

# Scaling Up Access to Finance for Agricultural SMEs Policy Review and Recommendations

OCTOBER 2011



**GPI**

Global Partnership  
for Financial Inclusion



**IFC**

**International  
Finance Corporation**  
World Bank Group

© **INTERNATIONAL FINANCE CORPORATION 2011. All rights reserved.**

2121 Pennsylvania Avenue, N.W.

Washington, D.C. 20433

Internet: [www.ifc.org](http://www.ifc.org)

The material in this work is copyrighted. Copying and/or transmitting portions or all of this work without permission may be a violation of applicable law. IFC encourages dissemination of its work and will normally grant permission to reproduce portions of the work promptly, and when the reproduction is for educational and non-commercial purposes, without a fee, subject to such attributions and notices as we may reasonably require.

IFC does not guarantee the accuracy, reliability or completeness of the content included in this work, or for the conclusions or judgments described herein, and accepts no responsibility or liability for any omissions or errors (including, without limitation, typographical errors and technical errors) in the content whatsoever or for reliance thereon. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries. The findings, interpretations, and conclusions expressed in this volume do not necessarily reflect the views of the Executive Directors of The World Bank or the governments they represent.

The contents of this work are intended for general informational purposes only and are not intended to constitute legal, securities, or investment advice, an opinion regarding the appropriateness of any investment, or a solicitation of any type. IFC or its affiliates may have an investment in, provide other advice or services to, or otherwise have a financial interest in, certain of the companies and parties (including named herein).

All other queries on rights and licenses, including subsidiary rights, should be addressed to IFC's Corporate Relations Department, 2121 Pennsylvania Avenue, N.W., Washington, D.C. 20433.

International Finance Corporation is an international organization established by Articles of Agreement among its member countries, and a member of the World Bank Group. All names, logos and trademarks are the property of IFC and you may not use any of such materials for any purpose without the express written consent of IFC. Additionally, "International Finance Corporation" and "IFC" are registered trademarks of IFC and are protected under international law.

# Table of Contents

List of Abbreviations	2
Acknowledgements	3
Introduction	5
Executive Summary	6
<b>CHAPTER 1 Agricultural SME Finance in Context</b>	<b>12</b>
1.1 Definitions and Segmentation	12
1.2 Basic Challenges in Agricultural Finance	18
1.3 Changing Paradigms in Agricultural Finance	19
<b>CHAPTER 2 Policies, Regulatory Framework, and Government Support</b>	<b>21</b>
2.1 Developing Country Specific Diagnostics and Strategies	21
2.2 Developing a Supportive Legal and Regulatory Framework	22
2.3 Designing Effective Government Support Mechanisms	32
<b>CHAPTER 3 Financial Infrastructure and Data</b>	<b>44</b>
3.1 Strengthening the Financial Infrastructure	44
3.2 Building Consistent and Reliable Data Sources	49
<b>CHAPTER 4 Capacity Building of Agricultural Finance Institutions and Their Clients</b>	<b>53</b>
4.1 Building Capacity of Financial Institutions	54
4.2 Building Capacity of Value Chains	56
4.3 Building Capacity of Farmers and Farmer Organizations	58
4.4 Innovative Instruments and Delivery Mechanisms	61
<b>CHAPTER 5 Conclusion</b>	<b>73</b>
<b>ANNEX I Grants to the Poor</b>	<b>75</b>
<b>ANNEX II Smart Subsidies and the Question of Fertilizer Subsidies</b>	<b>77</b>
<b>Bibliography</b>	<b>78</b>

# List of Abbreviations

<b>AFD</b>	Agence Française de Développement	<b>IFAD</b>	International Fund for Agricultural Development
<b>AFI</b>	Alliance for Financial Inclusion	<b>IFC</b>	International Finance Corporation
<b>AFRACA</b>	African Rural and Agricultural Credit Association	<b>IFRS</b>	International Financial Reporting Standards
<b>AGRA</b>	Alliance for a Green Revolution in Agriculture	<b>KfW</b>	Kreditanstalt für Wiederaufbau
<b>ATM</b>	Automated Teller Machine	<b>LSMS-ISA</b>	Living Standards Measurement Study-Integrated Surveys on Agriculture
<b>BMZ</b>	German Federal Ministry for Economic Cooperation and Development	<b>MDG</b>	Millennium Development Goal
<b>CABFIN</b>	Capacity Building for Rural Financial Institutions	<b>MFI</b>	Micro Finance Institution
<b>CBRO</b>	Community-Based and Resource-Oriented Organization	<b>MFW4A</b>	Making Finance Work for Africa
<b>CECAM</b>	Caisses d'Épargne et de Crédit Agricole Mutuels	<b>NBFI</b>	Non-Bank Financial Institutions
<b>CGAP</b>	Consultative Group to Assist the Poor	<b>NGO</b>	Non-Governmental Organization
<b>DFI</b>	Development Finance Institution	<b>PCG</b>	Partial Credit Guarantee
<b>DLL</b>	De Lage Landen	<b>POS</b>	Point Of Sale
<b>FAO</b>	Food and Agriculture Organization of the United Nations	<b>PPP</b>	Public-Private Partnership
<b>FBO</b>	Farmer-Based Organization	<b>RIAS</b>	Rabo International Advisory Services
<b>GIZ</b>	Gesellschaft für Internationale Zusammenarbeit (formerly GTZ)	<b>RSF</b>	Risk Sharing Facility
<b>GPFI</b>	Global Partnership for Financial Inclusion	<b>SME</b>	Small and Medium Enterprise
<b>GTZ</b>	Gesellschaft für Technische Zusammenarbeit	<b>UNCDF</b>	United Nations Capital Development Fund
		<b>VCF</b>	Value Chain Finance
		<b>WFP</b>	World Food Programme
		<b>WRMS</b>	Weather Risk Management Services

# Acknowledgements

International Finance Corporation (IFC) is the lead technical advisor to the G-20 Global Partnership for Financial Inclusion's (GPFI) SME Finance Sub-Group. This report was produced by IFC on behalf of the GPFI. The GPFI is the main platform for implementation of the G-20 Financial Inclusion Action Plan. The group engages partners from G-20 and non-G-20 countries, private sector, civil society, and others. It is chaired by the G-20 troika countries, currently Korea, France, and Mexico. The GPFI is supported by three implementing partners: the Alliance for Financial Inclusion (AFI), the Consultative Group to Assist the Poor (CGAP), and International Finance Corporation (IFC). [www.gpfi.org](http://www.gpfi.org)

The report "Scaling Up Access to Agricultural SME Finance: Policy Review and Recommendations" was developed under the overall guidance of Peer Stein (IFC) and Susanne Dorasil (BMZ). The working group team for the report, led by Ghada Teima (IFC) and Roland Gross (GIZ), comprised Heather Miller (IFC), Achim Deuchert (GIZ), and Susanne Schellhardt (GIZ). Panayotis Varangis (IFC) provided technical expert advice to the working group.

This report has been a collaborative effort with contributions from individuals at the following organizations: Agence Française de Développement (AFD), Alliance for a Green Revolution in Agriculture (AGRA), German Federal Ministry for Economic Cooperation and Development (BMZ), the Food and Agriculture Organization of the United Nations (FAO), Gesellschaft für Internationale Zusammenarbeit (GIZ), the International Fund for Agricultural Development (IFAD), Kreditanstalt für Wiederaufbau (KfW), Making Finance Work for Africa (MFW4A), Rabo International Advisory Services (RIAS), Stanbic Bank, Technoserve, United Nations Capital Development Fund (UNCDF), and World Bank.

The team would like to thank the World Bank-IFC internal peer reviewers: Rolf Behrndt, Gary Reusche, Bradford Roberts, Ernest Bethe, Damien Shiels, Ulrich Hess, Marc Sadler, Ajai Nair, and Diego Arias, as well as GIZ internal peer reviewer, Ariane Riemann.

Last, but not least, this work was completed under the leadership of the co-chairs of the G-20 SME Finance Sub-Group: Susanne Dorasil (Germany), Anuradha Bajaj (United Kingdom), Ayşen Kulakoglu (Turkey), and Christopher Grewe (United States).

This background report relies heavily on the following initiatives and papers, for which we extend special gratitude to the authors:

- *Rural and Agricultural Finance: Trends, Issues and Challenges*. Hoellinger, Frank. GIZ (2011 - forthcoming);
- *Policy Support to Agricultural Finance in Africa*. Roberts, Richard A.J. Paper prepared for the Making Finance Work for Africa Conference “Zipping Finance and Farming” (June 29-30 2011);
- *Managing Risk in Financing Agriculture*. Proceedings of the Expert Meeting Convened and Co-Sponsored by African Rural and Agricultural Credit Association (AFRACA), FAO, The Land Bank of South Africa, and the World Bank (April 1-3, 2009);
- *Subsidies as an Instrument in Agriculture Finance*. Meyer, Richard L. Joint Discussion Paper of the *Capacity Building for Rural Financial Institutions* (CABFIN) international network, including World Bank, BMZ, FAO, GIZ, IFAD, and UNCDF (2011); and
- *Stocktaking Background Study on Agricultural SME Finance*, RIAS on behalf of IFC.

# Introduction

The objective of the G-20 Work Stream on Agricultural Finance is to identify appropriate approaches to assess or reduce the main risks and costs that inhibit access to financial services in the agriculture sector in developing countries. Strengthening the productivity and capacities of agricultural small and medium enterprises (SMEs) and farmers through enhanced access to finance is at the core of this sub-group's focus. This work stream will contribute to and generate synergies with other pillars of the G-20 development agenda, particularly the pillars on *food security* and *private investment and job creation*. Based on a global stocktaking exercise, this report derives guidelines for policy and regulatory frameworks conducive to agricultural finance and consistent with the G-20 Principles for Innovative Financial Inclusion. These recommendations shall be used to create a roadmap for implementation. This paper is addressed primarily to those policymakers responsible for formulating, managing, and tending the agricultural financial system, but also targets donors and managers of rural financial institutions operating in the agricultural finance space.

This policy review and recommendations document is designed to elaborate on the recommendations of the G-20 SME Finance Sub-Group specifically as they relate to access to finance for agricultural SMEs. It is meant to contribute to the formulation of an agricultural SME finance policy framework, which shall be implemented by facilitating the development of concrete national action plans. In addition to the policy recommendations and background information supporting such policies, this paper will also briefly review promising approaches, including innovative financial instruments such as value chain finance, warehouse receipts, branchless banking, and index-based insurance schemes. It should be noted that this report exclusively covers issues specific to agricultural finance and only refers to other, more general needs for the agriculture sector's development where there are direct implications for financing.

Particular examples of innovative instruments are found in section 4. These are based on a background stocktaking report, which includes approximately 60 case studies, chosen according to scalability (potential for expansion), replicability (possibility to transfer to other regions and contexts), and sustainability (option to continue without external support). Each of the selected models demonstrates at least one of these criteria. The stocktaking is a non-exhaustive list of experiences and models but nevertheless is very comprehensive. The stocktaking report, with specific insights into the financing frameworks of the models, will be prepared in time for the G-20 Mexico Summit 2012.

# Executive Summary

Around the world, agriculture is and will continue to be a major building block in the achievement of the Millennium Development Goals (MDGs). Recent statistics show that agricultural production needs to increase by 70 percent by 2050 in order to feed the world, while demographic growth, climate change, and urbanization put pressure on available cultivable land. Three-quarters of the world's poor live in rural areas and more than 80 percent of them either directly or indirectly depend on agriculture for their livelihoods. Hence, in low income countries, the agriculture sector is vital for economic growth, as it provides about 60 percent of total employment and 20 percent of GDP. However, agriculture in developing countries is still characterized by low productivity; without a renewed effort to accelerate growth in the agriculture sector, few countries will be able to reach the MDGs, especially the goal of halving poverty and hunger by 2015.<sup>1</sup> Increased agricultural productivity can enhance food security, poverty reduction, job creation, and economic growth.

Therefore, this brings new attention to the issue of agricultural finance. After more than a decade of low recognition, international donors, politicians, and specifically the G-20 are putting a renewed focus on this topic. Within the financial systems development expert community, the debate on effective solutions to sustainably support agricultural development has been renewed. The issue of agricultural finance is frequently on top of the international development agenda. Now, with the triple shocks of the recent years — food, fuel, and finance — the urgency of food security has increased greatly and

created political pressure to act immediately. There is now broad support for more and better investments to increase agricultural production, to improve marketing of commodities, and to combat poverty.

However, there are no quick political fixes and the provision of sustainable financial services for agriculture has proven to be difficult. The past years have demonstrated that neither commercial banks nor the emerging micro-finance industry are willing or able to sufficiently meet the financial needs along agricultural value chains, leaving farmers and agricultural SMEs unserved in the so-called “missing middle.” There is a broad consensus that existing mechanisms for agricultural finance are not adequate and that we need to move to innovative and market-based approaches that are scalable and can reach a large number of beneficiaries.

By endorsing and promoting a set of key policy recommendations, the G-20 strives to help policymakers in the developing world focus their resources on creating the right environment for agricultural SME finance by designing country specific government support mechanisms. On the basis of the key lessons learned from the stocktaking and background exercises, these recommendations and a summary of key focus areas are outlined as follows:

## 1. Developing Country Specific Diagnostics and Strategies

Policymakers need to undertake a detailed baseline diagnosis of the supply and demand for agricultural

---

<sup>1</sup> Fan (2008)



finance at the country level, and engage in a dynamic process to continuously assess needs in the sector in order to develop strategies based on relevant information. It is useful to examine solutions for various categories of farmers and commodity sub-sectors, such as smallholders, commercial farmers, and agribusinesses, along with larger commercial farmers and corporate agribusinesses. Assessments to identify client needs (including savings, insurance, and other financial needs) and strategies to address this demand should be participatory processes, including stakeholders from agricultural organizations and private sector representatives. Such on-going evaluations must assess how agricultural finance policies are established, as well as whether they are properly implemented and effective in achieving stated goals and objectives.

## 2. Developing a Supportive Legal and Regulatory Framework

Coordination of policies intersecting both the financial and agriculture sectors is critical to facilitating access to finance for farmers and agricultural SMEs. The appointment of a single coordinating body as the advocate for agricultural finance can optimize policies that target farming as an economic enterprise to promote agricultural development through finance and investment. This high-level body can also reconcile and harmonize policies focused on objectives related to rural development, social support, and food security that are aligned with, but not necessarily the same as, policies supporting agricultural finance. Coordination is often necessary between the ministry of finance, the ministry of agriculture, the central bank, and the ministry of trade and commerce. Developing countries also require solutions to increase access to long-term, local currency funding for financial institutions as well as to promote equity finance in addition to credit. This issue is not specific to agriculture but influences overall financial flows to support sustainable growth in the agriculture sector.

Efficient and responsive credit services depend on a well-functioning judiciary system that provides objective decisions in a timely manner and with minimal

political interference. Legal enforcement of contract rights for creditors, farmers, and SMEs is important to strengthen value chain structures and facilitate finance to all market participants. Commercial contracts between actors in the supply chain represent an alternative collateral source to lenders, help mitigate risks for farmers and SMEs, and serve to promote value chain linkages, growth-oriented contract farming, and nucleus farm or out-grower schemes. Lease financing can benefit from improved rights for repossession upon default as well as tax laws that encourage utilization of leasing arrangements.

Under certain conditions, promoting secure forms of land tenure can be beneficial to stimulate productive farm-level investment and to allow producers to pledge land as collateral for obtaining finance. In the absence of long-term land-use rights, farmers lack incentives to grow through land expansion, productivity enhancements, and long-term investments, as well as sustainable and environmentally-friendly land use. Lenders may be more willing to finance operations in which they are able to take and enforce a charge over land, both in terms of larger loan amounts and longer terms. The move from usufruct to more permanent forms of tenure could be done with better systems of recording rights to land. Social and local legal considerations should be taken into account, including (among others) communal rights, sensitivity to local customs, and limiting speculative and external investment except when broadly beneficial to local communities.

Warehouse receipt financing, including the appropriate legislation, regulatory and supervisory oversight, and licensing of warehouses, represents an opportunity to lower vulnerability of farmers to unfavorable prices and conditions, reduce post-harvest losses, and increase the flow of credit into supply chains. A well-functioning warehouse receipt system can provide broad benefits such as permitting stored goods to be used as collateral; improving quality, control, and inspection of commodities; facilitating investments to increase and improve storage capacity and quality to reduce losses;

enhancing marketing within value chains; and supporting the establishment of commodity exchanges. Alternative systems based on collateral management agreements can provide viable solutions to inventory financing but also require relevant legislation, such as registration for movable collateral.

Effective organizational frameworks, such as cooperatives and other farmer-based organizations (FBOs), enable farmers to focus on commercial activities and participate in value chains. Governments need to provide an enabling environment and legislation supporting the development of cooperatives and other FBOs as economic enterprises. Cooperatives, as currently defined, operate under some inherent limitations, and other organizational options, such as informal associations of farmers and limited liability companies, in many cases may offer more appropriate organizational frameworks. A less hands-on approach when promoting cooperatives and farmer-based organizations would likely lead to better results in terms of ownership, profitability, and sustainability. In some countries, a revised legal framework permitting easy registration and legal status for farmer groups may be needed. Governments and donors can support capacity building for cooperatives and FBOs that encourage best practices, such as clearly defined market-oriented objectives, mandatory supply agreements, proper capitalization structures, and sound business and governance principles.

### 3. Designing Effective Government Support Mechanisms

Government support should be directed towards public goods and investments in financial and physical infrastructure with industry-wide, systemic benefits. Utilization of “smart” subsidies that minimize market distortions and elimination of regressive measures help encourage private sector investment, leading to sustainable agricultural development and finance. Subsidies should be used to support the institution and not the borrowers. Moreover, subsidies should not undermine competition by favoring

specific institutions but should support natural spill-over effects to non-subsidized institutions. Subsidies function best when time-bound, limited, decreasing over time, and focused on infrastructure and product development. Incentives to encourage increased lending to the agriculture sector are welcome, but policymakers should avoid historically ineffective and sometimes damaging measures such as interest rate caps, debt forgiveness, and directed or mandatory lending targets, which impede the functioning of financial markets.

State agricultural development banks often need evaluation and a decision to privatize, reform, or close those institutions found to be ineffective. Good examples of reformed state-owned agriculture development banks are characterized by a governance and management structure free of political pressures and generally employ commercially-oriented policies, full risk management practices, loan products priced according to risk, and a portfolio mix to limit concentration risk. Reform of the entire institution is the most challenging option, requiring strong political commitment and extensive technical assistance. Alternative options to complete reform include creating specialized units using bank branches and systems or adopting a second-tier or apex function, providing financial linkages with other financial service providers.

Partial credit guarantees and risk sharing facilities can be an effective mechanism in stimulating agricultural loans, particularly when accompanied by complementary technical assistance to banks. These schemes may include capacity building of local financial institution staff, support to develop targeted agriculture loan products, and technology transfer to support implementation. Guarantees targeting longer-term loans may also boost finance for equipment and other productivity-enhancing investments. It is recommended that guarantees in general require an appropriate portion of default risk to remain with the retail financial institution (i.e., coverage maximums, shared losses) to avoid moral hazard and adverse selection, and that the

guarantees be gradually phased out in order to promote financial sustainability.

Infrastructure investments via public-private partnerships (PPPs) are best targeted towards public goods supporting broad agricultural development. Certain types of infrastructure underpin the broader market for agricultural finance, such as weather stations for insurance, irrigation systems to mitigate weather risks, quality storage facilities to support warehouse receipt financing, and market information systems (e.g., prices, production, etc.), but these are best implemented via the private sector and/or PPPs for long-term sustainability. It is worth noting that other infrastructure investments, such as roads, railways, cold chain, transport, energy, and telecommunications are critical to agricultural development but not directly linked to agricultural finance.

Development of agricultural insurance markets represents an opportunity for public-private partnerships to foster access to finance and improve agricultural productivity. Governments can actively support growth of agricultural insurance through investments in weather stations and data collection, such as weather and area yield data, necessary for commercial products to be developed, which may also require suitably designed premium support. The government can also promote more traditional yield-based crop insurance through appropriate incentives and support systems. Fiscal support is necessary for reinsurance markets and funding for catastrophic risks.

#### 4. Strengthening the Financial Infrastructure

Support to extend credit reference bureaus, as well as other forms of client identification and credit reporting, into rural areas is beneficial to facilitate increased lending to agricultural producers. Efforts to establish credit bureaus are often concentrated in urban areas, but access to better client information is especially important in decision-making for agricultural loans given moral hazard concerns combined with the

broad geographic dispersion of rural clients. There are promising innovations, such as biometric and fingerprint data, which support client identification and reporting, but pricing and fee systems must be appropriate for rural clientele and smaller loan sizes.

Improved collateral registries for movable collateral and development of alternative forms of collateral are particularly important to increase lending in the agriculture sector. There are severe constraints to medium- and long-term finance for agricultural producers, yet investments in assets such as machinery, equipment, and irrigation are necessary to enhance productivity and agricultural development. Movable collateral registries, which support borrowers' ability to pledge such assets as collateral and lenders' ability to register their charge over these assets, are integral to support long-term investments in agricultural production and value chains, especially when land tenure rights are not secure. Additionally, improving creditor rights to register security interests on sales contracts can support increased lending via value chain and contract farming structures.

Growth of a vibrant rural financial system, including a variety of financial institutions, platforms, and distribution networks, is critical to supporting growth and development in the agriculture sector. The financial system should foster a mix of diverse financial institutions serving agricultural clients, with standards, oversight, and support appropriate to each type of institution, as well as facilitation of wholesale and partnering relationships between players to support innovation and expanded rural reach. A diverse system can best address demand for financial services beyond credit to include savings, insurance, and other products tailored for specific groups, such as youth and women. Although competition is important, cooperation and partnerships can leverage various institutions' strengths to play complementary roles and establish distribution channels. Commercial banks have strong managerial capacity and balance sheets, and financial cooperatives and rural credit unions offer rural reach and local knowledge, while alternative delivery platforms such as correspondents,

agents, mobile branches, and mobile banking platforms support access to hard-to-reach clients.

## 5. Building Consistent and Reliable Data Sources

Governments should invest in the regular collection and dissemination of reliable data related to agricultural finance, agricultural production, supply chains, and market pricing information. There is an extensive need for collection, organization, analysis, and dissemination of a broad range of agricultural finance data. Such data is necessary to inform effective agricultural finance policies and to bridge the gap in understanding that divides market participants from the supply and demand sides. Financial institutions need more information about prospective agricultural clients and supply chains, while farmers and agricultural SMEs also need better understanding of banks and other financial service providers.

Measurement of the agricultural finance gap, along with quantification of the opportunities for growth, is paramount to setting, evaluating, and improving agricultural finance policies. Policymakers can require banks and financial institutions to report data on agricultural lending, such as the amount, term, loan purpose, and repayment performance. Such data from financial institutions, together with census and other survey research, contributes to the on-going diagnostics and strategic reviews of agricultural finance within each country and leads to sound policy.

The public sector can play a vital role in generating and disseminating data and information about a country's agriculture sector, which can reduce problems of imperfect and asymmetric information that currently hinder the efficient allocation of resources toward and within the agricultural economy. Although individual banks may collect some information from agricultural clients, certain data (particularly in aggregate form) has public good characteristics that benefit all players in the market. Central banks often collect aggregate data on loan portfolios to the

agriculture sector. Such information can then be utilized by banks and other financial institutions to assess borrowers through parametric lending models and to support portfolio monitoring and risk management efforts.

## 6. Building Capacity of Financial Institutions and Their Clients

Banks and financial institutions require support in training, product development, and risk management specific to agriculture. Given the unique risks and characteristics of agricultural production and supply chains, bankers serving the segment require the development of specialized credit skills and policies, credit scoring and rating tools, and portfolio monitoring practices. It may also be necessary to utilize agronomists and value chain specialists to provide research and analysis of key agricultural sectors. Lastly, rural financial institutions and savings and credit cooperatives need special attention to improve professionalism, governance, and management in order to remain a key link to the rural client base.

Banks need assistance in strengthening value chain finance arrangements, such as multi-partite arrangements between financial institutions, agribusiness companies, and farmers. Banks can enhance value chains by offering a full range of financial services, improved product design, transparent pricing, direct disbursement to farmers, and cross-selling. These value chain finance linkages reduce agricultural lending risks and may come to serve as collateral substitutes. Extension services and access to quality inputs reduce production risks, while market and price risks are often addressed by forward contracts. Hence, loan appraisals can become more focused on assessing the cash flow created by the value chain transactions and the strengths and profitability of the entire chain, rather than solely on the creditworthiness of the individual borrower as applied in mainstream lending.

It is important to strengthen farmers and farmer-based organizations in order to facilitate access to

finance and improve the efficiency of value chains. Training in basic farm economics, financial literacy, organization, governance, business management, and financial skills promotes the development of economically-oriented farmer associations or cooperatives. Effective organization of farmers focused on commercial activities brings structure to value chains, allows farmers to pool resources for purchasing and marketing power, supports collective risk management efforts, and provides a counterparty through which financial institutions may finance production of smaller farmers. Well-organized farmer groups also ease the delivery of valuable extension services, training in improved agronomic and husbandry practices, certification, and other forms of technical assistance to elevate productivity.

Another crucial need is capacity building for innovative instruments and approaches in the agricultural SME finance space, with focus on identifying the needs of farmers. Innovative instruments support hedging

commodity price and weather risks, inventory financing, and payment and delivery systems, among others. This will enable financial institutions to develop appropriate products through capacity building aimed at farmers. Among such products are savings and payment services, loans, leases, hedging, and a range of insurance services, including health, life, crop, weather, and property insurance.

This policy review and recommendations paper is laid out according to the following organization. Section 1 provides definitions of important terms, including segmentation of agricultural SMEs and farmers. It also provides the historical context and changing paradigms of agricultural finance. Section 2 covers the recommendations related to government support, regulatory frameworks, and policy-setting. Section 3 outlines the recommendations and focus areas related to financial infrastructure and the importance of reliable data. Section 4 provides an overview of the areas of capacity building, both for financial institutions and their clients, that are necessary to advance agricultural finance in a sustainable manner. This section also includes a summary of certain innovations in the agricultural finance space, and serves as a preview to a follow-up stocktaking report on agricultural financing models.

