks and costs. During the stocktaking, about one-third of these firms highlighted that they provide more than one type of LT financing. The lack of insurance is also noted, with only 11 percent of the firms providing an insurance product — even though insurance of assets purchased on financial lease arrangements or through other asset-based financing is required.

Finance is just one part of the value that the agribusiness companies provide, and this creates strong incentives for the borrowers to rely on and continue to work with the lenders. The agribusiness firms tend to offer additional value for the borrowers/investees, including technical assistance, provisions of agriculture inputs, and maintenance of the equipment. In fact, nine agribusiness companies (47 percent of the total) in the analysis offer technical assistance to their borrowers. For example, in the coffee industry, many producer and processing organizations benefit from buyers who have a strong social impact interest, providing some support and LT financing for upgrading and renovations. Starbucks[8] has special grant funds for this purpose. Fairtrade organizations also offer technical support for their source organizations. The technical assistance from private sources is quite often geared toward building technical capacity and meeting required standards. Furthermore, risk management is also highly integrated into the business operations. Repayments can be extracted from sales of crops over the years in the case of the plantations. Equipment suppliers secure loans using their products as collateral (second-hand market) as well as the investee's down payment.

[8] https://www.starbucks.com/responsibility/community/farmer-support/social-development-investments

Challenges

LT financing provided directly by agribusinesses exists, but it is not generally found to be common across the sector, even when their suppliers and customers have significant LT financing needs, and when the agribusiness companies need their products and markets. There are three main reasons. First, the firms themselves, especially smaller players, need financing so they do not deplete their own funds for on-lending. Second, it is costly and risky for the agribusiness firms to borrow to on-lend to smaller agribusinesses, producer organizations and farmers. The access to funding for on-lending is difficult, and it is not in the interest of the finance providers. Finally, agribusinesses generally do not have the capacity or the systems to manage LT loans, even when they can handle accounts receivable and ST lending to established clients.

The financing is restricted by the main businesses of the agribusinesses. LT financing is just one element of the agribusiness lenders' strategies. The ultimate business objectives (stable procurement of raw materials and sales of machinery) strictly constrain the scope of the LT financing including borrowers, terms, and conditions. The agribusiness companies do not usually finance beyond their well-established and longer-time farmer and trader partners. The LT financing by equipment suppliers is strictly targeted to the buyers of their products. The lending terms and conditions are structured to minimize the risks and transaction costs, as well as to achieve the lenders' respective business objectives beyond the financing itself. Any deviations from the standard arrangements are not usually allowed.

Public Interventions

Most agribusiness companies that provide LT loans for procurement tend to do so only when there is an outside stimulus or incentive. Agribusiness company financing beyond their well-established and longer-time farmer and trader partners is costly and risky. If left only to their own resources and interests, their LT financing outreach would be quite limited. Therefore, public interventions such as financing, technical assistance, and guarantees are critical enablers.

Case

ECOM trading agribusiness firm, as highlighted in Box 10 and depicted in Figure 7, provides LT financing for coffee, cacao, and other export-focused crops. It is supported by a Global Agriculture and Food Security Program (GAFSP) guarantee to reduce their risks. They also have participation and support from the IFC and the Inter-American Development Bank (IADB) in some of their operations.

2.5 Other Suppliers and Instruments

Specialized Financial Institutions

Agricultural finance institutions are often structured as specialized, non-bank entities. For example, the Agricultural Credit Corporation

Box 10. Agribusiness Company Case 1: ECOM

Long-term financing becomes imperative when diseases, such as the Roya in coffee, require replanting with tolerant varieties. ECOM trading company, with offices in Latin America, East Africa and parts of Asia, provides financing of 3 to 7 years for the growers of coffee, cocoa, sugar cane, rice, and cotton. It uses its own funding and arranges for financing from other agencies, including the IFC and IADB. Loans, disbursed in tranches, are secured with a combination of moveable collateral or mortgages, as well as with purchase agreements with ECOM companies or other buyers, such as Starbucks. Training and support can also be provided. As shown below, the model for coffee rehabilitation involves concessionary financing and guarantees.

Source: Authors.

Figure 7. ECOM - Using Economic Actors Effectively

$30M Coffee Renovation and Rehabilitation Project for 500 coffee farmers in Nicaragua

- Financing facility targeted renovation of trees affected by coffee rust disease for 500 farmers in Nicaragua.
- Tree crop renovation has a short-term adverse impact on cashflow as the existing tree, which is producing coffee cherries, is then replaced with a sapling that will only produce after several years, requiring long-term lending and concessional rates.
- DFI concessional capital; (with a first loss guarantee) was critical to make loans affordable.
- Starbucks provision of 3-year offtake agreement addressed commodity risk for farmers.
- Ecom's existing granular farmer-level data and the training they received on long-term lending addressed business model risks for lenders.

Source: Bryan Serrano. ECOM/Expasa Nicaragua.
Note: DFI= Development Finance Institution; IaDB= Inter-American Development Bank; IFC= International Finance Corporation.

in Jordan serves as the "main official source [of] specialized … agricultural finance."[9] Some special governmental programs are also focused on financing agribusinesses, as in the case in Malaysia (Box 11)[10] Funding for these specialized entities is often from the government and development finance agencies, which allows them to actively promote LT lending to the sector.

Box 11. TEKUN NASIONAL

Tekun Nasional is an agency under the Ministry of Entrepreneurial and Cooperative Development of Malaysia. It provides short- and long-term financing of up to 10 years for SME expansions and startups, as well as entrepreneurial development. In collaboration with the Ministry of Agriculture, it has a major focus on agribusiness, including dedicated funds, many of which include concessional financing and other kinds of support. Islamic Finance (Sharia) compliant financing is also possible.

Source: Tekun Nasional.

Credit Unions, MFIs and Others

Apart from their focus on ST lending, microfinance institutions and credit unions provide some LT financing. Their LT actions tend to be restricted by the limited funding, except when they partner with larger financial institutions to offer LT loans for on-lending to their members or clients. By necessity, for risk diversification and institutional cash flow management purposes, their agribusiness portfolio is small. However, they do fund longer-term investments in small equipment, dairy animals, and son on, that can generate installment-type repayments (Box 12).

Islamic Banks

Sharia-compliant lending by Islamic banks offers some LT lending opportunities. The unique

[9] http://www.acc.gov.jo/en/node/349
[10] https://www.tekun.gov.my/en/tekun-entrepreneur/ar-rahnu-tekun/ciri-ciri-produk-2/

Box 12. Juhudi Kilimo

Unlike traditional microfinance, which primarily provides loans for working capital to informal businesses, Juhudi Kilimo finances specific LT agricultural assets. The Juhudi Kilimo MFI uses a "type of micro-asset financing to purchase dairy cows, irrigation systems, poultry, greenhouses, water tanks, cooking stoves, solar lamps and motorbikes among others." It directly purchases the asset for the farmer or agri-entreprenuer, who then pays them over time. This "helps [to] ensure that funds are not diverted to other non-profit uses."

Source: Ndaramu, Juhudi Kilimo.

features of Islamic finance can make lending less risky for borrowers and more viable for lenders by sharing risk and profit between the two parties. Depending on the arrangement, lenders can have more of a say and shared control in the operations. Several Islamic finance products are suitable for LT lending to agribusinesses. With financial leasing *(Shirkatul Meelk)*,[11] the bank sells machinery and equipment on a rental basis until the cost is repaid. With sales on credit, (*Bai-Muajjal*), the bank sells with a repayment agreement as a lump sum or in installments (IFPRI 2015). A third group of Islamic finance products, *Musharaka* and *Mudaraba*, are similar to joint ventures and private equity investments, respectively. *Musharaka* consists of an agreed partnership between the lender(s) and its client(s), whereby the parties share profits according to a predetermined ratio. They share losses in proportion to their capital contribution. Regarding *Mudaraba*, the financier provides funds to be managed by the agent (borrower). While profits are shared by both parties, losses are covered by the lender (Hussain and others 2015).

Crowdfunding

Crowdfunding is an emerging method of raising financing through a pool of friends and individuals, primarily online via social media and online platforms — with growing participation in agribusiness SME financing. These sources are not structured in the rigorous manner of an investment fund. As such, they can be targeted to a single SME, but more often through a platform offering multiple options for investors to choose. For example, Convergence, a Canadian-based platform for vetting proposals for financing and then facilitating crowdfunding, has a Kenya office and could look at some of the investments on the ground. The total global crowdfunding industry's estimated fundraising volume in 2018 stood at US$ 305 billion. It consists primarily of person-to-person consumer lending of US$195 billion, business lending of US$ 71 billion, and equity crowdfunding of US$ 1.5 billion (Cambridge Center for Alternative Finance 2020). Although the majority of crowdfunding is non-agricultural, its use is growing for SMEs, including agribusinesses — although evidence is sparse and generally at a small scale. However, crowdfunding, which often has incentives for social and/or economic benefits, can be used for longer-term financing. Conservation, niche market agriculture, and technologies that support agro-ecological causes are among the popular crowdfunding investments for SME agribusinesses. For example, the African Crowdfunding Association (ACfA) strengthens crowdfunding networking, regulations and transparency for SME access to finance.[12]

Innovative Partnerships

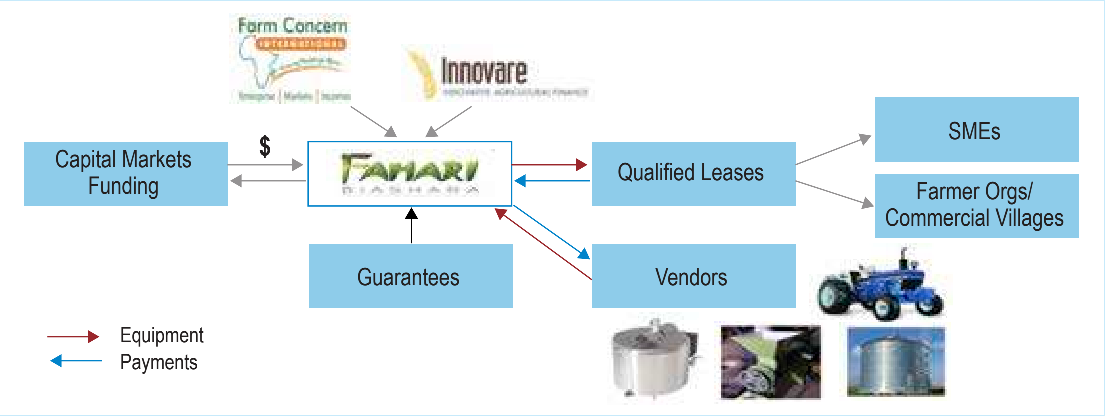
Although not large in overall size of operations as compared to major institutions, many private sector innovations for LT finance are emerging — often in partnership with development agencies and financiers. The following two cases show such initiatives. Both the Farm Concern and International Development Enterprises (iDE) cases

[11] Islamic terms may vary between countries.
[12] https://africancrowd.org/

Box 13. Innovative Partnerships Case 1: Fahari Bishara

Farm Concern International, a large Kenya-based NGO, and Innovare Advisors, a non-bank financial group, joined together to form Fahari Biashara, a financial leasing company. The partners use capital market funding for leases, which is collateralized by down payments, guarantees, vendor buy-backs and equipment titles until the last lease payment is made.

Fahari leases the equipment to farmer organizations and SME customers. The lease purchase price is stated or set as a fair market value. Lessees are qualified according to their financial capacity. After making a down payment, the lessees pay the balance and full value of the lease over 3 years. Because Fahari owns the equipment during the lease period, the lessee generally has no collateral obligations. At the completion of the final payment, the equipment ownership transfers automatically to the lessee.



Given the need for equipment and smallholder mechanization throughout Africa, Innovare is expanding this model to other African countries. Innovare AgriFin Ltd, based in Ghana, is one such example.

Source: Innovare Advisors.

Box 14. Innovative Partnerships Case 2: International Development Enterprises (iDE) Agribusiness Financing Support to SMEs

iDE uses a business-oriented approach to support smallholder and SME technology adoption through building sustainable supply chains of key farm inputs and technologies. It includes both demonstration and capacity development of the stakeholders, as well as the building of networks of 'last mile' Farm Business Advisors, local agricultural machinery dealers, and input retailers.

Connecting these key players to banks, MFIs and agribusiness financing allows the dealers and input suppliers to obtain longer-term or ongoing finance to sell their technologies on credit, including pay-as-you-go arrangements. In Bangladesh, the dealership network for agricultural machinery supports over 3,000 local service providers and over 200,000 farmer clients. Products and services in Bangladesh and Nepal include drip irrigation, greenhouses, water pumps and power tillers, as well as production inputs.

Sources: F. Conor Riggs, iDE, and authors.

in Box 13 and 14 illustrate examples of forward-thinking organizations who are not afraid to innovate and create solutions to fill financing gaps. When asset financing was not available, Farm Concern partnered with investors to create a financial leasing company. For its part, iDE created TechPath and the Commercial Pockets Approach to reduce risk, build linkages and open investment financing to SME agribusinesses, including pay-as-you-go financing from importers.

Financial Services Based on Information Technologies

Agribusiness loans currently provided through digital platforms or mobile networks are very small and short-term. They are targeted for consumption purposes, with a few exceptions. The case studies in Section 4 show that the advanced LT finance suppliers rely heavily on their relationships with borrowers, including the granular information that such relationships produce (see the Farm Credit System case, for example). However, there is a group of fintech players that provides asset financing products, some of which target rural and agriculture households. This trend is increasing (Mattern 2020).

2.6 Comparative Analysis

There are notable similarities and differences between the three categories of LT finance providers. Figures 8 illustrates and summarizes the main discussion points.

Target borrowers: Commercial banks lend mostly to creditworthy borrowers with track records and collateral. This tends to limit the target population to well-established agribusinesses in specific crops. Driven by the government's agenda, the development banks target borrowers in priority segments of the economy that often include agribusiness SMEs. Some of the development banks lend to commercial banks for on-lending purposes. Collectively, the banks are the largest LT lenders among the three categories in the stocktaking exercise. The investment funds inherently aim for the larger sized agribusiness SMEs. By contrast, there are impact investment funds that aim for smaller and/or less developed agribusiness SMEs — including producer organizations and funds specialized in specific themes and sectors such as climate change and forestry. The agribusiness companies strictly lend to the suppliers and buyers of their products as an integral part of their business transactions.

Duration: Commercial bank lending often deals in the 5-10-year range, but it can be extended to 15 years depending mainly on the availability of the LT financing sources. Taking advantage of public funds, the development banks in the study extend loans for up to 30 years. Equity from the investment funds is often limited to 5-7 years due to the finite fund structure of many of them. Their debt financing is shorter, at around 3-5 years. The LT loans from the agribusiness companies are generally about 1-5 years and vary depending on the business cycles of the lenders and the strengths of the borrowers.

Size of loans and investments: The LT loans of the commercial and development banks are flexible in size, and at the smaller end, they can be several US thousands of dollars. Due to the high risk-return expectations and high fixed costs relative to the number of investments, the investment funds tend to target larger investments. Equity and quasi-equity investments in agribusiness SMEs usually do not finance deals of less than US$3 million, and there is a strong incentive to pursue larger transactions. Debt financing can be smaller, at US$1-2 million and even lower. However, the deals below US$250,000 are limited due to the high fixed costs relative to expected returns. Although the information is far from sufficient, LT financing from agribusiness companies seems to be the smallest collectively and individually among the three groups, given their restrictive financing modality and their limited interest in and capacity for lending.

Instruments: The commercial banks primarily rely on debt and leasing instruments, whereas the development banks offer a wider range of products including guarantees for their wholesale lending businesses. Some banks also offer equity and quasi-equity products. The investment funds mainly use equity and quasi-equity, often combined with debt. There are also debt investment funds, especially for producer organizations. The agribusiness firms offer debt and equity for their suppliers and buyers. In particular, the equipment suppliers also use leasing and loans backed by their products.

Funding sources: Retails savings, deposits and equity from shareholders are the main sources of funding for most commercial banks. Some have access to credit lines of more than 5 years from governments or development agencies. The development banks have access to public funds, and some also accept deposits. Most investment funds in this area are financed by public donors and development finance institutions. In addition, private foundations and other impact investors are becoming more visible. However, the role of domestic private investors is limited. The agribusiness companies normally use their own funds, often supported by the public sector, or by a link with a financing institution or subsidiary finance company.

Risk management: The commercial and development banks largely rely on borrowers' past performance. They secure their LT loans through immovable and movable collateral, as well as through guarantees. The investment funds are highly selective in identifying investees and provide technical and managerial support. They also try to diversify risks by investing in different sectors and geographic locations. Long-standing business relationships are the first line of defense for the agribusiness firms. The repayments are often secured through purchases and deliveries of goods.

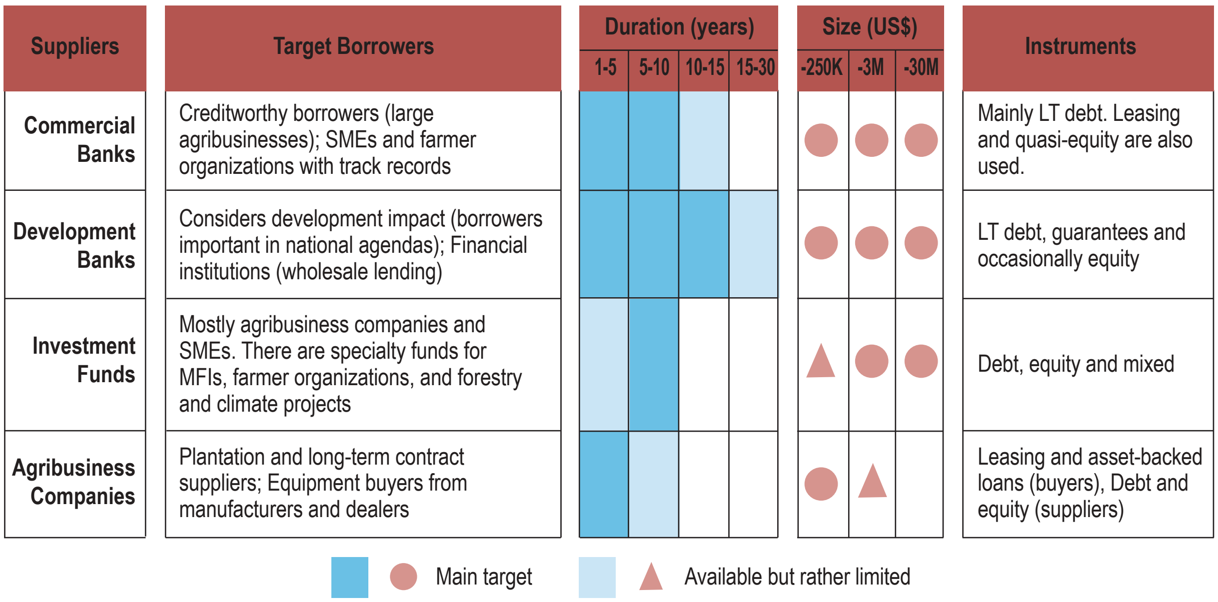
Constraints and public support: The commercial banks are often restricted by their limited LT funding sources. In some cases, this is addressed through public credit lines. Public guarantees are also offered to partially cover credit risks. Most development bank loans have at least some subsidized lines of financing; as a result, they are cheaper than commercial loans. At the same time, development banks are more prone to political interference, and some suffer from high NPLs. The investment funds are often funded by both public and private funds, with impact focus funds being primarily or partially public funded. A limited pipeline of investment-ready SMEs is partially offset by public technical assistance support. However, experienced fund managers, especially in agribusiness, are not widely available. Given that lending is not their core business, agribusiness firms often partner with donors or financial institutions to complement their limited funding resources and capacities.