# CHAPTER 1

## Agricultural SME Finance in Context

### 1.1 Definitions and Segmentation

This paper focuses on policy recommendations and focus areas for governments in emerging and developing countries interested in increasing access to finance for agricultural SMEs. Agricultural SME finance policies refer to all actions that enhance financial services for agricultural SMEs, encompassing objectives and plans, laws and regulations, actions and behaviors, and all factors impacting on institutions, firms, and individuals within the country in question. This publication sets out to clarify the process of policy making for agricultural and rural finance, and looks especially at the mechanisms involved. It is addressed primarily to those policymakers responsible for formulating, managing, and tending the agricultural finance system, but also targets donors and managers of rural financial institutions operating in the agricultural finance space. It lists some of the key issues and provides instruments to overcome the risks and challenges that are specific to agricultural finance.<sup>2</sup>

This report is about Agricultural Finance for SMEs. However, it is important to note that agricultural SME finance is different from rural finance, microfinance, and SME finance. While microfinance refers to financial services for low-income households, rural financial services are used in rural areas by all income groups and for all activities, both agriculture and non-agriculture related. However, agricultural finance is

defined as financial services for all agriculture-related activities, from production to marketing, for enterprises of all sizes. Hence, *agricultural SME finance* (the subject of this paper) is defined as “financial services for SMEs with respect to agricultural production (i.e., farming) and production-related activities (i.e., input supply, wholesaling, processing, marketing, and trade).”<sup>3</sup> The following section provides definitions for some common terms that are used in this broad space, both in terms of financial actors on the supply side and a segmentation of farmers and agribusinesses (SMEs) on the demand side.<sup>4</sup>

#### FINANCIAL INSTITUTIONS AND SUPPLY SIDE ACTORS

**Rural finance** is a spatial concept that encompasses the provision of different financial services to households and enterprises in rural areas for both productive and consumptive purposes. It refers to financial transactions related to both agricultural and non-agricultural activities in rural areas. Credit is believed to be the binding constraint in many cases related to agriculture project objectives, leading to the incorrect assumption that rural finance and agricultural credit are the same. Instead, rural finance encompasses the full range of financial services demanded by rural households, including loans, savings, payment and money transfer services, and risk management (e.g., insurance, hedging, and guarantees).

2 OECD (1988)

3 The title of this paper reflects the fact that this work falls under the G-20 SME Finance Work Stream. Therefore, when using the term “agricultural finance” herein, we actually refer to “Agricultural Finance for Small- and Medium-sized Enterprises,” which includes both farmers and agricultural SME businesses. See definition of SMEs that includes both farmers and agribusinesses later in this section.

4 The definitions draw largely on Hoellinger (2011) and Hazell, Anderson, Balzer, Clemmensen, Hess, and Rispoli (2010).

Rural financial services are provided by a continuum of institutions with different levels of formality, ranging from informal grassroots financial institutions such as Rotating and Accumulating Savings and Credit Associations (ROSCAS and ASCAS) to formal financial institutions such as banks, leasing and insurance companies, investment funds, and non-bank financial institutions. Financial NGOs, mutualist financial institutions such as credit unions, savings and loan cooperatives, and financial services associations, sometimes called “semi-formal” institutions, are somewhere between. Although more structured and with higher levels of functional differentiation and professionalization, their regulatory framework and supervision are often weak or non-existent.

**Agricultural finance** is a sectoral concept that comprises financial services for agricultural production, processing, and marketing; this includes short-, medium-, and long-term loans, leasing, savings, payment services, and crop and livestock insurance. Recently, the concept of **agricultural value chain finance** has been introduced to emphasize the vertical dimension of agricultural finance to and between different segments of agricultural value chains. Although agricultural finance can largely be regarded as a subset of rural finance, some larger companies operating on both ends of agricultural value chains are also located in bigger towns and cities.<sup>5</sup>

**Non-financial institutions** such as traders, input suppliers, processors, and exporters have always played an important role in providing short-term finance for agricultural production and marketing. The role of agribusiness as provider of agricultural credit might even have increased in recent years, in response to the decline of bank lending and as part of an overall trend towards increased vertical coordination and integration.

**Microfinance** can be broadly defined as financial service provision to poor people in urban and rural areas.<sup>6</sup> Microfinance only partly overlaps with rural finance, given that most microfinance customers are in urban areas. **Agricultural microfinance** refers to the provision of financial services to small farmers and poor rural households for agricultural production, marketing and processing.<sup>7</sup>

**SME finance** is the funding of small and medium enterprises. As outlined in the IFC SME Finance stocktaking report, the term “SME” typically encompasses a broad spectrum of definitions across countries and regions. SMEs are usually defined based on the number of employees, sales, or assets. One of the most widely used definitions covers all firms with fewer than 250 employees, therefore including micro-firms.<sup>8</sup> Under this definition, the vast majority of all businesses are SMEs, typically 95 to 99 percent. SMEs account for a significant share of employment and GDP around the world, especially when taking into account the informal sector. A substantial portion of the SME sector may not have the security required for conventional collateral-based bank lending, nor high enough returns to attract risk investors, while their financial requirements are too large for microfinance. This has led to claims of an “**SME finance gap**” — particularly in emerging and developing countries.

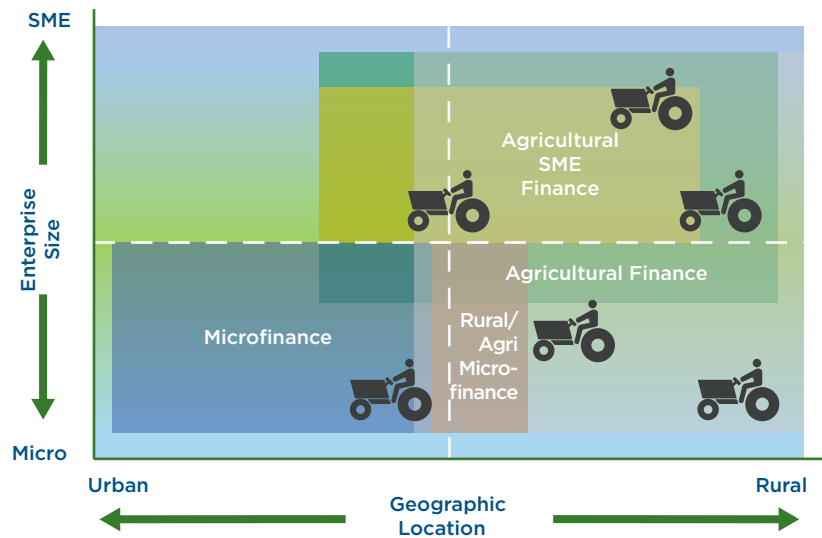
Frequently, agricultural finance heavily overlaps with SME finance in the agriculture sector. Hence, **agricultural SME finance** is defined as financial services for small and medium enterprises engaged in agricultural production (i.e., farming) and production-related activities, such as input supply, processing, trade, wholesaling, and marketing at all levels.

5 This applies to importers of agricultural inputs and machinery and larger companies engaged in processing and export of agricultural commodities.

6 The upper boundary of microfinance is either related to the poverty status of customers in relation to national poverty lines or the size of financial transactions to the average Gross National Income (GNI).

7 Christen and Pearce (2005)

8 See IFC (2010) for more information on defining SMEs.

**FIGURE 1** AGRICULTURAL SME FINANCE

The discussion in this paper focuses primarily on agricultural SME finance. The diagram in Figure 1 seeks to represent agricultural SME finance as a subset of agricultural finance within the broader space of rural finance, microfinance, and SME finance.

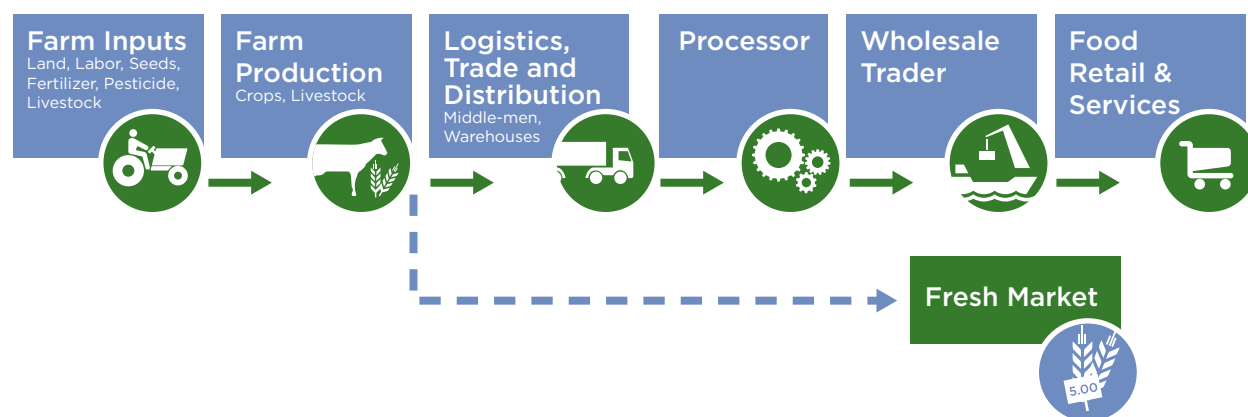
#### DEMAND SIDE AND AGRICULTURAL FINANCE CLIENTS — AGRICULTURAL SMEs AND FARMERS

On the real sector or demand side of the agricultural finance equation, this paper focuses on both farmers and agricultural SMEs in developing countries. In other words, it generally includes agricultural production, processing, trade, and marketing at all levels, with a perspective of economic growth and professionalization. We use the term **Agricultural SMEs** broadly, to include both those engaged in primary production, as well as agricultural businesses engaged in activities all along the agricultural value chain. Those engaged in primary production can include

individual farmers, farmer-based organizations and cooperatives, or larger enterprise farm operators. The discussion in this report includes all of these economic entities, as illustrated by the Agricultural Value Chain diagram in Figure 2 on the following page.

Value is added throughout the chain — by the farmer, processors, marketers, and service providers all the way to the consumer. As such, agricultural financial services are required to support this value addition all the way along the chain. However, agricultural value chains and value addition have associated risks, transaction costs, and information asymmetries, all of which impede access to finance for agricultural players along the value chain. In general, access to finance is often less available at the beginning of the chain (for inputs and farm production needs) and more available to agricultural businesses engaged in the value-additive activities further along this chain (processors, wholesalers, etc.).



**FIGURE 2** AGRICULTURAL VALUE CHAIN

In order to develop tailor-made policies and financing instruments for agricultural SMEs, segmentation of farmers and agribusinesses is essential. Agribusiness SMEs tend to have characteristics similar to traditional SMEs. For example, these agribusinesses are enterprises engaged in input supplies, processing, trading, wholesaling, retailing, and services, much like non-agricultural SMEs. Therefore, traditional definitions used for SME segmentation can be applied to distinguish agribusiness SMEs from microenterprises and large enterprises engaged in the same business activities. These definitions are generally measures according to either number of employees or annual sales turnover.<sup>9</sup> Therefore, agribusiness SMEs can be thought of as those agricultural businesses that fit the general definition of an SME for a given country or region.

### SEGMENTATION OF PRIMARY PRODUCERS

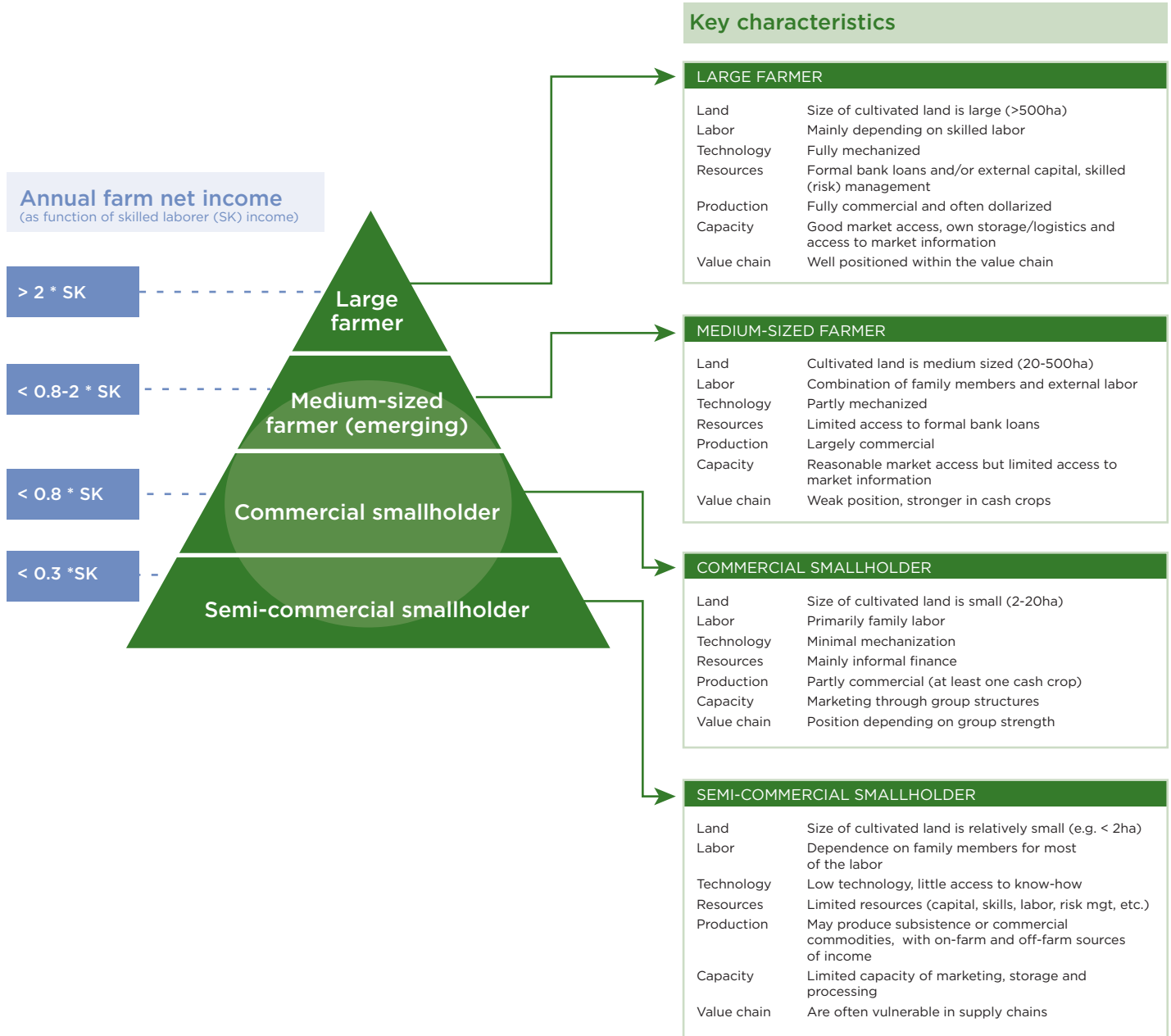
However, farmers and enterprises engaged in primary agricultural production do not conform easily

to conventionally agreed upon SME definitions. As a result, there is no clear international consensus on how to segment those who fall into the farm production stage of the agricultural value chain. Therefore, it is particularly important that policymakers begin to try to distinguish and define the segment of farmers engaged in primary production that would be considered SMEs.

In this vein, the following section provides an illustrative framework to attempt to segment primary agricultural producers into different categories. We recognize that there is no clear cut segmentation that can be universally applied because of variations across countries and regions, as well as differences due to the types of crops or agricultural commodities produced at the farm level. However, we feel that these characteristics offer a starting point from which policymakers can begin to segment their own country's agricultural producers in order to better design policies that meet the needs of the various categories.

9 See IFC (2010) pg. 9 and Annex A pg. 89 for examples of SME definitions.

**FIGURE 3** SEGMENTATION OF FARMERS



Segmentation by farm income is particularly challenging due to income differences across countries and the earnings potential of various crops. For example, cash crops can often earn a high income on a small landholding, while staple crops may earn minimal income on a much larger plot of land. Therefore, the segmentation illustrated in Figure 3 provides an income proxy by comparing the annual net income generated by farming (after all costs are deducted) to the annual earnings of a skilled laborer in that country or region. Again, this is not an exact science and perhaps other comparable measures could be employed; nevertheless, there is benefit in trying to segment farm size according to characteristics that include both income and other non-income qualities. The challenges here are not dissimilar to the various definitions of SMEs, in which there is focus not only on annual revenue but also on the number of employees as a proxy for business size.

**Semi-commercial smallholders** (also referred to as “subsistence farmers”) generally exhibit no or very small marketable surpluses. They are generally not active in agriculture for economic reasons but farm to survive and due to lack of alternative opportunities. In some literature, semi-commercial smallholders are considered to have a land size smaller than 2 hectares. Other literature holds that it is typical for agriculture to account for less than 60 percent of the income of these households. The annual farm net income after costs is generally less than 0.3x the annual earnings of a skilled laborer in that country or region.

**Commercial smallholders** are farmers with some marketable surpluses in a particular crop. Land holdings may range from 2-20 hectares, and crop production often includes at least one cash crop. The annual farm net income after costs may range between 0.3x and 0.8x the annual earnings of a skilled laborer in that country or region.

**Medium-sized farmers** generate meaningful income from farming, often with land under production

totaling more than 20 hectares and up to 500 hectares (also referred to as emerging farmers). The smaller farmers of this segment are likely producing cash crops, while the larger land holdings are more likely to be used for commercial farming of staple crops. Annual farm net income after costs is generally more than 0.8x but less than 2.0x the annual earnings of a skilled laborer in that country or region.

**Large farmers** produce and market their output in a professional manner, employ staff, and often have access to a full range of financial services. These farmers are often producing on land holdings in excess of 500 hectares, though this may be smaller if farming only cash crops. In general, the annual farm net income after costs of large farmers is in excess of 2.0x the annual earnings of a skilled laborer in that country to region.

#### AGRICULTURAL SME FINANCE GAP

When we refer to the agricultural SME finance gap for farmers, we especially refer to the lowest three segments. Commercial smallholders that are active in integrated, mostly cash crop, sectors may get access to finance through value chain financing instruments; medium-sized farmers may have just the minimum size to appeal to some banks. However, by and large both segments have difficulties accessing formal financing, especially when producing staple crops (such as cassava, maize, wheat, rice, etc.) and when seeking medium-term and long-term financing. Oxfam refers to the farmer finance gap as the missing middle, and particularly points to the gap that exists for farmers in need of loan amounts between USD 5,000 and USD 500,000 that have difficulty with access to finance because they are too large for micro-finance institutions (MFIs) and too small, risky, and remote for commercial banks.<sup>10</sup>

In agriculture, the vast majority of SMEs consist of semi-commercial and commercial smallholders. Hence, this report refers to this broad category of SMEs

10 Doran, McFadyen, and Vogel (2009)

and includes semi-commercial smallholder farmers. In practice, semi-commercial farmers (or subsistence farmers) do not have access to finance through most commercial banks and even through microfinance institutions. Although we acknowledge that there is a serious need for financial inclusion measures at this level, this paper keeps within the focus of the G-20 SME Finance Subgroup and primarily references policies geared towards the financial needs of commercial smallholder and medium-sized farmer segments as the core of the agricultural SME space. However, we do not ignore the needs of the semi-commercial smallholders, and the policy recommendations attempt to be sensitive to any policies that would further marginalize this segment.

## 1.2 Basic Challenges in Agricultural Finance<sup>11</sup>

Given the characteristics of rural areas and rural economic activities, rural financial services provision has to tackle a number of specific challenges, in addition to those inherent in any financial intermediation. These specific challenges are related to seasonality, covariant risks, and low population densities.

Many rural economic activities are subject to seasonality and gestation periods, which often lead to a slow rotation of the invested capital and are reflected in the cash flows of rural entrepreneurs. Longer loan maturities and irregular repayment schedules are more risky and present additional challenges to liquidity management. More than in other sectors, the profitability of agricultural enterprises depends to a significant extent on external factors such as weather, major outbreaks of pests and diseases, or prices of inputs and outputs, which are largely beyond the control of farmers. In addition to idiosyncratic risks affecting individual clients (e.g., illness or death of family members, theft of productive assets, etc.), agricultural enterprises are exposed to covariant risks arising from the above external factors, which may simultaneously affect large numbers of farmers in a given area.

Finally, agriculture is a politically sensitive sector prone to government interventions. Although permanent interventions through lending quotas, interest-rate ceilings, or direct government provision of financial services have been reduced substantially in the last decades, governments continue to intervene on an ad hoc basis. Such interventions include loan rescheduling or forgiveness and preferential lending programs for specific target groups, which are often granted after major economic downturns or natural calamities, and especially in the advent of elections. They create additional uncertainties for financial institutions and tend to weaken the repayment culture.

Despite these challenges, rural financial services providers have fewer instruments at their disposal to manage the various risks and reduce operational costs than their urban counterparts have. Many rural financial institutions try to protect themselves against the various risks through excessive credit rationing and over-reliance on collateral. However, rural assets are less suitable as loan collateral than, for example, urban real estate. Due to legal and administrative impediments as well as cultural factors, land and other rural assets are often not registered and may be more difficult to foreclose and sell. Even where these constraints do not apply, collateral is a poor protection against massive default due to covariant risks. However, other more appropriate instruments for managing covariant risks, such as crop insurance or hedging, are rarely available.

Classical microfinance techniques to cope with delinquency risks include highly standardized loan products based on small credit amounts, frequent (often weekly or bi-weekly) repayments without grace periods, short maturities, and collateral substitutes such as joint liability mechanisms. While these techniques still work rather well in peri-urban areas and for a few rural economic activities, they are difficult to apply in rural economies characterized by strong seasonality and low population densities, and they are unsuitable for the larger loan amounts and longer maturities that are typical for agricultural finance.

---

<sup>11</sup> This section is taken directly from Hoellinger (ibid)

### 1.3 Changing Paradigms in Agricultural Finance<sup>12</sup>

In view of the above-mentioned challenges, commercially-oriented financial institutions tend to avoid rural and agricultural finance as long as other, less risky business opportunities are available. Due to the importance of the rural economy for overall economic growth, employment, and poverty reduction in most developing and transition countries, expanding rural and agricultural finance used to be a major concern for governments and donors. However, policies and instruments for enhancing rural finance have evolved considerably over the past decades, reflecting fundamental changes of the underlying paradigms. During the 1960s and 1970s, the emphasis was on addressing market failures through massive public intervention in the form of directed and subsidized credit. The overall objective was to accelerate the modernization of agriculture through the adoption of Green Revolution technology packages combined with farm mechanization and irrigation. Credit was considered as an input for agriculture production, and specific institutions such as agricultural development banks and cooperatives were established to make cheap credit widely available to farmers. Rather than financial intermediation, the main purpose of these institutions was to channel loans at subsidized interest rates to farmers. Outreach, not loan repayment, was the main concern, and little attention was paid to the financial health of the lending institution.

Although subsidized and directed credit helped some developing countries, especially in Asia, to improve agricultural yields, it proved to be a high-cost approach that scored poorly on efficiency and sustainability. All too often, state-owned agricultural banks and credit funds were fraught with poor management, political interference, and rent-seeking elites. Interest rates were set too low to cover operational costs, and high loan losses further undermined the financial health of the

lending institutions. Politically motivated loan forgiveness following major natural calamities or price slumps weakened the repayment culture in rural areas. Hence, periodic capital injections were required to keep the lending institutions alive. Notwithstanding sizable amounts of public funds invested, outreach to small farms and landless households often remained limited. Like other financial institutions, agricultural banks preferred lending to medium and large farmers who had sufficient collateral and could be served at lower transaction costs. Therefore, in many countries the majority of rural households did still not have access to credit, let alone other financial services.<sup>13</sup>

During the 1980s, major donor organizations and many governments started reviewing their agricultural credit policies. In the wake of structural adjustment programs and fiscal austerity, funding for agricultural banks and credit projects declined sharply. Many countries, especially in Latin America and Africa, liberalized their financial markets, closed down agricultural development banks, and phased out credit lines to agriculture and other priority sectors. At the same time, microfinance gained popularity amongst donors and governments. Pioneers like the Grameen Bank, Banco Sol, Bank Rakyat Indonesia, and others demonstrated that large numbers of poor households deemed unbankable could be serviced in a cost-covering way and that lending institutions were able to become financially sustainable (at least in the medium term) if appropriate institutional arrangements and financing technologies were put in place. In addition, a new strand of research based on the concepts of *new institutional economics* provided fresh insights into the functioning of rural financial markets and the financial management practices of poor households, including a better understanding of their demand for financial services.

During the 1990s, these trends converged into a new paradigm in development finance, focusing on the

<sup>12</sup> This section is taken directly from Hoellinger (ibid)

<sup>13</sup> Meyer and Nagarajan (2005) and FAO and GTZ (1998)

development of efficient and inclusive financial systems and markets. The Financial Systems Approach acknowledges the importance of efficient financial intermediation for economic development and poverty reduction. The development of stable, efficient, and inclusive financial systems is regarded as a development objective on its own, rather than a means to achieve other development objectives.

According to the Financial Systems Approach, governments should refrain from directly providing financial services or intervening in financial markets. Lending quotas, interest rate ceilings, or subsidized funding to priority sectors should be avoided as they distort resource allocation and crowd out private financial institutions. The main role of governments is to provide a conducive framework and an enabling environment for the development of competitive and transparent financial markets and effective financial intermediation. This includes sound macro-economic policies that keep inflation and domestic borrowing rates low and exchange rates stable. Governments should further create a strong legal and regulatory framework for different types of financial institutions coupled with effective supervision in order to stimulate competition while safeguarding the stability of the financial system.

Further important areas for public-sector investments are transport and communication infrastructure, which reduce transaction costs and enhance the profitability of both economic activities and financial services provision in rural areas. Subsidies to financial institutions should be limited to institutional

---

#### **BOX 1** BASIC PRINCIPLES AND ASSUMPTIONS OF THE FINANCIAL SYSTEMS APPROACH

- Financial institutions must be allowed to charge cost covering interest rates in order to grow and provide loans in a durable way.
  - Poor clients value reliable and quick access to loans more than their costs.
  - Financial liberalization creates competition amongst financial institutions, which stimulates product innovations and a gradual expansion of financial service provision (the so-called “frontier of formal finance”) towards rural areas, low-income clients, and riskier economic activities such as agriculture.
  - Savings, insurance, and payment services are at least as important as credit for poorer rural households. Moreover, deposit mobilization can be an important source of funds for financial institutions.
  - Due to problems regarding governance, efficiency, and political interference, governments should refrain from directly engaging in financial services provision.
- 

strengthening and capacity building, with a view to enhancing outreach, financial sustainability, and poverty reduction impact. Subsidized funds for on-lending might only be justified for a limited time period in order to compensate financial institutions for the higher initial costs and risks of launching financial innovations. Interest rates for clients should not be subsidized. According to the Financial Systems Approach, victims of wars or natural disasters should be given direct grants rather than subsidized loans.<sup>14</sup>

## CHAPTER 2

# Policies, Regulatory Framework, and Government Support

### 2.1 Developing Country Specific Diagnostics and Strategies

#### CHALLENGE:

Agriculture varies tremendously across and within countries, and priorities can change in response to a variety of conditions, both internal and external.

#### POLICY FOCUS AREA

Policymakers need to undertake a detailed baseline diagnosis of the supply and demand for agricultural finance at the country level, and engage in a dynamic process to continuously assess needs in the sector in order to develop strategies based on relevant information. It is useful to examine solutions for various categories of farmers and commodity sub-sectors, such as smallholders, commercial farmers, and agribusinesses, along with larger commercial farmers and corporate agribusinesses. Assessments to identify client needs (including savings, insurance, and other financial needs) and strategies to address this demand should be participatory processes, including stakeholders from agricultural organizations and private sector representatives. Such on-going evaluations must assess how agricultural finance policies are established, as well as whether they are properly implemented and effective in achieving stated goals and objectives.

Successful policy-making takes into account thorough analysis of key background data and captures the view of all stakeholders in both the formulation and implementation of the policies. An additional challenge in policy-making is that such analysis and stakeholder involvement must be done on a continuing and ongoing basis, not as a one-time event. Given the involvement of various ministries, institutions, companies, and stakeholders, it is common for differences to surface, and conflicts must be managed with regard to balancing the influence of various parties on the policy-making process.<sup>15</sup>

The recommendation to engage in an on-going diagnostic exercise is linked with many of the other recommendations included in this report. For example, development of an agricultural finance strategy would first rely on clear definitions and segmentation of the market participants from both the supply and demand side. The preceding section provided some guidance on this approach. The diagnostic exercise relies upon an evaluation of demand and supply side data aimed at estimating the agricultural SME finance gap, which is covered in more detail in Section 3.2. It should be stressed that the gap in financial services covers not only credit, but also savings, leasing, insurance, and payment services among others. A diagnosis would also have to identify the weaknesses and constraints within the real sector that prevent agricultural SMEs from gaining access to the financial services that they need.

On the supply side, the quality of the agricultural SME finance architecture must be evaluated, including an

assessment of the quality of financial infrastructure and relevant laws and regulations that impact the supply of finance. Much of the heart of this diagnosis can be guided by the recommendations in Section 3.1. When thinking about agricultural finance, it is important to understand the full range of suppliers of credit to agricultural SMEs and farmers beyond simply commercial banks and microfinance institutions. There is a wide variety of financial service providers that can and should be supported with appropriate policies. Recommendations around this topic are also discussed in Section 3.1. The many forms of finance supplied via value chains are covered in Sections 4.2 and 4.4.

From the policy perspective, it is critical that diagnosis and strategy-setting be undertaken regularly and consistently as part of an on-going and dynamic process. Policy assessments should be measured against specific policy objectives. Policy-setting is only one part of the process, whereas much of the evaluation of effectiveness may be found in implementation. An assessment of the success and failure of past policies can help to identify existing weaknesses, facilitate the formulation of coherent and integrated policies, and provide the basis for monitoring progress in expanding the agricultural SME finance space. It is crucial to consider the entire policy context for policies that impact the agricultural finance space. This is covered in significantly greater detail in Section 2.2. It is also worth noting that regional frameworks and regional integration sometimes influence a country's agricultural policies and strategies.

## 2.2 Developing a Supportive Legal and Regulatory Framework

### CHALLENGE:

Agricultural finance is a policy orphan - too often responsibility for policies impacting agricultural finance falls into a void among several government ministries, such as finance, agriculture, planning, trade, and commerce. Different government bodies often have divergent interests and perspectives concerning

agricultural finance. Accordingly, the subject area is frequently pushed to the side and neglected, inhibiting a coordinated legal environment that promotes the cohesive development of strong, sustainable, and socially-responsible agricultural finance policies and supportive underlying legal and regulatory systems.

### POLICY FOCUS AREA

Coordination of policies intersecting both the financial and agriculture sectors is critical to facilitating access to finance for farmers and agricultural SMEs. The appointment of a single coordinating body as the advocate for agricultural finance can optimize policies that target farming as an economic enterprise to promote agricultural development through finance and investment. This high-level body can also reconcile and harmonize policies focused on objectives related to rural development, social support, and food security that are aligned with, but not necessarily the same as, policies supporting agricultural finance. Coordination is often necessary between the ministry of finance, the ministry of agriculture, the central bank, and the ministry of trade and commerce. Developing countries also require solutions to increase access to long-term, local currency funding for financial institutions as well as to promote equity finance in addition to credit. These issues are not specific to agriculture but influence overall financial flows to support sustainable growth in the agriculture sector.

### NEED FOR A POLITICAL FRAMEWORK WITH A ROBUST POLITICAL MANDATE

A strong regulatory framework is crucial for the success of agricultural finance, as bank lending and efficient investments are adversely affected if the necessary legislation is absent or, even worse, if existing legislation is a roadblock for progress in agricultural finance. The correct regulatory framework is



critical for many areas important to agricultural finance: land rights, efficient leasing, contracts for value chain finance, contract enforcement via an independent and reliable judiciary, warehouse receipt systems, or a supportive environment for farmers to organize into economic groups, including cooperatives. The regulatory framework encompasses the agricultural and financial sectors and is crucial to ensure business planning and bank collaterals. The general role of financial sector policy is to provide a fair and competitive marketplace framework for financial institutions. Hence, regulators should ensure a level playing field in rural areas.

A common challenge facing agricultural SME finance is that policies affecting agricultural and rural finance belong to several different policy-making areas. In other areas of the economy, it is often easier to identify the ways in which an economic sector corresponds with a certain division or ministry within the governmental structure. At a minimum, agricultural finance straddles agriculture sector policies, financial sector policies, and policies for the macroeconomic environment. Given the overlap of policy areas, there is a danger that the needs unique to agricultural finance may be overlooked or that policies may partially conflict with one another instead of being mutually supportive.

Figure 4, next page, illustrates an example of a comprehensive diagnostic outline for agricultural finance policymakers, demonstrating that many inputs and many actors at various levels need to participate in order to ensure robust and fruitful results. The general and background information takes into account the bigger picture in which agricultural finance resides, including overall political, rural infrastructure, social and cultural, and demographic contexts. Agricultural finance policy also has to fit within the macroeconomic context for the financial sector and the agriculture sector. Finally, there are the policy fields that relate specifically to the agriculture sector

and the financial sector, as well as institutions and real sector market participants, all of which are areas in which the primary stakeholders must be brought together and key coordination activities should occur.

The basic problem is that different government bodies have differing interests and perspectives concerning agricultural finance. This is particularly true with respect to macroeconomic policies, agriculture sector policies, and financial sector policies. As explained by Coffey:

*All three policy areas have their own impact on the effective provision of financial services. Generation of an effective agricultural and rural finance policy depends on the definition of a clear overall rural finance policy framework and strategy. Tensions and contradictions do occur between each of these policy areas, which need to be debated and addressed through effective and continuous policy dialogue. Often, however, an effective policy dialogue platform does not exist, with a lack of confidence between the public and private sectors.<sup>16</sup>*

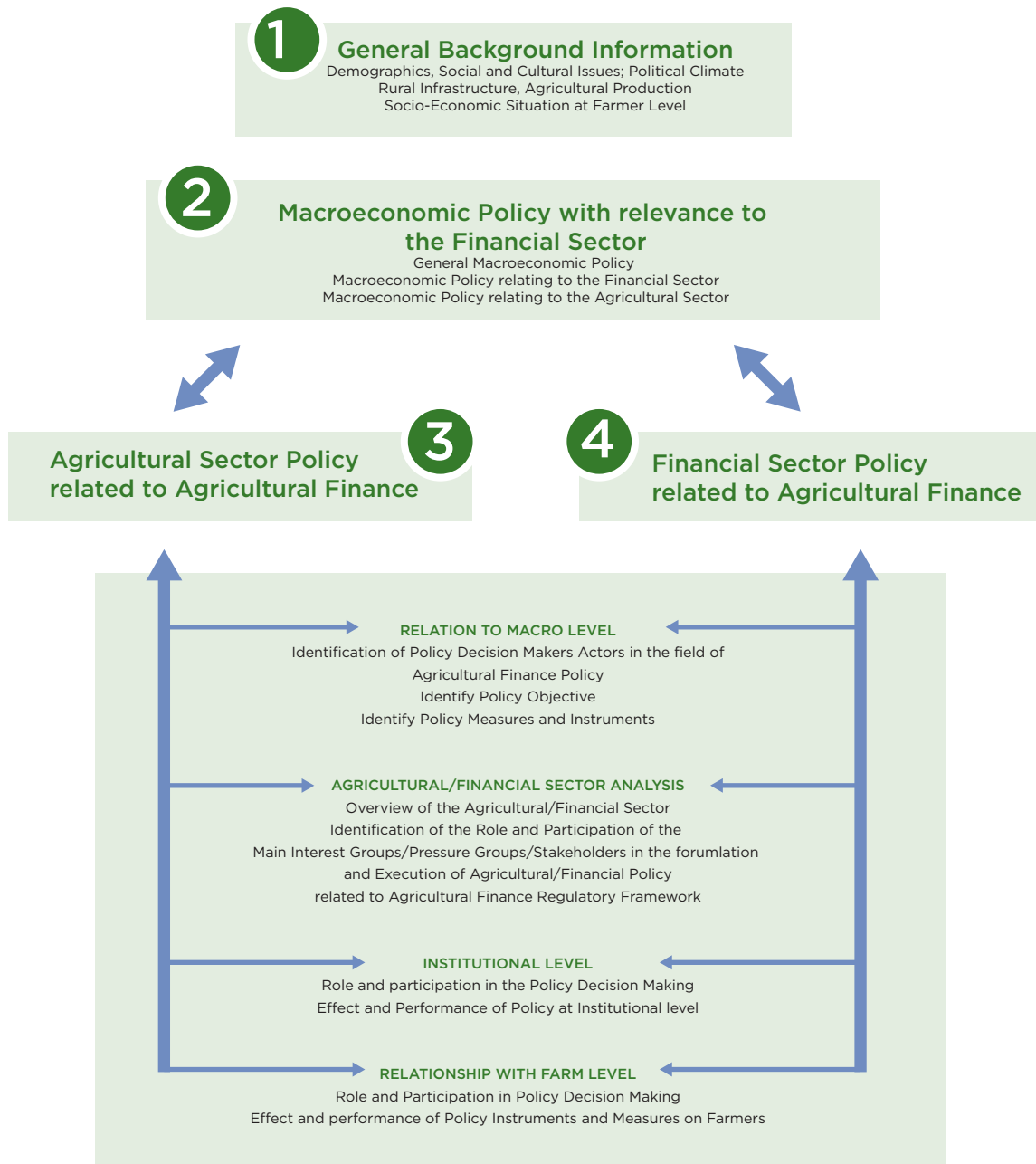
In order to function efficiently, agricultural finance policies have to integrate the perspectives of the agricultural and the financial sectors, despite the fact that both sectors pursue different rationales. Agriculture sector policies strive to make agricultural agents more profitable, while financial sector policies endeavor to build profitable financial institutions in order to serve the economy, including the agriculture sector. However, these rationales have been frequently confused. Financial institutions were assigned many tasks of direct agricultural development, with little attention paid to the logic of financial markets and to the required financial infrastructure.

Furthermore, there may be other policy areas that come to bear on agricultural finance, such as trade and commerce in the case of export of agricultural commodities, tax policies with respect to imports, exports, and leasing, and social affairs in terms of support following catastrophic events or food security concerns.

---

16 Coffey (ibid)

**FIGURE 4** DIAGNOSTIC METHOD FOR AGRICULTURAL FINANCE POLICIES



Source: Coffey (1998)

In addition to the lack of an effective policy dialogue, very few countries have a strong advocate for agricultural finance. The dominant government player in the agricultural and rural finance policy-making process varies from country to country. The challenge is not only to formulate an appropriate policy framework that suits the different interests of public and private groups but also to find a governance structure that can implement such policy. Whichever governance structure is chosen, it is difficult to achieve a *Pareto optimum* objectively speaking and subjectively perceived by the various interest groups of the sector.<sup>17</sup> Generally, two primary forms of leadership have emerged in formulating successful agricultural finance policies: that of a dynamic leader, which may be at the highest levels of either the ministry of finance or ministry of agriculture; or leadership through some form of inter-ministerial policy committee to focus on agricultural development, which can then bring coherence on agricultural finance policies.<sup>18</sup>

There are strong arguments that countries need a recognized lead agency or coordination body, preferably made up of representatives from the key government ministries or departments, who would be vested with institutional responsibility for coordinating agricultural finance policy. This coordination body would also be responsible for facilitating interactions and reconciling policies between intergovernmental, public, and private interests. According to the specific country context, this lead body may be the ministry of finance, the ministry of agriculture, the central bank, or an intergovernmental coordinating agency. There may be good reasons for designating each of these institutions. However, conflicting issues may evolve around the fact that agricultural finance is a sensitive political topic with different perspectives coming from the agricultural and financial sectors.

The ministry of finance is the lead political agency of the financial sector and, from the viewpoint of the financial sector, could be a powerful promoter of

agricultural finance policies. The ministry of finance has significant political and decision-making power and covers the full financial sector, including insurance companies. However, more often than not, the finance ministry does not see itself as a promoter of agricultural finance and hands over this responsibility to the ministry of agriculture.

At first glance, the ministry of agriculture appears to be the predestined body to take the lead in promoting agricultural finance as it traditionally has been responsible for agricultural finance, with the goal of achieving development objectives, such as social equity. However, the track record for this leadership approach has not always been successful. Achieving agricultural development goals with the instruments of another sector (namely finance), which functions completely differently, has proven rather difficult. Hence, financial sector experts may think that the ministry of agriculture might not have the expertise and mandate to promote agricultural finance according to the standards of the financial sector. In addition, the ministry of agriculture may wish to push agricultural finance with interventions that contradict best practices in finance.

Last but not least, a third key facilitating agency would be the central bank. Even though the central bank is not a ministry, frequently the central bank is among the most powerful institutions in the financial sector, concentrating technical and supervisory capacities. The central bank is a regulator and supervisor of financial institutions. It is thus already close to agricultural finance practice, as banks are the dominant provider for agricultural finance. Moreover, the central bank possesses the greatest expertise in the financial sector and often enjoys a reasonable degree of independence from political interest groups. This makes it a potentially neutral facilitator and watchdog of agricultural finance. The central bank could help strengthen the supervision of rural financial institutions and set ratios that address the unique

17 Roberts (2011)

18 Meyer and Nagarajan (2005) and FAO and GTZ (1998)

risk management aspects of agricultural finance. The central bank can also play a strong role in collecting data on agriculture lending. However, the central bank's primary responsibilities are to regulate financial institutions and ensure stable macroeconomic conditions. Therefore, it may not have the capacity or willingness to take on the lead role in setting and promoting agricultural finance policies.

Hence, what becomes clear is that one lead agency could choose to take on the lead role to oversee and promote agricultural finance, but which entity would depend on the country-specific context. Coffey notes that potential tensions and contradictions between overall financial sector and agriculture sector policies should be taken into consideration. A national level body, such as an agricultural or rural finance policy committee, can act as a single coordination body to advocate for agricultural finance. This is especially important given that certain objectives related to agriculture, such as rural development, social development, and food security, are important but do not necessarily align directly with the objectives of agricultural finance policies. In addition to government ministries engaged directly in financial sector policies and agricultural and rural development policies, such a national body can also bring together the various stakeholders of the private sector such as financial institutions, agribusiness, and representatives of farmer organizations.<sup>19</sup>

#### LACK OF MEDIUM- TO LONG-TERM FINANCE

A different, but still noteworthy, challenge exists in developing countries with respect to a general lack of long-term local currency funding for financial institutions. This is commonly cited as a constraint for financial institutions unwilling to extend longer term credit. However, this issue is not unique to agricultural finance; it applies to the financial sector in general. If long-term funding is available, it is rarely used for medium- and long-term agricultural investments, such as equipment or irrigation, which are crucial for

modernization of the agriculture sector and agricultural infrastructure. Government policies can even have a negative effect on the local currency long-term funding market by encouraging funds from pensions and insurance companies to finance government bonds. Although long-term funding through foreign currency is much more readily available, many institutions involved in rural finance have no capacity to deal with currency mismatches. It is recommended that governments review their policies to ensure that a level playing field is established in the long-term local currency funding market.

The central bank can have a role by supporting the legal and regulatory environment and a framework for "green bonds" and other refinancing mechanisms to support agriculture finance. It is also advisable to engage with donors, international financial institutions, and others to find workable and low cost solutions for currency mismatches for long term agricultural investments. Increasing equity investments are also necessary for growth, as agricultural SMEs often do not have sufficient capital on their balance sheets to support additional credit. However, an outstanding question is the extent to which agricultural SMEs are actually open to equity investments in their businesses. Nonetheless, there is limited equity finance in many developing countries to support business growth and expansion, which applies to agricultural enterprises and many other sectors alike.

#### NEED FOR A WELL-FUNCTIONING JUDICIARY SYSTEM

##### POLICY FOCUS AREA

Efficient and responsive credit services depend on a well-functioning judiciary system that provides objective decisions in a timely manner and with minimal political interference. Legal enforcement

19 Coffey (ibid)

of contract rights for creditors, farmers, and SMEs is important to strengthen value chain structures and facilitate finance to all market participants. Commercial contracts between actors in the supply chain represent an alternative collateral source to lenders, help mitigate risks for farmers and SMEs, and serve to promote value chain linkages, growth-oriented contract farming, and nucleus farm/outgrower schemes. Lease financing can benefit from improved rights for repossession upon default as well as tax laws that encourage utilization of leasing arrangements.

In order to operate profitably, financial institutions need a clear, reliable legal environment. Keys to such an environment are prudential banking laws, financial contract laws, and procedures to effectively enforce these contracts. Efficient and responsive credit services are equally important and depend on a functioning judiciary that is able to fairly resolve legal claims in a transparent manner, without corruption and with minimal political interference. The judiciary must be able to rule and adjudicate in a timely manner and to support enforcement of rulings. A framework of regulations should be consistent, transparent, and evidence-based and include strict standards of governance, property administration, and quality regulation. The policy environment must provide incentives for players to invest in agriculture while protecting the welfare of citizens and the environment.

Bankruptcy regimes regulate the efficient exiting of the market, and make the resolution of multiple creditors' conflicting claims more orderly, resulting in more extensive opportunities for recovery by both the bankrupt entity and its creditors. A modern framework for SME insolvency will start with legislation for corporate SMEs that will include "fast-track" and expedited bankruptcy provisions in unified or corporate bankruptcy laws. Additional frameworks for dispute resolution, such as mediation, might also be included to help improve efficiency. For the vast majority of SMEs that are non-corporate, however,

this will involve entirely new legal frameworks for personal insolvency or updates to personal insolvency legislation.

Agricultural finance can particularly benefit from improved legal enforcement of contract rights for creditors, farmers, and SMEs, which is important to strengthen value chain structures and facilitate finance to all market participants. By strengthening contract rights, actors on both sides of such contracts are more likely to engage in and honor contracts. Such commercial contracts between actors in the supply chain represent an alternative collateral source to lenders, help mitigate risks for farmers and SMEs, and serve to promote growth-oriented contract farming and outgrower schemes. Bringing financial institutions into value chain finance arrangements via multi-partite agreements between financial institutions, agribusiness companies, and farmers offers the potential to address some of the constraints facing financial institutions in lending to the agriculture sector. The use of value chain contracts as an alternative form of collateral should not be underestimated in the agriculture sector, especially in light of the challenges and limitations highlighted below regarding land as collateral. Moreover, banks can offer additional financial services beyond the specific value chain loans, such as savings and payment services to beneficial agricultural clients.

Leasing permits farmers, farmer organizations, and agribusinesses to take advantage of alternative forms of collateral to enhance creditworthiness, and helps circumvent some of the problems related to registration and foreclosure of collateral. It can be used for financing machinery and movable assets such as vehicles and farm equipment as well (also discussed in Section 3.1 under collateral registries). Since the lessor owns the equipment, repossession in case of default is more straightforward, as it does not require court procedures. However, repossession of leased goods in the case of a default in some countries does require a court intervention by the lessor, as possession rights emanating from the lease contract override ownership rights until a court decides otherwise. Thus, this

structure is often in need of clearer legal support or reinforcement to ensure the rights of the lessor in the event of borrower or lessee default. The use of leasing is greatly facilitated by a suitable legal framework stipulating the rights and obligations of both parties. Despite the advantages of leasing in principle, very few institutions offer equipment leasing to rural customers.<sup>20</sup>

## LAND TENURE AND LAND RIGHTS

### POLICY FOCUS AREA

Under certain conditions, promoting secure forms of land tenure can be beneficial to stimulate productive farm-level investment and to allow producers to pledge land as collateral for obtaining finance. In the absence of long-term land-use rights, farmers lack incentives to grow through land expansion, productivity enhancements, and long-term investments, as well as sustainable and environmentally-friendly land use. Lenders may be more willing to finance operations in which they are able to take and enforce a charge over land, both in terms of larger loan amounts and longer terms. The move from usufruct to more permanent forms of tenure could be done with better systems of recording rights to land. Social and local legal considerations should be taken into account, including (among others) communal rights, sensitivity to local customs, and limiting speculative and external investment except when broadly beneficial to local communities.

Land policy, legislation, and implementation arrangements impact the pattern and distributional consequences of agricultural growth. Secure, transferable land rights are needed to protect the interests of local populations and can enable entrepreneurial farmers to acquire unused land in regions with small populations.

Secure land rights also provide incentives to invest in increasing land productivity and sustaining environmental quality. Block-farming, allowing smallholders to pool their land into larger more economical blocks and share economies of scale, is also easier to establish under a transparent land tenure system. Although there is no evidence that access to finance depends solely on absolute land rights, weak land tenure is one constraint facing agricultural finance growth. Lack of clarity in land rights also prevents farmers from making broader agricultural land investments that could increase their productivity.

Further, banks are usually required to apply appropriate collateral coverage for their loans, often 125 percent of the loan value or more. The inability of many farmers and rural SMEs to meet such collateral requirements prevents the financing of many worthwhile investments, as land is generally the primary asset that banks seek as collateral. Addressing the collateral issue in a comprehensive way requires a series of measures that include the clear definition and demarcation of property rights for land, as well as the creation or upgrading of property registries for real estate, movable assets, and other collateral substitutes. Although it is critical to acknowledge the significant achievements that have been made in developing alternative collateral substitutes for land in agriculture, there still is a need to establish a better legal basis and records for ensuring access to land. The fact remains that most banks and rural financial institutions still primarily look to land collateral as a fundamental basis for determining loan qualification.

A strong financial infrastructure can help to overcome certain land tenure problems through mechanisms for accurate recording of land rights and documentation systems. Technological and financial support for accurate measurement and recording (such as through GIS mapping) and systems to document transfer of ownership represent opportunities for technical assistance and funding on the part of donors, especially when

20 Hoellinger (ibid)

done through established regional or international organizations with experience in this issue.<sup>21</sup> The financial infrastructure also has a significant role to play in furthering alternative collateral, particularly moveable collateral such as equipment, commodities held in inventory, and contract rights for value chain finance. These items are discussed further in section 3.1

There are many social, legal, and environmental considerations with respect to land rights and land tenure issues. For example, many countries exhibit significant cultural barriers to move away from usufruct, since land allocation and rights are a major prerogative of traditional authorities.<sup>22</sup> In addition, lenders may not be willing or able to foreclose on land even when contractually authorized to do so. Important gender, social, and environmental implications must be factored into any discussion on land issues. These issues include the concentration of land holdings, accompanied by the loss of access to land by smallholders and declining opportunities to earn an income and raise food for consumption. Such concerns also have a bearing on food security; however, it should also be acknowledged that limited productivity in agriculture also affects food security in many countries.

There are significant concerns about the rights of smallholders versus larger, commercial farming interests and external investment interests. Each country, and the various regions within countries, can address land rights in the context of these issues, while also considering how to plan and organize the extent to which and under what conditions it is desirable to sell or lease land to commercial farmers, which may or may not marginalize or crowd out smallholders. There are particular cautionary cases of property acquisitions by land investment funds that rely upon appreciation of land values rather

than productive investment to offer returns to investors, often foreigners. In many cases, it will be best to preserve land ownership within the country, although foreign investment in production is welcome when undertaken with minimal social disruptions or even broad community benefits. Value may occur by investment in land clearing, fencing, roads, irrigation infrastructure, or investments to improve water supplies, but these must also be weighed against any environmental degradation or socially undesirable consequences in the local communities.<sup>23</sup> There are positive cases of long-term land leases for large nucleus farmers that have brought significant benefits to the local community, such as investments in community schools and outgrower farming schemes that provide additional income earning opportunities.