Value chain (VC) and situation specific: Agribusiness financing by banks, investment funds and agribusiness companies is contextual to the value chains, commodities and borrowers. The successful financing approaches of each of these include an informed analysis of the particular cash flows, VCs and client risks, as well as the relationships of the various market segments and the operating environment of their borrowers. Improving data access and platforms, stronger back-office information systems and technologies, and capacity development are enabling factors that facilitate increased and more inclusive LT lending to the sector. Innovative alternative examples exist, such as Crédit Agricole of Morocco, which segments agribusiness clients by type, performance, intensity and technology of production and region. For weaker client segments, it provides capacity development to strengthen their business success and repayment record. A VC financing approach is used with agribusiness companies and plays an important role in LT financing of up to 12 years as appropriate (Credit Agricole du Maroc 2019).

2.7 Country Context

The county context is critical when analyzing LT products and suppliers. The relative importance of LT finance suppliers varies by country (Figure 9). In some countries, development banks are the

Figure 8. Comparison of the LT Finance Providers — Banks, Investment Funds and Agribusiness Companies



Source: Authors.
Note: LT= long term; MFI= microfinance institution; and SME= small and medium enterprise.

major LT finance suppliers in the agriculture sector, whereas commercial banks are more active in other countries. In developing countries where private sector credit is scarce, the supply of LT agribusiness finance is significantly insufficient compared to the potential demand. Private financial institutions have non-agricultural and low-risk business opportunities that are more attractive than making long-term commitments to the agribusiness sector. In this context, alternative providers such as investment funds and agribusiness companies — although still small in number and volume — were seen to have more of a presence in developing countries than those in the developed economies where various LT finance sources and products exist. As the credit data does not differentiate agribusiness SMEs from the total, the following analysis will cover all the agriculture and agribusiness LT lending, including the SMEs.

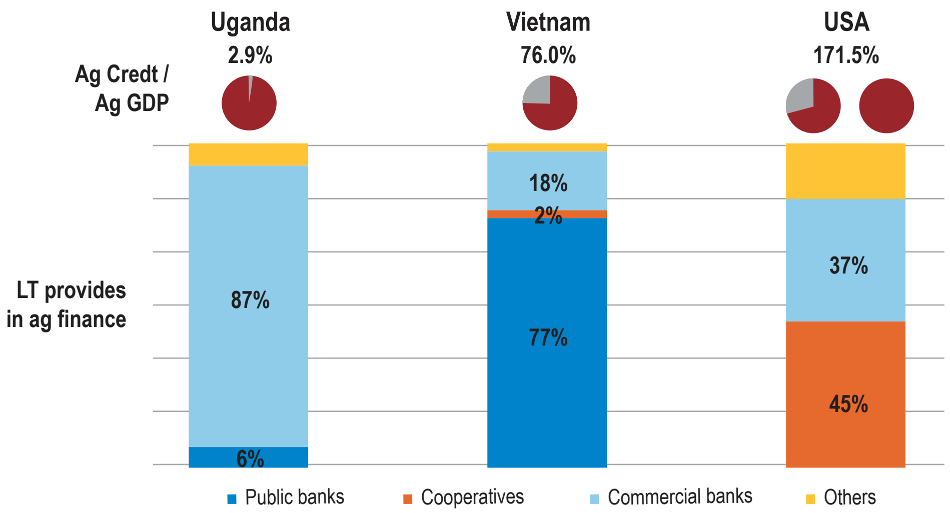
Market maturity and structure affect banking participation. In Uganda, where formal institutions finance only 2.9 percent of the agriculture gross domestic product (GDP), the unmet demand for agriculture credit remains significant, especially for LT finance. Commercial banks — a source of more than 90 percent of the small amount of formal credit available for agriculture production, processing and marketing — offer LT finance. However, the amount is far from sufficient, mainly due to the short-term nature of their liabilities. Moreover, the available LT debt tends to be concentrated in the large agribusiness companies. Even if SMEs and farmer organizations have ambitions to grow, the limited supply of LT finance constrains their investments. In this environment, the importance of other financial suppliers such as investments funds is significant, which is why they are active in the country. Public interventions, including wholesale credit, investment into funds, TA, and a development bank, also play vital roles.

In Vietnam, public development banks — mainly represented by the Vietnam Bank for Agriculture and Rural Development (Agribank) — account

for 77 percent of the LT finance for the agriculture sector, including processing, marketing, and some rural development activities. The agriculture credit market is more mature, and around 75 percent of the agriculture GDP is financed by formal institutions in Vietnam. These public institutions are vital financiers in the country. They promote financial inclusion as well as agriculture development, with a strong emphasis on commercialization and value addition. There are other policy interventions in the agriculture credit market, such as interest rate subsidies and lending quotas. Commercial banks provide 18 percent of LT finance to the sector, mainly for larger agribusiness companies — partially to comply with the lending quota requirement. Anecdotal evidence suggests that agribusiness SMEs, being in the middle of the public and commercial banks, have extremely limited access to credit, especially LT finance.

The LT lending situation also varies among developed countries, with mature financial markets reflecting numerous differences in the financial and agriculture sectors. For example, in the US agriculture finance market, formal credit to agriculture GDP exceeds 170 percent. As such, the market contains various LT providers. The Farm Credit System, a nation-wide group of financial cooperatives and commercial banks, accounts for 45 and 37 percent, respectively, of LT finance. It is generally backed by real estate, but also relies heavily on cash flow analysis (For details of the Farm Credit System, see Section 4.2). In addition, the non-real estate loans are often long-term (average maturity of 13-15 years) and secured through movable collateral. Private equity investments in SMEs across sectors in the US are also not uncommon. By contrast, in Japan, over 80 percent of LT agriculture finance is provided by a public bank and, to a lesser extent, by financial cooperatives. The dominance of the public player with subsidized interest rates has traditionally discouraged commercial banks from entering the market, but the lack of valuable collateral is another deterrent.

Figure 9. Comparison of Long-term Agricultural Financiers



Sources: Uganda – Authors estimate based on the data from the Bank of Uganda and the Uganda Development Bank.
Vietnam — Agriculture Finance Diagnostic of Vietnam (World Bank 2019).
USA — Agricultural real estate loan data from the United States Department of Agriculture (USDA).
Note: Ag= agricultural; GDP= gross domestic product; and LT= long term.

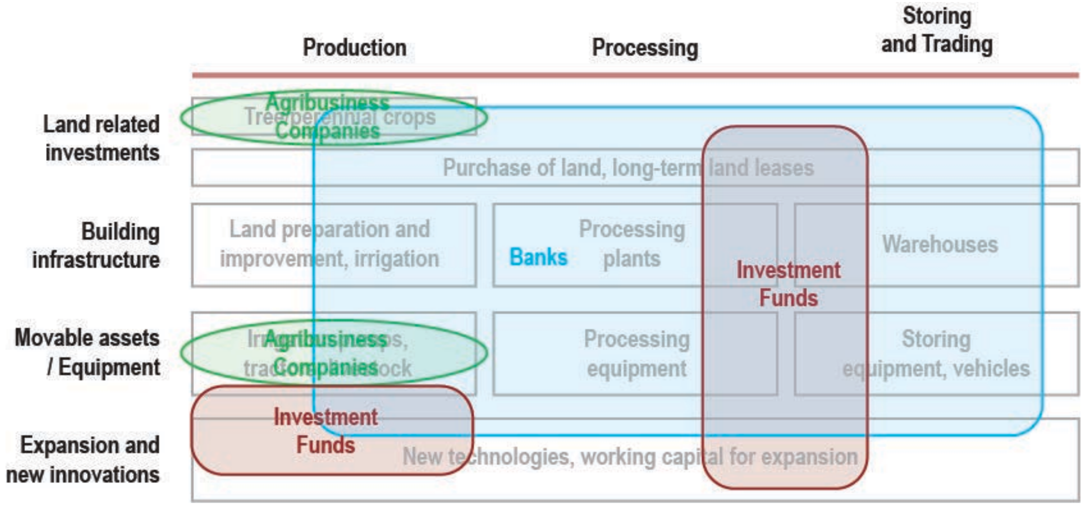
3. Conclusions and Policy Recommendations

Banks, investment funds, and agribusiness companies are the main providers of LT finance for agribusiness SMEs, but a substantial supply and demand gap remains. According to the FAO, commercial bank financing to the agriculture sector[13] remains less than 50 percent relative to the sector's contribution to the economy in many developing countries. The share is much smaller among Sub-Saharan African countries. This means that the majority of agricultural activities are financed by providers not properly recorded in the national statistics. Given the scarcity of LT lending by the commercial banks, the LT financing gap is much larger. Furthermore, although they actively provide LT finance in many developing countries, the development banks are most likely not significant enough to fill in the space. Moreover, a study of over 60 agriculture investment funds in developing countries, including rural microfinance funds, estimated investments of about US$7.1 billion (FAO 2018). However, this is just a fraction of the LT finance demand by agribusiness SMEs including smallholders who are estimated to require about US$80 billion of LT finance. Thus, collective agribusiness SME needs for LT financing are considerably higher than these funds can currently provide.

The LT financing is skewed to larger and established agribusiness SMEs in processing and trading, rather than in agricultural production. Both commercial banks and investment funds clearly prioritize agribusiness SMEs with strong track records. Producer groups and individual farmers are mostly off their radar — except for impact investment funds, specialty funds, and some leading banks in agriculture and rural finance. The development banks are tasked with financing priority sectors, including agriculture. However, many tend to focus on larger investments that require longer-term commitments, unless the banks are capable of handling smaller loans to SMEs and producer groups. The agribusiness companies are active only in areas of their business interests. Thus, their coverage is limited. Figure 10 illustrates the positioning of the LT finance providers relative to the major agribusiness activities described in Figure 1. Notable gaps seem to exist around investments related to agricultural

[13] The credit data includes ST and LT loans mainly for production, but sometimes for processing and marketing depending on the country. The observations are taken from the FAO's Statistics website. (http://www.fao.org/economic/ess/investment/credit/en/)

Figure 10. Positioning of LT Finance Providers Relative to Major Agribusiness Activities



Source: Authors.

production. Although it is not captured in the figure, longer-term financing over 10-15 years is also missing. One important caveat is that the demand and supply mix may differ significantly depending on the development of the financial and agriculture sectors, as well as policy interventions. Therefore, the country context is critical for any analysis of LT financing for agribusiness SMEs.

One underlying factor affecting both demand and supply of LT finance is the lack of certainty about the long-term economic stability in developing countries, including the agricultural economy. Stability, inflation and growth prospects have strong effects on LT finance and investment. Stable currencies and trade policies, creditor rights, contract enforcement, and market and price stability have been shown to be important. In some cases, political instability can also affect investment.

The importance of public investment and support should be noted. In addition to the enabling environment that lays the foundation of any agribusiness activities including financing and investment, public involvement can leverage private investment. It can also directly address missing gaps, as the stocktaking analysis and case studies show. One concrete example concerns the financing of forestry. Public development banks and government banks generally engage in this sector, since the long-term horizon and uncertainties make it unattractive for purely commercial financiers. However, since public finance is limited, "the role of public and private funders is to become champions of smart subsidy, finding the most effective ways of blending capital to substantially increase the total flow of funding to smallholder finance" (Dalberg 2016). In well-designed private-public collaborations, it is demonstrated that the financing becomes less risky for investments. In this way, the borrowers and the investees can meet banking and investor thresholds for financial returns, as well as for multiple development impacts.

Public support is required to promote solutions that target the root causes of LT financial market constraints (Table 1). The shortage of long-term financing, the risks, and the lack of capacity and products will continue to be key obstacles for commercial banks in developing countries. Therefore, credit lines and technical assistance will remain relevant along with other means, such as guarantees to partially cover the credit risk. These public instruments need to be carefully selected and executed. They should be based on a market analysis to ensure that they address the root causes of the limited LT financing, which may not be high interest rates. (For example, Agriculture Credit Facility case in Section 4.3). The same applies to the public support for development banks. These banks should facilitate and supplement private-sector lending activities by targeting critical gaps in the market rather than by competing with them.

Similarly, public support for investment funds and agribusiness companies will remain critical, as will the need to leverage private investment. The public sector will continue to be one of the funders of many investment funds and especially TA facilities. However, the public funding is too small for scaling up to meet the demand. Therefore, leveraging private investment is indispensable. Likewise, the limited number of private sector fund managers with proven track records cannot be replaced by public investors and can become a bottleneck. Public support, such as TA and financial incentives, can facilitate new partnerships with agribusiness firms for LT financing. The involvement of financial institutions can be explored to expand the lending activities beyond the financing capacity of agribusiness companies.

3.1. Policy Recommendations to Facilitate Long-term Finance for Agribusiness SMEs

Governments and development agencies must be aware of the significant gap in the supply of appropriate LT financing for agribusiness SMEs; indeed, supply falls far short of the potential demand. This stifles growth and development of agribusiness SMEs, as well as their value chain partners, communities, and the economy in many

Table 1. Public Support – Challenges and Opportunities

Suppliers	Gaps and Constraints	Current Public Support	Opportunities and Challenges for Expansion
Commercial banks	Limited LT funds, capacity of banks, and pipeline	Credit lines and guarantees for lenders; TA for lenders and borrowers	Public support is an important enabler, but country context needs to be considered. Solutions should target root causes.
Development banks	High NPLs, political influences may result in less borrower seriousness	Direct funding, subsidies	Development banks should facilitate and supplement private-sector lending activities. Public support should address LT finance gaps.
Investment funds	Limited pipeline, size and duration, and scope for scaling up	Public investment in funds, TA for investees	Leveraging private investment is indispensable due to limited public sector funds. Private sector fund managers can become a bottleneck in the developing markets.
Agribusiness companies	Capacity to manage lending; lack of funds to lend; narrow scope (borrowers, terms)	TA, guarantees, and financing (for agribusiness, borrowers and financial institutions)	Public support can facilitate new partnerships for LT financing. Involvement of financial institutions can be explored.

Source: Authors.
Note: LT= long term; NPL= non-performing loan; TA= technical assistance.

developing countries. The stakes are high in view of the growing demand for high-value food products, and significant business opportunities for SMEs, producer groups and farmers. Building awareness begins with reliable information and data about agricultural market trends and LT risks. Such data is very limited. Also, more data is needed about agribusiness SME bottlenecks, such as the constraints in meeting food safety and export certifications. Lending data, segmented by borrowers, duration, usage and conditions, and so on, is also lacking. Data needs to be context appropriate and readily available. Without it, the financial sector will never be able to fully engage in LT financing to the extent needed. Data is also required by the policymakers to guide their decisions. Much of the needed data is a public good; hence, the public should invest in or support data capture and platforms to make it more readily available.

The government should take a more market-oriented approach. Cost is a major factor affecting agribusiness SME demand and capacity to repay LT loans. Interest rate subsidies and caps along with other mechanisms are commonly found in the research. However, policymakers can take more market-oriented actions including: (i) fostering the availability of credit information by strengthening corporate accounting and credit bureaus; (ii) establishing and enhancing movable collateral laws and collateral registries; (iii) improving insolvency regimes; (iv) strengthening the legal, regulatory, and institutional infrastructure for factoring and leasing; and (v) creating an enabling environment for innovation (IFC 2017).

Equal attention is needed to the structural challenges in the financial sector. Policymakers intent on unlocking new sources of LT finance should support the growth of new markets and instruments that can help fill the gap between the current financing sources and projected future demand for long-term financing. This includes the greater use of public-private partnerships and support for new savings pools that can act as sources of long-term finance in the future. These could include long-term pensions and insurance-based investments. The requisite legal and institutional frameworks also need to be in place for private and/or public funds to be invested into large, long-term investments (Group of Thirty 2013).

In this context, general policy recommendations to increase LT financing go beyond the financing of agriculture and agribusiness, and include:

- Ensuring a stable macroeconomic and political environment — an enabling operating environment that provides assurance for longer-term growth and stability, including clarity and consistency regarding land and resource use rights.
- Development of a stable financial sector — financial infrastructure, savings mobilization, currency and economic stability, creditor rights, contract enforcement, and development of capital markets and domestic LT finance sources (pension funds, and so on).
- Ensuring favorable agricultural policies — market-friendly interventions, value chain development, production enhancement, organizations of farmers, and land titles.
- Supporting measures to increase effective demand — support investment readiness of agribusiness SME borrowers to meet the conditions of financiers and investors through capacity development initiatives and guarantee support mechanisms.

The details of the first two points are well documented and explained in the preceding studies (World Bank 2015). The third point is common in broader agriculture finance discussions, but more specific interventions on LT finance are summarized in Hollinger 2004.

Although conducive policies would help to expand the LT finance market, there are no standard prescriptions to promote LT financing for agribusiness SMEs. The policy makers and

development agencies must assess and address market failures that inhibit lending, and then support a combination of proper interventions depending on the country contexts, priorities, and LT finance providers. A diagnostic study of a broad agriculture finance landscape would be required to identify bottlenecks and opportunities for interventions. The World Bank's Maximizing Finance for Development framework is useful for identifying market failures, as well as areas where public interventions and investments are required (World Bank 2018). Any public support should recognize, as this stocktaking analysis shows, that there are distinct suppliers offering different types of LT financing for particular sub-segments. They face unique constraints, some of which require specific policy interventions as follows:

Banks:

- **Capacity development for lenders** — support for market intelligence, risk management and product development, including the expanded use of asset financing and alternative collateral products.
- **Credit lines** — these are often needed and effective if there is a lack of liquidity in the banking system and/or especially when banks' lack LT sources of funds to be able to lend for longer periods. However, options to leverage existing liquidity sources should be considered based on the market analysis.
- **Partial credit guarantees and insurance** — these are shown to be effective, but a suitable mix of instruments should be explored based on the market analysis.
- **Direct lending by development banks may be required, but it must address market gaps** — this could include longer-term loans, for example, loans of 10 years or more, and risky segments that commercial banks do not touch. However, LT lending by development banks is a "mixed bag", with successes in well-managed banks and high defaults in some others.
- **Incentives and LT funding for SME investment into climate-smart technologies.** The incentives can be both for agribusiness SMEs and/or the financial institutions to encourage them to provide increased financing for these kinds of investments. Examples include capacity development support, cost- and/or risk-sharing mechanisms for SMEs, and long-term, lower-cost sources of capital for FIs.
- **Review of monetary and banking controls** to reduce risk in the banking and investment sector (for example, policies that unduly penalize unsecured lending). Such controls may constrain the ability and interest of the financial sector to invest into LT agriculture.

Investment funds:

- **Private sector-driven approach** — private sector fund managers and teams with relevant skills are vital for expanding outreach and strengthening agribusiness investees.
- **Longer-term investments** — public investor as a patient capital provider, or impact investors with a long-term investment period. Alternatively, evergreen structures can be viable options.
- **Risk diversification** — across sectors and geographic locations, while maintaining adequate focus and expertise.
- **Promote investment of local funds** — local sources of funding should be leveraged to increase the capital base and allow for local currency investments.

Agribusiness companies:

- **Policies and regulation gaps** — gaps in the financial infrastructure need to be addressed in many countries, both for agribusiness companies and others, including: secured asset systems development, including collateral registries, credit bureaus and financial lease regulation, among others. These can affect the operations of agribusiness lending.
- **Public incentives needed** — support and incentives for piloting and upscaling of

agribusiness firms, as well as partner financial institutions (technical assistance, guarantees, and financing, and so on) (The BANAGRO case in Section 4.5 highlights a partnership between financial institutions and an agribusiness company).

- **Involvement of financial institutions** — few agribusinesses have funds for LT lending to suppliers or buyers. Third-party arrangements with financial institutions (FIs) to fund the SMEs purchasing from the agribusinesses or financing from FIs to the agribusinesses would allow them to provide on-lending to their customers. This are important to increasing LT agri-lending. (However, FIs perceive increased risks when their funding to agribusinesses is used to on-lend to their agribusiness SME customers.)

Collaboration across the public and private spheres is indispensable. Policy makers must take the lead in promoting and developing recommended solutions to fill the financing gap. However, they can and must engage donor agencies, development finance institutions and private sector leaders to collaborate in addressing the challenges facing LT financing for agribusiness SMEs.

3.2 Follow-up and Research Considerations

The information gathered for the stocktaking represents one point in time and can quickly become out of date. Although it is too costly to continually update studies, it is possible to stay abreast by following the research in information sharing by other organizations and institutions in this stocktaking.