There are many problems and negative experiences from historical policies that need to be avoided and in many cases evidence is either not easily available or is inconclusive. This paper does not seek to give answers on such a complex issue nor prescribe any specific approach to solving the problems. Broad recommendations simply cannot be made given that local conditions and considerations vary considerably. Although this discussion is quite limited, the issue is put forth within the context of this paper in order to encourage a more open dialogue and debate on the issue of land rights in the context of agricultural growth and economic development. Ideally, such discussion will be supported by the evaluation of historical policies and sharing of lessons learned. Rather than remain silent on the issue due to its complexity and sensitivity, however, this report strives to raise the subject in hopes that policymakers continue to seek solutions that capitalize on the benefits of improving land security while minimizing the negative impacts.

---

21 Roberts (2011)

22 Roberts (ibid)

23 Roberts (ibid)

## WAREHOUSE RECEIPT FINANCING

### POLICY FOCUS AREA

Warehouse receipt financing, including the appropriate legislation, regulatory and supervisory oversight, and licensing of warehouses, represents an opportunity to lower vulnerability of farmers to unfavorable prices and conditions, reduce post-harvest losses, and increase the flow of credit into supply chains. A well-functioning warehouse receipt system can provide broad benefits such as permitting stored goods to be used as collateral; improving quality, control, and inspection of commodities; facilitating investments to increase and improve storage capacity and quality to reduce losses; enhancing marketing within value chains; and supporting the establishment of commodity exchanges. Alternative systems based on collateral management agreements can provide viable solutions to inventory financing but also require relevant legislation, such as registration for movable collateral.

Post-harvest finance in many developing countries is not well structured due to the lack of a well-functioning warehouse receipts system. As a result, farmers sell their crops right after harvest without benefiting from any price recovery. A warehouse receipt system can offer farmers a choice to either sell or store the crops under proper conditions, and benefit from any price recovery post-harvest by facilitating the finance against those warehouse receipts. The most important factor in creating a sound warehouse receipt system is a favorable legal environment, which ensures the easy enforceability (out-of-court) of the bank's security interest in the crop collateral and thereby provides comfort to the banks to lend against warehouse receipts. The sale of the commodity then becomes the primary source of repayment for the loan.<sup>24</sup>

The lack of adequate storage for many staple crops and the associated post-harvest losses in many countries can be ameliorated by the incentives created through a well-functioning warehouse receipt system. Additionally, the ability of farmer organizations to participate in price recovery will be more likely in an environment with well-developed warehouse receipt finance mechanisms. Although warehouse receipt financing has many benefits, it is worth noting that it only provides post-harvest finance. In most cases, other than farmers engaged in double or triple cropping (which is uncommon for those commodities that can take advantage of warehouse receipt financing), this post-harvest finance does not address the issue of demand for working capital to finance planting and other seasonal activities.

From a legal and regulatory perspective, warehouse receipt financing depends on a number of prerequisites and preconditions in order to operate effectively and to achieve the benefits outlined above. The following prerequisites are widely accepted and are taken directly from Meyer:<sup>25</sup>

- 1) An appropriate legal system that essentially treats warehouse receipts as cash;
- 2) Active commodity markets to value and liquidate commodities;
- 3) A system of grades and standards for classifying commodity quality;
- 4) Regular patterns of post-harvest seasonal price increases sufficient to compensate for storage and borrowing costs;
- 5) Appropriate financial, technical, and administrative standards for warehouse operations and effective licensing and monitoring of warehouses;
- 6) An effective indemnity fund or bond as insurance against potential fraud or negligence by warehouse operators; and

<sup>24</sup> Please refer to Section 4.4 on innovative models for more information on warehouse receipt finance.

<sup>25</sup> Meyer (2011)



- 7) Local financial institutions willing to experiment with a new product.

Typically, these prerequisites can be most easily met for traditional export commodities such as coffee and cotton, but their use for cereals and other non-traditional export crops often requires preliminary work to create essential support systems. It is also worth noting that the prerequisites apply to public warehouse systems, which are most inclusive, but the process for establishing the prerequisites is often long and cumbersome. These efforts can also be undermined by weak governance systems that nullify the main benefits. There is an alternative in the form of private systems, generally run through collateral management agreements or stock management agreements. Although such private systems are easier to set up, they tend to be significantly more expensive on a transactional basis and generally only the largest, most profitable market participants are engaged in the private system arrangements.

## COOPERATIVES AND OTHER FARMER-BASED ORGANIZATIONS

### POLICY FOCUS AREA

Effective organizational frameworks, such as cooperatives and other farmer-based organizations (FBOs), enable farmers to focus on commercial activities and participate in value chains. Governments need to provide an enabling environment and legislation supporting the development of cooperatives and other FBOs as economic enterprises. Cooperatives, as currently defined, operate under some inherent limitations, and other organizational options, such as informal associations of farmers and limited liability companies, in many cases may offer more appropriate organizational frameworks. A less hands-on approach when promoting cooperatives and farmer-based organizations would likely lead to better results in terms of ownership, profitability, and sustainability. In some

countries, a revised legal framework permitting easy registration and legal status for farmer groups may be needed. Governments and donors can support capacity building for cooperatives and FBOs that encourage best practices, such as clearly defined market-oriented objectives, mandatory supply agreements, proper capitalization structures, and sound business and governance principles.

Within the market as a whole, farmers are very small-scale entrepreneurs who have to face more powerful traders and off-takers, even large-scale and multinational companies, as their clients. Thus, the ability of farmers to organize into larger groups around economic activities helps to bridge the gap between the individual small farmer and the large market players, while ensuring that the farmers can assume a more equal market position within the supply chain. These FBOs sometimes take the form of cooperatives.

However, in many developing countries cooperatives have shown a questionable historical performance record at best. Frequently, cooperatives have been created directly or indirectly by the state and are viewed more as social rural development instruments than as economic structures for the producers. This is also reflected in the relevant legislation, which is sometimes based on traditional consumer cooperative structures instead of on principles of cooperative enterprises. This paternalistic approach has resulted in a very fragmented and ineffective cooperative landscape. As a result, most cooperatives in developing countries have a very small market share in supply chains and are avoided by the better producers. By comparison, cooperatives in mature markets have evolved into economically-oriented and professionally-managed groups that have developed considerable or even very large market shares.

Given this context, there is reluctance on the part of many in the agricultural finance space to consider

such traditionally-defined or old form cooperatives as viable entities to participate in financial transactions. However, it is simply not feasible for most individual farmers to access significant finance directly from financial institutions. The aggregation process can move families working small plots, typically under two hectares, from household subsistence production to surplus farming for markets. Key is that transaction costs to off-takers can be reduced by forming effective marketing cooperatives or FBOs. To attract external finance, these businesses need organizational cohesion and management capacity, especially in financial and business planning.<sup>26</sup>

Through FBOs or cooperatives, farmers are able to establish their own companies that can integrate successfully into the agricultural supply chains, thus effectively transforming the farmers collectively into agricultural SMEs. Such organization ultimately enables more efficient functioning of supply chains, not only for the direct benefit of individual farmers but also for other stakeholders in the supply chain, such as service and input suppliers. FBOs or cooperatives can thus eliminate fragmentation and non-value additive multiple trading and enhance appropriate post-harvest and quality management. From a value addition perspective, such organization by farmers can also make the supply chain shorter, as middlemen are cut out, while permitting all remaining parties to increase their margins without raising prices for the consumer.

Thus, given the success of cooperatives and other FBOs in many developed markets and the potential benefits to value chain development in developing countries, it is important to look at ways in which cooperatives and FBOs can be appropriately structured and supported by legislation so that farmers can realize the benefits from economic cooperation, integration, and organization. Section 4.3 lays out a number of factors that distinguish economically-oriented, successful cooperatives and FBOs from those that have proved unsuccessful.

## 2.3 Designing Effective Government Support Mechanisms

### CHALLENGE:

Given its political importance for poverty reduction and food security, agriculture is a politically sensitive sector and prone to ad hoc government interventions. Government support mechanisms are often the victim of mixed policies, such as subsidy interventions, directed credits, and direct government investment, which have frequently failed to meet expectations by crowding out both financial and agriculture sector growth.

Although permanent interventions through lending quotas, interest-rate ceilings, or direct government provision of financial services have been reduced substantially in recent decades, governments continue to intervene on an ad hoc basis given the politically sensitive nature of agriculture. Such interventions include loan rescheduling or forgiveness, and preferential lending programs for specific target groups, which are often granted after major economic downturns or natural calamities, and especially in the advent of elections. Usually such actions create additional uncertainties for financial institutions and tend to weaken the repayment culture. Subsidies represent another popular example of government intervention in the agriculture sector. However, the experience of the last decades has shown that almost all forms of direct subsidies, such as interest rate subsidies, have rarely produced positive effects. More often than not they have led to severe market distortions, with credit misallocation, undermining the sustainability of financial institutions.

Government support may be effectively used to provide incentives, catalyze a market, spur investment in infrastructure with widely dispersed benefits, or create a demonstration effect. It is critical that government special support programs be used as complements to, rather than substitutes for, the development

---

26 Doran, McFadyen, and Vogel (ibid)

of a basic enabling environment for financial services. In all cases, government interventions (state banks, lending facilities, credit guarantees, risk-sharing, capacity-building, etc.) should be carefully designed and better evaluated with a view to accurately measure their achievements in terms of outreach, additionality, and leverage. Such interventions should be designed to respond to market needs in a timely and cost-effective manner, and should be sufficiently flexible to respond to changing macro-economic conditions. It is also important to ensure alignment of interests between the public authority providing funding and the implementing institution, so that the latter also has an interest in achieving the policy objectives. In general, any financial support scheme should be able to make a profit.

## SMART SUBSIDIES

### POLICY FOCUS AREA

Government support should be directed towards public goods and investments in financial and physical infrastructure with industry-wide, systemic benefits. Utilization of “smart” subsidies that minimize market distortions and elimination of regressive measures help encourage private sector investment, leading to sustainable agricultural development and finance. Subsidies should be used to support the institution and not the borrowers. Moreover, subsidies should not undermine competition by favoring specific institutions but should support natural spillover effects to non-subsidized institutions. Subsidies function best when time-bound, limited, decreasing over time, and focused on infrastructure and product development. Incentives to encourage increased lending to the agriculture sector are welcome, but policymakers should avoid historically ineffective and sometimes damaging measures such as interest rate caps, debt forgiveness, and directed or mandatory lending targets, which impede the functioning of financial markets.

A basic problem behind certain government interventions is that politicians wish to come up with quick fixes for social problems, such as rural poverty. In this respect, politicians frequently promote short-term solutions, such as easy credit and subsidized interest rates, in order to achieve social objectives. Even though these interventions appear to assist the poor, in the long run they regularly end up distorting existing financial markets and hindering agricultural development. At the same time, financial institutions are often weakened by the imposed conditions having negative effects on their portfolio or the attitude of the debtors.

Instead, government intervention in any form should be kept to a minimum and focus on developing and improving enabling legal frameworks, including measures to ensure compliance with legal norms by citizens and improve the quality and capacity of the judiciary so as to be able to enforce laws. The intervention of government may be directed at the development of the entire financial sector through, for instance, supporting an enabling environment, data collection, and registration measures, as well as supporting structures or institutions that make processes more transparent, easier, and cheaper (e.g., credit information bureaus, data and weather analysis, etc.). Through such measures, all financial institutions may benefit, which might lessen the reluctance to extend credit and offer financial services for agricultural businesses along the value chain.

It should be obvious that financial institutions have to cover all costs in order to operate profitably and, therefore, they need to take market interest rates. However, relaxing interest rates because farmers are too poor to pay market-based interest rates might also mean that farmers are too poor to repay their loans. Hence, interest rate subsidies frequently lead to credit default and misallocation, which even accelerate the impoverishment of poor customers. This is based on the fact that low interest rates reduce incentives for savings mobilization, discourage credit discipline, and lead to decreasing capital.

Financial institutions should take market-based interest rates in order to cover operational costs and to work profitably. Those institutions that do not take market interest rates will likely ultimately prove unprofitable, unsustainable, and non-competitive. Hence, they rely on subsidized funding from outside and frequently work inefficiently, with high administrative costs and low economies of scale. Other criticisms of subsidized loans (also called “cheap” or “soft” loans) are that the distribution might be unequal and that subsidy dependency follows for local clients. As a result, the local market may become distorted after the local population has become accustomed to subsidies. For this reason, once subsidies are implemented in a system, they are difficult to abolish.

Subsidized interest rates build on the misconception that rural individuals are unable to pay market interest rates. However, widespread use of informal credit suggests that farmers are anxious to have access to the full range of potential sources of finance, even at high cost. Given the risky nature of agricultural production, access to a full range of reliable, transparent and clearly structured financial services is the decisive factor, rather than costs alone. Informal financial sources exhibit much higher effective interest rates than formal financial sources.

Formal banks often prefer to lend in other sectors over agriculture due to the complexities and risks in agricultural production and agribusiness. Subsidies or guaranties may provide incentives to encourage banks to explore the sector, but these are often not sufficient alone and work best when accompanied by capacity building. Tools to cope with the different requirements for evaluation of credit risk in agricultural clients, analyze certain agricultural sectors, and calculate the economic potential of agribusinesses can help banks to open up to the opportunities of financing agriculture all along the value chain. The combination of subsidies and technical assistance for SME and

banking staff might facilitate the transition and allow banks to become accustomed to working with the segment. Once established, the subsidies can be phased out, and the best practices continued within the organization and ideally shared with other banks to help broaden the competition.

Some interventions in insurance that consist partly of subsidies have proven quite promising. Through promoting and subsidizing the establishment of weather reporting stations, data collection, and analysis, a much broader knowledge and infrastructure can be established to enable development of micro- and weather-index-based insurance products. This would benefit both the financial institutions and their clients by mitigating the risks associated with weather. Other interventions might include the careful implementation of credit guarantee funds in combination with technical assistance, and development of warehouse receipt schemes according to the local needs and capacities.

Lessons learned about subsidies have led to guidelines for “smart subsidies.” One of the principles is to subsidize the infrastructure and the capacity building in the institutions, but not the borrowers directly, to reduce the effects mentioned above.<sup>27</sup> Smart subsidies advocate support of financial intermediaries or apex structures to extend services for clients and members. Looking at the overarching lessons about subsidies, certain guiding principles have emerged throughout the last decades, along with examples of subsidies that contribute to sustainable rural finance. In general, any subsidy should be temporary and transparent, and linked to institution building rather than lending activities in order to prevent or minimize market distortion and allow a broader approach.

The following general guidelines for smart or market-friendly subsidies are taken from the summary of

---

27 See also section 4.1 on capacity building for financial institutions.

subsidy issues listed in *Subsidies as an Instrument in Agricultural Finance: A Review*.<sup>28</sup>

- Subsidizing the institution but not the borrower is the best way to reduce distortions, even if this implies a degree of direct subsidy to borrowers.
- Projects to subsidize selected institutions should explicitly consider the interest rates to be charged relative to competing institutions so the subsidies do not undermine competition.
- Subsidies that successfully create public goods for the benefit of the entire financial sector may generate higher returns than subsidies for specific institutions because no single institution can justify making the investment alone when the benefits accrue to many.
- Subsidies for building individual financial institutions are easier to justify if there is a natural positive spillover to nonsubsidized institutions. Subsidies to finance innovations created through networks of financial institutions may be preferred because of the likelihood that the benefits will be spread among all members.
- Indirect subsidies that benefit many borrowers may generate more total benefits than direct interest-rate subsidies to borrowers.
- Quantitative performance measures should be included in the project agreements so subsidies to financial institutions do not dull incentives for achieving high performance levels. Subsidies need to be time-bound with explicit exit strategies specified for the supplier of the subsidies.
- Comparative cost-benefit studies are needed to identify which subsidies generate the greatest payoff in practice.
- Recipients of grants should provide matching cash or in-kind contributions to demonstrate their commitment to the projects funded.
- The provision of grants to financial institutions should be designed so recipients clearly understand

the difference between grants and loans that need to be repaid.

The following are principles for subsidies that contribute to sustainable rural finance, which are also taken directly from the paper *Subsidies as an Instrument in Agricultural Finance: A Review*.<sup>29</sup>

### **Pillar 1. Subsidies for Financial Intermediaries**

Subsidies to financial intermediaries must be:

- Transparent, targeted, and capped;
- Funded explicitly through the government budget or other sources subject to effective control and regular review;
- Fiscally sustainable;
- Fair, not giving an unfair advantage to some intermediaries vis-à-vis other qualified and directing competing institutions; and
- Economically justified.

Appropriate subsidies could:

- Provide technical assistance to financial intermediaries to improve systems that enhance efficiency, such as management information systems;
- Develop and introduce demand-responsive products on a pilot basis;
- Help develop or improve service delivery mechanisms that enable greater outreach into rural areas; and
- Cover a portion of the cost of establishing new branches in areas that do not have financial intermediaries that serve the poor.

### **Pillar 2. Subsidies for Financial Infrastructure**

Time-bound subsidies may be appropriate to:

- Create capacity within regulatory and supervisory bodies;
- Support the creation of industry associations; and
- Develop training institutes and credit information agencies.

28 Meyer (ibid).

29 Meyer (ibid)

### Pillar 3. Subsidies for Economic and Social Infrastructure

Subsidies in this category involve investments in economic and social infrastructure that facilitate the carrying out of income-generating activities by members in the community. Such subsidies should:

- Decline over time, as the local organizations build capacity to cover costs through user fees; and
- Include a match from the beneficiaries, preferably in cash but also in kind, depending upon the beneficiaries' economic circumstances.

There are other topics relevant to subsidies that are outside the scope of this report on agricultural SME finance, including interventions directed to the very poor and fertilizer subsidies. In-depth thought on this and other topics already introduced above can be found in the excellent paper, "Subsidies as an Instrument in Agricultural Finance: A Review."<sup>30</sup> We have included in annexes two excerpts from this paper. Annex I provides an excerpt dealing with grants to the poor. Annex II includes more information about subsidies specifically related to fertilizer.

#### AGRICULTURAL DEVELOPMENT BANKS

##### POLICY FOCUS AREA

State agricultural development banks often need evaluation and a decision to privatize, reform, or close those institutions found to be ineffective. Good examples of reformed state-owned agriculture development banks are characterized by a governance and management structure free of political pressures and generally employ commercially-oriented policies, full risk management practices, loan products priced according to risk, and a portfolio mix to limit concentration risk. Reform of the entire institution is the most challenging

option, requiring strong political commitment and extensive technical assistance. Alternative options to complete reform include creating specialized units using bank branches and systems or adopting a second-tier or apex function, providing financial linkages with other financial service providers.

State-owned agricultural development banks had a very poor track record in the 1970s and 1980s, despite the high hopes that they would be a key channel for the development effort launched and backed by the Western policy community in the 1950s and 1960s relying on subsidized finance. Instead, many have failed or been closed down.<sup>31</sup> Weak banking practice exacerbated by bad governance, associated with political intrusion and corruption, was the key reason for most failures. However, in a recent Gesellschaft für Technische Zusammenarbeit (GTZ) study led by Hans Dieter Seibel, at least 75 state-owned agricultural development banks were identified as still functioning in 2006. An important question is how to ensure that those agricultural development banks that have not only survived but have been, or are in the process of being, successfully reformed can play the most useful role in the provision of finance for agricultural SMEs.

In the interest of government finances and good use of scarce donor funds, this report recommends that governments undertake an evaluation of the remaining agricultural development banks in order to decide on a course of action: essentially to privatize, reform or close such institutions. It is not recommended to continue with the status quo, given the many problems and the contrasting potential for success from following other positive alternatives.

Successfully reformed development banks can offer substantial opportunities for improving finance for

30 Meyer (ibid)

31 Doran, McFadyen, and Vogel (ibid)

agricultural SMEs. Their large retail network in rural areas enables them to be close to their clients and offer loans, deposits, and payment services at low transaction costs. Due to their size, agricultural banks are able to diversify portfolio risks across regions and enterprises while still offering specific loans for different agricultural enterprises and maintaining specialized staff. Their size and status as banks allow them to offer the full spectrum of financial services, including loans and deposits of different maturities, payment services, etc. They further have access to a range of funding sources, including long-term funds like subordinated loans, bonds, and debentures.

Although development banks might have extensive agricultural sector knowledge, they frequently lack the operational professionalism of a commercial bank. After years of reforms, specific agricultural banks, especially in Asia, have achieved financial sustainability and significant outreach. Among the most remarkable success stories are Bank for Agriculture and Agricultural Cooperatives (BAAC) in Thailand and Land Bank in the Philippines. These development banks shifted from a pure focus on the agriculture sector to a balanced, multi-sector approach. Decisive in their reforms have been strict commercialization, domestic resource mobilization, and cost-covering operations.

There is no single best way of reforming agricultural development banks. Different approaches to reforming public banks can be viable. Their success depends to a significant extent on specific country conditions. Key for success is a strong political will and a coalition to manage and bring forward the transformation. Good examples of reformed state-owned agricultural development banks are characterized by clear mandates, strong governance and management structures, and freedom from political pressures. They also generally employ commercially-oriented policies, full risk management practices, and loan products priced according to risk, while tending to expand beyond pure agricultural lending to achieve a balanced portfolio mix for risk management purposes. Experience thus far reveals different options to reform agricultural development

banks and use their infrastructure to enhance the quality of their products and services. One option is to reform the entire institution, a second is to create a specialist unit that utilizes bank branches and systems, and a third option is to change the mandate to adopt a second-tier or apex function in order to provide linkages with other financial service providers. The reform of the entire institution is the most challenging option, which requires strong political commitment and extensive technical assistance. The aim of reform is to transform these banks into self-reliant sustainable financial intermediaries that are active and responsible participants in rural financial markets.

Very few state-owned agricultural or rural banks in developing countries have gone the route of privatization to date, and some have gone bankrupt after being corporatized. Experience in mature markets has shown that financial institutions where capital suppliers and customer base are linked, like the cooperative banks, do better at retaining their rural mission, in contrast to financial institutions where there is no linkage between capital suppliers and the client base. Therefore, specifically when contemplating privatization of rural state banks, it is advised to develop a mechanism by which rural stakeholders can become shareholders, as this is likely to provide better assurances that the rural mission of the institution will be retained.

For countries that do not already have such institutions, this report does not recommend the creation of new state-owned agricultural banks. If there is a rationale for a market intervention to better serve agricultural SMEs, objectives could arguably be better achieved by specific policy instruments channeled through existing financial institutions, like well-designed credit guarantee schemes or other measures outlined in this report. Moreover, in countries where there is a state bank operating side by side with a credit guarantee scheme, the role and target markets of the two institutions should be well defined. Arguably, the credit guarantee scheme would target the segment of riskier and smaller firms. This would

presumably promote transparency and facilitate the identification of losses and the possible need for government support.

It is also worth stating that governments unable to follow through on the above reforms with sufficient political will and dedication over the long time required to implement such reforms would likely be best served by simply closing state-owned agricultural development banks. In this case, resources can then be redirected to the development of other sustainable, commercially-oriented financial systems serving rural and agricultural clients.

## PARTIAL CREDIT GUARANTEES

### POLICY FOCUS AREA

Partial credit guarantees and risk sharing facilities can be an effective mechanism in stimulating agricultural loans, particularly when accompanied by complementary technical assistance to banks. These schemes may include capacity building of local financial institution staff, support to develop targeted agriculture loan products, and technology transfer to support implementation. Guarantees targeting longer-term loans may also boost finance for equipment and other productivity-enhancing investments. It is recommended that guarantees in general require an appropriate portion of default risk to remain with the retail financial institution (i.e., coverage maximums, shared losses) to avoid moral hazard and adverse selection, and that the guarantees be gradually phased out in order to promote financial sustainability.

Partial credit guarantees (PCGs) and risk sharing facilities (RSFs) are instruments that lower the risk on loans provided by financial institutions to certain borrowers through an agreement with a third party to partially guarantee or share the risk of defined types of loans. The third party may be a government, donor, NGO,

international financial institution, or other party. PCGs and RSFs may provide incentive for banks to extend loans in situations when they otherwise would not, especially when collateral is minimal or nonexistent or in situations where the legal and regulatory environment makes it challenging to secure, perfect, and realize collateral claims. Particularly in the absence of good collateral, PCGs and RSFs may serve to stimulate medium- and long-term lending that would otherwise not occur in the agriculture sector.

Another rationale often used with PCGs and RSFs is that these instruments may provide comfort for financial institutions interested in testing the feasibility of lending to businesses along the agricultural value chain, but a guarantee alone is unlikely to induce additional lending if the lenders lack such interest. Training and technical assistance components of guarantee schemes are as important as the funding of the guarantees in stimulating lending to a new clientele.

PCGs and RSFs are best designed with clear eligibility criteria to encourage specific types of investments, particularly those that help to modernize the agriculture sector. When designed well, they can operate based on auditing and monitoring after the fact instead of processing that requires approval of each individual application, thereby reducing bureaucracy and the length of time between application and disbursement. It is recommended that guarantees be gradually phased out, which could mean either reducing coverage or stepping them down over time in order to phase out the entire facility completely, facilitating the financial sustainability of the loan portfolio the guarantees are designed to support. The guaranteed or shared-risk portion should be capped at a level that ensures the financial institution retains a sufficient amount of risk to avoid moral hazard problems and to ensure sufficient leverage of the funding.

Credit guarantee schemes should be fully integrated into the existing financial market to be efficient and are better managed by finance professionals who know the market and the customers well. Special-purpose vehicles for risk management have proven



less effective in managing guarantees. It is also beneficial to clearly separate guarantees from any subsidy or soft loan schemes. Local regulators should encourage effective guarantees for agricultural finance by applying a reduced risk capital weighting for loans that are covered under PCGs or RSFs.

The following represent the minimum requirements, as identified by IFAD,<sup>32</sup> that should be fulfilled in order to justify a credit guarantee arrangement:

- Credit guarantees respond to a measurable, quantifiable demand;
- The guarantee is professionally managed by an independent, specialized financial institution;
- A significant part of the default risk stays with the retail institution to avoid moral hazard and adverse selection; and
- Adequate technical assistance is available to mitigate the other constraints and risks involved in serving the target group (e.g., appropriate products and delivery mechanisms, trained staff, risk management systems).

PCGs for agricultural credit from governments or donors have shown mixed results. If PCGs are confused with subsidies, moral hazard problems can deplete such funds rapidly. Additionally, covariate risks can threaten a guarantee fund and its sustainability. Therefore, it is necessary to assess the capacity of the participating financial institution in terms of economic soundness, staff capacity, and the potential risks and opportunities of the portfolio targeted. The full costs of any scheme should be assessed and monitored as well. International agencies can perform a valuable service by conducting evaluations to determine if and under what conditions guarantees produce the expected results and how the details of guarantee designs affect performance. As the conditions of the financial institutions in countries vary considerably, the conditions under which certain schemes might work and with what type of partner financial institution could be evaluated and assessed, so that structures and conditions

could be adapted accordingly. It is also critical to evaluate whether they distort markets and discourage private credit market development.

According to a forthcoming GIZ paper, another challenge in developing and transition countries is to shift from unsustainable funds towards sustainable guarantee companies as part of the financial sector. The latter could be set up as non-bank financial institutions and structured as public-private partnerships with participation of the banking sector. Well-managed guarantee companies with low claim ratios can achieve high leverage of their core capital. Core elements of robust design to move into the direction of sustainable funds are similar to the above IFAD requirements. The following suggestions can be highlighted: appropriate coverage levels (between 50 -70 percent of the loan amount) and the use of shared rather than first-loss guarantees to avoid moral hazard. Cost-covering guarantee fees, diversification of the guarantee portfolio across sectors and regions, and professional management are further prerequisites for sustainability.<sup>33</sup>

## INFRASTRUCTURE

### POLICY FOCUS AREA

Infrastructure investments via public-private partnerships are best targeted towards public goods supporting broad agricultural development. Certain types of infrastructure underpin the broader market for agricultural finance, such as weather stations for insurance, irrigation systems to mitigate weather risks, quality storage facilities to support warehouse receipt financing, and market information systems (e.g., prices, production, etc.), but these are best implemented via the private sector and/or PPPs for long-term sustainability. It is worth noting that other infrastructure investments, such as roads, railways, cold chain, transport, energy, and telecommunications are critical to agricultural development but not directly linked to agricultural finance.

32 IFAD (2009)

33 Hoellinger (ibid)

This section addresses government support to spur investment in physical infrastructure supporting the real sector, rather than in financial infrastructure (covered in Section 3.1). The infrastructure investments focused on herein are also those directly linked to or with specific impacts on the development of financial products such as weather insurance and warehouse receipt financing. It is important to recognize that significant constraints exist in the physical infrastructure supporting rural areas, as listed in the recommendation above. Although these are not directly covered in the recommendations specific to agricultural finance, the impact of the poor state of rural infrastructure should not be overlooked, as inadequate infrastructure leads to significant inefficiencies in the sector as a whole. Poor infrastructure in terms of transportation, communications, and power supply result in high transaction costs for agricultural finance clients and rural financial services providers alike.<sup>34</sup> Thus, public-sector investments in transport and communication infrastructure can reduce transaction costs and enhance the profitability of both economic activities and financial services provision in rural areas.

In many countries, the lack of quality warehouses for storage is a major constraint to inventory financing of both staple crops and value chain financing for crops requiring cold chain storage. There is a significant need to improve, upgrade, and modernize existing warehouses and storage facilities in order to reduce post-harvest losses, as well as to increase various forms of post-harvest inventory finance, such as lending against warehouse receipts, stock management agreements, and collateral management agreements. Often, warehouse facilities, particularly those in rural areas, have been constructed by the government but have not been well maintained or managed, and are thus in need of repairs, improvements, and modernization, in addition to

sustainable management going forward. Governments can take advantage of public-private partnerships to share this responsibility and capitalize on the opportunities that can be derived from enhanced storage capacity and quality to benefit many market participants.

Particularly important to agricultural producers is infrastructure that supports risk management measures, such as irrigation to mitigate weather risks, insurance infrastructure, and information technology and platforms for collecting market price and production information on various crops. Irrigation on a large scale under government ownership has generally suffered from poor maintenance. However, it is possible to support irrigation investments that benefit large groups of farmers through public-private partnerships in addition to promoting smaller-scale irrigation schemes at the farm level. Infrastructure investment is a necessity to provide accurate and timely weather data for the development of weather index insurance products, representing one mechanism by which farmers can manage weather risks. IFAD and the World Food Programme (WFP) highlight adequate weather station infrastructure as one of the minimum conditions to start-up weather index-based insurance and one of the key principles to achieve scale and sustainability. They also note that weather station infrastructure is an area in which government support can be effectively leveraged.<sup>35</sup>

There is a public good element in this type of investment, as market players will not begin to develop insurance products without accurate data. Individual firms generally cannot cost-effectively make these investments in weather stations on the assumption of future revenues, given a traditional first mover problem and particularly given the costs of construction and maintenance in remote areas.<sup>36</sup> Additionally,

34 The transaction costs for financial institutions are mainly related to on-site loan appraisal and monitoring of borrowers, and in dealing with defaulting borrowers. Transaction costs for clients are related to transport to and from bank branches, obtaining the necessary loan documentation, making payments, etc.

35 Hazell, Anderson, Balzer, Clemmensen, Hess, and Rispoli (ibid)

36 Although this is almost always the case, it is important to acknowledge that a private company in India, the Weather Risk Management Services (WRMS), has installed more than 400 weather stations. Data generated by WRMS stations has been a key input into index-insurance products but has also been sold for other uses, and WRMS has achieved break-even operations. This example shows the possibility of private companies and/or the potential for PPPs in this area.

market participants need reliable information for a reasonable historical period from weather stations to estimate and price risks and establish contracts. They also need such infrastructure to be well maintained on an on-going basis to be able to settle claims in a timely manner. Governments can use weather data in order to better plan for and manage disasters such as droughts, floods, and other climate change adaptation policies. There is an opportunity to support the costs of infrastructure investments in weather stations by selling weather information to farmers, insurers, newspapers and media companies, input suppliers, and agricultural processors. Given the variety of potential users, there should be opportunity for developing effective PPPs to build and manage infrastructure for long-term sustainability.

## AGRICULTURAL INSURANCE SCHEMES

### POLICY FOCUS AREA

Development of agricultural insurance markets represents an opportunity for public-private partnerships to foster access to finance and improve agricultural productivity. Governments can actively support growth of agricultural insurance through investments in weather stations and data collection, such as weather and area yield data, necessary for commercial products to be developed, which may also require suitably designed premium support. The government can also promote more traditional yield-based crop insurance through appropriate incentives and support systems. Fiscal support is necessary for reinsurance markets and funding for catastrophic risks.

Covariant risks related to weather events constitute a significant challenge for farmers and agricultural lenders alike. Farmers engage in informal risk management strategies such as savings, social networks,

and asset sales in case of emergencies, but these cannot fully protect farmers against major covariate risks. Farmers also try to limit their exposure to covariate risks by diversifying into many small scale activities, on and off their farms. This strategy, however, comes at a substantial cost since it precludes rural households and enterprises from reaping gains from specialization and economies of scale.<sup>37</sup> Moreover, financial institutions at best are forced to diversify their lending operations across regions and activities to limit their exposure to particular agricultural activities and locations. At worst, they must avoid or seriously limit their lending to agricultural clients. Smaller financial institutions in particular may not be able to reach a volume of agricultural lending that would warrant the development of specific lending products and would enable them to achieve high productivity levels and reasonable lending costs. Agricultural insurance can protect financial institutions against certain covariate risks and allow them to expand their exposure towards the agriculture sector. Agricultural insurance can also permit producers to better mitigate weather and other crop risks in order to specialize and thus grow by taking advantage of economies of scale in production.

Traditional crop insurance programs based on individual on-site loss assessments are burdened by high transaction costs, asymmetric information, and moral hazard. In order to keep premium levels affordable, most crop insurance programs are highly subsidized, even in developed countries. Only a few developing countries have been able and willing to afford these costs.<sup>38</sup> Nevertheless, traditional crop insurance could be applicable under certain circumstances, particularly for larger commercial farmers and crops. Such insurance can be supported by appropriate capacity building to reduce transaction costs and asymmetric information.

Index-based crop insurance shows some promise to overcome these flaws. Indemnity payments are triggered

37 Bryla, E, et al. (2003) and World Bank (2005)

38 Hess and Hazel (2009), Stutley (2010), Roberts (2005), and Skees, Hazell, and Miranda (1999)

by deviations from an independently verifiable indicator such as rainfall data measured at local weather stations. Different variables can be used as indices including rainfall, temperature, wind speed, area yield, or livestock mortality, as long as they are highly correlated with farm yields in the surrounding areas and can be measured accurately and objectively. Due to their transparent and standardized structure, index-based insurance contracts may be more easily sold to international reinsurance markets. Transferring risks to international markets enhances the capacity of local insurers to manage larger covariate risks.

The main shortcomings of index-based insurance are possible mismatches between payouts and actual losses if the correlation between index and farm level yields is not high enough (basis risk). Even if a high overall correlation between rainfall data at local weather station and farm yields in surrounding areas exists, there may be important differences between farms due to micro-climatic factors. Good data availability through a dense weather station network and sound actuarial modelling can help to reduce basis risk.

The Weather Risk Management Facility, a joint undertaking of IFAD and WFP, recently reviewed a range of experiences with index insurance programs around the world.<sup>39</sup> It is noteworthy that in nearly all the cases examined by IFAD and WFP, private insurers were not the first to offer index insurance. The public sector, multilateral agencies, and NGOs appear to have initially promoted the concept, in part because private insurers feel constrained by a first mover disadvantage; that is, the first insurer to invest in research and development of index insurance products will not be able to prevent competitors from copying the products and benefiting from the first insurer's investments. However, private insurers have adopted the concept and offered weather

insurance products either because there were regulatory incentives to do so (India), because insurance companies acted collectively through their association (Malawi), or input suppliers/contract farming operations took the lead and insurers followed (Kenya). Still, even when producers want and can afford insurance products, commercial insurers are not always prepared to offer them.

Government support for the development of agricultural insurance is therefore needed in several ways:

- Creation of the necessary network of weather stations;
- Investments in and support for product research and development;
- Premium subsidies and subsidies for administration costs;<sup>40</sup>
- Creation of public awareness and promotion of agricultural insurance;
- Adequate agricultural insurance legislation; and
- Re-insurer of last resort for catastrophic risks.

The analysis of key actors, features of the products, and their successes and challenges revealed that, while not a panacea, index insurance holds promise for improving the lives of people for whom weather incidents can mean the difference between survival and catastrophe. It will take work and, as the IFAD/WFP paper has indicated, careful thought and management to be successful. Index insurance seems to be more effective when part of a larger package of risk management strategies and services, an overall "value proposition." Given the consequences of global climate change, index insurance may also play a role in supporting adaptation strategies in developing countries.<sup>41</sup> To be successful, index insurance will require great public and private investment, as well as willingness to measure success objectively and adjust strategies accordingly.

39 Hazell, Anderson, Balzer, Clemmensen, Hess, and Rispoli (ibid)

40 Premium subsidies should be used with caution, as they may be counterproductive or distortionary. Alternatives to direct premium subsidies include covering catastrophic losses outright. See further list of risks associated with premium subsidies in Hellmuth, Osgood, Hess, Moorhead and Bhojwani (2009)

41 Hellmuth, Osgood, Hess, Moorhead, and Bhojwani (ibid)

The IFAD/WFP analysis has distilled eight principles to help index insurance reach scale and sustainability:<sup>42</sup>

1. Create a proposition of real value to the insured, and offer insurance as part of a wider package of services;
2. Build the capacity and ownership of implementation stakeholders;
3. Increase client awareness of index insurance products;
4. Graft onto existing, efficient delivery channels, engaging the private sector from the beginning;
5. Access international risk-transfer markets;
6. Improve the infrastructure and quality of weather data;
7. Promote enabling legal and regulatory frameworks; and

8. Monitor and evaluate products to promote continuous improvement.

The paper further concludes that with government and donor help, infrastructure can be developed to create stable data and a rational market for index insurance. Once the framework is in place, private insurers can step in to extend the market along existing delivery channels, and to stabilize the risk through objective standards and reinsurance. Ultimately, index insurance has potential not only as a profitable industry, but also as an aid to governments in making better choices about poverty and disaster management. Interested governments and donors should begin by training and educating key players in the idea of index insurance, and private insurers should begin developing relationships with existing delivery channels. These steps will lay the groundwork for a functioning market.

---

42 Hazell, Anderson, Balzer, Clemmensen, Hess, and Rispoli (ibid)

## CHAPTER 3

# Financial Infrastructure and Data

### 3.1 Strengthening the Financial Infrastructure

#### CHALLENGE:

A functioning financial infrastructure, including auditing and accounting standards, credit registries, collateral and insolvency regimes, and apex institutions, reduces information asymmetries and ensures legal security. However, specifically in the agricultural finance sector, a solid financial infrastructure is absent, which increases transaction costs and inhibits access to SME finance.

The financial sector infrastructure is made up of support services for financial service providers, such as domestic rating agencies, credit information bureaus, audit firms, deposit insurance agencies, training and technical service providers, professional certification institutes, and the networks, associations, and apex organizations of financial institutions. These actors work to reduce transaction costs, improve sector information and market transparency, increase access to refinancing, and enhance skills across the sector. They facilitate activities in the financial sector, but do not themselves provide retail financial services. The vitality of the financial infrastructure, or these meso-level institutions, has significant implications for efforts to develop inclusive financial services. The sustainability of the institutions that make up the

financial system, as well as their functional inter-reliance and connections, is very important to the long-term provision of financial services.<sup>43</sup>

As discussed in the G-20 SME Finance recommendations, financial infrastructure in many developing countries is lacking in terms of auditing and accounting standards, credit bureaus, collateral registries, insolvency regimes, and apex institutions. A functioning financial infrastructure reduces information asymmetries and legal uncertainties that increase risk to lenders and constrain the supply of finance. Financial infrastructure development decreases transaction costs and moral hazard problems and improves financial access for all firms, but SMEs are expected to benefit proportionately more, as the problems of opacity and information asymmetry are more severe in the case of smaller firms. Weaknesses in the general SME finance space are further exacerbated for rural and agricultural finance, given the variety of actors involved in the provision of finance, the geographic dispersion of clients, and risks inherent in agricultural loans. A sound financial information infrastructure improves transparency and disclosure for SMEs in a cost-effective way, and helps SMEs build a credit history, which is critical in helping to address both challenges of information asymmetry and cost to serve. In short, an efficient financial infrastructure is the foundation for the functioning of the whole financial sector.

## CREDIT BUREAUS

## POLICY FOCUS AREA

Support to extend credit reference bureaus, as well as other forms of client identification and credit reporting, into rural areas is beneficial to facilitate increased lending to agricultural producers. Efforts to establish credit bureaus are often concentrated in urban areas, but access to better client information is especially important in decision-making for agricultural loans given moral hazard concerns combined with the broad geographic dispersion of rural clients. There are promising innovations, such as biometric and fingerprint data, which support client identification and reporting, but pricing and fee systems must be appropriate for rural clientele and smaller loan sizes.

Credit information systems consist of public credit registries and private credit bureaus, which play two key roles in a financial system: they support banking supervision, and promote access to finance by reducing risks for lenders. Credit reporting systems help assess borrower creditworthiness and reduce operating costs substantially. These cost savings dramatically reduce the size at which a loan becomes profitable, thereby improving access to credit for small borrowers. Credit reporting systems may also facilitate non-collateralized lending by providing sufficient information about a borrower's credit repayment history to offset the need for physical collateral, which is particularly pertinent to agricultural finance.

Governments and public authorities have a critical role to play in developing public credit registries and/or promoting the development of private credit bureaus. The aim should be to develop a comprehensive credit reporting system that covers both personal and commercial credit information, and therefore can

seamlessly cover micro, small, and medium-sized businesses, thus helping lenders better manage credit risk and extend access to credit. Provision of data to credit registries/bureaus should be made mandatory, along with the consultations to the registries/bureaus. This would ensure the rapid build-up of coverage and a reliable database.

Credit registries/bureaus are most effective when their data are electronically accessible and available in real time, and the credit report information is up-to-date and processed quickly. Developing countries, where the information environment is particularly weak, need to start collecting information from all relevant players inside the financial services industry, including microfinance institutions, banks, non-bank financial institutions and, as far as it is economically and practically feasible, players outside the financial services industry, such as utilities and retailers. Finally, bureaus should be encouraged to provide additional services such as credit scores.

Thus far, efforts to establish credit bureaus are often concentrated in urban areas, but access to better client information is especially important in decision-making for agricultural loans given moral hazard concerns combined with the broad geographic dispersion of rural clients. Credit information availability remains relatively weak in developing countries, constraining access to finance in these countries; credit bureau coverage in Sub-Saharan Africa and in South Asia seems particularly weak. Farmers are often not registered by credit bureaus where they have been established. Agriculture and rural credit bureaus are incredibly rare and difficult to create.<sup>44</sup>

The lack of rural credit bureau information represents a risk for both individual financial institutions and across the system. For example, at the micro level, individual clients facing high levels of indebtedness may cause financial institutions to experience high portfolio delinquencies. This may

be linked to the non-existence or limited use of credit information bureaus at the meso level that could in turn lead to systemic problems in a given rural area to spread across multiple financial institutions. Credit information bureaus can help financial institutions to determine reasonable levels of client debt and calculate the loan repayment capacity of potential clients.

It is advisable to expand the coverage of credit bureaus and have them include farmers and registered farmer-based organizations, to enhance these groups' opportunities to access credit. There are promising innovations, such as biometric and fingerprint data, which support client identification and reporting, but pricing and fee systems must be appropriate for rural clientele and smaller loan sizes.

It is also worth noting that there has been debate around developing accounting and auditing standards for SMEs that strike the right balance between transparency and regulatory simplicity. SMEs are typically non-public entities with simple financial transactions. Many of the disclosures aimed at public shareholders and lenders are unnecessary for SMEs. Several countries still resist adopting international financial reporting standards (IFRS) for SMEs, claiming that these standards remain excessively complex and costly for smaller firms. Therefore, a further review of IFRS rules for those firms below, for example, 50 employees may be warranted. Likewise, governments may consider adopting the EU policy of exempting firms with fewer than 50 employees from obligatory audit requirements. Thresholds should be calibrated according to country conditions. Although most farmers and agricultural SMEs covered in this report would fall below this threshold, farmer-based organizations and economic cooperatives as advocated herein may exceed the threshold in terms of membership numbers. A balance can be struck between appropriate financial management and overly burdensome regulations around accounting and auditing standards.

## COLLATERAL REGISTRIES

### POLICY FOCUS AREA

Improved collateral registries for movable collateral and development of alternative forms of collateral are particularly important to increase lending in the agriculture sector. There are severe constraints to medium- and long-term finance for agricultural producers, yet investments in assets such as machinery, equipment, and irrigation are necessary to enhance productivity and agricultural development. Movable collateral registries, which support borrowers' ability to pledge such assets as collateral and lenders' ability to register their charge over these assets, are integral to support long-term investments in agricultural production and value chains, especially when land tenure rights are not secure. Additionally, improving creditor rights to register security interests on sales contracts can support increased lending via value chain and contract farming structures.

Governments are central to developing another crucial component of the financial infrastructure: an effective secured transactions regime. A well-functioning collateral regime is characterized by a wide range of allowable collaterals (immovables and movables), the establishment of clear priority rankings of claims over collateral, efficient collateral registries making priority interests publicly recognized, and effective enforcement of collateral in the case of default, including both seizure and disposition. In the case of developing countries, it is helpful to establish out-of-court enforcement mechanisms, given the low efficiency of court systems and the long time period necessary for reforms to take effect in this area.



Collateral is a necessary requirement for all SME financing. Regardless of how good the business and financial analysis may be, there will remain many risks for an adverse future outcome. However, the reality is that land right issues in developing countries seriously impede the options to use farm land as collateral. The land rights issue in developing countries is reinforced where central banks impose strict collateral regimes on banks. There are particularly severe constraints to medium- and long-term finance for agricultural producers, yet investments in assets such as machinery, equipment, and irrigation are necessary to enhance productivity and agricultural development. These are non-real property assets that could benefit from collateral registry systems. In addition to registration of property as collateral, the system of registration of pledges on current assets (e.g., commodity stocks and warehouse receipts) and the easy access by banks to this registry is of utmost importance.

Insolvency procedures and out-of-court settlements cannot be ignored, as they relate to collateral registration, perfection, and realization of value from collecting against pledged collateral. The value of collateral is strongly associated with how easily and speedily possession can be taken in case of insolvency, especially if the collateral is linked to perishable goods in agriculture. In many countries, insolvency procedures can be only carried out through the courts, which makes them lengthy, time-consuming and, in many cases, unpredictable. The existence of adequate insolvency procedures based on out-of court settlements has a positive impact on the value financial institutions can extract from a given security. This in turn can greatly improve access to financing. Therefore it is recommended that governments will review their regulations and legislation and make them more “customer friendly” in order to enhance financing.

## COMPETITION BETWEEN AND COMPLEMENTARITY OF FINANCIAL INSTITUTIONS

### POLICY FOCUS AREA

Growth of a vibrant rural financial system, including a variety of financial institutions, platforms, and distribution networks, is critical to supporting growth and development in the agriculture sector. The financial system should foster a mix of diverse financial institutions serving agricultural clients, with standards, oversight, and support appropriate to each type of institution, as well as facilitation of wholesale and partnering relationships between players to support innovation and expanded rural reach. A diverse system can best address demand for financial services beyond credit to include savings, insurance, and other products tailored for specific groups, such as youth and women. Although competition is important, cooperation and partnerships can leverage various institutions’ strengths to play complementary roles and establish distribution channels. Commercial banks have strong managerial capacity and balance sheets, and financial cooperatives and rural credit unions offer rural reach and local knowledge, while alternative delivery platforms such as correspondents, agents, mobile branches, and mobile banking platforms support access to hard-to-reach clients.

Competition is a key incentive for financial players to expand business lines beyond the large corporate segment and develop the agricultural SME finance business. An effective legal and regulatory framework will promote competition by avoiding overly restrictive licensing requirements and allowing international and regional banks with better SME lending technologies and downscaling capacity to enter local markets. It will also enable the growth of institutions that have proved to be effective, such as mutual banks, and promote the development of alternative lending technologies

such as leasing and factoring. Finally, an effective legal framework promotes the development of securities markets and institutional investors as an alternative to bank lending for the largest firms, thus producing positive spillover effects to SME lending.

Partnerships between formal and less formal financial institutions have the potential to combine the strengths and overcome the weaknesses of each partner. Formal financial institutions have better access to funds, well-trained staff, extensive infrastructure and systems, and better opportunities for managing risks through portfolio diversification. Less formal financial institutions are close to their clients, have good knowledge on local conditions, may use social sanctioning mechanisms to ensure compliance with contracts, and tend to be more flexible and innovative.

In most cases, financial linkages are used to allow less formal institutions to expand lending, make deposits, and manage liquidity. In other cases, the less formal partner acts on behalf of the formal partner, normally against a fee for the services provided. These facilitating linkages can be used for different financial services and transactions such as payment of remittances or utilities, mobilizing savings, selling insurance products, and extending loans. Setting up linkage partnerships requires substantial amounts of training, capacity building, and mentoring. Such linkages could be used more widely to expand the quality and availability of financial services to poor population groups in rural areas. Governments and donor partners could support the testing of different types of contractual arrangements, creation of accounting system add-ons, and use of advanced internet and telecommunication technologies. Less formal institutions could be assisted in identifying formal linkage partners. Emphasis should be placed on developing linkages that go beyond the provision of credit and involve other financial services.

Payment, clearance, and settlement systems are the means by which payments are made between system participants, mainly banks, within and across borders. Yet, most agricultural SMEs conduct business

using cash, which is subject to loss, theft, and destruction in a multitude of ways. Effective, efficient, and stable payment, clearance, and settlement systems encourage entrepreneurs to move into the formal economy and facilitate their relations with banks. Corporate payment and retail payment systems both play a role in scaling up SME access to financial services and reduce the costs of doing business.

Competition and cooperation among financial sector players can be promoted further by introducing technological platforms in key areas, facilitating a variety of financial products and services, driving down the costs of financial access, and reaching previously untapped markets. The competitive marketplace for SME finance should include both financial institutions and non-financial institutional providers with extensive business networks meeting appropriate criteria. Examples of this includes the agent banking model in Brazil, where financial services are successfully provided by private agents using point-of-sale devices.

In some cases, the scope and reach of financial services can benefit from an innovative approach providing those services in partnership with agents (employees or independent relationships) or via third-parties. For access to financial services in rural and remote regions, such agent and partnership models can increase points-of-presence for banks or money transfer services exponentially. Beginning with simple and trusted agent cash-in/cash-out services, and access via mobile phone or internet kiosk, rural customers, both banked and un-banked, can access national and international remittance services, electronic current accounts and bill payments, standing orders, and short- and long-term savings products. With electronic records of payments and payment behavior, balances, and on-time payments, a credit history can be quickly and efficiently built up, providing the required intelligence for basic credit-scoring, lines of credit, agricultural loans, leasing schemes, farming input options, and foreign exchange management.

Governments should develop effective regulations that allow agent banking and mobile banking services in order

to effectively improve financial inclusion, as even with information technology solutions it is essential to have convenient places for cash-in/cash-out transactions. In many rural locations, it is too expensive for banks to set up their own offices, and therefore agents can be helpful. Experience in Brazil, Kenya, and the Philippines, among others, has shown that this can be effective. It is important for governments to strike the right balance between control (i.e., protection of consumers) and market needs.