Several lingering research questions remain open for consideration:

- With the exception of asset financing, a seeming majority of other examples of LT debt financing for smaller SMEs have some level of public collaboration to "sweeten the deal". This is achieved by offering blended finance support of guarantees, partial grants, subsidized interest rates or investments costs, and so on. Is the LT financing risk for agribusiness SMEs too high to be initiated without support?
- Some SME financing models and programs have targeted initiatives for women and youth SMEs. Most do not differentiate, especially for LT financing. How can the LT financial products be better adapted to fit their needs, such as more options for meeting collateral constraints?
- The theoretical, or often projected demand, for LT financing for agriculture and agribusiness SMEs is often calculated to be huge. However, the effective demand on the ground is a small fraction of this amount, especially in Africa. Currently there is much "cherry-picking" of financing to the easier initiatives and sectors, such as coffee and cocoa. How can this be broadened to facilitate needed LT investments in less attractive agribusiness sectors and less-developed agribusiness SMEs?
- What governmental policies or combination of macro interventions have been most effective in promoting LT financing for agribusiness SMEs? What are the most effective tools and in which context? How does the shift from the public-driven model to the private-led financing occur?

Looking ahead

The COVID-19 pandemic has increased the stakes and challenges of agribusinesses and their important role in food system development. Although not covered in the present study, it is recognized that governments, policy makers, financial leaders and agribusinesses face increased pressure and constraints from the COVID-19 pandemic. Agribusinesses, as well as almost all businesses, are under strain and food systems have been disrupted. The risks of failure have also risen. Additional long-term financing is required to recover and build from the crisis. At the same time, resources are even more limited, underscoring the need for more highly effective policies and strategies to leverage private sector capital.

4. Case Studies

This study focuses on LT agribusiness SME finance by financial institutions, investment funds and agribusiness funds. The following cases delve deeper into information that is not possible to obtain through the stocktaking of these types of LT financiers. These cases were selected from leading examples. They include representation cases from Africa, Asia and Latin America, as well as the leading agricultural financial institutions in the USA. Due to the in-depth information required for these cases — some of which is not regularly shared with the public — a close working relationship was developed with each of the institutions.

4.1 Bank for Agriculture and Cooperatives – Thailand

Overview and Background

The Bank for Agriculture and Cooperatives (BAAC) is a large, government-owned bank in Thailand that is the predominant player in the food and agriculture sector. BAAC lends to 5,851,421 individual farmer clients and 1,996,707 farmer families who are members of agricultural cooperatives. BAAC's outreach covers more than 96 percent of farmer households in Thailand (8,140,290 as of March 30, 2020). In terms of deposits, BAAC serves 28,350,628 depositors, including its borrowers and non-borrowers.[14]

Thailand is the second largest economy in Southeast Asia after Indonesia; with its upper-middle income status, it serves as an economic anchor for neighboring developing countries. The Thai economy is heavily based on agriculture. Indeed, it contributes 8.1 percent of GDP and employs 32.0 percent of the active labor force (of its 69.4 million population), with industry and services contributing 22.5 and 44.6 percent, respectively. The country is the largest producer of rubber in the world, and one of the leading producers and exporters of rice. Its major crops also include sugar, corn, jute, cotton,

[14] Key persons consulted at the BAAC include:
- Nipath Kuasakul, Senior Executive Vice President of Accounting, Treasury and Banking Business
- Surasak Sompadung, Vice President, Marketing Promotion Department
- Wichai Paksa, Assistant Director, Office of Data Management and Analytics
- Manapaht Kanchanawat, Credit Analyst
- Keerati Jirawatjany, Credit Analyst

and tobacco. Fishing also constitutes an important activity, as Thailand is a major exporter of farmed shrimp. However, agriculture's contribution to the country's GDP is declining, and exports of goods and services have increased.

Thailand has enjoyed economic stability with an estimated growth rate of 0.9 percent in 2019, a low inflation rate of 0.9 percent, and an almost a balanced budget (that is, prior to the COVID-19 pandemic). Unemployment very low, at 1.2 percent in 2019. However, it has increased since the onset of the pandemic. Hence, the fiscal conditions — coupled with a rapid intervention to counter the effects of the pandemic — provide a relatively strong position for the country to weather the economic downturn from the virus.

The National Strategic Plan (2017-2036) emphasizes improving the business environment and boosting the country's competitiveness and long-term economic performance through the development of rail, road, airport, and electricity infrastructure. This includes an enabling environment for business and finance and investment opportunities for its 30 commercial and six government banks. The private and public sectors are strong, and public sector institutions, such as the BAAC, enjoy a high level of independence, as evidenced by the fact that 86 percent of the bank's assets are from depositors. Although the government does not take an active role in the BAAC's banking operations, it does collaborate with special program support to the bank in helping target vulnerable populations, thereby meeting social impact objectives.

Description of the Case Study Institution

The BAAC is a full-service agricultural and rural small and medium enterprise lender with a wide range of products serving all types of smallholder farmers and SMEs, including fisheries, perennial crops, and agribusinesses. It has total assets of Thai Baht (THB) 1,973,197 million[15] (US$ 60.4 billion). Ninety percent of BAAC's outstanding loans total THB 1,486,646 million (US$ 45.5 billion) as of the end of February 2020. The loans are for agriculture, including agribusiness SMEs. The BAAC serves all rural and agricultural households and agribusinesses from micro to large agricultural corporations, but the vast majority are smallholder families and agribusiness SMEs.

The bank categorizes its clients into three groups under a 3S strategy as shown in Figure 11 .

S1: Small-scale farmers who have low potential in terms of production and are included in a registered government welfare project.

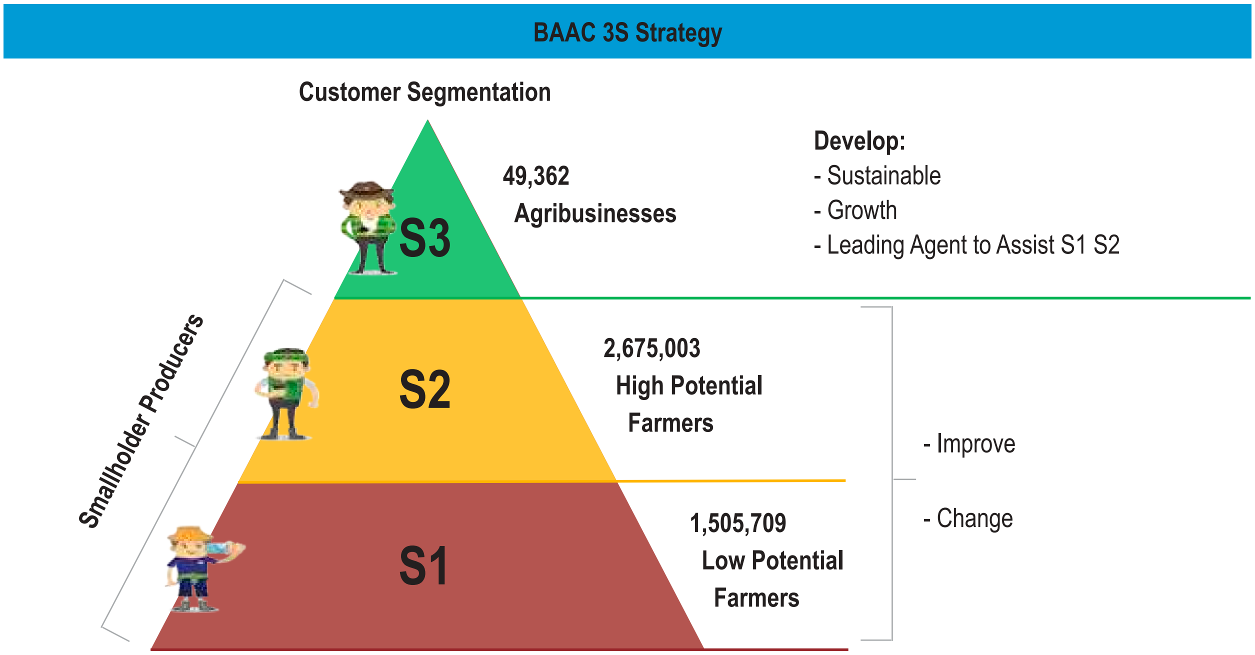
S2: Smart farmers, who have the potential and capacity for agriculture production and who will likely adopt the new technology.

S3: Agribusiness SMEs, including individual entrepreneurs and agricultural institutions and corporations who have marketing knowledge, and modern production and processing methods. This group of agro-entrepreneurs are or will be leaders in helping farmers in S1 and S2. They will serve as a spearhead for agricultural product merchandising.

Loan products and services are provided according to the needs of the group segment. The S3 group of agribusinesses are far fewer in number, but they are important leading agent "drivers" for many of the smallholders through value chain linkages. The S3 agribusiness SME role is seen to lead in restructuring agricultural practices, transferring farming technologies, supporting S1 and S2 farmers, and providing accessible markets. The bank may fund S1 and S2 farmers by funding S3 agribusinesses who work

[15] One Thai Baht (THB) is approximately US$ 0.03062.

Figure 11. Customer Segmentation



Source: BAAC.

with them. However, it often finances them both directly and indirectly. Specifically, some funds flow from the S3 agribusinesses to their S2 clients, and to a lesser extent, to their S1 clients. However, often the BAAC directly funds all three customer segments and works across these segments to promote value chain linkages that strengthen their customers' profitability and improve their loan results. It also provides the BAAC with a more in-depth knowledge of the value chains and their risks and relationships.

Agricultural loans cover production and agricultural investment in annual and perennial crops, livestock, fisheries and rural development; these loans generally have value chain linkages with the SME agribusinesses in their sectors. Agricultural loans at the end of fiscal year (FY) 2019, ending March 31, 2020, amounted to THB 904,706 million (US$ 27.7billion), and outstanding SME agribusiness loans totaled THB 192,185 million (US$ 5.9billion). A breakdown of the SME portfolio can be found in Table 2. It indicates that two-thirds of agribusiness SME loans are invested in aggregation, including storage, with the rest of the SME portfolio rather evenly distributed between marketing, services and other products. Loan sizes for the SME companies (called Juristic Persons) average only THB 6.5 million (US$ 199,029) per loan as compared to THB 0.7 and 0.2 million (US$ 21,433 and US$6,124) for individuals and farmers, respectively. Thus, the SME agribusinesses are relatively small in size.

The small size of the SME loans is also noted when comparing them with the agricultural and marketing cooperatives whose loans average THB 16.4 million (US$502,166). A breakdown of the BAAC's short- and long-term loans reveals the following in terms of loans outstanding, arrears and non-performing loans (NPLs) (Table 3):

Although the overall long-term loan volumes are similar to the short-term volumes in agricultural loans, a trend analysis showed that during the

Table 2. Agriculture and Agribusiness SME Finance Portfolio

	SMAEs' Business Types											
	Aggregation		Processing		Marketing		Services		Others		Total	
Types of Client	No. of Contracts	Outstanding Loan (Million Baht)	No. of Contracts	Outstanding Loan (Million Baht)	No. of Contracts	Outstanding Loan (Million Baht)	No. of Contracts	Outstanding Loan (Million Baht)	No. of Contracts	Outstanding Loan (Million Baht)	No. of Contracts	Outstanding Loan (Million Baht)
Juristic Person	146	1,334	139	933	11	59	25	75	268	1,402	589	3,803
Individual	1,630	996	463	383	687	217	705	376	281	793	3,766	2,766
Farmer	573,688	110,929	42,253	11,182	57,820	13,364	34,851	16,209	11,916	10,871	720,528	162,555
Informal Group	596	531	176	118	69	69	114	100	375	436	1,330	1,254
Agricultural Cooperatives	711	11,009	153	3,888	13	209	19	98	55	396	951	15,600
Agricultural Marketing Cooperatives	116	1,900	5	266	8	54	4	5			133	2,225
Farmer Group	46	224	15	124					6	15	67	364
Village Fund & Urban Community	1	2					1	1	5	3	7	6
Community Enterprise	1,417	1,769	544	484	152	176	94	101	797	1,083	3,004	3,612
Sector - S3	**578,351**	**128,693**	**43,748**	**17,379**	**58,760**	**14,148**	**35,813**	**16,966**	**13,703**	**15,000**	**730,375**	**192,185**

Source: BAAC.

Table 3. Short- and Long-term Loan Volumes

Agricultural loans (THB millions)			
FY2019	**Short-term**	**Long-term**	**Total**
Outstanding	415,668	489,038	904,706
Arrears	7,856	6,336	14,192
NPLs	1.89%	1.30%	1.57%
SME loans (million THB)			
FY2019	**Short-term**	**Long-term**	**Total**
Outstanding	114,286	77,899	192,185
Arrears	2,136	158	2,294
NPLs	1.87%	0.20%	1.19%

Source: BAAC.
Note: NPL = non-performing loans; THB = Thai Baht.

past three years, long-term lending has increased. However, short-term loans have not increased. Thus, 54 percent are long-term loans (as of 2019).

Development Focus

As a government-owned agricultural bank with development objectives, the BAAC has a comprehensive approach for serving rural and agricultural communities that goes beyond mere financial services. It uses a "customer centric" approach to delivering good products and services to each customer group — with an emphasis on increasing their capacity, competitiveness, and value addition. The BAAC's strategy is to "enhance the capability of the Thai agricultural sector." As such, it emphasizes supporting SMEs and cooperatives that will in turn be used as mechanisms to lead changes to build strong agricultural value chains and upgrade the capacity of farmers and families. This includes support in the restructuring of productive systems. In addition, it entails support to indebted and welfare farmers in building more sustainable livelihoods. Examples include:

- Support and financing for a new generation of "smart farmers" to enter agri-business with the knowledge and ability to use modern technology and innovations to enhance agricultural production. Over 138,000 farmers — including youth, students and new-generation-focused persons —have become customers of the BAAC.
- Enhance cooperatives, community enterprises, farmer associations, entrepreneurs and village associations as lead "drivers" and organizers in their value chains, serving as the main mechanisms for the collection of the farmers' products in their areas. These organizations, totaling 10,235, work to bring their members appropriate services and fair prices.

Operations for the Long-term Financing of Agriculture

During its first decade of operation starting in 1966, the BAAC focused on short- and medium-term loans. It then expanded and evolved its services over time, adding more financial and non-financial products, including marketing cooperatives, value chain financing, financial inclusion and self-sustainability. This long process of learning-by-doing and innovating set the stage for the bank to developing effective loan analysis and long-term loan opportunities.

Loan Analysis and Processes for Long-term Lending

The BAAC analyzes long-term loans using the tools and standard guidelines that apply to all customers. These include credit scoring for retail loans, credit ratings for cooperatives and corporate loans, and loan portfolio management for its risk management. Regarding long-term lending, particular analysis and priority is given to evaluating the business feasibility rather than the SME's collateral. The BAAC uses the following key financial indicators:

- Efficiency ratio: gross profit margin.
- Leverage ratio: debt to equity ratio (D/E).
- Coverage ratios: interest coverage ratio (ICR) and debt service coverage ratio (DSCR).
- Risk assessment, including an assessment of commercial, financial, collateral, legal and other risks.

The BAAC developed a program for relationship manager officers to analyze the financial ratio that is commonly used to show the key information when completing the credit approval form. This loan process can manage both customer and bank risks. Loan analysis and approval varies according to short- and long-term loans because long term loans, especially under SME schemes, have more details to analyze. Also, forecast projections and benchmark conditions must be considered since credit scoring is insufficient. As noted in Table 3, the overall percentage of the BAAC's non-performing loans is 1.6 percent for agriculture and 1.2 percent for SMEs — both of which are low compared to agricultural lending in many countries. The NPL ratios are lower for long-term loans than for short-term loans for agriculture and SMEs, that is, 1.3 percent and 0.2 percent, respectively. Hence, long-term loans, which have a more comprehensive loan scrutiny and allow more time to repay are less risky.

Loan Conditions

The BAAC maintains variable interest rates according to their customer segments, as well as numerous special programs and a credit risk scoring premium. However, the basic standard for general agricultural retail client loans is the Minimum Retail Rate (MRR), that is, the prime rate for its best clients. This is generally in the range of 5.5-7.5 percent annually, plus a risk premium. Risk premiums vary with client history and risk, as well as type of loan. For institutional agri-clients, such as agri-cooperatives, its basic rate is the Minimum Loan Rate (MLR), that is, the prime rate for term loans to premium clients, which is about 0.5 percent less than the MRR, plus the risk premium. However, for SME loans to individuals, the interest rate is 4 percent for the first three years, followed by 2 percent less than the MRR (that is, 6.625 percent - 2 percent = 4.625 percent) for years 4 to 10. For agribusiness SME loans to institutions and corporate entities, the rate is 4 percent for the first three years, followed by the MLR rate for years 4 to 10. Late penalty interest premiums are standard for all loans.

The BAAC's interest in promoting more SME loans, and the fact that its performance is better, both contribute to their lower loan pricing as compared to agricultural production loans. Loan tenures for long-term loan contracts at the BAAC range from 3 to 7 years for agricultural loans, with an average of 5 years. For institutional loans, the range is 3 to 10 years, with an average of 7 years. Long-term agricultural loans for fixed agricultural assets can be up to 15 years.

Group loans also have their own risks, especially in terms of management capacity and governance. Hence, the BAAC uses the following limits for lending to organizations and groups as follows:

Agriculture Cooperatives

- Working capital not exceeding 15 times its own capital
- Working capital in material supplies not exceeding nine times its own capital
- Working capital in product collection not exceeding THB 100 million (US$ 3.06 million)
- Investment capital not exceeding THB 100 million. (US$ 3.06 million)

Individuals, Village and Urban Fund Organizations

- Village and Urban Funds with loan limits not exceeding THB 25 million (US$ 765,500)
- Individuals with loan limits not exceeding THB 100 million (US$ 3.06 million)
- Organizations with loan limits not exceeding THB 200 million (US$ 6.12 million)

SME Projects

- A four percent annual interest rate for the first three years
- Loans are provided to both individual clients and corporate entities.
- Alternative collateral, such as the governmental Portfolio Guarantee Scheme, is accepted.

Loan security for the BAAC loans can be pledged in various forms, including joint liability agreements by farmer groups; two members of branch clients servings as guarantors; mortgages of property; and/or pledges of government securities; or deposits in the bank.

BAAC's Value Chain Finance Approach

The BAAC uses a value chain financing approach as one of the key concepts for driving its SME lending. Loan analysis and facilitation takes into account the linkages between upstream, middle stream and downstream along the value chain. It also considers how to best structure the lending. This allows all players in the value chain to obtain benefits from the loan disbursement in an efficient manner. Fair benefit-sharing is also a key condition for lending in the BAAC's SME projects. The key conditions for SME project financing include:

- **Market led:** Customers must have a specified market and trade partner; this condition helps the bank and customer to manage and reduce the market risk.
- **Capacity matching:** Optimize the production between supply and demand, using labor for appropriate production and matching of market demand.
- **Fair price:** Provide additional benefits upstream and to farmers by providing a fair price to the farmers.
- **Community:** The community benefits, which is one of the key underlying factors and drivers for BAAC's SME schemes.

These conditions are especially important for the BAAC's long-term loans, with its value chain financing approach to increase loan benefits and utilization by the customers in the value chain, as well as to reduce the bank's lending risk. The SMEs are considered the drivers of the value chains and the most feasible conduit for the financing of all VC actors involved, either directly and/or indirectly. Having longer-term loans helps to stabilize the value chain funding flows to all participants in the value chain.

Key Special Programs

The BAAC develops products and services to support the different customer needs in each segment. To bolster this outreach, there are numerous special programs to encourage access to suitable financing, especially long-term financing for specific groups of customers. Some of these are special BAAC long-term agricultural development projects, and some are supported by the government or other institutions. Examples of these programs include:

- **SME Scheme** — The BAAC provides financial support to the customers, including a lower interest rate and a relaxing of some other conditions to agricultural SMEs. These customers have more opportunities to access credit, even if they do not have hard collateral.

- **Portfolio Guarantee Scheme** — This is used for agricultural customers who do not have enough collateral. It is one of various innovative products involving BAAC collaboration with governmental agencies, such as the Thai Credit Guarantee Corporation (TCG). The aim is to increase access to finance and achieve economic growth in the country.
- **Agritech innovation loans** — These encourage young people to become farmers by developing loan products for them, including loans for innovation in agriculture (Agritech), loans for a sustainable production restructuring, and loans linked with contact farming.
- **Smart Famers program** — In collaboration with the Village Broadband "Pracharat" Internet Network, it promotes a new generation of informed, technology-savvy farmers and agro-entrepreneurs (Box 15).

Box 15. Moo-yim Toong Kham, Smart Farmer

The Moo-yim Toong Kham community enterprise for organic swine production and marketing in the Nan province of Thailand was established by Adul Saonothai, a young smart farmer who received a scholarship from the BAAC.

The small business has 30 employees and generates income for low-income farmers in the area. The professional smart farmer program was key to his business success. It also exemplifies the BAAC's understanding that education and knowledge, along with financial services, are key mission elements to supporting its clients.

Source: BAAC

- **Happy Farmer Card** (*Kaset Suk Jai*) — For production inputs, it is used by 562,200 farmers.
- **Ag Product Pledging Scheme** — Governmental loan guarantee using "crop receipt" obligations, especially for rice paddy loans
- **Paddy Insurance Scheme** — For nearly 2 million rice paddy farmers, insuring 27.6 million rai (4.4 million Has.)
- **Debt Burden Relief Scheme** — It supports farmers with: (i) extended loan principal repayment periods of 3 years; (ii) a 3 percent reduction in interest rates for one year; and (iii) as a financial discipline incentive, an interest rate rebate of 30 percent for clients who have repaid their loans within the due date.
- **Environmental Preservation Scheme** — Externally-funded, long-term loans for forestry, bio-gas, and agricultural investments to improve incomes while preserving the environment.

The BAAC implements special programs to help improve capacity in the agricultural sector, as well as taking care of communities, societies, and the environment through the provision of environmental-friendly credit under the concept, "BAAC Go Green," which adheres to environmental protection laws.

Portfolio Performance and Assessment

Long-term lending is more cost effective for the BAAC due to larger loan sizes and less time spent in processing than for short-term loans. The loan review for short-term lending must be conducted every time the contract expires. In other words, it must be conducted every year or less, thus increasing the transaction costs for the bank and the customer. From the BAAC's perspective, short-term lending is riskier than long-term lending. However, the BAAC notes that this might differ from other banks because the majority of the BAAC's loan portfolio is in the agriculture sector, accounting for 80 percent of its portfolio.

The most critical factor affecting farmers' incomes is the high uncertainty related to weather and climatic conditions. For instance, if flooding occurs during the rice harvest, the farmers will face obstacles in repaying their loans. The farmers will need to wait for another year before planting again, and outstanding short-term loans becomes non-performing loans; consequently, the bank has to arrange for a reserve for 100 percent. However, a longer-term loan for production or an investment in assets diversifies risk beyond one growing season. If the business goes wrong as expected, they still have a chance to get back on the right track. Moreover, the bank has tools to help this kind of lending by loan suspension, expanding the loan period, and so on. The BAAC also lends to a variety of businesses, and despite the importance of the rice sector, it has diverse sources of loan repayment flows, such as from other annual and perennial crops and agribusinesses.

Loan Monitoring and Follow-up

The BAAC has an 'after lending' process for large-scale borrowers to mitigate credit risk, including wrongdoing of loan purpose, acknowledging current business issues, and suggesting potential solutions. Close loan monitoring contributes to a lowering of its NPLs while also creating opportunities for offering loan programs and other products (such as up selling and cross selling). There are two types of loan monitoring:

- **Project progress monitoring** — After loan disbursement, the loan monitoring must be done within three months and continuously monitored before the next loan disbursement. The amounts are based on the project progress.
- **Annual monitoring** — It is mandatory to conduct loan monitoring at least once a year for large-scale borrowers. After the officer visits/monitors the borrower, he/she is required to record the monitoring data in the loan management system. It synthesizes the data and displays a warning signal for particular borrowers.
  - A 'green' warning sign means "monitoring 1 time a year."
  - A 'yellow' warning sign means "monitoring 2 times a year."
  - A 'red' warning sign means "monitoring 4 times a year".

Overall Performance, Satisfaction and Impact

As evidenced by the BAAC reports and input from staff, the S3 level loans perform the best in terms of highest profits as compared to the S1 and S2 portfolios. Costs and losses are lower, and the loan sizes are larger. Loans to these S3 level agribusiness SMEs are also important to the value chain finance approach in that they help to "pull" S1 and S2 smallholder customers toward improved productivity and market linkages. Therefore, the bank would like to continue to expand growth in its S3 portfolio.

The BAAC's performance evaluation process includes annual satisfaction surveys, collecting and analyzing data from all stakeholders. These survey results indicate that its clients are satisfied with its services and products. Regarding the smart farmers group, they expect the bank officer to be a financial advisor, who also has expertise in business and provides innovation assistance. As for the survey results, the Board of Directors and management are satisfied with the bank operations and performance. In this regard, they continuously work to align the bank's performance with its strategy and vision.

The BAAC has its own special programs for some target client segments and collaborates on many special projects with the government to relieve rural problems of inequality and lift the quality of life for the farmers (as evidenced by the many special programs illustrated above). Many of these are longer term endeavors. The bank focuses on total financial service solutions to respond to its customers' needs. As such, it aims to increase the efficiency of agricultural value chains. In order to connect its S1, S2 and S3 groups of clients as a network, the BAAC strives to understand customer behavior and interests. It often acts as a facilitator to connect the players in the value chains and match the businesses needing support with the available resources and programs. There are many opportunities for scaling up the SME businesses. For instance, the clients in the S3 group need technical assistance, as well as additional financial services. However, the BAAC notes that capacity building for the bank officers is also needed, including major skills in modern business operations and business consulting.

Box 16. Kitchakood Organics Farm

Kitchakood Organics Farm is one of BAAC's customers. It has the largest hydroponic vegetable distribution in the Chantaburi region. The farm agro-enterprise is involved throughout the vegetable value chains — from input supply, production, aggregating, packaging, to distribution in domestic and overseas markets. Ms. Siripun (Khoo Koi), the daughter of fruit farmers and the business owner, noted that the prices of fruits fluctuate widely by season and decided to allocate part of the land to grow hydroponic vegetables. She expanded her successful business by encouraging local small-scale farmers to grow hydroponic vegetables, providing them with training and linking them with the BAAC to obtain working capital. The BAAC supported the expansion by providing a special low interest rate loan to the farmers and established 'Open House Training' for the farm, providing technical know-how. To further expand the business opportunity, the BAAC arranged for a field trip to Cambodia. Thus, the agro-enterprise was able to expand into Cambodia's market by selling both vegetables and agricultural equipment. In addition, the farm established a learning center in Cambodia.

Source: BAAC

Key Lessons Learned

Client-centric approach — The BAAC's 3S client segmentation strategy and client-centric approach helps it to target its financial products, technical assistance and incentives according to the clients' economic and social circumstances and growth potential.

Loan assessment and monitoring — Credit approvals must be considered as part of the project feasibility and risk assessment. Moreover, long-term loans for SMEs must be entail linkages between all players along the value chain.

Long-term lending — Loan structuring over longer terms is considered effective for SMEs, and overall NPLs are lower than is the case for seasonal loans. In addition, special-arrangement agricultural loans that allow flexibility for borrowers to develop their products and to 'smooth' income flow variations can also be effective.

Incentives — Incentives for SMEs should include tools for encouraging entrepreneurs to conduct their businesses with a sustainable mindset. The BAAC considers that clients who conduct a business that shares benefits and offers a fair price to their value chain partners should receive an incentive from the financial institution. This consideration led to the provision of indirect support to upstream farmers, who produced the raw materials in the value chain system.

Collateral — Flexibility is needed for consideration of collateral requirements and types of collateral. Some BAAC projects and customers receive support in this area from governmental agency programs, such as the Portfolio Guarantee Schemes (PGS).

Value Chain Finance (VCF) Approach — Financial risk management and efficiency are improved through the use of a VCF approach to financing. It helps the bank to target financial support to the key points, which will then flow to benefit the borrower and its partners and/or suppliers.

Value Chain Finance training — Bank officers need training to upgrade their skills and knowledge in modern business management. This will help the officers to become professional financial advisors. The VCF approach has been widely adopted in agricultural lending, but additional capacity building support is needed from international financial agencies, such as the World Bank, and other knowledge specialists.

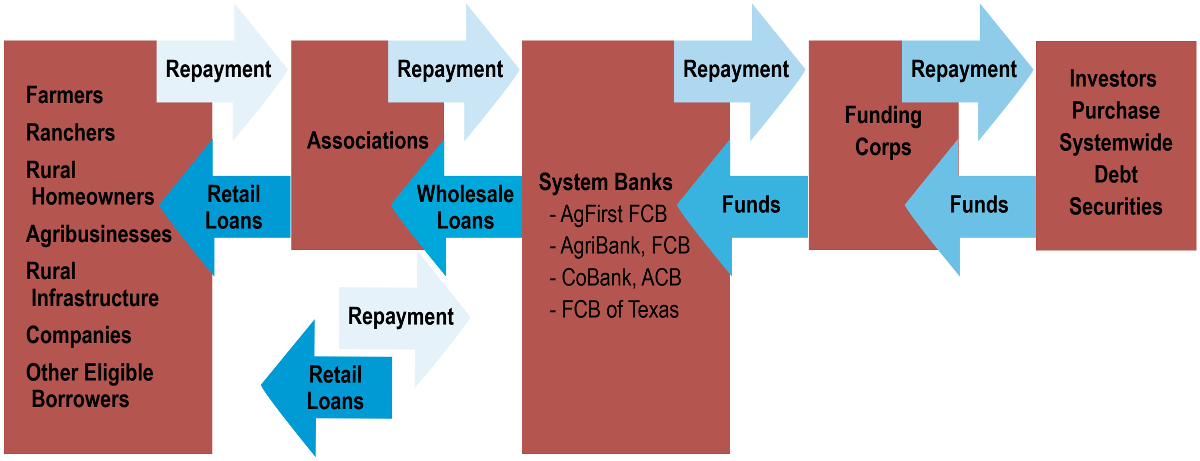
4.2 Farm Credit System - USA

Background and Overview

The Farm Credit System (FCS) is the most important financial system for agriculture in the United States (US), providing more than 40 percent of the credit needed by those who live and work in rural areas. Its function is to provide a source of credit for American agriculture by making loans to qualified borrowers at competitive rates and providing insurance and related services. It was established by Congress in 1916 to provide financing for farmers and ranchers. The FCS was designed as a network of rural lending cooperatives, and was modeled after the German agricultural cooperative credit system. After the economic depression of 1933, when banks required recapitalization, the FCS was organized into the Federal Land Bank for long-term financing. The Production Credit System focused on short-term lending. After many years, these were merged, and today the FCS is a nationwide network of 72 independent lending institutions (including four farm credit banks [FCBs] and 68 associations) in all 50 states and Puerto Rico. They are cooperatively owned by their customers, including farmers, ranchers, farmer-owned cooperatives and other agribusinesses, as well as rural utilities and other customers in rural America.

Agriculture is a very important sector in the US, and its farmers and the FCS benefit from a stable and supportive regulatory environment. This helps to keep the cost of capital low and ensures ready access to funding for all agricultural loan maturities, including long-term capital investments, land purchases and rural housing. Another strength lies in its federated cooperative structure, which is owned by the retail lending FCS cooperatives (associations), as shown in Figure 12. The cooperative system also

Figure 12. Farm Credit System Network Structure and Flow of Funds



Source: Farm Credit (2019).
Note: FCB= farm credit bank.

provides security, if needed, to back up any farm credit cooperative experiencing times of difficulty. In addition, the structure allows for a long-term view because the owners are the cooperative members.

Farm Credit System Funding

The FCS does not receive any governmental funding or tax dollars. It is, however, a government-sponsored entity (GSE), which like Fannie Mae and other GSEs, implies some governmental protective support in case of significant difficulty. The associations and banks in the FCS are not allowed to take deposits. Instead, its raises money on Wall Street by issuing bonds (Farm Credit Debt Securities). Through its tiered structure, as shown in Figure 12, these bonds are passed on to fund the Farm Credit Associations and their borrowers. The bonds are for varying longer-term maturities and have a AAA bond rating, indicating their implied safety for bond holders. It is also bolstered to some extent by its GSE status. The Farm Credit Administration, an independent federal financial regulatory agency, regulates the FCS.

In 1987, after a prolonged recession that particularly affected agriculture, the FCS created the Farm Credit System Insurance Corporation (FCSIC) and the Federal Farm Credit Banks Funding Corporation (FFCBFC). The FCSIC provides insurance primarily to insure the timely payment of principal and interest on the debt securities. The FCSIC overseas and administers an insurance fund created by assessing FCS institutions based on their loan volume. Annual assessments can vary, but the size of the insurance fund is targeted to 2 percent of outstanding Farm Credit System-wide indebtedness.

The FFCBFC is a stand-alone institution that manages the sale of Farm Credit Debt Securities for the FCS. The Funding Corporation issues debt securities on behalf of its four regional wholesale banks, including AgFirst, AgriBank, CoBank and the Farm Credit Bank of Texas, shown in Table 4. These bonds are callable or non-callable fixed rate bonds or floating rate bonds. They are auctioned or negotiated through selected dealers to a wide variety of investors. They are issued with 1 to 30-year maturity ranges. Through the FCS discount note program, shorter-term discount notes of less than one year are also issued. The actual bond yield and trade value vary with the prevailing bond rates. The system-wide average interest rate on loans was 4.86 percent, whereas the average interest payments to the debt securities was 2.37 percent. Including the returns from investment and other liabilities, the net interest spread was 2.04 percent in 2019, which generated net income of over US$ 5.3 billion. The large amount of patronage distributions to the members/customers is evident in Table 4. These dividends, which amounted to over US$ 2.4 billion in 2019, significantly reduce the overall effective rates to these borrowers, varying according to the net earnings of the bank and their Farm Credit Associations (FCA).

The structure and operations of the FCBs and their FCAs is similar, but there is some variation among the four wholesale bank networks. For example, CoBank also uses the proceeds from the Farm Credit Debt Securities to make loans directly to farmer-owned cooperatives, rural infrastructure providers and other agribusinesses, as well as funding its local retail associations.

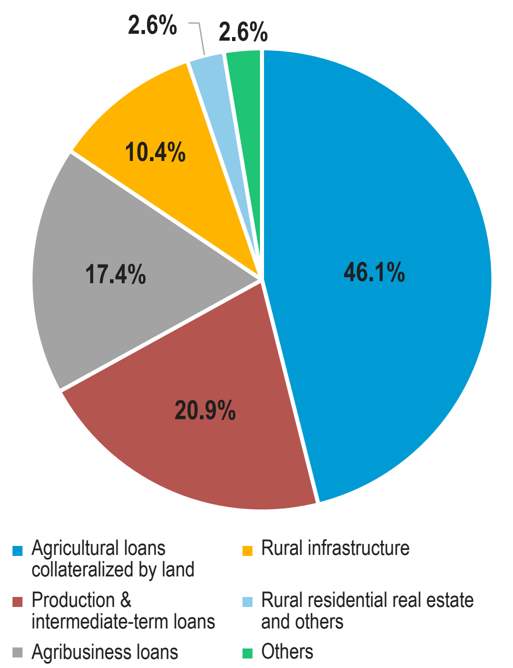
The four FCS cooperative wholesale banks fund the individual Farm Credit Associations that finance farmers and ranchers, farmer-owned cooperatives and other agribusinesses, commercial fishers, rural home buyers, and rural infrastructure providers. The total assets and loan portfolio of the FCS are US$ 365.4 billion and US$ 287.0 billion. The system-wide non-performing loan ratio was 0.82 percent. A majority of the financing is long term. Agriculture and agribusiness loans, including land purchases, constitute close to 85 percent of the FCA's loan portfolio (Figure 13).

Table 4. Farm Credit System Regional Banks

FCS Regional Wholesale Banks[a]	Number of Retail FCS Associations	Number of Stockholders (clients)	Total Assets by Bank District (US$ Billion)[b]	Net Loans Outstanding (US$ Billion)	Net Income (US$ Million)[c]	Patronage Dividends (US$ Million)[d]
AgFirst Farm Credit Bank	19	105,880	40.3	30.5	553	412
AgriBank	14	328,333	135.2	114.7	2,180	895
CoBank	21	80,594	157.2	119.0	2,105	867
FC Bank of Texas	14	58,403	32.8	26.2	484	267
Total	68	573,210	365.6	290.4	5,322	2,441

Source: Farm Credit Funding Corporation (2019).
Notes:
a As of December 31, 2019 reports.
b Including net loans of US$287.0 billion, an insurance fund of US$5.2 billion and cash, federal funds and investments of US$68.3 billion.
c Does not include US$124 million of the FCS Insurance Fund.
d Patronage is based on year end withholding; actual distributions are expected to be higher

Figure 13. Farm Credit Association Loan Portfolio (by loan type)



Source: Farm Credit Funding Corporation

Investment Strategy and Services

The FCS network with its regional banks and FCA is organized under a general set of guiding cooperative principles that ensure they are dedicated to their communities and committed to their member owners. The Farm Credit Bank of Texas, for example, expresses seven guiding principles, including: 1) voluntary and open membership, 2) democratic member control, 3) members' economic participation, 4) autonomy and independence, 5) education, training, and information, 6) cooperation among cooperatives, and 7) concern for the community. Nonetheless, the different regional banks and their member associations have varying implementation philosophies and approaches, with some following more corporate business-oriented lending approaches and others favoring relationship lending.

With over 100 years of operations, the FCS benefits from its experience and ability to develop, adapt

and refine its approach and services. The evolution of the regional FCS banks and each of their FCS cooperatives has led to autonomy and independence in many aspects. However, they continue to share and collaborate with many programs and services to address their somewhat diverse rural customer needs.

Targeted Customer Services by Market Segment

The Farm Credit System's main customer market segments are: agricultural producers; young, beginning and small farmers; rural infrastructure providers; farmer-owned cooperatives and other agribusinesses; rural homebuyers; and agricultural exports. Agriculture includes forestry, fisheries, annual and perennial crops, and so on. Although many FCS loan products and services are common across all customers, each market segment has its own particular conditions and services. Some of these market segments, such as young farmers, involve specific incentives from the FCS or government to support their needs.

AgFirst Farm Credit Bank and AgCredit Agricultural Credit Association

To better understand the operations of long-term financing, the case study focuses on the operations of the AgFirst Farm Credit Bank (AgFirst), one of four regional wholesale cooperative banks. It has 19 FCS associations within its banking network that serve 105,000 customers. It has a portfolio of US$30.5 billion in net loans, and it also provides other financial and support services. Its funding, like that of the other FCBs, derives approximately 93 percent from debt securities issued by the FFCBFC, plus approximately 6 percent from unallocated retained earnings and capital stock certificates. The AgFirst loan portfolio is strong, with approximately 2.6 percent of the customers' loans classified as substandard. The net loan write-offs were 0.05 percent as of 2019. In addition to being the funding conduit bank and support network to its associations, AgFirst provides a host of other services. Examples of the services it provides include document imaging and centralized document repository, business process management, financial reporting and analytics, tax reporting, loan disbursal, patronage payments, and so on — all of which contribute to a streamlining of the operations and associated costs at each association.