### 3.2 Building Consistent and Reliable Data Sources

#### CHALLENGE:

A large gap in data and knowledge transfer has impeded growth in agricultural finance. Data relevant to agricultural markets, such as crop production, trade, marketing, crop prices, weather, or other systemic risk factors, are not collected systematically, which inhibits the evaluation of loans, conceptualization and quantification of agricultural finance risks, and development of appropriate risk management mechanisms. Further, data on agricultural loans are not reported consistently, creating a challenge in estimating the financing gap in the agriculture sector.

#### BRIDGING THE DATA GAP

##### POLICY FOCUS AREA

Governments should invest in the regular collection and dissemination of reliable data related to agricultural finance, agricultural production, supply chains, and market pricing information. There is an extensive need for collection, organization, analysis, and dissemination of a broad range of agricultural finance data. Such data is necessary to inform effective agricultural finance policies and to bridge the gap in understanding that divides market participants from the supply and demand sides. Financial institutions need more information about prospective agricultural clients and supply chains, while farmers and agricultural SMEs also need better understanding of banks and other financial service providers.

The lack of reliable data in both the agriculture sector and agricultural finance is a significant hindrance to the economic development potential for agriculture in many developing countries. The recent food crisis has sharply highlighted the importance of sound agricultural policies along with the weaknesses in agricultural information systems that hinder knowledge generation, innovation, and change. Despite the importance of the agriculture sector and its critical role in meeting the MDGs and buttressing governments' poverty reduction and growth strategies, serious weaknesses in agricultural statistics persist throughout many developing countries. This lack of valuable data applies to both the financial sector, in terms of the supply and gaps in agricultural finance, as well as to the real agriculture sector, in terms of the lack of useful industry information on production, price, and cost factors.

The missing data on both sides contributes to the reluctance of supply and demand actors alike to constructively provide or utilize financial services to grow the agriculture sector for the betterment of the economy as a whole. This relates not only to credit and lending products, but also to insurance, which relies very heavily on data availability, and other savings and payment services. Through more reliable information on the agriculture sector, financial institutions, private sector investors, and supply chain companies can become more confident regarding the agriculture sector and better able to analyze and assess risks and returns more accurately. Reliable information can create in these actors greater willingness to lend or invest in the sector, while generating higher returns and expanding the savings or investment possibilities. In this regard, publicly available information on costs and risks of agricultural production is extremely valuable at a sub-sector or value chain level and at the level of defined geographic areas. The value of the information not only helps estimate the financing gap but also indicates constraints and opportunities. Clearly, there is a strong need to bridge the data and knowledge gap that exists between suppliers of agricultural finance and the users of agricultural financial services.

## AGRICULTURAL SME FINANCE GAP

## POLICY FOCUS AREA

Measurement of the agricultural finance gap, along with quantification of the opportunities for growth, is paramount to setting, evaluating, and improving agricultural finance policies. Policymakers can require banks and financial institutions to report data on agricultural lending, such as the amount, term, loan purpose, and repayment performance. Such data from financial institutions, together with census and other survey research, contributes to the on-going diagnostics and strategic reviews of agricultural finance within each country and leads to sound policy.

The gap in the financial landscape remains a major challenge. The data on agricultural SME finance is unavailable to quantify this gap even on a country level, let alone globally, but there is a consensus that the financing gap is a substantial and persistent problem.<sup>45</sup> There is already a well-defined need to improve data to quantify the SME finance gap, and further problems arise when looking at the agricultural finance sector. In particular, there are problems of reporting, since a significant amount of agricultural credit is provided through informal arrangements, village-level banks, savings and credit cooperatives, and other less formal (and often unregulated) financial institutions. In addition, much agricultural finance is provided by non-financial private sector companies active in agricultural supply chains, often in the form of input supplies or trade credit.

The task of measuring the agricultural SME financing gap and tracking progress remains a challenge, but it is necessary to the process of undertaking diagnostics and strategies for continuous improvement, as outlined in Section 2.1. An effective data collection framework at the national level should include efforts

to standardize the definition of SMEs, centralize the collection of supply-side data by the central bank and other financial sector supervisors, and survey SMEs and farmers in order to identify and quantify underserved agricultural SME segments. The availability of demographic data on SMEs by number of employees, turnover, and asset size should help normalize access to finance data across countries with different SME definitions, thus allowing global aggregation. In order to get a more complete picture of the agricultural SME finance landscape, systematic efforts should be launched to estimate the number of agricultural SMEs and farmers in the informal sector as well as to examine their access to financial services.

There is a clear need to better understand the demand for and use of financial services targeting the agriculture sector in order to estimate the gap in agricultural SME finance and to develop effective products, institutions, projects, and policies. The rapid growth of microfinance suggests that there may be a large unmet demand for agricultural loans, but two issues need consideration. First, there may be a tendency to overestimate demand, as has occurred with microfinance. Second, an empirical question concerns borrower sensitivity to interest rates relative to other factors affecting demand. Farmers' demand for loans may be limited if the interest rates charged are as high as MFIs require to provide small microenterprise loans sustainably. There is, however, some research indicating that farmers will take advantage of loans, even at high interest rates.

This recommendation is very much in line with the United Nations Inter-Agency Initiative on Inclusive Finance for Development. As a first step, the initiative proposes setting up a global database of the supply and developmental impact of microfinance and financial intermediaries. The process of sharing information and identifying people in the different organizations to manage knowledge on good practices, making recommendations, and advancing a set of shared principles still needs to be initiated.

45 Doran, McFadyen, and Vogel (ibid)

Individual countries' efforts in this regard are necessary for country-level policy and can feed such a multi-country initiative.

## AGRICULTURE SECTOR DATA

### POLICY FOCUS AREA

The public sector can play a vital role in generating and disseminating data and information about a country's agriculture sector, which can reduce problems of imperfect and asymmetric information that currently hinder the efficient allocation of resources toward and within the agricultural economy. Although individual banks may collect some information from agricultural clients, certain data (particularly in aggregate form) has public good characteristics that benefit all players in the market. Central banks often collect aggregate data on loan portfolios to the agriculture sector. Such information can then be utilized by banks and other financial institutions to assess borrowers through parametric lending models and to support portfolio monitoring and risk management efforts.

The availability of databanks with benchmark data on the agriculture sector would greatly help banks to evaluate agricultural SME risks. Governments should play a role in creating and funding such institutions in support of agriculture sector development. This can be accomplished in conjunction with valuable extension services, which is a complementary value-added support mechanism ideally based on sound research. Even in cases where data collection, extension services, and research can be managed effectively through PPPs, government financial sources can be channeled to meet these critical needs. In the absence of such a national agricultural databank, banks focusing on the agriculture sector could choose to invest in building up their own database and benchmarking systems. This takes resources and

several years of data gathering and will likely only be undertaken by a few institutions, thus forfeiting the public good nature of this agricultural information. However, for those banks willing to invest in such knowledge, the payoffs can be large in terms of improved credit analysis and identification of opportunities to grow their business in various sectors.

There are a number of reasons why the quality and quantity of agricultural data have seldom matched their importance in policy-making.<sup>46</sup> First, poorer countries, for which agriculture is a critical source of livelihoods, often have the weakest data. Second, agricultural data are often collected in institutional isolation, with little coordination across sectors and little analytical value-added beyond the sector. Third, the lack of analytical capacity has created a vicious cycle of poor analysis, undermining the demand for high-quality data. Finally, inadequate data and measurement issues have affected the ability of policy analysts and researchers to contribute to the design of innovative and more effective policy.

The Living Standards Measurement Study — Integrated Surveys on Agriculture (LSMS-ISA)<sup>47</sup> program is an initiative of the Development Research Group of the World Bank, funded by the Bill and Melinda Gates Foundation and aimed at developing and implementing innovative household panel surveys in six Sub-Saharan African countries, with a strong focus on agricultural and rural development. A number of tenets are central to the LSMS-ISA project. First, the collection of agricultural data must be integrated into a broad, multi-sectoral framework that goes well beyond agriculture. Second, the collection of agricultural data must be buttressed by a well-matched institutional setting conducive to collaboration and integration of data sources. Third, national capacity needs to be strengthened to enhance the value of the data generated and bolster the link between data producers and data users.

46 Carletto (2010)

47 Carletto (ibid)

Perhaps the main difficulty with the LSMS-ISA project to date relates to reconciling two of the features of the projects: integration into an existing system with enough flexibility to make the surveys fully comparable across countries. Integration into existing survey systems and, when possible, with scheduled surveys, comes at a price, and striking the right balance between country-specificity and comparability over time, on the one hand, and cross-country comparability, on the other, is not always easy. Also, the concept of panel surveys and tracking remains a rather novel idea with statistical offices in the region, often resulting in an underestimation of the required effort and resources. While the project is emphasizing this aspect of implementation, it may take a few years to be fully valued and embraced by all stakeholders in the countries.

Furthermore, building stronger institutional linkages between the national statistical office and the relevant line ministries remains a challenge, particularly in some countries. The project's technical working group established in each country has provided a useful forum to elicit inputs from the line ministries and other sector stakeholders, but the political debate surrounding agricultural statistics continues to hinder a more efficient dialogue. Finally, the full integration of advanced data quality control systems based on intelligent, field-based data entry, while fully embraced by each country, must be perfected, particularly as pertains to the logistical aspects of data management. The application being developed under the project must ultimately rest on a strong data management system if the goal is to draw full benefits from the investments.

## CHAPTER 4

## Capacity Building of Agricultural Finance Institutions and Their Clients

## CHALLENGE:

Banks perceive agricultural risks to be high and profits to be low, and lack technical expertise in agriculture and specific crops. Therefore, a fundamental bottleneck is the inability of financial institutions to adequately conceptualize, underwrite, mitigate, and manage agricultural risks. At the same time, agricultural SMEs lack basic business and financial management skills, and poor financial literacy rates and a limited understanding of traditional banking requirements pose a challenge to accessing formal finance.

## POLICY FOCUS AREA

Capacity building is necessary among all market participants to support the growth of agricultural finance in order to enhance the capabilities of staff in financial institutions to serve agricultural clients. Capacity building will also enhance the financial literacy and management skills of farmers, farmer organizations, and agricultural SMEs in order to make them better financial clients. Agricultural universities and colleges should add or improve curricula offerings specifically related to agricultural finance.

The capacity building of financial institutions is critical to their sustained expansion and strengthening in the agriculture sector. Such support helps participant institutions to access new markets and

clients, broaden their product offerings, and learn the skills to integrate sustainable finance practices into their strategy and operations. For many international organizations, institutional capacity building has been a significant component of their SME finance assistance strategy, such as streamlining credit processing, standardizing product offerings, segmenting the SME market, training staff and management, and introducing management information systems. Development finance institutions (DFIs) can scale up their efforts to provide capacity building and advisory services to financial institutions specifically in the agricultural space and help them serve agricultural SMEs more efficiently, as they have already done in the broader SME space.

On the demand side, capacity building for farmers and agricultural SMEs is important in improving their access to formal finance. It can provide technical and business support services such as training, business development services, assistance in formalizing financial statements, and loan application preparation. Poor financial literacy rates, especially among small farmers, and a limited understanding of banking requirements pose a significant hurdle for agricultural SMEs wishing to access formal financial services. However, training of farmers and agricultural SMEs on financial literacy, record-keeping, and financial services in general can help to instill a greater trust of banks and improve understanding of the benefits of formal financial services. Bringing both groups closer together through capacity building on both sides of the equation is key to bridging the agricultural SME finance gap.

## 4.1 Building Capacity of Financial Institutions

### POLICY FOCUS AREA

Banks and financial institutions require support in training, product development, and risk management specific to agriculture. Given the unique risks and characteristics of agricultural production and supply chains, bankers serving the segment require the development of specialized credit skills and policies, credit scoring and rating tools, and portfolio monitoring practices. It may also be necessary to utilize agronomists and value chain specialists to provide research and analysis of key agricultural sectors. Lastly, rural financial institutions and savings and credit cooperatives need special attention to improve professionalism, governance, and management in order to remain a key link to the rural client base.

Capacity building in agricultural SME finance for all types of financial institutions is crucial for the success of the agriculture sector. It starts with staff training and data collection, reforming governance structure, and implementing adequate risk management tools for commercial banks and non-bank financial institutions. Banks often lack agricultural knowledge; it is rare to find a banker specializing in agriculture. Institutional capacity building for adequate agricultural lending requires extensive knowledge transfer and staff training, with the goal to develop and implement specific risk management tools, credit processes, sales channels, and product development. Given the unique risks and characteristics of agricultural production and supply chains, bankers serving the segment require the development of specialized credit skills and policies, credit scoring and rating tools, and portfolio monitoring practices.

The range of available loan products in the agriculture sector is very limited and tends to by-pass the real needs of agricultural SMEs. Prevailing loans structures

are short term, with inflexible repayment schemes and traditional collateral requirements. However, agricultural activities are subject to seasonality and long gestation periods, resulting in infrequent cash flows and long-term financing needs. Moreover, slow rotation of capital results in a lower profitability of agriculture and related activities when compared to other sectors such as trade and service businesses with a quick turnover of funds. Hence, lenders need to offer longer loan maturities and less frequent repayment installments in order to match the cash flow of borrowers. This requires strong appraisal skills along with efficient loan monitoring and borrower supervision to manage credit risk. Lenders also need to mobilize sufficient long-term funding sources in order to minimize asset liability mismatches and the associated risks. Moreover, the seasonal variations in the demand for funds from rural clients, reflected in the demand for loans and supply of deposits, pose additional challenges to liquidity management of rural financial institutions.

People with agribusiness knowledge may work at the headquarters of some commercial or rural banks, but it is just as important to train loan officers to finance agriculture in a sustainable way. Rural branches rarely have dedicated agricultural loan officers with the expertise to assess the risks and opportunities of farmers and agricultural SMEs. It is also uncommon for banks to have one central agricultural expertise center that follows market trends and coordinates the agricultural lending operations of the branches (including providing necessary training). All this has led to poorly organized agricultural lending in developing countries and a lack of necessary agricultural credit skills. Because it is rare to find a combination of a banker and an agricultural specialist, banks may want to hire extension officers and train them as bankers. It is crucial that the loan officers can connect with the farmers and assess their technical and management skills. Financial institutions that have no commitment to finance agriculture should not be forced to engage in this sector, however. The institutional development efforts should be clearly focused



on supporting those institutions that are committed to increasing their rural portfolio and can operate sustainably within the financial system structure outlined in Section 3.1.

In making their credit assessment, banks in developing countries tend to concentrate heavily on collateral coverage for loans. However, it is imperative to move beyond collateral-based approaches to agricultural lending. Credit scoring can help to enhance the efficiency of the credit application process for small, standardized credit applications. For other entities and credit applications in the SME segment, scorecards can be used to filter out applications that are not worth the time spent, thus reducing the costs of credit risk management. As farmers often do not have bank statements or income statements readily available, the land and crop combination can be used to arrive at income estimates (common practice in India, for example). This way of financing farmers is referred to as “parametric” financing and can be a useful approach when lending to small farmers, as the credit decision is based on only a few key parameters. Given the persistent lack of collateral in small scale agriculture, concepts such as parametric financing and the use of credit scoring tools need to be further promoted and replicated. However, capacity building is also necessary, as such parametric models must be custom-tailored to local factors and conditions (crop type, geography, climatic conditions, mechanization, and inputs).

Due to their low operational costs, member-based financial institutions, such as credit unions, savings and credit cooperatives, and less formal community-based savings and loan associations, can be viable even in remote rural areas. Most administrative and management tasks are carried out by members, often on a voluntary basis or with very low remuneration. Members also provide the funds in the form of shares and deposits. Good knowledge about local conditions, along with the character and capacity of community members, facilitates loan appraisal, while peer

pressure can be used to instill repayment discipline. However, often these institutions rely on informal systems with illiterate members and without formal record keeping, which strictly narrows the range of financial services. Governance and management form the Achilles heel: limited financial management skills, weak internal controls, hijacking by local elites, and insider lending to influential board members are some common problems.

To some extent, these challenges can be addressed by federating member-based financial institutions into networks and tiered structures. Second-tier structures can provide support services such as internal controls, audit, reporting, benchmarking, and product development, as well as training and backstopping in different technical areas. Networks can also facilitate liquidity exchange between member institutions and serve as a link to the formal financial system, depositing excess liquidity or accessing loans on behalf of their members. Some networks have reached considerable scale at regional or even national levels and created three-tiered structures that include regional federations and a national apex. These networks have become highly professionalized and are financially viable. Examples include the *Caisses d’Epargne et de Crédit Agricole Mutuels (CECAM)* in Madagascar or *CRESOL Brazil*.<sup>48</sup> However, growth, formalization, and federation into large networks have sometimes been accompanied by “mission drift,” characterized by gradual withdrawal from rural areas and increasing focus on non-agricultural activities.

Institutional development processes are gradual and require long-term technical support that must be allocated appropriately. Attempts to accelerate these developments, such as by providing credit lines for on-lending or introducing sophisticated products, may overstretch human resources and systems and undermine the viability of the networks. In countries where savings and credit cooperatives or other similar cooperative type financial organizations are part of the financial infrastructure, the principles for commercial

orientation of such organizations outlined in Section 4.3 should be applied to strengthen these member-based financial institutions.

## 4.2 Building Capacity of Value Chains

### POLICY FOCUS AREA

Banks need assistance in strengthening value chain finance arrangements, such as multi-partite arrangements between financial institutions, agribusiness companies, and farmers. Banks can enhance value chains by offering a full range of financial services, improved product design, transparent pricing, direct disbursement to farmers, and cross-selling. These value chain finance linkages reduce agricultural lending risks and may come to serve as collateral substitutes. Extension services and access to quality inputs reduce production risks, while market and price risks are often addressed by forward contracts. Hence, loan appraisals can become more focused on assessing the cash flow created by the value chain transactions and the strengths and profitability of the entire chain, rather than solely on the creditworthiness of the individual borrower as applied in mainstream lending.

Given the challenges for banks trying to reach many individual farmers directly, experience shows that a combination of several instruments is necessary to realize the full spectrum of financial services for agricultural SMEs. Perhaps more than in other fields of financial systems development, advances in rural and agricultural finance require an interdisciplinary approach and close coordination with other fields of rural development, such as extension services, business development services, professionalization and support of entrepreneurship in farming, marketing and value chain development, risk management, and rural infrastructure. Enhancing financial literacy and a continuous policy dialogue are further necessary constituents of such a comprehensive approach.

Value chain finance is a concrete example of an interdisciplinary approach in which the combination of financial and agricultural sector skills and various institutions come together to create synergies and reduce overall risks and transaction costs. It can bring about a substantial expansion of agricultural finance, even in more difficult operational environments, as long as the core principles of fairness and transparency are applied and stakeholders develop a long-term vision based on common interests. However, there is a strong need to build capacity in agricultural value chain finance to realize the full benefits.

A crucial point is that the basic prerequisites for value chain finance must be developed. These include profitable and well-functioning value chains rooted in a shared long-term vision and trust between the main actors. Outside support, through governments, donors, DFIs, and NGOs, can prepare the groundwork for value chain finance by upgrading promising chains, by strengthening industry associations and farmer organizations, and by supporting specialized service providers acting as value chain integrators. Donors can play the roles of facilitator and honest broker in setting up fair and transparent value chain finance arrangements, assisting in the design of contractual agreements and financing arrangements backed by risk and profit sharing formulae that are perceived as fair and equitable by all value chain participants. Trust is the essential glue that allows extending finance against flows or stock of commodities, especially in countries where the legal framework and administrative procedures for enforcing such contracts are far from perfect.

Although the value chain perspective offers additional solutions to traditional finance models, it has limitations in meeting long-term finance needs, as much value chain finance focuses on input supplies and other short-term finance. In addition, value chain finance should be paired with saving and payment services to make the farmers more self-sufficient with respect to their cash flow management throughout the season. Bringing formal financial institutions into

these arrangements can enhance value chains by offering a full range of financial services, such as improved product design, transparent pricing, and cross-selling. The links between farms and agribusinesses reduce agricultural lending risks and can serve as collateral substitutes. These structures can also enable banks to build their own comfort with lending in certain sectors that may allow them to branch out into longer-term credit products over time. However, banks will not enter this space without addressing the prerequisites touched upon above.

Donors might even consider underwriting parts of the financing risks during the start-up phase, until the financial procedures are proven and a track record has been established, as long as value chain actors and banks shoulder the major part of the risks and there is a clear exit strategy for the donor. Some demand for enhanced value chain financing has come from the concern for sustainability and traceability in food supplies, often driven by consumers and the large firms that sell to them. The capacity building work of outside actors, as well as a more active role by banks lending through value chains, can help to address environmental and occupational safety risks that are becoming more important in global supply chains.

Calvin Miller of FAO makes the following recommendations on capacity building in “Agricultural Value Chain Finance Strategy and Design”:<sup>49</sup>

**1. Build capacity of small producers and other weak chain partners to support growth towards maturity in the value chain.** This may involve building the understanding and capacity of stronger partners in order to incorporate them as chain participants. In the evolution of a value chain involving small farmers, two important steps can be distinguished: first, the effective linkage of farmers to more attractive markets which requires their ability to produce to exact product specifications required (inclusion barrier);

second, the transition towards sustainable local finance delivery (access barrier). A donor can play an important role in facilitating the graduation towards sustainable value chain finance, by giving support for the array of interventions needed to develop the chain. The success of graduation in value chain finance is measured by the degree in which it is addressed by local MFIs and formal financial institutions. The development of *credit worthiness of chain operators* for debt financing is a vital step in this process. Donors and financiers should both support such a medium-range perspective.

**2. Base interventions on a solid assessment of the needs for capacity building.** For each of the financing opportunities in a value chain, corresponding capacity building needs may be identified. Especially in emerging value chains, it is likely that many intervention areas need to be addressed. While financial service providers will not take prime responsibility for these interventions, their involvement is crucial to arrive at a joint strategy. They also need to build up their own capacity to deal with these issues, to develop appropriate products, and to appraise clients from a value chain finance point of view.

**3. Develop business and service alliances.** Globalization puts greater pressure on individual businesses to be part of competitive industries. Shared knowledge and lasting relationships that are mutually beneficial are characteristics of durable value chains and the businesses in the chain.

**4. Facilitate knowledge management and training.** The concepts and many of the instruments of value chain financing are not well understood. Universities, bank training institutes, and development organizations should be encouraged and supported to develop the training packages needed to build the capacity required.

---

49 Calvin Miller (2011)

### 4.3 Building Capacity of Farmers and Farmer Organizations

#### POLICY FOCUS AREA

It is important to strengthen farmers and farmer-based organizations in order to facilitate access to finance and improve the efficiency of value chains. Training in basic farm economics, financial literacy, organization, governance, business management, and financial skills promotes the development of economically-oriented farmer associations or cooperatives. Effective organization of farmers focused on commercial activities brings structure to value chains, allows farmers to pool resources for purchasing and marketing power, supports collective risk management efforts, and provides a counterparty through which financial institutions may finance production of smaller farmers. Well-organized farmer groups also ease the delivery of valuable extension services, training in improved agronomic and husbandry practices, certification, and other forms of technical assistance to elevate productivity.

In order to become attractive to external capital providers, agricultural enterprises need to prove their capacity as borrowers or investees. Basic business skills such as strategic planning, record-keeping for financial reporting and analysis, human resource management, and marketing can be acutely lacking in smaller rural enterprises that cannot attract trained staff. This problem is exacerbated where government and donor support for extension services and SME development infrastructure has been reduced. Thus, a major bottleneck for farmers and agricultural SMEs to accessing finance is their sheer lack of business and financial capacities. Poor financial literacy rates and a limited understanding of traditional banking requirements pose a major challenge to accessing formal finance.

Those responsible for managing the agricultural enterprise must demonstrate that they can plan for and respond in time to contingencies, such as unexpected weather patterns or price fluctuations that can affect the financial position of the business. Even among high-potential enterprises, there can be unfamiliarity with the spectrum of possible financial mechanisms and the potential providers who would best meet their financing needs. Owners or finance managers may lack the confidence to assess the trade-offs of working with different financial mechanisms.<sup>50</sup> In general, agricultural SMEs seldom have the required financial data, business plans, marketing tools, and powerful projects to convince financial institutions to provide adequate funding. Moreover, agriculture stands in a fierce competition with other sectors, including oil and gas, which often have well-established industry lobby groups. However, there seems to be little parallel for the agriculture sector, as agricultural producer and processor groups, where they exist, are often under-funded and ill-trained, leading to weak bargaining power and links within agricultural value chains.

Farmers and agricultural SMEs need capacity building in technical skills, business skills, and financial skills to become more bankable, and to become attractive business partners for banks and trading partners. All of these measures can be undertaken by a combination of public and private providers or, in some cases, through public private partnerships. Necessary services often include:

- Training and extension services in good agricultural practices and market orientation;
- Training in basic farm economics and for adopting a business approach to farming;
- Financial literacy and financial management training, including how to access external financing sources and what is necessary to qualify for bank loans;
- Certification of agricultural producer organizations to allow improved access to national and

50 Doran, McFadyen, and Vogel (ibid)

international markets. Certification schemes often include components of best agricultural practices and may reduce market risks for farmers. Further, as they include data collection requirements, certification schemes can also form a basis for more comprehensive business data collection of the agricultural SMEs;

- Capacity building for organizations of horizontally integrated players (e.g., farmer-based organizations, marketing cooperatives, associations to pool machinery) and for vertically integrated actors (e.g., farmers to processors, nucleus farmer to outgrower schemes, contract farming).

Capacity building as it relates to vertical relationships is covered in Section 4.2. Organization of farmers at the horizontal level can facilitate information flows and allow farmers collectively participating in such organizations to realize economies of scale and gain bargaining power. Such organizations can develop a common network platform for information and knowledge transfer, including sharing information on prices, demand, and supply. These organizations can also provide a forum through which to share management support services for farm operations and best practices. They can also help farmers group production to coordinate and reduce the costs of infrastructure such as irrigation and equipment shared among members to improve productivity and reduce reliance on rain-fed agriculture.