Regarding the actual loan assessment, the focus of this case study is narrowed to one typical association, the AgCredit Agricultural Credit Association (AgCredit). AgCredit is within the AgFirst network and follows a 'relationship lending' approach. It is characterized as a bottom-up philosophy that is very committed to cooperative principals and ways of doing business. In this way, its customer base is solid and multi-generational. These relationships provide a crucial benefit for its lending assessment. The AgCredit association serves over 7,000 members in 18 counties across northwest and central Ohio. It provides loans to farmers and home buyers in these largely agricultural, rural counties. It finances farm loans, rural home loans, equipment, beginning farmer loans, and agribusiness loans. It also provides services, including appraisals, crop insurance and general support for agricultural finance planning. Although it is not a bank, its customers receive credit lines, mobile and online banking access, wire transfers and other services. Information and communications technologies (ICT), such as internet and mobile banking, are widely used in their customer services.

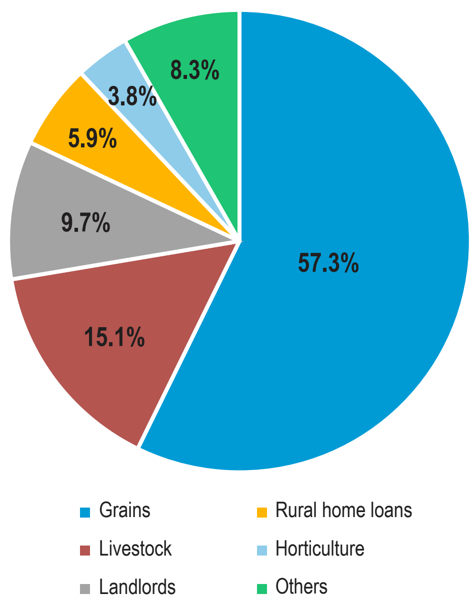
A strong incentive to the relationship lending approach is the patronage returned to the customers of AgCredit. It has given its customers patronage (that is, usage-based dividends) for the last 33 years, averaging 28.7 percent over the last 15 years (It was 45 percent in 2019, which amounts to nearly a halving of the effective interest rate paid by the customers). This was made possible by its net income of US$55.1 million. During the past 10 years, the average interest charged was 5.1 percent, and after the patronage refunds, the rate was effectively 3.5 percent per year. As of the end of 2019, AgCredit had total assets of US$2.056 billion, with loans outstanding of US$1.968 billion and loan losses of 0.57 percent. Members' equity was US$348 million for a return of 2.76 percent on total assets and 15.15 percent on members' (customers) equity.

AgCredit Farm Credit Association Financing Operations

The AgCredit association manages its loans and services through 14 branch offices in northwest and central Ohio. The region it covers is characterized by productive farmland. Each FCS association of AgFirst FCB has a different mix of commodities and products, depending on the region and the agricultural needs. Many have greater diversity. Across the AgFirst districts, which include much of the eastern coast of the US, non-farm income was most important, followed by grain and poultry, along with timber, dairy and many others. Figure 14 shows the strong predominance of grain crop farming in the AgCredit region, followed by livestock. Corn, soybeans and wheat are the leading grain crops. These commodities, and grain farming in general, plus livestock, are the most common commodities across the heartland of America. The loans for rural homes and landlords, who purchase land and/or make improvements on it to rent out to other farmers, are long-term investments backed by mortgages.

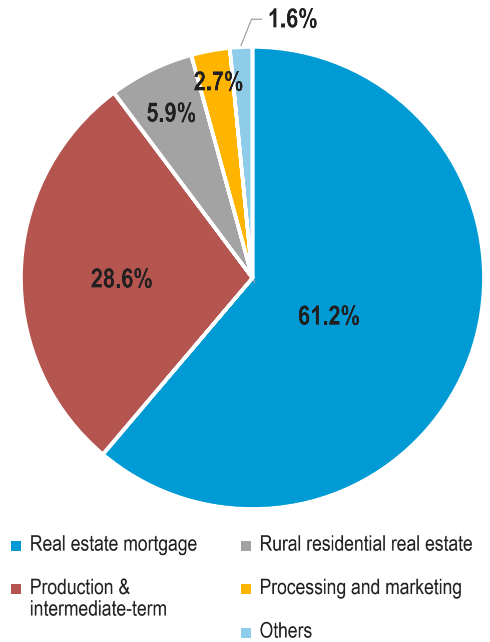
The bulk of AgCredit's loans are for mortgage-backed, long-term lending for real estate, primarily farmland purchases, buildings and improvements, including drainage tiling and conservation. Loan types in Figure 15 are fairly consistent with the overall FCS breakdown shown

Figure 14. Commodity Group of AgCredit Loans



Source: AgCredit

Figure 15. AgCredit Loan Type



Source: AgCredit

in Figure 14. Production activities are short-term, but the loans are often for an intermediate term because the production credit lines, for example, are often structured for multiple years. Loans to farm-related businesses, rural residences, cooperatives, power and water, and processing are generally long-term loans as well. Hence, the longer-term nature of AgCredit's lending reduces the costs of loan origination for both the association and the borrower.

The predominance of farm real estate and production lending in the FCS is owed in part to its history with the Federal Land Bank and the Production Credit Associations, serving long- and short-term needs, respectively. These were later brought together in the FCS. Production credit has annual or shorter-term turnover, whereas land and improvements need long repayment periods. Therefore, the production loans are often structured over multi-year periods as well. However, each FCS association may structure its loans slightly differently. FCS associations across the country have different mixes of loan types and volumes than AgCredit. For example, each may be more or less competitive in certain loan products as compared to others. For instance, AgCredit is strong in production agricultural lending. However, it faces strong competition in financial leasing from other associations and leasing companies. It also faces strong competition from banks for lending to some large, farm-related businesses.

Crop Insurance

AgCredit provides crop insurance through a local insurance broker. The insurance includes coverage for drought, excess moisture, cold and frost, flood, wildlife and unavoidable insect and disease damage. The US government is the underwriter for the crop insurance, offering an array of generally subsidized options for farmers. Borrowers can also choose other insurance brokers or insurers outside of the AgCredit network.

Equipment Loans and Leasing

AgCredit structures loans or financial lease financing for farm vehicles, equipment, machinery and/or other facilities, new or used. Farm Credit Express, an equipment financing program for leasing and lending, is offered through the regional AgFirst bank's associations, working with many affiliated equipment companies, both local and across the country. The dealers perform the paperwork for these loans. While it is a useful form of financing, the overall volume of leasing finance under the program is small within the AgCredit association. This is due to competition as well as the fact that the borrower is required to contribute upfront capital to obtain a lease. When borrowers have sufficient trade-in value or other overall equity, they can purchase equipment with a loan — and without a down payment that a lease requires.

Loan Analysis and Management

AgFirst offers SunGard's Optimist Analysis Tool Suite loan analyst software to support its associations' credit analysis and lending processes. This all-encompassing software enables loan officers and management to have a more complete view of their clients' financial profiles across a wide range of assets. However, this software requires many processes and is designed for larger loans than most offered by AgCredit, where much of the loan approval authority is done at the local branches. Hence, for time efficiency, AgCredit uses Optimist for its large, complicated loans and employs its own software system for smaller and more routine agricultural loans.

Loan Application, Analysis and Structuring

The requirements for a new loan are to provide three years of income tax statements (tax statements commonly required of all citizens), balance sheets, and land and land use and yield information, including cost/unit of land

or livestock for principal activities. These are critical due to the importance of cash flow analysis and efficiency in the FCS loan assessment for both long- and short-term loans. New and out-of-region (county) customers also require a farm visit. Loans for operating capital are generally for multiple years and as well as those for capital investments. However, operating loans of over one million dollars require annual reviews and renewals.

> *"Our risk rating sheet has evolved over the years to emphasize earnings more than equity, and projected earnings more than historical earnings".*
>
> *Charles Yoder, AgCredit*

AgCredit uses a positive income projection as their starting point financial indicator for any agricultural loan approval. They then apply a risk rating. For farmers, this rating goes from 4 to 14, with 4 being a very strong operation; 10 a rating needing more attention and with a more limited loan approval authority; 11 a problem loan; 12 a possible loss; and 14 a loss. Larger agribusiness loans have ratings of 1 to 14. (Categories 1 to 3 are only used in agribusiness loans.) These AgCredit ratings are applied to the: a) current ratio, b) owner equity ratio, c) historical coverage ratio, d) projected coverage ratio, e) loan structure and f) management and character assessment. There is also a calculated composite rating of these, and a loan officer-recommended rating, if different, followed by appropriate notes. The Farm Service Agency (FSA) provides guarantees and special considerations for young farmers and others are also taken into consideration. The desirable level of debt-equity ratios varies with risk. For example, the debt-equity ratio for cash grain production is typically expected to be lower than 1.25 (or higher, if eligible for a young farmer FSA guarantee), whereas for contract livestock a ratio of lower than 3.0 is acceptable.

AgCredit branches are small, typically having four to eight staff, of which 50 percent are loan officers. Additionally, credit analysts for larger loans and home loan originators are separate groups and serve across the AgCredit Associations. A branch manager in AgCredit has approval authority that varies according to the risk level of the loan. The weaker loans also have more restrictions on working capital. They entail more farm visits and have limited capital purchase levels without AgCredit loan committee concurrence. It should be noted that the loan approval process and delegation of approval varies among the different FCS associations.

The profitability and cash flow projections of the farm businesses are given priority over equity for loan assessment decision making. Since long-term loans depend on long-term projections that must be as accurate as possible, much emphasis is given to looking forward. This is done using the past records of yields, costs and returns as a benchmark guide, along with new factors, including price projections, governmental programs, and so on. For this reason, the assessment spreadsheets include yields and costs and returns of each major activity of the overall agricultural operation for at least three years, and five years if available. Family expenses, other non-farm income, and so on are also factored into the income, but with the weight given primarily to the profitability and risks of the operations to be financed.

Investment loans in land, buildings and improvements are structured as long-term loans according to the investment. Land and housing loans are typically for 20 to 30 years and building loans are for 7 to 10 years. Operating loans are for 1 to 3 years. They have annual interest payments, but many are set up as 3-year notes. As such, they do not have to renew them every year, unless they are over US$1 million. In that case, there would be annual reviews or a loan quality review needing additional analysis. Machinery loans are usually for 5 years with fixed interest rates. These are variable according to maturities, that is, for 1 year, 3-year and 5-year maturities. With the exception of housing and other loans with monthly cash flows such as dairy, agricultural loans are generally repaid annually, with payments based on the cash flow projections. The focus of loan analysis and planning for non-farmer rural housing is on repayment capacity and credit bureau information.

Box 17. Young, Beginning and Small Farmer Loans

The nationwide lending results for FCS to its young, beginning and small farmers can be summarized as follows:

- 46,680 new loans for US$9.8 billion to young producers (under 36 years old);
- 62,323 new loans for US$13.3 billion to beginning producers (with under 10 years of experience); and
- 114,817 new loans for US$12.5 billion to small farmers (with under $250,000 in annual sales).

Qualifying loans under these programs likely benefit from Farm Service Agency (FSA)-guaranteed loans or jointly financed loans, as well as lower interest rates and loan terms of 20 years.

For these farmers, FCS loans may be blended with FSA guaranteed loans, whereby the borrower contributes a minimum of 5 percent of the investment, FCS lends 50 percent, and FSA provides 45 percent with guaranteed funds. For young farmers making their first or second farmland or livestock building purchase, for example, there is no loan origination fee, and discounted loan closing costs and loan terms are extended.

Source: AgStart, https://www.agcredit.net/loans/beginning-farmer-loans/fsa-loans

Technical Assistance and Blended Financial Support

As is typical of agriculture around the world, there is an interest in helping new and young farmers and those facing difficulties. Therefore, technical advice and linkages for support from government extension and others are available to them and any customer needing them. Since these new and young potential customers often lack collateral and proven farm management history, special programs — with governmental support — are available to them from AgCredit, and throughout the FCS network, as shown in Box 17.

Performance and Impact

AgCredit, and the FCS, as a whole, are engaged in agricultural and rural lending for the long haul. It is what they do, and indeed all they do. As such, they and their customers have a relationship focus with a mutual dependence. Their dominant market share of agricultural lending heightens the importance it has to the sector and the country.

The FCS, and especially the AgCredit association and the AgFirst wholesale bank network, uses a longer-term loan approach for structuring its loans. It is important to note that AgCredit does a large amount of production lending for annual crops and livestock fattening, and so on (28.6 percent in 2019) that are short-term activities. However, the loan structuring tends to be for multi-crops, and the investment loans cover a longer period. This has served them well over time — despite competition, price and weather crises for many farmers, and

“I could not have done it without you” as quoted by a young farmer without capital buying and operating the family farm without personal or family equity, thanks to an AgCredit and the FSA guarantee.

(Marion AgCredit office.)

equity fluctuations due to significant swings in land prices. AgCredit's ability to return an average of 29 percent patronage to its customers from earnings over the last 15 years is an example of their strong and sustainable performance and impact.

Key Lessons Learned

The operating environment in the US is stronger than in many countries; but farmers, agribusinesses and rural communities face many of the same issues around the globe. Many lessons can be learned from the 100 plus years of the Farm Credit System.

Relationship lending — The impact of a longer-term relationship approach provides for a strong 'Know Your Customer' understanding. This relationship of trust also reduces the costs and risks for both the lender and the customer. The owners are the customers, and the board is comprised of a mix of farmers and finance and management specialists. They work together to improve understanding within the system.

Bond funding — The system of raising long-term funding for the FCS allows the Farm Credit Banks and their Associations the ability to provide long-term financing without funding source-and-use gaps that hinder many banks that are forced to depend on shorter term client deposits for funds. Its proven stability and history also create the conditions for a AAA rating and low cost of funds.

Cooperative structure — Although not applicable in all country contexts, the structure works well in providing for corporate bond funds to flow down to the associations, such as AgCredit and its customers. It also provides a network for collaboration, learning and economies of scale for some of the programs and services of the system. This cooperative structure also provides a source of security. For example, if there are problems in one Association or wholesale bank, others can provide support, if required, as evidenced in the mid-1980s.

Loan structuring — The focus on cash flows and income projections has proven effective in providing a good fit for farmers. It allows them the flexibility to match payments with their income flows. Indeed, the FCS has high repayment rates, without the typical heavy reliance on equity required by banks. In addition, the use of 3-year notes for operating loans — rather than annual, renewal loans — adds flexibility and reduces transaction costs for both borrowers and lenders.

Time-proven loan assessment processes — With its long history of lending to agriculture, the FCS has developed well-honed financial processes for analysis as well as training programs, such as the FCS university for training of officers.

Supportive governmental environment — The FCS was created by the government. Although it is not directly supported or guaranteed by the government, the GSE relationship implies a level of security support, a high level of transparency and strong governance. In addition, governmental support for agricultural insurance for farmers and potential support to them if needed (for trade disruptions and unexpected events, such as the COVID-19 pandemic) is beneficial for the stability of the agricultural sector and the FCS.

4.3 Agriculture Credit Facility (ACF) — Uganda

Background and Overview

Uganda, a landlocked country in East Africa, has one of the fastest-growing populations in the world with a GDP per capita of US$640. Its economy grew at an annual average rate of around 5.5 percent over the last 10 years. Agriculture accounts for about 20 percent of GDP, down from over 50 percent in the late 1980s. However, it still plays a critical role in the economy by employing more than 70 percent of the workforce, mainly on a subsistence basis, and earning over 50 percent of the country's annual export revenues. The sector also contributes to poverty reduction and food security.

Private sector credit to the agriculture sector is limited. The credit to agricultural production constitutes just 2.9 percent of agricultural GDP and 5 percent of the total private sector credit in 2019. The formal lending institutions are more active in the agricultural marketing and processing sector, allocating about 8.5 percent of the total credit to these areas. The commercial bank's agricultural loans (including marketing and processing) recorded a NPL ratio of 9.1 percent in 2019, the highest among the major sectors — and more than two times the overall NPL ratio of 3.8 percent. The short-term loans constituted 43 percent of the total agricultural lending in terms of value in 2014, and the rest was for longer than 12 months.

Commercial banks collectively account for over 95 percent of the financial institutions' assets; they also provide the bulk of the agricultural loans, especially long-term loans based on their large balance sheets. The Ugandan financial institutions are divided into 24 commercial banks (Tier 1), four credit institutions (Tier 2), and three microfinance deposit-taking institutions (Tier 3). They are all supervised by the Bank of Uganda (BoU). The Uganda Development Bank Ltd. (UDBL), which is not included in the Central Bank statistics, actively lends to the agriculture sector, including long-term loans. There are a large number of non-deposit-taking MFIs, Savings and Credit Cooperative Organization (SACCOs), and other lenders (Tier 4) that are regulated by the Uganda Microfinance Regulatory Authority (UMRA). Many are active in rural areas, but their loans for agriculture are not well recorded in the national statistics.

The banking sector is largely financed by deposits. In June 2019, deposits constituted 84 percent of the commercial bank liabilities. The banks offer both checking and savings accounts, but deposits are generally short-term.

The Government of Uganda and the BoU are making efforts to widen access to financial services, mainly by facilitating private sector finance — especially to the agriculture sector and among the rural population. Recent notable achievements include the expansion of the credit bureau's coverage and the establishment of the regulatory framework for agent banking. In order to further facilitate agricultural lending, especially long-term loans, the government provides funds on a refinance basis for on-lending to financial institutions from the Agriculture Credit Facility (ACF).

Description of the Case Study Institution, Investment Fund and/or Agribusiness

The Agriculture Credit Facility, a credit line for Tier 1-3 financial institutions and the UDBL, is hosted and managed by the BoU. It started operating in 2009 with "the aim of facilitating the provision of medium- and long-term financing to projects engaged in agriculture, and agro-processing, focusing mainly on commercialization and value addition".[16] The Government of Uganda contributed Ugandan shilling (UGX) 142.4 billion (US$ 38.8 million),[17] including the initial capital of UGX 30 billion (US$ 8.2 million). The Central Bank has a dedicated team to manage the ACF. There are no selection criteria for participating financial institutions (PFIs), and all the tier 1-3 financial institutions and the UDBL are deemed to be eligible to access the ACF. In fact, all the commercial banks (represented by the Uganda Bankers Association), credit institutions, deposit-taking MFIs, and the UDBL signed a Memorandum of Agreement (MoA) with the Central Bank and the Government stipulating the terms and conditions of the ACF credit.

Multiple financial institutions are active in the agriculture sector and they are the main users

[16] BoU ACF website: https://www.bou.or.ug/bou/bouwebsite/ACF/moreinfo.html
[17] Exchange rate applied: one Ugandan shilling = USD 0.0002725.

of the ACF. Stanbic Bank, whose exposure to the agriculture sector (UGX 393 billion [US$ 107 million]) constitutes 15 percent of its total outstanding loans, actively lends to commercial production, aggregation, processing, and storage. Centenary Bank has a mission to provide financial services for all, especially microfinance for the rural population. As such, it maintains a strong agricultural focus. Its exposure to the agriculture sector (UGX 228 billion [US$ 62 million]) is 16 percent of its loan portfolio. For the dfcu Bank, a subsidiary of Arise, an investment company owned by Rabobank of the Netherlands, FMO, and Norfund, the Norwegian Investment Fund for Developing Countries. Agriculture is the largest borrowing segment of its loan portfolio, accounting for 21 percent (UGX 294 billion [US$ 80 million]). There are also smaller financial institutions active in agricultural lending, such as the Opportunity Bank Uganda. The UDBL places a strong emphasis on the agriculture sector and agribusiness in its strategy and maintains a high exposure in its lending operations. In 2018, 43 percent (UGX 132 billion [US$ 36 million]) of its loan portfolio is in agro-processing and primary agriculture. Post bank, a government-owned credit institution, is also active in agricultural lending, although its exposure to the sector is not disclosed.

Long-term Financing or Investment Operations

The ACF's value proposition is attractive for lending institutions. It is one of the few long-term local currency financing sources in the country. This wholesale fund offers interest-free liquidity and can be used for relatively large projects. The financial institutions can choose beneficiaries as long as they fall under the eligibility criteria.

The ACF has several unique features. First, the ACF covers 50 percent of the eligible loans to Tier 1 banks with zero interest rates. The PFIs are expected to use their own resources to finance the remaining 50 percent. The counterpart contributions by Tier 2 and 3 institutions amounts to 30 percent (ACF finances 70 percent). Secondly, the interest rate of the end loans from the PFIs to the borrowers is capped at 12 percent. The commercial bank lending rate has declined in recent years, but it is still at 18 percent as of 2019. The processing fee that PFIs can charge to borrowers is also capped at 0.5 percent of the total loan amount. Thirdly, the ACF's contribution can be used to write-off the loans in case of default, and PFIs do not have to repay to the ACF.

The PFIs can choose end-borrowers at their discretion as long as they follow the selection criteria. The PFIs first identify borrowers and appraise the loan proposals. The ACF subsequently assesses the proposals and provides commitments if refinance conditionalities are met. The ACF then disburses its contribution only after the loans are executed by the PFIs. The ACF loans have a duration of up to eight years and a maximum three-year grace period. The maximum loan amount is set relatively high at UGX 2.1 billion (about US$ 572,000) to facilitate large-scale projects. The ceiling can be increased on a case-by-case basis for projects that have significant value-added for the agriculture sector and the economy. The borrowers can use the ACF repeatedly if their credibility is demonstrated by the lenders. The PFIs are expected to take collateral in accordance with their credit policies, especially financed assets such as machinery and equipment where applicable. The eligibility criteria and disbursement procedures are summarized below (Table 5 and Figure 16).

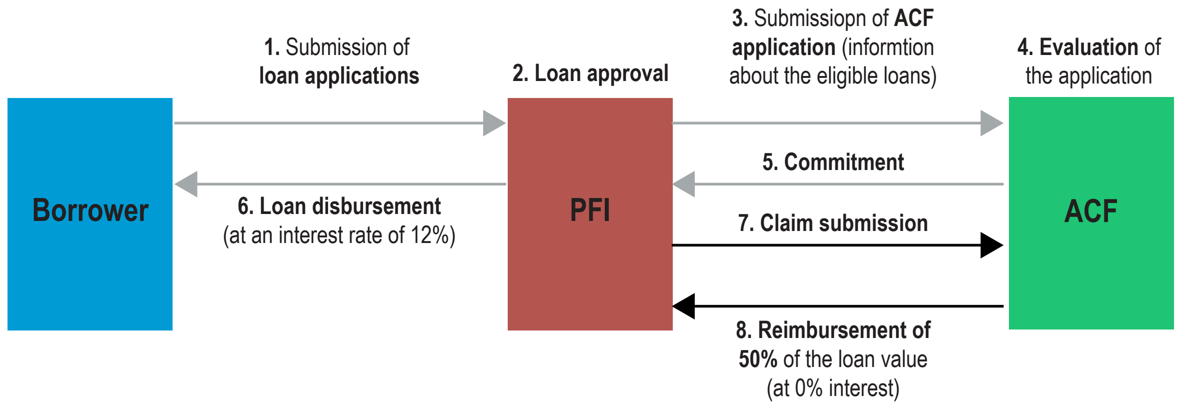
In case of default, the ACF is designed to play a de facto credit guarantee function. The PFIs are first required to make provisions based on the banking regulations and then follow up with the borrowers in accordance with their policies. For any losses, ACF funds can be used to write-off the loans. Once all the actions for recovery are made, the PFIs need to report to the ACF. Subsequently, the Office of the Auditor General will conduct an audit, and Parliament will

Table 5. Eligibility Criteria

Borrowers
Private sector businesses or individuals operating in Uganda and engaged in agriculture and agro-processing of raw materials and intermediate products originating from crop and livestock production, fish farming, poultry farming/breeding, and beekeeping, and so on.
Purposes
• The acquisition of agricultural machinery, post-harvest handling equipment, storage facilities, agro-processing facilities, agricultural inputs (for example, pesticides and fertilizers), biological assets (for example, banana suckers, fruit seedlings, chicks, piglets, cows and goats), as well as the purchase of grain, and any other agricultural and agro-processing related activities. • Working capital should not exceed 20 percent of the total project cost for each eligible borrower. These include, among other things, wages for farm labor, overhead costs (for example, utilities and installation costs), and the hiring of specialized machinery for farming activities. • The maximum loan amount to an eligible borrower for biological assets shall not exceed UGX 80 million (US$ 21,800). • Projects not eligible: Purchase of land, forestry, refinancing of existing loans, and trading in agricultural commodities, with the exception of grain.

Source: BoU ACF website.

Figure 16. Disbursement Procedures



Source: Authors based on the UoB ACF website.
Note: ACF= Agriculture Credit Facility; PFI= Participating Financial Institution.

need to approve all the write-offs. If any funds are recovered thereafter, the PFIs will need to reimburse the funds to the ACF after deducting the recovery costs on a pro-rata basis.[18]

ACF recently introduced two new mechanisms:

Block allocation: This allocation is to facilitate collateral-free loans for smallholder farmers (ACF 2019). Under this new arrangement, the ACF can allocate up to UGX 1.5 billion (US$ 408,750) for a portfolio of small loans, and the PFIs can consider alternative collateral such as chattel mortgages. The PFIs are required to submit a list of eligible borrowers and the total loan amounts. The maximum size of each loan is UGX 20 million (US$ 5,450).

Grain trade: The ACF started this dedicated funding scheme to finance the working capital requirements of the grain trade in 2015. This was done in response to the drastic decline of maize prices after the bumper harvest. The primary objective was to reduce the amount of maize in the market by supporting grain traders (ACF 2019). The maximum loan amount is UGX 10 billion (US$ 2,725,000),[19] and 50 percent of the loan value is covered by the ACF for all Tier 1-3 institutions. The interest rate of the working capital loans is capped at 15 percent, and the loan duration is shorter, that is, up to 24 months.

Portfolio Performance and Assessment

Since its inception in 2009, the ACF has supported 668 loans and disbursed UGX 207.03 billion (US$ 56.4 million) as of December 2019. In addition, UGX 71.3 billion (US$ 19.4 million) has been committed. The outstanding ACF loans amounted to UGX 83 billion (US$ 22.6 million) at the end of 2019, which constituted 3.8 percent of the total outstanding agricultural loans. The total contribution from the Government of Uganda to the ACF amounted to UGX 142.4 billion (US$ 38.8 million), including UGX 0.86 billion (US$ 234,350) for the ACF's marketing activities.

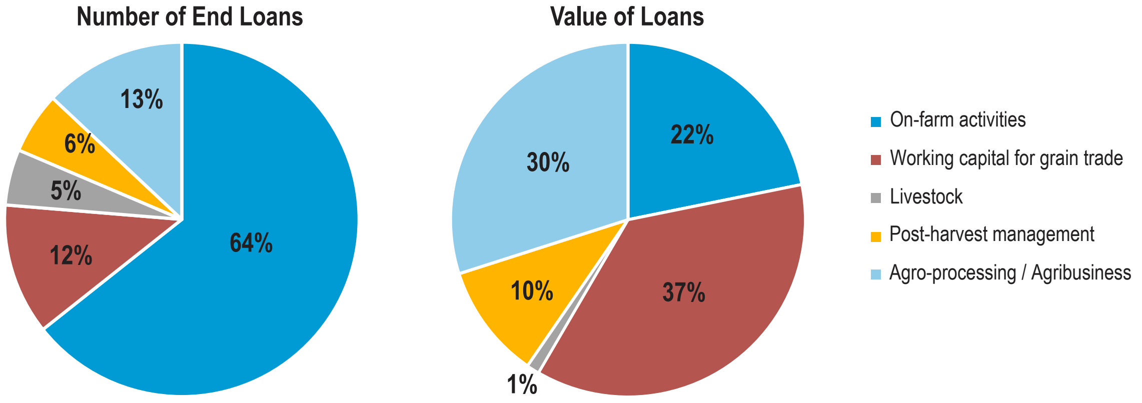
The bulk of the ACF loans supported on-farm activities and grain trade. Of the total commitment and disbursement of UGX 278 billion (US$ 75.8 million), close to 65 percent of the loans disbursed supported on-farm activities. In terms of the loan value, grain trade financing has the largest share with 37 percent, followed by agro-processing and agribusiness with 30 percent (Figure 17). The grain trade scheme that mainly finances short-term working capital requirements seems to have grown quickly since its start in 2015 and accounted for more than one-third of the ACF financing at the end of 2019.

The average loan size of the ACF-supported loans is UGX 700 million (about US$ 191,000), reflecting the objective of supporting the commercialization and value addition of the agriculture sector (Figure 18). It is probable that the average loan size has increased through the introduction of the grain trade scheme in 2015. The ceiling for these loans is larger than that of other ACF loans. The loans below UGX 20 million (US$ 5,450) are mostly loans financed through the block allocations for small projects.

The ACF is mainly used by a small number of lending institutions. The Post Bank accounts for 28 percent of the number of ACF loans, mainly due to the recent expansion of the block allocation for small loans. However, the dfcu is the biggest ACF user in terms of value, with a share of 24 percent. Stanbic Bank has substantial shares in both in terms of the number of loans and the disbursement value. Although the ACF is open to all 31 Tier 1-3 institutions and the UDBL, six lenders collectively constitute more than 80 and 70 percent of the ACF loans and disbursement values, respectively (Figure 19).

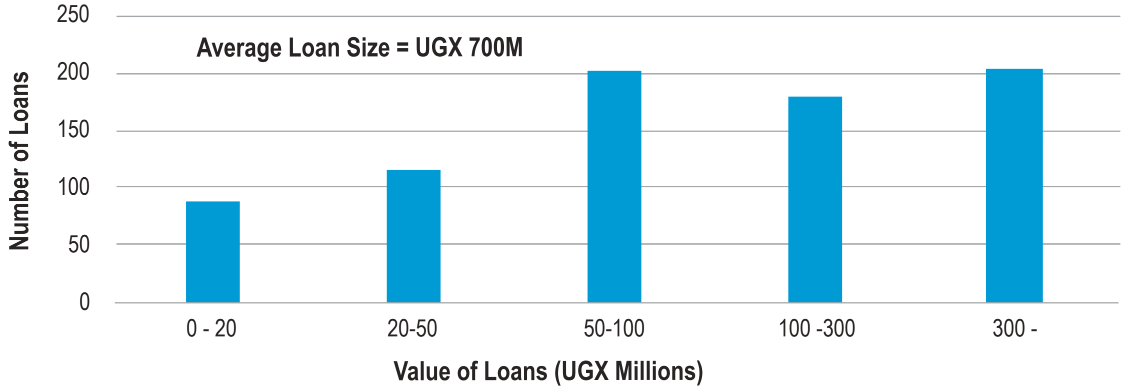
[18] Memorandum of Agreement for the Agriculture Credit Facility in 2018.
[19] This can be increased on a case-by-case basis.

Figure 17. ACF Disbursements and Commitments by Activities



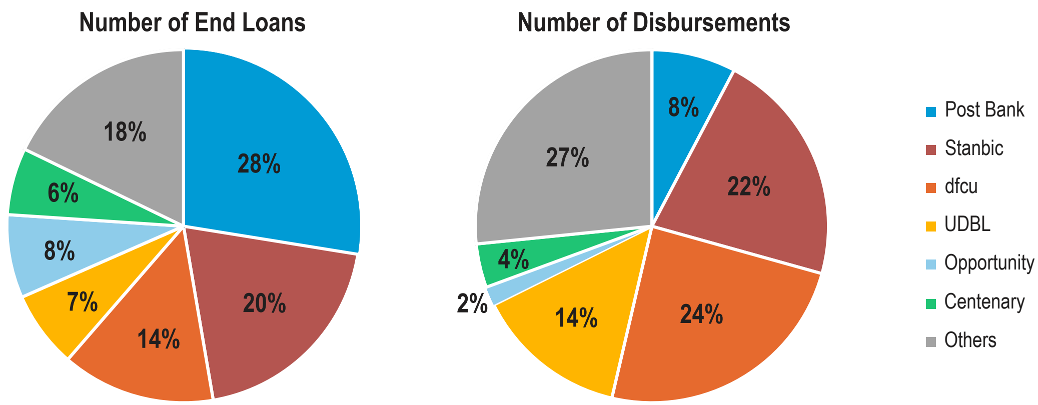
Source: ACF Progress report (2019).

Figure 18. ACF Loans by Size



Source: ACF Progress report (2019).

Figure 19. ACF Disbursement by PFIs



Source: ACF Progress report (2019).
Note: ACF= Agriculture Credit Facility UDBL= Development Finance Company of Uganda Ltd.

ACF's NPL rate is surprisingly low, and no loan write-offs have been allowed to date. NPLs in the ACF's portfolio stood at UGX 2.9 billion (US$ 790,250) (15 loans), comprising 1.40 percent of the total disbursements at the end of 2019. This is extremely low compared to the NPL ratio for the overall agriculture loan portfolio in the banking sector, which has been hovering around 10-15 percent for the last 4-5 years. Of the 15 loans, the Auditor General verified eight loans, and only one loan with an outstanding balance of UGX 18.52 million (US$ 5,047) was recommended for write-off. However, it has not been approved by the Parliament. Therefore, the ACF's guarantee function has never been used.

Overall Performance, Satisfaction and Impact

The ACF financing, amounting to about UGX 280 billion (US$ 76.3 million), contributed to the expansion of credit in the agriculture sector. It also successfully mobilized additional funds of about UGX 270 billion (US$ 73.6 million) from the PFIs. The Facility provided long-term liquidity in the local currency, which is scarce in the Ugandan financial market. Indeed, it is considered to be one of the key binding constraints in providing long-term credit in the agriculture sector.

Given that there are several large lending institutions active in the agriculture sector, it can be expected that the ACF would play a more critical role. In fact, the ACF's share in the agriculture sector credit is negligible. Furthermore, its share in medium- and long-term loans seems to decrease even further as one-third of the ACF funds supported short-term grain trading, and another 20 percent financed smallholder farming activities. The ACF's NPLs are extremely small, which may indicate the limited use of the ACF credit for risky, but high-impact projects. There are several structural issues in the ACF that may prevent the PFIs from participating and actively lending to end borrowers. These include:

- **Extremely difficult loan write-offs:** The procedures for the loan write-offs are long and involve high-level governmental bodies. Since the inception, no loans have been written off despite the tangible risks in agriculture lending. This seems to create a strong incentive for PFIs to use the ACF for well-established and credible borrowers. The exceptionally low NPL ratio is evidence of this tendency.
- **Interest rate cap of 12 percent for on-lending:** The cap is significantly lower than the market lending rate and does not allow PFIs to cover its cost of funds, operational expenses, risks, and profit margins. Providing longer-term loans for new projects is riskier than other lending opportunities and 12% seem to be too low for PFIs. Anecdotal evidence suggests that some smaller banks refrain from accessing ACF due to the interest rate cap.
- **Role of the Bank of Uganda:** The BoU manages the ACF and appraises every loan application from the PFIs. Some banks stated that this caused some delays in the past, although the MoA states that the BoU would release the funds within 14 working days of the receipt of applications with the relevant supporting documentation. In addition, its marketing activities for potential end-borrowers, especially smallholder farmers, may raise expectations that cannot be met due to the above-mentioned structural issues.

Key Lessons Learned

- Long-term credit lines can be effective tools to facilitate long-term loans in the agriculture sector. They are suitable, especially for a county like Uganda where multiple financial institutions are lending in the sector and the lack of long-term liquidity is evident.
- However, the additionality of such a credit line must be monitored and assessed through a robust monitoring and evaluation mechanism. Although the Bank of Uganda and the ACF maintain a high level of transparency that has enabled this kind of case study, an additional assessment is warranted — especially at the

level of end borrowers. This would help to show the real impact of the facility.

- Credit lines need to be carefully designed and structured to effectively incentivize lenders and end-borrowers. As noted, some rules and procedures in the ACF seem to deter the PFIs from proactively accessing the subsidized credit that might otherwise be very attractive. The policymakers need to focus on the primary objectives and carefully design financial instruments, such as credit lines.

4.4 FairTrade Access Fund

Background and Overview

The Fairtrade Access Fund (FAF) is an impact investment fund that provides trade finance, working capital and long-term lending to smallholder organizations and agribusinesses in Latin America and Africa. Although impact investment funds for microfinance, SME finance and, to a much lesser extent, agricultural finance are relatively common, very few have a focus on investing in smallholder organizations and in providing long-term finance.

The founder's objectives for the FAF are:

- Contributing to the development of a **fair and sustainable agriculture** sector.
- Breaking the cycle of agrarian poverty by providing developmen**t financing for smallholder farmers**.
- Strengthening portfolio companies through effective **technical assistance**, thereby allowing them to provide better services and reach more smallholders.
- Providing a **fair return to investors**.

The FAF is managed by Incofin Investment Management (Incofin). It is a Belgian Impact Fund Management Company that manages and/or advises nine impact investment funds with about US$ 1 billion in assets under management. The FAF and AgRIF, an investment fund managed by Incofin, are focused on agricultural impact investment funds, whereas others invest in microfinance and SMEs. Some of the funds invest through debt, and others invest through both debt and equity. Several of the funds have associated technical assistance facilities for supporting investee clients and/or for special initiatives, such as impact assessments.

Description of FairTrade Access Fund

The FAF was founded as a debt fund in 2012 for smallholder producer organizations and agri- SMEs related to small producers. It had a specific mandate to assist smallholders and their organizations with operational finance, as well as transformational growth and development. As such, it was designed with a specific covenant to have 40 percent of its portfolio in long-term loans within the initial two years and 50 percent after eight years. The founding partners, FairTrade International, Grameen Foundation, German Development Bank (KfW), and INCOFIN, created this requirement to encourage investment in new technologies, equipment, and processes, as well as conservation and perennial crop improvements, such as smallholder plantation upgrading.

Funding for the FAF comes from its Class A founding stockholders and additional equity investors, Class B debt stockholders and additional seasonal credit line and loans, plus retained earnings. At the end of 2019, it included Class A equity shareholders (US$28.8 million), Class B subordinated debt shareholders (US$15.6 million), and debt securities (US$15.7 million) for a total of US$60.0 million in capital. All FAF investors, with the exception of commercial banks providing seasonal credit lines, have an impact focus with dual expectations of supporting smallholders and earning a lower than commercial profit over a longer-term investment holding. The FAF Board consists of equity investor representatives and an independent board chair. The investment committee has both a mix of independent and investor members.

The FAF's investment operations have been successful and it has grown from investing US$0.5 million in 2012, when it started, to US$88.0 million for 49 new loans in 2019. Sixty-three million dollars was disbursed throughout the year, with US$56.4 million under investment at the end of the year. Despite its achievements, the FAF has consistently had difficulty in achieving its long-term financing goal, originally set at 40 percent of loan volume and targeted for the first five years. Eventually this covenant, defined by the FAF as a loan duration of up to 5 years, was reduced to 30 percent. The 12-month rolling average measurement for long-term lending was 28 percent of its investment portfolio at the end of 2019. The largest portion of the FAF portfolio, 61 percent, is in trade finance, with working capital loans comprising the remainder of 11 percent. The number of loan transactions included 54 finance transactions, 8 working capital loan transactions, and 21 long-term loan transactions. Eighty percent of the portfolio and 88 percent of the loans are in Latin America, with 20 percent of the portfolio and 12 percent of the loan transactions in Africa. The highest country exposure is in Colombia at 18 percent, followed by Honduras at 13 percent, and Ecuador and Bolivia at 12 percent.

The economic, governance and often technical capacity of smallholder producer organizations or their local SME processor/ trader organizations is insufficient for long-term commitments in many cases; in other cases, their lack of collateral prohibits a long-term loan from being approved by the fund. Trade finance arrangements generally do not require fixed collateral, and they can be financed more easily using the backing of buyer contracts from reputable companies. It is important to note that a majority of the FAF's long-term loans started with short-term or trade finance arrangements. Once the parties were comfortable working together, they began to make longer-term investments.