In order to take advantage of the benefits of organization, the capacity building needs vary according to the type of farmer organizations. FAO guidelines lead to identification of the following three broad farmer group categories:<sup>51</sup>

- **Informal organizations:** Probably most farmer groups fall into this category, which consists of farmer groups that share some collective functions (e.g., marketing or input purchase) and are mainly based on village ties. These are neither formal cooperatives nor formal legal entities. Informal organizations typically attract funding

from MFIs and/or NGOs under typical MFI financing structures.

- **Community-based and resource-oriented organizations (CBROs):** These are more formal groups and function as a separate legal entity. They could be primary cooperatives or associations and are often based on local or regional ties. The main difference from informal organizations is that CBROs have management and a board elected by the members. These groups may get financing based on warehouse receipts or short-term pre-financing by traders or rural banks to purchase the crop from its members. However, often input financing and especially investment financing are inaccessible, because of weak organization and capitalization. Capitalization is often neglected to enable paying a higher price to the members, which keeps them loyal and deters side-selling to middlemen. As a result, the organization remains weak, pays high interest rates, and is unable to efficiently provide improved margins to its members.
- **Commodity-based and market-oriented organization:** This type of organization typically focuses on one crop or product such as rice, coffee, dairy, tea, tobacco, or cotton. The larger of these organizations may be direct exporters to the world markets. A formal cooperative or organization of this type is best if characterized by clear rights and responsibilities of the members, with mandatory delivery of set levels of product by each farmer to the organization, clear separation of corporate governance from management, consistent capitalization policies, and loyal members. They are often engaged in forward integration, such as logistics or primary processing, and employ “zero loss” policies, meaning that the members guarantee any losses of the group.

Regardless of the type, organization of farmers into groups can be supported through capacity building that helps to address the same fundamental gaps in technical, managerial, business, and financial skills

51 Based on FAO (1997)

outlined above. Working through organizations is more efficient for providers of training and capacity building and for financial service providers. Furthermore, capacity building in organizational management, particularly focused on enhancing the economic orientation and functioning of farmer-based organizations and cooperatives, can greatly advance the provision of financial services to individual farmers who are members of such organizations.

Farmer organization structures can be useful if they are based on proportionality of votes, meaning that

voting rights are linked to the sales volume of the members, which provides larger farmers with incentives to stay involved as members of the cooperative while still enabling smaller farmers to benefit from the group's economies of scale. However, in all cases, decisions to adopt this type of structure are determined by the members. The successful organizations or cooperatives can both attract funding for investments and offer on-lending services to its members. Such organizations or cooperatives can organize input purchases centrally and distribute inputs to their members in return for part of the crop.

## RABO INTERNATIONAL ADVISORY SERVICES (RIAS) – COMMERCIAL ORIENTATION OF FBOs

RIAS has global experience in helping cooperatives and other FBOs to become more business-oriented. The following are some of the critical success factors that RIAS has identified in working with cooperatives and farmer-based organizations:

- Organization, efficiency, and well-defined objectives focused on bridging the gap between individual small farmers and larger market participants, and maximizing market revenues and minimizing cost of production of members.
- Clear communication between the board and the members to eliminate lack of clarity on rights and obligations, and to minimize the possibility of gradual erosion of member loyalty and participation.
- Mandatory supply of produce by the members, with penalties against side selling, to enable sustainability, mechanization, investment in logistics, and reduction of per unit costs. Scale also permits resources to professionalize management.
- Proper capitalization structures, including consistent reservation policies, in order to enhance the likelihood of obtaining external financing from banks or other sources.
- Operations based on sound business principles, including:
  - *The Proportionality Principle*: allocation of revenues and costs of its transactions, and the members' rights and duties, including capitalization, liabilities, and voting rights, according to the economic principle of proportionality. Farmer organization structures can be particularly useful if they are served by formation based on proportionality of votes, meaning that voting rights are linked to the sales volume of the members. This provides larger farmers with incentives to remain as members, while still permitting smaller farmers to gain benefits of membership from economies of scale.
  - *Service at Cost Principle*: processing and marketing the products of members and supply inputs and services at cost. Thus, the organization does not make a profit on members' turnover. Business other than with its own members, such as turnover with non-members, clients, customers, suppliers, and employees, is subject to profit maximization or cost minimization.
  - *Principle of Self-financing*: for its core business, no attraction of external equity investment from outside investors in order to avoid fundamental conflicts with the members' interests (i.e., maximizing shareholder value vs. member value). The equity capital therefore has to be provided by the members themselves, and the balance sheet can only be extended by external loans.

## 4.4 Innovative Instruments and Delivery Mechanisms

### POLICY FOCUS AREA

Another crucial need is capacity building for innovative instruments and approaches in the agricultural SME finance space, with focus on identifying the needs of farmers. Innovative instruments support hedging commodity price and weather risks, inventory financing, and payment and delivery systems, among others. This will enable financial institutions to develop appropriate products through capacity building aimed at farmers. Among such products are savings and payment services, loans, leases, hedging, and a range of insurance services, including health, life, crop, weather, and property insurance.

The lack of agricultural knowledge and interest of financial institutions to engage in the agriculture sector manifests in an absence of adequate financial instruments, products, and delivery mechanisms. Some important areas where DFIs and donors have been focusing include instruments that can cost-effectively reach larger groups of farmers, whether through value chain finance structures or through innovations in technology or delivery mechanisms to access rural clients. There are other instruments being put to use for farmers, FBOs, traders, and financial institutions to hedge their exposure to significant commodity price swings. Another area of strong interest is support to help farmers and financial institutions to insure their weather risks affecting crops. Capacity building for financial institutions, farmers, FBOs, and traders to access finance using inventories as collateral is another area of current attention. While a full report on stocktaking for such innovative approaches and instruments will be forthcoming, but the following section provides examples of some innovative approaches.

### BRANCHLESS BANKING

Several innovations have been introduced to enhance rural outreach by reducing transaction costs and avoiding high fixed costs of maintaining branches. Examples include mobile phone banking, automated teller machines (ATMs), and point of sale (POS) devices. The idea is that information and communication technologies boost access to finance by radically reducing transaction costs in rural areas. Mobile phones operate at the intersection between rural clients and banks by providing cheap transaction services, electronic savings accounts, and even credit functions. The most prominent example is the service M-Pesa, provided by the mobile network operator Safaricom in Kenya, which has developed into one of the largest banks in eastern Africa. In countries lacking the technical and commercial infrastructure for ATMs and POS devices, mobile phone banking in particular can be a low-cost way to expand access to financial services in rural areas.

Branchless banking services in rural areas have also tried to extend their reach through bank agents. Selected agents, such as shops, post offices, and kiosk chains, offer a limited and specific range of financial services, such as opening an account and cash-in and cash-out services. Many smaller trading centers do not warrant a full-service bank branch, with the real estate, security, and staffing costs that this implies. As business builds, the volume and type of transactions can provide a solid justification for establishing a full-service branch.

The drawback with these innovations is that they are new within the financial infrastructure system. In most countries there is no existing legislation for mobile phone and agent based banking. Regulators should carefully weigh the risks and profits in order to allow agents to function as the interface between banks and customer, or to permit mobile network operators to carry out the functions of a bank. As successful and proportionate regulation in Kenya has demonstrated, it is possible to strike the right balance

### WIZZIT SOUTH AFRICA AND OMNI PAKISTAN

The WIZZIT bank in South Africa (a division of the South African Bank of Athens Ltd.) launched its services completely without any branches at all, using only “WIZZkids” (dedicated bank agents) to sign up new customers, and distribution of start-packs (with a Maestro-branded debit card). Cash-in is via bank transfer, and iWizz internet banking and the call center provide customer support.

In Pakistan’s popular United Bank Ltd. (UBL) “Omni” Branchless Banking program, the bank will be available in full-service kiosks (for the 350+ plus Omni locations in Pakistani “Durkaans”) at partner locations, including stores and post offices. For UBL Omni, the link between mobile phone number and a bank account has also helped support the penetration of financial services down the pyramid to individuals who would not normally choose to access financial services, who cannot afford card-based banking products, or who do not live near a traditional bank branch.

between supervisory requirements and the development of financial access.

### VALUE CHAIN FINANCE

In response to the lack of adequate financing sources, several financing tools have emerged between business partners within the agriculture sector. Rather than relying on the creditworthiness of the individual, the value chain financing approach is based on business relationships in the value chain. Broadly speaking, value chain finance (VCF) includes financial flows between value chain actors (also called internal finance) as well as flows from financial institutions into the chain (external), or combinations of both.<sup>52</sup> Value chain finance arrangements build on the systemic character of the value chain and use its information flows and business linkages as soft collateral. Outgrower schemes are a well-established example of such arrangements: a financially stronger processing

enterprise, for example, would address critical financing bottlenecks of its supplier farmers by providing in-kind credit for fertilizer, thus ensuring the supply of its raw material and benefitting farmers without cash to purchase inputs.

Internal VCF comprises a wide array of financing and marketing arrangements with different levels of formality and sophistication. However, even if contracts are in place, trust and market power are important factors that shape the financing relationship. Internal value chain finance has several advantages over conventional agricultural finance:

- Value chain actors tend to have better knowledge of the key risk and profitability factors in a particular sub-sector;
- The bundling of finance with other services, such as input supply, extension services and off-take contracts, reduces credit risks;
- Tying credit with commodity flows can reduce transaction costs of lending; and
- Since agribusiness companies do not make their profits from lending but from their commercial activities, they may tolerate higher levels of loan default than financial institutions.

Generally, the value chain finance approach of pre-financing production works best in situations with limited competition between buyers. In a liberalized market environment, this mainly applies to niche market products, products with a single use (banana), and bulky or highly perishable products that require immediate processing (sugarcane).

However, internal VCF also faces limitations. The most important relates to the ability to control loan default through side-selling. Moreover, the provision of finance by non-financial institutions is difficult. Lending is restricted to a particular crop or livestock activity while other financing needs of farm households remain unfunded, increasing the risks of input diversion. Moreover, finance is



usually restricted to short-term working capital while longer-term investment finance is only provided in exceptional cases. In addition, agribusiness companies and other value chain actors generally lack the skills in costing and pricing loans properly and are not well equipped for managing large numbers of accounts. Hence, value chain actors usually prefer to concentrate on their core business and leave the financing to financial institutions.

A major challenge of VCF arrangements, both internal and external, lies in their high set-up costs, given that the financing structure, related contractual arrangements, and procedures for monitoring and enforcement need to be tailored to a specific situation. Moreover, many financial institutions lack sufficient knowledge about value chain financing techniques and the skills to apply them.

External VCF undertaken through multi-partite arrangements between financial institutions, agribusiness companies, and farmers may be able to address some of the pitfalls of internal value chain finance, while overcoming some of the constraints facing financial institutions in lending to the sector. Banks not only have more funds and better systems for loan processing and monitoring, they also have the capacity to contribute to improved loan design and more transparent pricing. For example, loans that are disbursed directly to farmers in cash are more transparent and give farmers the choice of where to procure their inputs. Moreover, banks can offer additional financial services beyond the specific value chain activity, such as loans for other productive activities, school fees, housing, etc., as well as savings and payment services. Perhaps most importantly, banks and financial institutions can offer non-credit products that are needed by farmers and agricultural SMEs, such as savings, insurance, payment services, and remittance services, among others.

For financial institutions, the agglomeration of larger numbers of farmers around a terminal buyer offers interesting opportunities for cross-selling, whereby

repayments can be made through deductions at the income source. Several member-based financial institutions in Africa have been established around agricultural value chains and manage to provide a range of financial products and services to farmers. The linkages between the farm and processor or off-taker reduce agricultural lending risks and serve as collateral substitutes. Extension services and access to quality inputs reduce production risks, while market and price risks are often addressed by forward contracts. Hence, loan appraisals are more focused on assessing the cash flow created by the value chain transactions and the strengths and profitability of the entire chain, rather than on the creditworthiness of the individual borrower as applied in mainstream banking.

Two types of external value chain finance models can be distinguished: a direct VCF model that finances the individual farmer, and an indirect VCF model of financing the farmers through a farmer organization. The advantage of the indirect model is that it reduces transaction costs significantly compared to the direct model. Moreover, the larger loan amounts are more appealing to commercial banks. Another important factor is that in case of a farmer default, the FBO takes the first hit and not the bank. The downside is that sometimes the performing farmers have to compensate mismanagement by smaller farmers. This can lead to a departure of the better-performing farmers if not well managed by the farmer organization — and mismanagement by the farmer organization is the main risk of the indirect model. Delays and mistakes in payouts could quickly erode loyalty from members and undermine the FBO's continuity.

A solid tri-partite agreement between the farmer or farmer organization, the buyer, and the bank is the basis for any sustainable external VCF arrangement. A tri-partite agreement should include the following components:

- The processor/off-taker: (i) commits itself to purchase all produce delivered by the farmer subject to its quality standards, (ii) shares information on

performance record of its suppliers with the bank, and (iii) opens an account with the bank for transfer of sales proceeds to the farmers.

- The farmer/farmer organization: (i) commits itself to supply a set amount of its production to the processor, (ii) authorizes the bank to allocate the sales proceeds on the account for direct set-off against the debt service obligations, (iii) pledges available collateral to the bank, and (iv) shall have no other outstanding debts.
- The bank commits to: (i) finance all preferred suppliers of the processors with positive performance records of, for example, at least 3 years and subject to no criminal records or credit defaults, (ii) finance, for example, up to 60 percent of the value of the average product volume delivered to the processor during the last three years, and (iii) ask for no other collateral and guarantees beyond the farmer's available collateral (e.g., house/equipment).

Calvin Miller of FAO<sup>53</sup> warns of certain constraints that apply to VCF. First, the least powerful in the chain may become marginalized in certain value chains, and VCF cannot address inequities that may be inherent in some value chain relationships. Governance through policies and enforcement may be required. In addition, VCF can only address financial needs related to the chain; the conditions for promoting broad-based financial services to all households and businesses must also be pursued. Therefore, it is important that VCF be paired with other financial services, such as saving and payment services, to make the farmers more self-sufficient with respect to their cash flow management throughout the season.

VCF has an important place in agricultural finance, which augments but does not replace conventional finance. Most important is its comprehensive, structured, and market-competitiveness approach that complements conventional finance by increasing access to funds and reducing risk for both clients and financiers. Another main constraint of value chain financing is

that it typically only works in integrated sectors or cash crops with a high dependency between the chain actors, such as barley farmers/brewery, rice farmers/mill, tea farmers/tea factory, and dairy farmers/dairy plants, to name a few.

There are few success stories of VCF in staple crops such as maize, cassava, wheat, and ground nuts. These are typically crops with a high degree of side-selling risk by the farmers. Even in the case of rice, a value chain structure would only work if there is a strong relation between the farmers and the mill. However, in many countries there are multiple smaller mills and middlemen buying up paddy and undermining any potential value chain finance structure.

Another constraint of VCF is that it does not contribute to the development and growth of smallholder farmers into medium-sized farmers. Especially where it concerns contract farming models, the farmer's role is limited to execution of the production plan of the off-taker/processor. Often the inputs are provided by the processor and the off-take is guaranteed. In addition, there is often a strong monitoring role for the buyer. The advantage of contract farming is that the farmer needs virtually no working capital and has a predictable income. The disadvantage is that the farmer becomes dependent on only one buyer and does not have the opportunity to develop into a larger or more sophisticated farmer. The advantage for the bank is that the cash flows are very predictable compared to stand-alone farmers and that there is a low risk of side-selling. The risk for the bank is that the buyer could experience financial or operational problems and become unable to buy the produce under the contract.

The ideal situation emerges when a bank can finance the inputs of all farmers through the farmer organization based on a supply chain finance structure, while at the same time finance the medium- and long-term needs of the medium-sized and lead farmers on an

---

53 Miller (ibid)

individual basis. The medium-sized farmers can still benefit from the bargaining power of the FBO in buying its inputs and marketing of the output. Of course, the smaller members may still be served with personal/saving accounts and payment services individually by the bank.

The European Microfinance Platform (e-MFP) Rural Outreach & Innovation Action Group put forth a policy statement in June 2011 on how donors and governments can best support value chain finance in a smart way.<sup>54</sup> The following are key points of this policy statement:

- Safeguard connections and distinctions between financial services and value chain development, noting that financial service providers rarely conduct VCF on their own;
- Select entrepreneurial and proactive partners from promising value chains, rather than supply-driven approaches;
- Identify effective lead partners, such as a well-organized farmers' marketing organization or processing company, to provide a degree of "chain governance";
- Facilitate orchestration of promising VCF strategies according to local conditions, not based on an assumed best model;
- Build on synergies between grant and debt finance, as financial service providers can follow value chain work that has been undertaken by donors;
- Support designs that are driven by value chain actors, by either producers or buyers;
- Invest in value chain analysis to acquire in-depth knowledge;
- Work toward clear separation of roles and responsibilities, with governments or donors focused on capacity building;
- Exploit opportunities in the chain to mitigate risks, through horizontal or vertical linkages, value-add activities, and financial instruments, including insurance and collateralization;

- Conduct solid needs assessment for capacity building;
- Work towards growth in the maturity of value chains, as sustainable local finance will only follow after effective linkages are made to attractive markets;
- Involve financial service providers through capacity building in VCF and risk mitigation;
- Coordinate among donors, with care taken to avoid crowding out the private sector and to avoid grants when local finance can be mobilized or technical assistance is more appropriate;
- Measure results, with agreement on key performance indicators and measures for return on external intervention investments to move towards sustainability and exit of government or donor support to the value chain.

#### PALABANA DAIRY COOPERATIVE SOCIETY, ZAMBIA

Different local donors and banks have given several credits to the Palabana Dairy Cooperative Society, formed by local dairy farmers to finance the purchase of cows and to build up a common milk storage depot. Parmalat, the leading dairy processor of Zambia, has signed a 5-year off-take guarantee with the cooperative and pays directly into the cooperative's account at Zanaco, the country's largest rural bank. Farmers benefit from the cooperative's infrastructure and are part of the value chain structure with Parmalat.

#### INSTRUMENTS TO MANAGE PRICE RISKS

A number of external VCF arrangements operate with higher levels of sophistication or formality in the nature of the contracts or agreements. While, as a common denominator, future sales of the financed commodity are the main source of loan repayment, loans can be secured in at least three ways, such as by flows of commodities being produced or transformed (e.g., forward contracts), by commodities that have already been sold but not yet paid (e.g., accounts

receivables), or by existing stocks of commodities (e.g., warehouse receipts, discussed at length in the following section). Financing of commodity flows can use relatively simple tripartite contract farming arrangements as well as more sophisticated structured finance arrangements covering entire export value chains. Usually, forward or even futures contracting is used to manage price and market risks, which may be supported by risk-sharing and partial guarantee arrangements between off-takers and financial institutions. Receivables financing and factoring can enhance the liquidity of value chains, especially of the upstream segments of the chain such as farmers. These instruments can be used in situations where farmers (and processors or exporters) receive delayed payments from their buyers.

There have been increased fluctuations and volatility in agricultural commodity prices following the termination of buffer stocks, commodity agreements, and administered prices. Theoretically, however, there are different financial risk management instrument producers that traders and processors can use to protect themselves against price risks. Forward contracts, futures, and options allow sales prices to be locked in prior to the actual delivery of the product. Forward contracts can be written for any amount and offer more flexibility to small-scale operators. However, futures contracts and options are often beyond the reach of agricultural SMEs and commercial smallholders, due to their cost and legal sophistication. Several other factors also constrain the use of futures and options by producers in developing countries. For example, the main commodity exchanges with derivatives trading are located in industrialized countries and only a few emerging economies. Contract specifications are designed to meet the needs of industry producers, traders, and processors, and require large volumes with homogeneous quality. Using commodity exchanges implies high transaction costs and requires good communication technologies and market intelligence.

Banks can play a role in facilitating the local producers' access to futures markets. For example, CRDB in Tanzania has purchased put options for the sale of coffee and cotton in commodity exchanges in New York and London on behalf of its clients, mainly cooperative unions. The unions usually make several payments to their farmers and the first payment is made several months before harvest at a price agreed upon at the cooperative's annual meeting. The put option enables the cooperative union to offer a fixed price to farmers prior to the harvest while protecting itself against the risks of declining prices during the cropping season.<sup>55</sup>

Commodity risk management instruments are complex and potential users of such instruments in developing countries often lack knowledge about and experience in their use. As most farmers in developing countries lack basic financial literacy, they are not likely to benefit from this kind of risk management in the near future. Basic market information systems that allow farmers to gain valuable information on market and price developments are more realistic in terms of timely implementation and unfolding positive effects. Policymakers play a role in raising awareness among financial institutions, agribusinesses, and farmer or exporter associations of the potential for these instruments to manage risks and expand agricultural finance.

### WAREHOUSE RECEIPT FINANCING

Collateralized commodity finance based on warehouse receipts is another promising way to enhance working capital secured by agricultural commodities. Commodities are stored in licensed and bonded warehouses that issue receipts certifying the amount and quality stored. The owners of the commodity (such as farmers and traders) provide the receipts to lenders in exchange for loans. Except in the case of double or triple cropping, credit obtained after harvest does not directly solve the seasonal need for working capital to plant a new crop. The expenses of creating, operating, and

---

55 Bryla et al. (ibid)

monitoring these systems imply that scale is a serious challenge, so that simple, small-scale village-level systems may be most appropriate for small farmers. Moreover, the critical need for small farmers may be production loans to meet seasonal cash outflows at the beginning of planting rather than marketing loans after harvest. The fact that warehousing is common for export crops suggests that economic barriers may constrain expansion into grains and other commodities produced primarily for local markets. In any case, such a system requires an enabling legal framework, proper licensing, inspection, and oversight of public warehouses, and an indemnity fund or appropriate insurance cover.

The advantages of a properly working warehouse receipt system are:

- It gives a choice to primary producers in deciding whether to sell immediately after harvest or to store in a licensed warehouse and to apply for a short-term credit. The farmer can decide to sell the crop later in the year when prices are usually higher than at harvest time;
- It enables primary processors to secure their sourcing throughout the year and to purchase their raw materials;
- The system leads to a reduction of post-harvest losses as the grains are stored under proper conditions in licensed warehouses;
- It creates possibilities for banks to lend to agribusiness at a reduced risk, because the collateral for the loan is a liquid asset;
- If there is a well-functioning commodity exchange, it will increase the number of transactions without physical movements of the goods but only by endorsement of the warehouse receipts; and
- The warehouse receipt system increases the efficiency and transparency of the national commodities market.

The following outlines the necessary pre-conditions for a successful warehouse receipt system:

1. *An appropriate legal environment:* The most important element is a favorable legal environment, which ensures the easy enforceability of the security and

thereby provides comfort for the banks to lend against warehouse receipts. The legislation should clearly and unequivocally make warehouse receipts a title document. The receipts must specify the quality and quantity of the goods stored. The rights, liabilities and duties of each party to a warehouse receipt (producer, warehouse, bank) must be clearly defined. Receipts must be clearly transferable by delivery or endorsement. Holders of the receipts must have the right to receive the stored goods or their fungible equivalent if the warehouse defaults or its business is liquidated. And the lender should be able to determine, before granting the loan, if there is a competing claim on the goods.

2. *Reliable warehouses:* In principle, the warehouses should be private entities, or at least operate on a commercial basis, and they should be spread throughout the producing areas to ensure that there is a warehouse near the primary producers and processors. Transportation costs can be high and very few users are willing to have their crop/inventory stored far away from their production site. Warehouses need to be in a good condition and professionally run. They should be able to do a number of basic functions reliably, such as: weighing, cleaning, drying, analyzing, and sorting of the commodities. The crop has to be kept properly, so that it does not deteriorate with time or get mixed with goods of inferior quality.
3. *Licensing, inspection, and monitoring system for warehouses:* In order for commodity buyers, banks, and other participants to treat all receipts equally, they must have trust in the value of the receipts independently of the warehouse that issued them. This is only possible if the inspection of all licensed warehouses truly guarantees minimum standards acceptable to everyone. Licensing and inspection should focus on:
  - Assuring financial strength of the warehouse operator to ensure that the banks are comfortable with the viability of the entity holding their security;
  - Establishing technical standards of the warehouse to ensure that the quality of the

- commodity is maintained throughout the storage period;
- Developing the ability to store the crop according to quality standards to ensure value creation and market segmentation; and
  - Implementing administrative systems to ensure that the licensed warehouses are able to handle, in an efficient and reliable way, the paperwork and procedures associated with the warehouse receipt process;
  - Once the warehouses have been licensed, proper monitoring needs to take place. This includes frequent on-site visits, both scheduled and unscheduled, to ensure that the actual amount stored corresponds with the tonnage on the receipts issued. Financial monitoring, where quarterly financial statements are submitted to the monitoring body, is needed to ensure compliance with the financial strength requirements of the license.
4. *Performance bond and/or indemnity fund*: An indemnity fund should be established as early as possible to cover any potential fraud or negligent behavior by the licensed warehouses. In case a warehouse is unable to deliver the crop due to loss or deterioration outside of the insurance policy, the bank can call on the indemnity fund to cover its loss. The participating licensed warehouses normally establish an indemnity fund and/or bonding over a period of time. However, because of the time it takes to accumulate a reasonable amount of funds, this issue can be difficult to tackle in the early years of the introduction of the warehouse receipts system and may require public support initially.
5. *Banks that trust the system*: Financial institutions need to be involved as early as possible in the implementation of the program. They must be comfortable with the risks associated with lending against warehouse receipts in case of default on the loans. To accommodate the risks associated with the commodities, most financial institutions will only lend a percentage of the current market value of the crop stored. This is to ensure that, in case the value decreases, the security will still cover the loan granted. The percentage varies according to the level of risk of price decrease that the bank is willing to take. Additionally, some banks implement “call” mechanisms, which allow them to ask for additional security or force a sale in case the value of the crop decreases to a level approaching the value of the security.
6. *Agricultural prices that reflect carrying costs*: For the program to be attractive to its participants, there has to be a general increase in prices after harvest to properly reflect storage and carrying costs. This is usually not the case if the market is protected and interventions are made to maintain an artificial price. Governments need to abstain from intervention in the markets or at least do so in a predictable and non-disruptive way. Furthermore, for financial institutions to be able to lend against warehouse receipts there must be a marketplace (i.e., a market information system) where agricultural commodities are regularly traded and regular prices are published. This allows the financial institutions to assess the market value of the security and the participants to decide on their optimum time of sale.
7. *Role of the public authorities*: To set a proper institutional framework, the government should, in consultation with the private sector, take the following actions at a minimum:
- Prepare and pass the relevant legislation, which should include as a minimum a law (sometimes referred to as a “Grain Receipt Law”) and descriptions of standard conditions for the licensed warehouses;
  - Set up a licensing and inspection system for the licensed warehouses, as described above; and
  - Establish an indemnity fund or a performance guarantee system.
- Governments should be prepared to play a greatly diminished role in the grain markets, serving as guarantors that the markets work efficiently rather than participating in them directly. This is

not easy, as the prices of agricultural products are sensitive matters, and farmers tend to seek protection from governments in the form of market intervention.