The FAF works primarily with smallholder farmers and their organizations and/or agricultural producer/trader SME exporters who have a strong commitment to sustainable development. It invests in fair trade and sustainable certified organizations that have gone through a strict screening process based on financial, social and environmental performance. These investees include 35 producer organizations (38 percent of the portfolio); 35 agri SMEs/processors/exporters (39 percent of the portfolio), and more recently, 6 agricultural-focused microfinance institutions (23 percent of the portfolio). The inclusion of up to 30 percent of the FAF's investments in agri-MFIs allows the FAF to have greater stability due to diversification, while also reaching smallholders who may not have organized producer organizations. The Fund can invest in non-certified agri-businesses only when they are in the process of obtaining a fair trade or sustainable certification, or when they are engaged in "food security" crops — and only up to 20 percent of the FAF's portfolio. Through its Technical Assistance Facility (TAF), the FAF also can support smallholder farmers in meeting certification standards.

Eligibility criteria for investees include:

For agricultural SMEs (traders and processors)

- Source a majority of their **sales from smallholder farmers**.
- **Certified Fair Trade or have one of the other accepted sustainability certifications** (link to investment approach) OR source from suppliers that are certified.
- **Operational for 3 or more years.**
- **Positive earnings before interest, tax, depreciation and amortization (EBTIDA) for 3 or more years** (at least on average).
- **Financial projections showing a positive EBITDA** on average over the next 12 months.

For agricultural producer organizations

- **Certified Fair Trade or have one of the other sustainability certifications,** are in the process of becoming certified, or produce food-security focused crops for sale in local markets.
- **Legally registered as a producer organization** (Association or Cooperative).
- **Focus on smallholder farmers** (majority of members have < 5 hectares [ha] on average).
- **Operational for 3 or more years.**
- **Positive EBTIDA for 3 or more years** (at least on average).
- **Financial projections showing a positive EBITDA** on average over the next 12 months.
- **Audited financial statements or a commitment to being audited** as a result of working with the FAF.[20]

FAF's Long-term Financing Operations

The three loan products loans offered by the FAF are denominated in US dollars or in Euros in nearly all cases; if not, they are hedged to reduce currency risk. These products and their characteristics are shown in Table 6.

The repayment terms of long-term finance differ from trade finance and working capital loans in both tenor and flexibility of repayment, including grace periods. Most of the collateral for the long-term loans is conventional — immovable and moveable — thus limiting the demand since many organizations are not able to provide sufficient conventional collateral. Hence, the FAF loan volume in trade finance is much higher. The FAF's interest rates, as shown above, are similar to those of other impact funds. These rates have implicitly built in the relatively high levels of risk of impact investments in agriculture. Overall, the interest rates of the loans reflect the cost of the funds, as well as country and client risk. Long-term interest rates are marginally lower than those for trade finance, and working capital and long-term loans have a lower origination fee of one percent. This is an incentive and is due to the lower costs of administration.

Investment Process

The FAF investment process is relatively typical of investment funds and is similar for all types of loans, with additional scrutiny for forecasting and security of the long-term loans. The loan process consists of a series of steps, including origination, due diligence, risk review, investment committee approval, legal documentation, monitoring and reporting, and divestment. In comparison to some investment funds, the INCOFIN management requires a strict legal review of the investee organization. This can potentially delay the process, but it results in a stronger position in times of default. Roughly half of the loan proposals for financing will make it through the screening process of reviews to final closing and disbursement. However, one-third will not pass the review and due diligence stages. In addition, some loans approved are not disbursed or not fully disbursed for various commercial or risk reasons.

The FAF assesses financial and business information; as an impact fund, it also has as one of its goals to reach new clients who have not been financed by other funds, that is, to increase its impact additionality. This additional consideration requires more assessment and monitoring costs. In 2019, six of the 49 investment loans made went to new clients, where the FAF was their first investor.

The loan assessment and approval process takes into account the FAF covenants regarding exposure, which is calculated as a percentage of the average Fund's investment portfolio over the previous 12 months:

- Maximum exposure per country — 20 percent per country; or 30 percent for ones with large populations and a low-risk profile

[20] "Source: http://incofinfaf.com

- Maximum exposure per investee — 10 percent
- Maximum exposure per commodity, excluding coffee— 30 percent
- Maximum exposure to coffee — 40 percent
- Minimum exposure to long term loans — 30 percent (originally 50 percent)
- Fair trade or sustainable certification of producer groups — 70 percent
- Producer beneficiaries' average area of cultivation — less than 10 hectares.

Difficulties of Long-term Investment Financing and the FAF's Response

The FAF has normally met its exposure covenants without difficulty, with the exception of long-term finance. The FAF has found that there are several reasons for this difficulty. However, the two most important are the lack of suitable collateral by investees and the lack of a secure forecast outlook. Producer organizations, such as cooperatives, often cannot use their land as collateral. Furthermore, loans to such organizations are typically to the apex cooperative federation or entity, whereas their local cooperative or association members may often hold more assets and land. In times of difficulty at the apex level, these member associations are not accountable for apex losses. In fact, they can often abandon the federation and sell to a competitor, further weakening their apex institution.

A second factor that limits the FAF's long-term loans is that the long-term loan sizes are relatively small compared its other shorter-term loans. For instance, several FAF clients receive trade finance loans of US$1.5 million during their campaigns, whereas they only have a need for US$250,000 for a long-term loan to purchase specific machinery.

Long-term financing is subject to the inherent instability of the agriculture sector in terms of production and market prices, which are accentuated with longer term horizons. For

Table 6. Investment Products

Loan Highlights	Trade Finance	Working Capital	Long-term Finance
Repayment terms	< 12 months	< 12 months	Over 12 to 60 months; up to a 12-month grace period; annual or flexible payment
Guarantee	Sales contracts with reputable importers, using payment triangulation of contracts	Standard collateral and securities	Standard collateral and securities, with a minimum of 140 percent of the loan
Loan size	US$150,000 to US$3,000,000	US$150,000 to US$3,000,000	US$150,000 to US$3,000,000
Average loan size	US$855,000	US$361,000	US$769,000
Interest rate charged	7 to 11 percent	7 to 10 percent	6 to 10 percent
Investees	33	2	13
Current portfolio[a]	US$33,693,000	US$6,437,000	US$16,261,000

Source: INCOFIN
Note: Data are for 2019 or end of year 2019, unless otherwise indicated.
[a] A total of US$63 million was disbursed, representing 10 percent growth, with an outstanding portfolio of US$54.6 million.

example, coffee rust plagued Latin American producers and significantly affected the quantity and quality of the produce. Existing long-term obligations accompanied by trade finance caused several federations to suffer arrears, with some defaulting on their loans to the FAF. However, at a later point, coffee plantations needed to be replanted, resulting in a need for new long-term financing from the FAF.

The FAF board and management response to the long-term lending difficulties has included the following:

- **Combining of short-term and long-term financing.**
- **Providing long-term loans to organizations, such as agri-MFIs**, that have a credit portfolio directed at smallholder producers.
- **Promotion of best practice management, including the use of the technical assistance support** if warranted.
- **Encouragement of the use of crop and other insurance** by investees.
- **Promotion or requirement of strong sales contracts for investees, and the use of hedging** when possible.
- **Exploration of FAF portfolio insurance** (coverage from insurers for up to 90 percent of political and commercial risk for trade finance loans and 50 percent of losses for long-term loans, but **found to be uneconomic**).
- **Close monitoring of the investees,** including monitoring and comparing levels of productivity.
- **Use of a diversified portfolio among commodities and countries,** as well as the inclusion of non-commodity, specific agricultural investments through agricultural MFIs.

Although these responses have worked well over the five years of the FAF, they cannot guarantee success — especially with new, previously unforeseen risks, such as the value chain disruptions resulting from the COVID-19 pandemic.

Technical Assistance Fund

Through its Technical Assistance Facility (TAF), the FAF supports smallholder farmers in meeting the standards required to obtain and maintain organic, fair trade and/or other sustainable, responsible certifications (Box 18). Twenty-five percent of the FAF's Technical Assistance Facility projects are focused on obtaining certification. Some of the investees request support in strengthening their management systems, market development, climate adaptation, and other specific needs. The TAF also supports impact monitoring and impact studies.

Portfolio Performance and Assessment

The FAF has disbursed more than US$63 million to 57 investees in 2019, investing in 16 countries with its agriculture financing. During the year, 300,000 smallholder families received support through their organization. Of these smallholders, 238,000 cultivate less than 5 hectares, with the others averaging between 6-10 hectares each. An estimated US$102 million in value was created and over 3,000 permanent jobs were supported by the partner agricultural and SME activities.

Box 18. Fairtrade Access Fund Technical Assistance Facility

Many of the FAF's current and potential investees are small producer cooperatives. The FAF, as well as other impact investors, finds that cooperative governance is often the most limiting factor to success for producer cooperatives and consequently loan repayment. To bolster capacity in this area, the TAF provides both support and guidance, including the development of a "Cooperative Corporate Governance Manual" for Boards of Directors, Supervisory Boards and management.

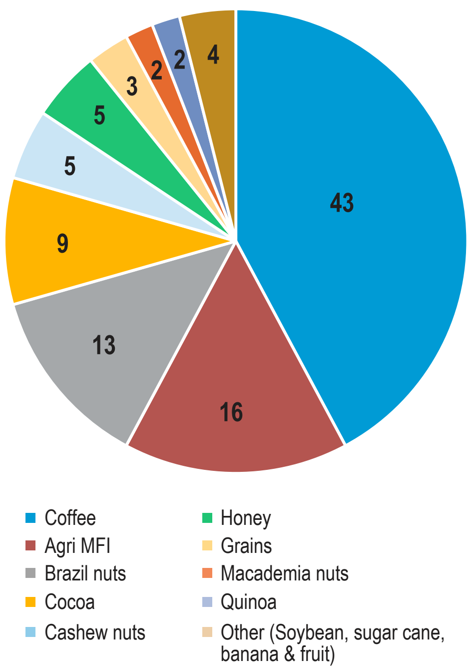
Source: http://incofinfaf.com/publication/good-corporate-governance-toolkit-for-producer-cooperatives/.

The FAF's main investments are in coffee and major export commodities; however, it has continued to diversify its portfolio, as depicted in Figure 20. In 2019, investments were made to support 16 different commodities and their value chains.

Maintaining portfolio quality is an ongoing concern. Despite careful due diligence and monitoring, INCOFIN's management cannot assure favorable weather conditions, protect against pest and disease attacks, and or prevent commodity price drops. The overall portfolio in arrears over the last four years has varied from 0 to 7 percent, with write-offs averaging 5.8 percent a year. In 2019, net loan impairments were US$797,000, representing 1.5 percent of the outstanding portfolio. The FAF had a net profit of US$985,000, representing a 2.1 percent return to shareholder equity. In comparison to the 12 investment fund managers of the Council of Smallholders Agricultural Finance (CSAF), the lending sector composition and loan sizes were similar. However, the arrears of other CSAF members are higher at 7.4 percent in 2018. (CSAF 2020)

Long-term financing requires long-term, stable sources of funds. As a precaution, the FAF requires at least one year's advance notice of divestment by

Figure 20. Investment by Value Chain



Source: Incofin.
Note: MFI= microfinance institution
Total investments = 102.

Box 19. Perunor Long-term Loan for Specialty Coffee Development

Perunor SAC is a Fairtrade certified coffee exporting company. It sources from over 2,000 producers located in the coffee-growing regions of northern and central Peru. The company has developed a strategy for differential coffees to increase its competitiveness and profitability by focusing on high-quality coffee.

In 2019, the FAF provided a LT loan of US$250,000 to support the creation of an anchor farm, which would grow special coffee varieties. The long-term loan is to plant 40 hectares of high-quality coffee seedlings, with the goal of establishing the best high-quality coffee varieties that can flourish in the northern coffee regions. This project, entitled "Programa de Manejo de Cultivos de Cafes Finos" aims to test the best coffee varieties, train its producers on best practices for quality production and productivity, as well as post-harvest processes for improving quality.

Over the longer term, the smallholder producers will learn improved growing techniques that will increase their incomes, improve their yields, and support better and more sustainable farming techniques.

Source: Incofin.

its core investors. It is also required to maintain a 15 percent liquidity reserve, from which it can pull funding for exiting investors. Because of the seasonality of investment requirements, a call-down line of credit is used to provide the liquidity cushion while also maintaining the optimal investment use of its funds. The FAF's mix of short- and long-term investments also contributes to its flexibility to make adjustments in meeting shareholder obligations.

Overall Performance, Satisfaction and Impact

INCOFIN's medium-term impact objectives for the FAF include, but are not limited to:

- Improving the livelihoods of over 500,000 smallholder farmers
- Generating over 10,000 permanent jobs
- Supporting over 2 million hectares of sustainably cultivated land
- Disbursing over US$320 million (for over 530 loans).

Impact is measured rigorously using Incofin IM's proprietary "Impact Methodology", utilizing a comprehensive social and environmental audit (via the Incofin tool: ECHOS 2.0©). This tool assesses the investment's alignment with the United Nations Sustainable Development Goals (SDGs). It produces a final score critical to investment evaluation: organizations with score below 55 percent are not eligible for FAF funding. Dimensions and weight include: a) mission fairness and transparency, b) outreach and access, c) quality of member or supplier services, d) human resources and labor management, and e) environmental responsibility.

The ECHOS tool, an impact measurement employed by Incofin, measures the level of change in productivity by the small producers. The FAF found that a 10 percent increase in a producer organization member's productivity meant an incremental income of US$250 per farm family.

Key Lessons Learned

Managing an agricultural finance portfolio requires solid portfolio diversification to mitigate risks associated with crops, countries, and so on. The FAF's maximum exposure limits helped it to build a solid and well-diversified portfolio.

Knowing and "walking with" the investee customers is important to increasing understanding, trust and transparency, while also alerting all concerned to future needs and issues. Despite the fact that the FAF has strong procedural requirements (including strict legal aspects), this rigor has helped its customers to improve their businesses over time. For instance, the FAF has been quite exigent in requiring its clients to improve their solvency by contributing part of their net results into special reserves — a practice that very few other impact lenders have adopted.

Innovating across time is required, such as adapting its securities to diverse loan circumstances. Also, in many jurisdictions, the FAF covers its loan operations with moveable assets.

Despite the flexibility of the FAF regarding securities, loan security is still a limiting factor for many long-term loans that support smallholders. This is because producer groups, especially cooperatives, as well as many agricultural SMEs do not have sufficient, quality, and/or marketable collateral that can be used for loans. Also, trade contracts have limited value for long-term lending.

Long-term financing faces additional challenges compared to short-term finance. In order to address these, the FAF and INCOFIN's management team have learned that:

- **Strong economic assessment and market trend forecasting** is required.
- **A strong legal review** is important.
- **Strong governance** is also key, including using the TAF to strengthen capacity if needed.

The FAF fund capital structure allows it to tailor the terms needed for a long-term portfolio. Class A shareholders have a minimum 7-year lock-up period. In addition, FAF has shareholders who are committed to investing with a "double-bottom line" of impact. They expect modest or lower returns and are willing to stay with the FAF over time.

International impact investment funding is often not the least expensive source of capital, especially in countries with many government subsidized plans. The value of using long-term funding from the FAF or other impact funds depends to a large extent on the additionality of the FAF resources, in terms of its management, technical guidance and support, stability of financing, as well as its ability to help the investee attract additional sources of funds. Some FAF investees also have local funding relationships with local banks, but their funding needs surpass what they can provide. One of the main reasons is that commercial banks are still assessing their investees based on collateral rather than on the basis of cash flow projections, the investee's business model and the real repayment capacity. These banks often do not properly understand these businesses. Thus, they do not finance them properly.

4.5 BANAGRO — Chile

Background and Overview

Empresas Sutil, one of the largest agro-industrial groups in Chile, is a conglomerate that produces and exports fruits and wines. Through its subsidiary, COAGRA, it also stores, processes and commercializes grains. It also sells agricultural inputs, machinery and hardware, as well as veterinary products, seeds and food for animal use.[21] COAGRA acquired its current legal status as an incorporated firm in 1996, but its origin goes back to the 1960s, when two farmer cooperatives were established, namely the *Cooperativa Agrícola de Graneros Ltda*. and the *Cooperativa Agrícola y Ganadera O'Higgins Ltda.* This history provides a long-term connection to a large base of farmers, who were first members of the cooperatives and are now clients of COAGRA. It also introduces a service-oriented approach that was later enhanced in 1995 with the arrival of the Sutil Group, first as a minority investor in COAGRA and, then in 2005, as the majority owner.

BANAGRO was created in 2011 by COAGRA, which owns 97 percent of its equity. By doing so, COAGRA took a step further in formalizing and professionalizing the credit service that was being offered to its clients. This is an important innovation, as throughout the world, input and machinery suppliers usually offer credit to farmers. However, most often, it is done without all the formalities and technicalities that specialized financial organizations apply for credit analysis and the rest of the credit process. Further, BANAGRO's linkage with the Sutil group allows for a holistic risk management approach to lending activities.

BANAGRO's overall objective is to solve the farmers' financing problems through tailor-made products for the agricultural sector, taking advantage of the knowledge acquired from the Sutil Group. The company determines the financial needs of small and medium agribusinesses, and provides them with financial services conceptualized and designed for farmers.

More specifically, BANAGRO, highlights its value proposition based in four elements:

1. **Technical assistance.** BANAGRO facilitates technical assistance and training programs to support the formalization and institutional strengthening of smaller agribusinesses. This

[21] For further details see http://www.empresassutil.cl and https://coagra.cl.

is accomplished through alliances with various organizations, particularly Fundación GTT, which established and coordinates agriculture producer groups.[22]

2. **Understanding and knowing the agricultural sector.** For example, an annual crop is different from a floriculture product and the particularities of greenhouse agriculture. Also, growing a table grape differs from others used for wine production. BANAGRO understands the reality of every kind of agricultural activity and each farmer.

3. **Flexibility.** Banks offer standard products, leasing for example, with monthly repayments for the farming of annual crops. Diversified farmers tend to have several annual crops. By contrast, BANAGRO adapts loan repayments to the client's needs.

4. **Cultural and physical closeness to farmers.** BANAGRO's executives are from farming families or have a degree from an agricultural related field. Further, they are all from the regions where they work. This facilitates communications and fosters empathy with farmers. Moreover, BANAGRO'S offices have a large outreach, covering six out of 16 regions,[23] plus the metropolitan area of Santiago. Thus, they service approximately 80 percent of Chile's agricultural GDP.

Governance

The Group's agricultural and industrial expertise is evident in the composition of BANAGRO's board, which is headed by Juan Ignacio Sutil, the founder of Empresas Sutil. He is an agro-industrial businessman with a deep expertise in the agricultural, commercial and industrial sectors. Other members of the board include the General Manager of Empresas Sutil, and board member in the various firms of the group; a fruit grower linked to COAGRA from the early days, when it was still a producer cooperative; a long-time General Manager of COAGRA; and a director with experience in capital markets. Thus, the board members are highly involved. In addition to the monthly board meetings, they also participate in four committees, namely credit, financial, administrative and normalization. The normalization committee analyzes credit operations on the "watch list" or operations that require a loan extension or restructuring. The committees have one or two board members, and they meet either twice a week (credit), or monthly (other committees).

BANAGRO initially operated with the organization's liquid resources, but now it heavily relies on the short-term credit lines from almost all commercial banks operating in Chile, which cover about 90 percent of its lending portfolio. Further, it has a longer-term "green credit line" from IDB Invest. BANAGRO is registered as an issuer of publicly listed securities. Under that condition, it is supervised by the *Comisión para el Mercado Financiero* (CMF), Chile's financial regulator. BANAGRO received an authorization for an issuance of securities up to US$12.6 million, but the allocation has not yet been used. It has a BBB rating from an international risk rating agency and an A- from a local rating firm.