8. *Well-trained participants:* A full understanding of the warehouse receipt system is a prerequisite for its successful implementation. Only if farmers, traders, processors, and banks receive training relatively early in the process will the implementation of the warehouse receipt system be successful.

### INNOVATIONS IN INDIVIDUAL LENDING PRACTICES

Most individual agricultural financing relies on formal loans provided directly to farmers and agricultural SMEs, often based on a formal contract against hard collateral. More innovative approaches focus on the evaluation of the borrower's cash flow capacity from farm and non-farm income sources. In contrast to the value chain finance approach, these approaches do not depend on a well-developed value chain structure and a client's linkages to other enterprises. Except in the case of MFIs lending to farmers and agricultural SMEs through joint-liability guarantee group structures, traditional funding is generally hard to access for farmers and agricultural SMEs, mainly due to the lack of collateral and the absence of bank or income statements. However, parametric financing models show that banks are starting to vary their practices in order to serve the agricultural clientele. In parametric financing, the credit decision is based on only a few key parameters related to farm size and information about the crops grown, and is commonly combined with credit scoring tools and checks at credit bureaus to determine outstanding debts. Other features of parametric models frequently include: a relationship approach, differentiation of interest rates, health and weather insurance, extension services, collateral (or at least taking possession of the collateral documents without registration), and the use of revolving or credit

card-type products. However, parametric models require capacity building for the financial institutions developing them, as these custom-tailored models vary according to many factors, including crop type, geography, climatic conditions, degree of mechanization, and inputs utilized.

Emerging farmers typically have larger land sizes than commercial smallholders, tend to concentrate or specialize in one or only a few particular crop(s), have a more entrepreneurial character, and are more comparable with commercial farmers despite not having yet reached the latter's size and scale. These farmers typically have reached their growth limits due to a lack of managerial and financial skills and lack of bank financing. Banks often choose to finance smaller households with mixed-income structures for risk diversification rather than emerging farmers. However, emerging farmers are the ones with the potential to develop into commercial or professional farmers with corresponding growth of financial services. Emerging farmer financing schemes may become successful with targeted loan structures based on farm crop models to address financial needs, combined with technical assistance to the farmers to address gaps in management and financial skills, as well as agronomic practices. Such technical assistance is ideally provided by a mix of NGOs, private agricultural input providers, and government extension services.

#### BASIX INDIA

As one of the front-runners in stand-alone financing, BASIX India has combined two strategies to effectively manage risk in smallholder financing. First, BASIX reduces its institutional-level risk through an appropriate mix of lending methodologies and portfolio limits. Second, BASIX helps customers mitigate their own risks through the integration of credit and insurance, thus reducing the company's exposure to defaults. This two-pronged approach provides a risk management model that is replicable for other institutions.

Investments in long-term assets, such as farm equipment, irrigation, land purchase, and post-harvest and processing facilities, require larger amounts of capital that amortize over several years. Other investments, such as the establishment of tree-crop plantations, are characterized by long gestation periods before cash flow begins to materialize. Term finance comprises various financial instruments such as term loans, leasing, and equity finance. However, longer loan maturities and irregular, lumpy repayment schedules are more risky and require more sophisticated skills in loan appraisal and investment analysis. The use of collateral substitutes is only suitable for smaller term loans, whereas larger loans require real estate or, at the least, chattel mortgage. On top of that, long-term funding sources are generally difficult to access even for financial institutions in developing countries and present additional challenges to liquidity management. This is based on the problem that fully developed capital markets are absent, which makes the provision of equity, subordinated debt, bonds, and term deposits even more tricky. The result is that adequate financial products for agricultural SMEs, such as cash-flow oriented, flexible, term finance products are absent. Thus financial institutions are often reluctant to provide such finance and growth potential is not realized.

## LEASING

Leasing offers the potential to reduce some of the risks of traditional loan provisions for investment financing in agriculture. Leasing can provide an alternative financing solution for smallholder farmers and rural enterprises with limited collateral and credit history for the acquisition of equipment and other production assets. It helps to circumvent some of the problems related to the registration and foreclosure of collateral and can be used for financing machinery and movable assets such as vehicles and farm equipment. Since the lessor owns the equipment, repossession in case of default is more straightforward, as it does not require court procedures. Leaseback enables rural entrepreneurs to access funds by selling a

productive asset to the lessor, who then leases it back to the lessee. At the end of the stipulated period, the lessor sells the asset back to the lessee at a pre-determined price. The use of leasing and leaseback is greatly facilitated by a suitable legal framework stipulating the rights and obligations of both parties. Moreover, local tax regulations can make leasing less lucrative than lending and sometimes inhibit the broader use of leasing as a finance mechanism.

Despite the advantages of leasing in principle, few institutions offer equipment leasing and leaseback to rural customers. Rural lessors face special issues, since the monitoring of assets is more difficult and costly, and markets for repossessed assets are sometimes shallow. In order to protect against these risks, some lessors request high down payments or additional collateral, which are beyond the reach of many would-be investors. DFIs and donors have assisted governments to develop supportive legal frameworks for leasing and addressing taxation-related issues. These efforts should be expanded to other countries but are insufficient for spurring rural and agricultural leasing. They should be

### BANCO DE LAGE LANDEN BRASIL

De Lage Landen (DLL), an international provider of leasing and asset finance, has built up an agricultural finance portfolio in Brazil that is nearing \$3 billion. This portfolio has been almost entirely generated in partnership with agricultural equipment vendors. Through BNDES, Brazil's national development bank, banks and financial institutions can provide finance to the agriculture sector at subsidized rates. DLL has distributed more funds than the general banks to the agriculture sector. Key for DLL's approach are: a deep understanding of farming and of the agricultural value chain in Brazil; a thorough knowledge of agricultural equipment; control over its distribution chain; and knowledge of the collateral value of the equipment and how to remarket it if needed. Most leases have a down payment or other form of client equity in the transaction, and a cash-collateralized partial guarantee from the dealer.



complemented by technical assistance for developing a rural leasing portfolio through staff training, improving product features, and operational procedures to cater to the rural market.

### INDEX-BASED INSURANCE MECHANISMS

Index-based crop insurance shows some promise in overcoming some of the risk related constraints. Indemnity payments are triggered by deviations from an independently verifiable indicator, such as rainfall data measured at local weather stations, rather than by on-site loss assessments. Weather-index insurance thus offers the promise of reducing the administrative, adverse selection, and moral hazard problems of traditional insurance. Different indices can be used, such as rainfall, temperature, or livestock mortality, as long as they are highly correlated with regional farm yields or herd productivity and are accurately and objectively measurable.

However, weather index-based insurance has its own operational challenges. Not all pilots programs have been successful, and the scalability of successful pilots

#### PEPSICO, INDIA

To protect the farmers in its potato supply chain, PepsiCo offers index-based insurance as part of its contract farming program in India. The new index-based weather insurance product, offered since 2007 through a private firm, is based on humidity and temperature levels that trigger late blight disease or frost. The premium is 3-5 percent of the sum insured and covers losses above 30-40 percent of the yield. Premium costs to farmers are partially recovered from an off-take price increment. Farmers buying insurance include those that do not have any borrowing needs, but use insurance for risk mitigation. Take-up rates have been 50 percent or more and as high as 95 percent in some areas. The scheme has already been improved. New weather stations have been built to reduce high variation basis risk.

has been proven only in India and Mexico so far. In partnership with insurance companies, financial institutions can play a role in retailing weather index-based crop insurance policies to advance uptake and help to achieve scale. Crop insurance can be bundled with agricultural loans<sup>56</sup> or sold as independent products. A lender may choose to purchase an index-based insurance contract as protection against the weather-related losses of borrowers, recovering the costs of the policy through the pricing of agricultural loan products. Due to their transparent and standardized structure, index-based insurance contracts may be sold to international reinsurance markets. Transferring risks to international markets enhances the capacity of local insurers to manage larger covariate risks.<sup>57</sup>

Because of correlated risk, premiums for agricultural insurance often cost 10-15 percent of the insured amount. Index insurance, because of the lower costs of standardized contracts, no loss assessments, and better possibilities for re-insurance, can significantly reduce these premiums. However, percentages are often too high for those who need the insurance most. Subsidies for index insurance are an option, although subsidies carry their own problems.

A major shortcoming of index-based insurance is in the possible mismatches between payouts and actual losses if the correlation between index and farm yields is not high enough (basis risk). Differences between farms covered by the same weather station can even occur due to micro-climatic factors, even if there is a high overall correlation between rainfall data at local weather stations and farm yields in the general surrounding areas; this leads to problems for individual farmers who have been adversely impacted but do not receive a payout. Good data availability, which is a serious shortcoming in most developing countries, and sound actuarial modeling can help reduce basis risk.

56 Hess (2003)

57 For example, in the PepsiCo case shown above, Swiss Re has reinsured the program every year since its inception.

An additional drawback is that small producers often do not understand the concept of insurance. It is often perceived as a nonviable investment because premiums are collected every year but indemnities are paid much less frequently. Previous experiences of small producers with insurance have often been negative (e.g., bankruptcy or fraud), which diminishes their trust in insurance.

The need for investments in infrastructure for index-based insurance also remains a major obstacle, as discussed in previous sections of this report. The extent to which the development of insurance

relies on the construction and maintenance of infrastructure should not be understated. An alternative might be found in index schemes based on information provided through remote sensing coverage. Given that satellite data is becoming increasingly available, it could be used to complement observations from weather stations. This could dramatically reduce one-off costs and make index-required data readily available. However, this approach is problematic in terms of credibility of data with farmers and timely delivery of relevant high-resolution remote sensing data. Results from the first pilot studies have been mixed.

## CHAPTER 5

# Conclusion

Agricultural finance is a key area of interest for policymakers focused on inclusive economic development, poverty alleviation, and achievement of the Millennium Development Goals. By endorsing and promoting a set of policy recommendations with specific key areas of focus related to agricultural finance, the G-20 strives to help policymakers in the developing world focus their resources on creating the right environment for agricultural SME finance. Within each of the six broad recommendations for policymakers in the developing world that were endorsed by the G-20 in November 2010 for general SME finance<sup>58</sup>, this report has highlighted key principles that are important to increasing access to finance for agricultural SMEs specifically.

### Developing Country Specific Diagnostics and Strategies

Section 2.1 explained the need for policymakers to undertake detailed baseline diagnoses of supply and demand for agricultural finance at the country level. The section also discussed the importance of engaging in a dynamic process to continuously assess needs in the sector in order to develop strategies based on relevant information.

### Developing a Supportive Legal and Regulatory Framework

Section 2.2 highlighted a variety of ways in which agricultural finance requires coordination of policies that intersect both the financial and agriculture sectors.

Other policy areas that influence agricultural finance are discussed in this paper, including a well-functioning judiciary with contract rights for value chain and lease financing, land security and tenure for farmers, legislation and implementation of warehouse receipt finance systems, and an enabling environment for commercially-oriented farmer-based organizations and cooperatives.

### Designing Effective Government Support Mechanisms

Section 2.3 focused on government and donor support mechanisms that foster the development of a sustainable agricultural finance system. Guidelines have been developed for smart subsidies and infrastructure investments that have systemic benefits, including for agricultural insurance markets. State agricultural development banks represent an area in which government involvement can be useful under proper conditions and, in many cases, with reforms. Partial credit guarantees and risk sharing facilities, particularly those combined with technical assistance or capacity building for financial institutions, were discussed with goals for achieving sustainability.

### Strengthening the Financial Infrastructure

Section 3.1 stressed key components of the financial infrastructure that have particular relevance for agricultural SME finance. The expansion of credit bureaus, especially into rural areas, as well as the improvement

of collateral registries for moveable collateral, can improve access to agricultural finance. Support for growth across the rural financial system, including a variety of institution types, platforms, and distribution networks, is also critical to scaling up agricultural finance access.

### Building Consistent and Reliable Data Sources

Section 3.2 addressed the existing gap in data and knowledge related to agricultural production and agricultural finance that impedes policy-making and growth in agricultural finance. Data is needed on both the financial and agriculture sectors to bridge the gap, including the measurement of the agricultural finance gap. Additionally, the acquisition and dissemination of aggregate data on agricultural production, processing, prices, costs, marketing, and risk factors can be used by both the financial industry and farmers and agricultural companies.

### Building Capacity of Financial Institutions and Their Clients

Section 4 covered a variety of topics related to capacity building — for financial institutions, value chain development, and farmers and farmer-based organizations, as well as for the development of innovative instruments and approaches. Capacity building among all market participants can support the growth of agricultural finance by enhancing the capabilities of staff in financial institutions to serve agricultural clients and by enhancing the financial literacy and management skills of farmers, farmer organizations, and agricultural SMEs in order to make them better financial clients and to strengthen the organization and governance of value chains. This section concluded with a brief overview of innovative models and instruments, which will be expanded upon in a separate stock-taking report to be completed in 2012 as a follow up to this policy report.

# ANNEX I

## GRANTS TO THE POOR

### EXCERPT FROM “SUBSIDIES AS AN INSTRUMENT IN AGRICULTURAL FINANCE: A REVIEW”

The revised rural finance strategy by the international agencies recognized that potential borrowers of financial sector loans must attain a minimum level of economic capacity before they can effectively use and repay loans. Those who are extremely poor, living in post-conflict or emergency situations, or seriously ill may not be able to profitably manage an economic activity. Therefore, grants may be useful to help kick-start an economic activity by providing the very poor with an income-generating asset, if these grants are followed by a package of assistance to help beneficiaries graduate to sustainable sources of financing. However, since grants are not a source of sustainable financing, their use should be limited in time. The World Bank also drafted guidelines for grants to the poor to help them accumulate assets and thereby build their capacity for future access to loans. These guidelines are listed below:

#### Subsidies to the Poor for Asset Acquisition

##### General guidelines for grants for economic activities include the following:

- Grants for economic activities should be limited to (1) very poor who are too vulnerable to take on the risk of a loan, (2) poor people living in communities that are beyond reach of financial institutions willing and able to extend services to the poor, and (3) poor people with some assets and earning capacity but unable to earn enough to pay the investment costs within a reasonable time frame.
- Grants must be carefully targeted with strong eligibility criteria to avoid capture of benefits by elites.
- Grants should be made on a matching basis, and beneficiary equity contributions should be made in cash if possible. In-kind contributions would only be appropriate in situations such as emergencies or post-conflict situations, where the majority of participants cannot be expected to save for a cash contribution.
- To ensure that beneficiaries value and care for the assets financed by the grant, they should contribute as high a percentage as is reasonable, given their overall economic circumstances. This should be at least 10 percent of total cost, and in many cases, a much greater percentage.
- Developing a cost-recovery mechanism can help ensure that only people with serious intentions receive grants. One possibility would be to establish local savings and credit associations to capture recoveries and hold beneficiary savings. The recoveries would help capitalize the entities for future lending within the groups.
- Grants are sometimes made to groups to finance expensive assets that cannot be provided by grants to individuals. However, conflicts can arise from group ownership of an asset. If group ownership does not have clear advantages that significantly outweigh these potential conflicts, it might be preferable to provide grants to carefully targeted individuals.
- For poor people with some assets and income earning capacity, financing a portion of the investment with a grant and the remainder with savings and a loan from a financial institution should be considered. There should be a strict separation between the financial intermediary issuing the loan and the body issuing the grants, even if the funding comes from the same financial institution. This way, it can be made clear to the beneficiary that the loan is indeed a loan and needs to be paid back. If both sources of funding appear to come from the same organization, confusion among beneficiaries is likely to result in poor repayment and damage to the local credit culture.

- Grants for income-generated activities should, in many cases, be combined with training in selecting, planning, and managing economic activities. The World Bank Institute has an established grassroots management training program, which includes household management, business skills, and financial skills. Such training programs improve the ability of targeted groups (especially rural women) to manage their income-earning activities and finances, often obviating the need to seek credit and making them more successful when they do. Such programs are sometimes linked with literacy and health programs.

Some MFIs have experimented with temporary grants for the very poor. BRAC, the huge NGO/MFI in Bangladesh, is a well-known leader in providing this type of infant industry support for some of its poorest members. CGAP and the Ford Foundation are testing nine graduation models that target ultra-poor.<sup>59</sup> However, such subsidies raise the possibility that pressures could develop to convert the temporary client subsidy into a permanent subsidy. Grants provided to the poor by MFIs imply that richer borrowers pay higher interest rates to cover the cost of grants or that the MFI obtains a continuous supply of external subsidies to finance this component of its operations.<sup>60</sup>

Subsidies for savings rather than credit could be even more important for the poor. IFAD's strategy notes that savings are important because they enable poor households to withstand income shocks and mitigate the effect emergencies of emergencies and crises. Access to secure savings services is also expected to promote financial discipline and help borrowers service their loans on a timely basis. However, customer education and protection are critical, savings should be adequately protected, and any risks should be clearly explained to savers.<sup>61</sup>

---

59 El-Zoghbi, Montesquiou, and Hashemi (2009)

60 Armendariz and Morduch (2005)

61 IFAD (2009)

## ANNEX II

# SMART SUBSIDIES AND THE QUESTION OF FERTILIZER SUBSIDIES

### EXCERPT FROM “SUBSIDIES AS AN INSTRUMENT IN AGRICULTURAL FINANCE: A REVIEW”

The concept of smart subsidies seems to be most advanced by supporters of fertilizers subsidies in Africa when they propose that governments avoid past mistakes and implement instead “smart subsidies” designed to target the poor and support rather than undercut private input distribution markets.<sup>62</sup> Although these arguments paint an enticing picture for smart subsidies, they provide little guidance on what form they should take in practice, how the traditional problems of elite capture and resale can be avoided, how subsidies can best be administered (for example, through private or state-controlled system), and how leakages and distortions can be minimized. Little evidence is provided on the relative costs of subsidies versus other forms of income or food transfer.<sup>63</sup>

Two important caveats about fertilizers subsidies apply to all subsidies. First, there are significant opportunity costs in devoting substantial public resources to the supply of fertilizer, a private good (as is credit), at the expense of public goods, such as infrastructure, education, or public health services, that may have a greater impact in reducing poverty.<sup>64</sup> Second,

...although there is an increasing perception among political leaders that there is a huge and unacceptable human cost in waiting for markets to develop well enough to support agricultural intensification in Africa, it may be equally important to ask what is the human cost of not taking active steps now to make markets work in future. There is a very real possibility that quick fix approaches to promote fertilizer use may leave inadequate resources and little political will for effectively improving the situation for the long run.<sup>65</sup>

The use of subsidies to meet short-term objectives, therefore, potentially implies high opportunity costs in the form of insufficient resources for and lack of attention to long-term development needs.

---

62 Minot and Benson (2009)

63 Crawford, Jayne, and Kelly (2006)

64 Minot and Benson (ibid)

65 Crawford, Jayne, and Kelly (ibid)

# Bibliography

- Armendariz de Aghion, Beatriz, and Jonathan Morduch. 2005. "The Economics of Microfinance." Cambridge, Massachusetts.
- Bryla, E., et al. 2003. "The Use of Price and Weather Risk Management Instruments." Case Study Presentation for the conference "Paving the Way Forward for Rural Finance, An International Conference on Best Practices." USAID, WOCCU. Washington, DC. June 2-4, 2003.
- Carletto, Gero. 2010. "Improving the Availability, Quality and Policy-Relevance of Agricultural Data: The Living Standards Measurement Study—Integrated Surveys on Agriculture." World Bank Development Research Group. Washington DC.
- Christen, R. and D. Pearce. 2005. "Managing Risk and Designing Products for Agricultural Micro Finance—Features of an Emerging Model." CGAP Occasional Paper 11. Washington DC.
- Coffey, Elizabeth. 1998. "Getting the Policies Right." FAO/GTZ AFR Series No 2. Rome.
- Crawford, Eric W., T.S. Jayne, and Valerie A. Kelly. 2006. "Alternative Approaches for Promoting Fertilizer Use in Africa." Agriculture and Rural Development Discussion Paper 22. World Bank. Washington DC.
- Doran, A., N. McFadyen, and R. Vogel. 2009. "The Missing Middle in Agricultural Finance." Oxfam GB Research Report. United Kingdom.
- El-Zoghbi, Mayada, and Aude de Montesquiou, with Syed Hashemi. 2009. "Creating Pathways for the Poorest: Early Lessons on Implementing the Graduation Model." Brief, Consultative Group to Assist the Poor. Washington DC.
- Fan, Shenggen. 2008. "A New Approach to Halving Hunger." <http://www.new-ag.info/en/view/point.php?a=1795>
- FAO and GTZ. 1998. "Agricultural Finance Revisited: Why?" FAO/GTZ AFR Series No 1. Rome.
- FAO. 1997. "Improving Agricultural Extension."
- Hazell, P., J. Anderson, N. Balzer, A. Hastrup Clemmensen, U. Hess, and F. Rispoli. 2010. "The Potential for Scale and Sustainability in Weather Index Insurance for Agriculture and Rural Livelihoods." IFAD, WFP. Rome.
- Hellmuth, M.E., D. E. Osgood, U. Hess, A. Moorhead, and H. Bhojwani, editors. 2009. "Index insurance and climate risk: Prospects for development and disaster management." *Climate and Society* No. 2.
- Hess, U. 2003. "Innovative Financial Services for Rural India: Monsoon-Indexed Lending and Insurance for Smallholders." Working Paper 9, World Bank Agriculture and Rural Development. Washington DC.
- Hess, U., and P. Hazell. 2009. "Innovations in insuring the poor." IFPRI Focus briefs, 17.
- Hoellinger, Frank. 2011. "Rural and Agricultural Finance - Trends, Issues and Challenges" Germany Agency for International Cooperation (GIZ). Forthcoming.
- IFAD. 2010. "Decision Tools for Rural Finance." [http://www.ifad.org/ruralfinance/dt/full/dt\\_e\\_web.pdf](http://www.ifad.org/ruralfinance/dt/full/dt_e_web.pdf)
- IFAD. 2009. Rural Finance Policy. <http://www.ifad.org/pub/basic/finance/ENG.pdf>
- IFC. 2010. "Scaling-Up SME Access to Financial Services in the Developing World." Washington, DC.



- Klein, B., et al. 1999. "Better Practice in Agricultural Lending." FAO/GTZ AFR Series No 3. Rome.
- Mensick, M., and J. de la Rive Box. 2011. "How to Support Value Chain Finance in a Smart Way?" Policy Statement of the European Microfinance Platform Rural Outreach & Innovation Action Group.
- Meyer, Richard. 2011. "Subsidies as an Instrument in Agricultural Finance: A Review." Joint Discussion Paper of Capacity Building in Rural Finance Partnership (CABFIN). Washington DC.
- Meyer, R. and G. Nagarajan. 2005. "Rural Finance. Recent Advances and Emerging Lessons, Debates and Opportunities." Reformatted version of Working Paper No. (AEDE-WP-0041-05), Department of Agriculture, Environmental, and Development Economics, The Ohio State University. Columbus, Ohio.
- Miller, Calvin. 2011. "Agricultural Value Chain Finance Strategy and Design." Agribusiness and Finance Group Rural Infrastructure and Agro-Industries Division of the FAO. Rome.
- Miller, C., and L. Jones. 2010. "Agricultural Value Chain Finance, Tools and Lessons." Food and Agriculture Organisation and Practical Action Publishing.
- Minot, Nicholas, and Todd Benson. 2009. "Fertilizer Subsidies in Africa: Are Vouchers the Answer?" IFPRI Issue Brief 60, International Food Policy Research Institute. Washington DC.
- OECD. 1988. "New Trends in Policy Making." OECD: Paris.
- Roberts, Richard A.J. 2005. "Insurance of Crops in Developing Countries." FAO: Rome.
- Roberts, Richard A.J. 2011. "Policy Support to Agricultural Finance in Africa." Paper prepared for the Making Finance Work for Africa Conference. Kampala, Uganda. June 29-30, 2011.
- Skees, J., P. Hazell, and M. Miranda. 1999. "New Approaches to Crop Yields Insurance in Developing Countries." EPTD Discussion Paper No 55, International Food Policy Research Institute (IFPRI). Washington DC.
- Stutley, Charles. 2010. "Guidelines for the design and implementation of agricultural weather index insurance schemes in Africa." GTZ: Eschborn, Germany.
- World Bank. 2011. "Migration and Remittances Fact Book 2011." World Bank. Washington DC.
- World Bank. 2007. "Providing Financial Services in Rural Areas. A Fresh Look at Financial Cooperatives." Report No 40043 -GBL.
- World Bank. 2006. "Meeting Development Challenges: Renewed Approaches to Rural Finance." Agriculture and Rural Development Department. World Bank. Washington DC.
- World Bank. 2005. "Managing Agricultural Production Risk-Innovations in Developing Countries." World Bank. Washington DC.





INTERNATIONAL FINANCE CORPORATION  
2121 PENNSYLVANIA AVENUE, NW  
WASHINGTON, DC 20433 USA  
[WWW.IFC.ORG](http://WWW.IFC.ORG)