Case Description

The target markets for BANAGRO are small and medium agribusinesses that encompass farmers and firms whose main income-generating activity is agricultural in nature, including services, such renting a tractor or a harvester. Small and

[22] GTT is the Spanish acronym for Technological Transfer Groups, a private sector initiative. A GTT is comprised of 10-15 agricultural producers from homogenous agro-ecological zones, with similar productive orientations and common socioeconomic conditions. They meet monthly to share experiences and to jointly analyze the development of their firms. See: https://www.gtt.cl/

[23] Chile is divided into 16 regions: 1. Aisén del G. Carlos Ibáñez del Campo, 2. Antofagasta, 3. Arica y Parinacota, 4. Atacama, 5. Biobío, 6. Coquimbo, 7. La Araucanía, 8. Libertador General Bernardo O'Higgins, 9. Los Lagos, 10. Los Ríos, 11. Magallanes y de la Antártica Chilena, 12. Maule, 13. Metropolitana de Santiago, 14. Ñuble, 15. Tarapacá and 16. Valparaíso.

medium farms represent around 70 percent of agricultural producers in Chile. BANAGRO determined that there was an unsatisfied demand in these market segments. However, it should be noted that subsistence farming has historically received financial support from the Corporación de Fomento de la Producción (CORFO) and the Instituto de Desarrollo Agropecuario (INDAP).[24] The large formal agricultural firms have direct access to the banking sector or are part of corporate groups that are already on the radar of the banks.

BANAGRO was initially focused only on servicing COAGRA's clients, but it later broadened its operations to serve other small and medium agribusinesses. It now has its own sources of business generation, mainly as a result of strategic alliances with the main agro-industrial actors in the country. These include tomato industrial processors, local and international exporting firms, as well as dealers of agricultural tools, tractors and machinery in general. BANAGRO's client base consists of the following:

- Clients of the agro-industrial firms of the Sutil group: BANAGRO finances small- and medium-size farms that sell their products to processing and exporting firms of the Sutil group (35 percent of the client base).
- The Sutil group maintains 1,500 hectares of farms for fruit production such as blueberry and vineyards (10 percent).
- Non-related agribusinesses. These may be farms (selling their production to processors and exporters other than the Sutil group), and suppliers of services to farms (that purchased their machinery from vendors other than the Sutil group) (55 percent).

Fruit growers and annual crop farms, with over 100 and 500 hectares, respectively, are considered relevant farmers by the banking system, and they have access to bank financing. However, clients of BANAGRO are mostly smaller farms with an annual income of between US$ 90,000 and US$ 5 million. They typically engage in:

- **Fruit growing,** such as table grapes and dry fruits, with farms of around 30 to 100 hectares.
- **Annual crop production,** such as grains, with farms of around 250 hectares.
- **Service provision,** such as renting of tractors and harvesters.[25]

BANAGRO offers its clients a series of credit products, such as contract financing,[26] factoring[27] and guarantee loans (for grain or wine inventories). There is also a type of community-targeted loan, that is used for financing local irrigation associations (asociaciones de canalistas). They receive support from the state for the construction of irrigation infrastructure. BANAGRO provides both, a kind of bridge loan, before the state's funds arrive, and administers the construction project liquidity.

Additionally, medium- and long-term financing, for both clients and non-clients of COAGRA is conducted through leasing, chattel loans and reconversion loans as follows:

[24] CORFO is a state agency that promotes entrepreneurship, innovation and competitiveness (see https://www.corfo.cl). INDAP is also a state agency promoting economic, social and technological development of small rural producers (see http://www.indap.gob.cl/indap/qu%C3%A9-es-indap).

[25] Service providers own small farms. Thus, they have excess capacity with their tractors or other types of agricultural machinery, so they offer their services to other farms.

[26] This type of contract, known in Chile as a *corto*, anticipates the income flows of an agreement between a farmer and an agro-industrial firm, exporter or processor. The rights are transferred to BANAGRO, with the guarantee of the crop. The agro-industrial firm liquidates and pays BANAGRO.

[27] Factoring may be national or international. The objective is to anticipate payment of receipts or accounts receivable. There is a web-based digital marketplace (from Innova Factoring, a firm based in Perú), where clients connect and cede the receipts to BANAGRO. The latter will pay those amounts to the client with a discount that operates as a commission for the service.

- **Leasing:** Leasing is usually used for purchasing tractors and agricultural machinery, such as harvesters, anti-frost towers, and equipment for irrigation and protected environments (for example, greenhouses). BANAGRO has alliances with the main dealers of such equipment, including repurchase agreements. For these contracts, there is a required down payment of about 20-25 percent.
- **Chattel loans:** A medium-term loan for investing in agricultural machinery, pick-up trucks or any other type of truck, with a maximum four-year tenor and the borrower appearing as owner from the start.
- **Reconversion:** This alternative product is used for the purchase of assets, financing of replanting or other investments needed for the development and growth of the firm. In this line, a recent expansion of BANAGRO's long-term financing occurred with its green loans. For example, these may be used for the purchase of sustainable irrigation equipment or the reconversion of orchards. This loan product has a tenor of up to five years, as detailed in the following section.

BANAGRO Lending Operations

The loan applicants are required to report their agricultural and financial flows, following a standard guideline developed by BANAGRO. The application must include the existing financial obligations which are checked against a private credit bureau that maintains default information. In certain circumstances, the farmers are asked to submit a certification of the outstanding balance with other lenders.

BANAGRO established a standard appraisal mechanism that enables swift loan approval. At the field level, BANAGRO operates from COAGRA's 14 branches, with a team of nine commercial executives, five of whom are in charge of two branches. Most branches have risk executives. These commercial and risk executives are referred to as "binomials". The risk executives visit all the clients, gather information and load the data to a software program that produces a report. Based on the report, the two executives discuss and decide on the loan's conditions. The next step is the analysis by the credit committee. When the loan is approved, the digital minutes of the committee are duly signed by all participants with electronic signatures. This document is sent to the legal staff in order to conduct a study of the incorporated firm requesting the loan and verifying the legal representative. Upon completion, the client signs using a smart phone or computer. The signed contract is then sent to a notary public for the signature certification, which requires accessing the *conservadores de bienes raíces* (real

Table 7. Loan Conditions

Condition	Working Capital	Leasing	Reconversion
Maximum tenor (months)	12	60	60
Maximum loan size (US$)	1,280,712	1,280,712	1,280,712
Interest rate (%)	13.2	15.0	12.0
Disbursement commission	0	0	0
Guranty	1.2 times	n.a.	1.4 times
Frequency of payments	Biannual /annual	Quarterly / biannual / annual	Annual

n.a. Not applicable
Source: BANAGRO

estate keepers), a manual procedure that may take up to 12 days.[28] On average, the whole process from analysis to disbursement takes 18 days, which BANAGRO plans to reduce to 15 days.

Loan conditions are described in Table 7. Medium- and long-term loans are for a maximum of five years. However, in practice, they are limited to four years, which is still longer than the annual working capital loans. The maximum loan size is UF 35,000,[29] which is equivalent to a little over US$1,280,000. BANAGRO does not charge any disbursement commission. However, if there is a mortgage, the legal

Box 20. Feedback from BANAGRO borrowers

Udo Kretschmer and Alessandro Comunian, Chilean farm owners growing high-value products, including walnuts, avocados and citrus, received long-term loans from BANAGRO. They financed the land preparation for walnut tree planting and deep wells and drip irrigation for the avocado production. BANAGRO identified these borrowers based on the insights from the Sutil Group companies, input providers, and buyers for these farms.

Loan Conditions and Characteristics

Crops	Walnut	Avocado
Duration	Up to four years (no grace period)	Up to five years (no grace period)
Repayment schedule	Adjusted according to crop cycles	
Interest rate	12 – 13.8 percent per year	
Loan security	Promissory note Contract with buyer	Promissory note

Source: Interview with the farm owners

What the farmers like about BANAGRO:

- *Understanding of agriculture*. BANAGRO's deep knowledge and understanding of the agriculture sector allows for renegotiations of loan conditions in case of unexpected events.
- *Accessibility.* The borrowers can easily access all the key BANAGRO staff, including the Chairman of the Board, to discuss their concerns.
- *Personal guarantees as collateral*. Promissory notes from the farm's owners are considered, particularly if they own the lands.

What the farmers do not like about BANAGRO:

- *Term mismatch*. The loan term is still too short compared to the project duration (8 years for walnut tree planting and 7-10 years for installing irrigation equipment).
- *High interest rate*. The lending rates are three times higher than those of commercial bank loans for non-agriculture projects.

[28] The *conservadores de bienes raíces* are private individuals, usually lawyers, in charge of keeping and updating real estate registries. There have been discussions about the digitalization of this process.

[29] The unidad de fomento (UF) is a reference currency used in Chile. As of June 14th, 2020, it was the equivalent of 28,711.73 Chilean Pesos (US$ 1 = 784.65 Chilean pesos).

fees will be charged to the client. Regarding security (for example, harvest or irrigation equipment), the value of the security ('guarantee' in the table) will have to be 1.2 and 1.4 times of the loan value for working capital and reconversion loans, respectively.

The flexible repayment reshedule is one of the distinctive features, and it is adjusted to the farms' cycle of agricultural activities. If the agribusiness has secondary sources of income, the borrower can make frequent interest payments and pay the principal at the end of the period. The repayment schedule takes into account the high concentration of the income received by farms between April and February. If required, for the financial stability of the borrower, there can be a lump sum payment for principal and interest. Box 20 describes experience of BANAGRO borrowers.

The total credit portfolio of BANAGRO was US$ 34.5 million, with 364 operations as of 2019, 50 percent of which were medium- and long-term loans. Medium- and long-term loans have the maximum and minimum average loan sizes, with US$27,333 for leasing and US$ 363,171 for reconversion. The composition of the total loan portfolio by product type is described in Table 8.

Regarding loans disbursed during 2019, there was an important contraction in leasing, with 3.8 percent of the total amount disbursed and 18 percent of the total number of loans disbursed. However, it maintained 50 percent share of the number of outstanding loans.

Table 8. Credit Portfolio by Product (US$)

Condition	Working Capital	Leasing	Reconversion	Factoring	Total
Gross outstanding loan portfolio	15,982,508	5,001,855	1,452,683	12,077,234	34,514,280
Number of loans	102	183	4	75	364
Average loan size	156,691	27,333	363,171	161,030	94,819
2019					
Amount disbursed in 2019	31,598,786	1,378,891	1,358,602	38,605,031	72,941,309
Number of loans disbursed in 2019	132	51	4	116	303

Source: BANAGRO
Note: These figures are as of December 2019.

Table 9. Evolution of Loan Portfolio 2017-2019 (Pesos)

	2017	2018	2019
Gross outstanding loan portfolio	21,975,543,000	24,133,625,000	25,842,222,256
% change		10	7
Number of clients	376	330	364
% change		-12	10

Source: Author's calculations with data from BANAGRO.

Credit Portfolio Performance and Assessment

BANAGRO's credit portfolio showed a notable 17.6 percent growth between 2017 and 2019 for an annual average rate of 8.8 percent (see Table 9).[30] The number of clients, however, contracted in 2018 by 12 percent, and mostly recovered in the following year. The gross outstanding portfolio shows a better performance, in part benefiting from the reconversion loans disbursed in 2019, which had an average size of over US$360,000. This was much higher than the other lending products, as highlighted in the previous section.

The non-performing loan ratio was 1.7 percent (PAR 90) in 2019, as shown in Table 10. A more sensitive indicator is the PAR90 plus the extended and restructured loans, which increases the figure to 3.2 percent. This still seems reasonable, considering that the whole portfolio is directly or indirectly linked to agricultural activities. The figures show a volatility in the PAR90 and the extended and restructured loans. However, the data does not indicate a growing trend, either in the PAR90 or the adjusted PAR90.

A fundamental strength of BANAGRO's credit-risk management is the linkage between the financial and non-financial activities since 45 percent of its clients are shared with COAGRA. This allows BANAGRO to have a thorough understanding of the clients' farming activities and their performance throughout the year. It also facilitates a payment collection arrangement at the source of the income generation. The risk management is based on the coordinated work between the commercial and the risk executives who diligently evaluate and monitor the agricultural and financial performance of all clients. Further, the normalization committee has a "watch list" of the borrowers that require a loan extension or restructuring.

Overall Performance, Satisfaction and Impact

BANAGRO is one of the few financial organizations in Chile, if not the only one, to fully specialize in directly servicing the agricultural sector. Direct lending to small- and medium-size agribusinesses is not common in the Chilean regulated banking system. These financial intermediaries do, however, provide second-tier financing to BANAGRO. It is based on sound operations and its affiliation with a large agro-

Table 10. Loan portfolio quality (US$)

	2017	2018	2019
US$			
Loan portfolio	35,7478,122	34,736,136	34,514,280
Non-performaing loan portfolio	625,666	313,856	579,850
Extended & restructured loans	97,549	976,340	541,507
%			
PAR90	1.8	0.9	1.7
Extended & restructured loans	0.3	2.8	1.6
PAR90+extended & restructured	2.0	3.7	3.2

Source: Author's calculations with data from BANAGRO.

[30] Portfolio figures in Table 9 are presented in Pesos to avoid the misleading conclusions that would result from a conversion to US$, as the Chilean currency depreciated 13 percent and 7.8 percent in 2018 and 2019, respectively.

industrial group. BANAGRO has linkages with the commercial and agro-industrial segments of the Sutil group and other players in Chile's large and developed agro-industrial sector. These alliances provide viable lending opportunities where borrowers' creditworthiness can be determined based on their business relations with leading actors in agricultural value chains (González-Vega 2006).

Opportunities

There are emerging opportunities for BANAGRO to further expand its long-term financing, including: (i) investments in response to climate change that includes introducing new crop varieties; (ii) the introduction of advanced technologies to agribusiness SMEs; and (iii) investments in sustainable development, such as a special irrigation equipment for efficient water usage. These are high-cost investments that require long-term loans in order for the projects to be profitable.

Future Challenges

Despite these strengths, BANAGRO sees several areas for improvement and challenges ahead.

- **Long-term, second-tier financing:** BANAGRO relies heavily on short-term credit lines from commercial banks to finance their lending operations, including long-term loans. The exception is the 5-year Inter-American Development Bank (IDB) loan for green reconversion credit. Additional long-term financing is clearly required to minimize the asset-liability mismatch.
- **Information management:** BANAGRO believes it could better utilize the information about agricultural production and specific farmer performance within the Group, as well its knowledge of the "binomial" of each client. This would allow for more effective credit scoring, and speedy credit appraisal.
- **Digitalization:** For example, BANAGRO has introduced drones to capture images of farms with 200-300 hectares and geo-referencing of the fields. However, most of the monitoring is still conducted manually. There are ample digital tools, including satellite tools for monitoring the growth of crops and climatic conditions, that can be combined with the data BANAGRO already produces.

Lessons Learned

The case of BANAGRO offers several valuable lessons regarding institutional structure, risk management, and long-term agricultural financing.

- **Formalization matters.** Evolving from a credit department of an input supplier into a specialized agricultural-oriented credit firm is a huge undertaking, and it has paid-off in terms of operational soundness as a financial institution.
- **Holistic risk management.**
  - **Alliances with leading actors in the agro-industrial sector** allows BANAGRO to identify creditworthy borrowers and secure loan repayments.
  - **Prudent loan appraisal and monitoring mechanism:** The oversight of borrowers' operations by risk executives is a vital component in the loan appraisal and monitoring process. If required, the normalization committee closely monitors the borrowers.
  - **Tailor-made payment schedule:** A flexible payment schedule, adapted to the characteristics of each agribusiness, is critical in agricultural lending.
  - **Good governance:** A strong board, including a set of well-integrated and active executive committees, is crucial for BANAGRO. A combination of agricultural and financial profiles is fundamental in governing bodies and administration.
- **Importance of long-term liquidity:** BANAGRO currently finances its long-term loan assets with short-term credit lines, causing a maturity mismatch in its balance sheet. Access to long-term liquidity is urgently required to reduce the risk and expand long-term financing in response to growing business opportunities.

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Annex:
Stocktaking List of Institutions

Banks – Commercial Banks			
Name	**Country**	**Name**	**Country**
Afriland First Bank	Cameroon	HBL	Pakistan
Banco LAFISE Bancentro	Nicaragua	ICICI Bank	India
Bank Alfalah	Pakistan	National Microfinance Bank	Tanzania
Centenary Bank	Uganda	dfcu Bank	Uganda
DFCC Bank PLC	Sri Lanka	Opportunity Bank	Uganda
Equity Bank	Kenya	Sidian Bank	Kenya
First Bank	Nigeria	Zanaco Bank	Zambia

Banks – Development Banks			
Name	**Country**	**Name**	**Country**
Agencia Financiera de Desarrollo (AFD)	Paraguay	Land and Agriculture Bank	South Africa
Agricultural Finance Corporation	Kenya	Land Bank of Philippines	Philippines
Agrobanco Peru	Peru	National Bank for Rural and Agricultural development	India
Agrobank	Malaysia	Rural Development Bank	Cambodia
Banco Agrario de Colombia	Colombia	Small Industries Development Bank	India
Banco de Desarrollo de El Salvador	El Salvador	Sudan Agricultural Bank	Sudan
Bank of Agriculture and Cooperatives	Thailand	Uganda Development Bank	Uganda
Bank of Industry	Nigeria	Vietnam Bank for Agriculture and Rural Development	Vietnam
Bhutan Development Bank	Bhutan	Vietnam Bank for Social Policies	Vietnam
FIRA	Mexico		

Investment Funds			
Name	**Target Region**	**Name**	**Target Region**
Acumen Fund	Multi-region	India Agribusiness Fund 1 & 2	Asia
Africa Agriculture Trade and Investment Fund	Africa	Injaro Agricultural Capital Holdings Limited	Africa
Africa Seed Investment Fund	Africa	Lignum Forestry Fund	Latin America
African Agricultural Capital Fund	Africa	Moringa Fund	Multi-region
African Agriculture Fund	Africa	New Hope Agriculture and Food Fund II	Asia
African Agriculture Fund SME Sub-fund	Africa	Oikocredit	Multi-region
African Food Fund	Africa	Olea Capital Fund	Africa
AgDevCo	Africa	Omnivore Partners India Fund 1 & 2	Asia
Agri-Vie Agribusiness Private Equity Fund I	Africa	Pampa Agribusiness Fund	Latin America
Agribusiness & Food Fund	Latin America	PEAK II	Africa
AgRIF	Multi-region	Phaunos Timber Fund	Multi-region
Alterfin	Multi-region	Rabo Rural Fund	Multi-region
Althelia Climate Fund	Multi-region	responsAbility Fair Agriculture Fund	Multi-region
Annona Sustainable Investment Fund	Multi-region	Root Capital	Multi-region
Aqua Capital	Latin America	SEAF India Agribusiness International Fund, SEAF India Agribusiness Fund	Asia
EcoAsia Southeast Asia Agriculture Fund	Asia	Shared Interest	Africa
Eco.Business Fund	Latin America	Small Farmers' Agri-Business Consortium	Asia
Fondo EcoEmpresas I and II	Latin America	SME Impact Fund	Africa
Fairtrade Access Fund	Multi-region	Tana Africa Capital	Africa
Fund for Agricultural Finance in Nigeria	Africa	Triodos Sustainable Trade Fund	Multi-region

GEF Africa Sustainable Forestry Fund	Africa	Voxtra East Africa Agribusiness Fund	Africa
Georgia Regional Development Fund	Europe	Southern Africa SME Fund	Africa
Grassroots Business Fund	Multi-region	Central Africa SME Fund and African Rivers Fund	Africa
Horus Food & Agribusiness Fund	Africa	Zeder Investment	Africa

Agribusiness Companies			
Name	**Categories**	**Name**	**Categories**
Agrivo International	Agribusiness	New Britain Palm Oil	Agribusiness
ARCO	Equipment	NWK Agri-Services	Agribusiness
Case International	Equipment	Olam	Agribusiness
Caterpillar	Equipment	Pt. ZTE Agribusiness	Agribusiness
Promofruits	Agribusiness	Starbucks	Agribusiness / retailer
EFTA	Equipment	Syngenta	Agribusiness
ECOM	Agribusiness	VegPro	Agribusiness
Fahari Biashari	Equipment	Yara International	Agribusiness
Fertica	Agribusiness	Yunnan Power Biological Products Group	Agribusiness
John Deere	Equipment		

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