Finance for Smallholders

Opportunities for risk management by linking financial institutions and producer organisations

npm platform for inclusive finance

Food & Business Knowledge Platform

Agri Pro Focus

Colophon

Funders:

Food & Business Knowledge Platform (F&BKP)
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Preface

NpM, Platform for Inclusive Finance (NpM) supports its members amongst others through research, knowledge exchange, policy recommendation and representation of the sector. The Rural Finance working group of NpM has always played an active role in improving its members' activities to increase access to financial services in rural areas. In the past, themes that the working group worked on are Value Chain Finance and Member-owned financial institutions. This research 'Finance for Smallholders: Opportunities for risk management by linking financial institutions and producer organisations' has been carried out in the countries: Ethiopia, Mali, Rwanda and Uganda. The case studies are integrated in a separate document which can be downloaded from the NpM website: (www.inclusivefinanceplatform.nl/about/publications).

The working group coordinates its efforts with other organisations to leverage its knowledge and to make sure the work is complementary to other initiatives. NpM has worked with AgriProFocus (APF) for a number of years on the topic of rural finance. Jointly, the working group and APF have coordinated the content of this research with the Food & Business Knowledge Platform (F&BKP), the Consultative Group to Assist the Poor (CGAP), the Rural Finance and Innovation (ROI) action group of the European Microfinance Platform (e-MFP), Agriterra and the Wageningen University and Research centre (Wageningen UR). ICCO Terrafina Microfinance coordinates the working group.

The topic of this research 'Finance for Smallholders' was chosen in line with the activities and policy of the members, the Dutch government and the above mentioned organisations. To this end, the working group of NpM also provided expert input in the consultation round of the F&BKP, whom with this consultation contributed to the wider stakeholder input gathering by the ministries. The government considers the opinions and contributions that emerged from this F&BKP consultation as important building blocks in the development of the policy. The policy letter on global food security stated that: 'the focus is on small and medium-scale farmers as well as on other rural entrepreneurs who could potentially serve market demand. Increasing these people's earning power is a powerful tool in fighting hunger and poverty and promoting economic growth.'

The Netherlands is internationally recognized as an expert and innovative partner for agricultural development and food security. Its activities are in line with EU policy in this field and play a visible and distinctive role at the UN within an integrated approach to aid, trade and investment. Knowledge, capacity and activity are the common themes.

According to Minister Ploumen: 'A problem that occurs in the food chain is access to financial services; a problem that is dealt with already in different ways'. This research sets out different kinds of good practices for the identification of opportunities for risk management, by linking financial institutions (FIs) and producer organisations (POs). The cases were selected out of the portfolios of NpM member organisations and APF. Early 2014, the NpM Rural Finance working group took the initiative, in cooperation with APF, to investigate the financing of small producers and POs in order to learn from, upscale and replicate best practices.

NpM hopes that this report will be useful and inspiring. We would be grateful if you provide us with your remarks, ideas or suggestions; we welcome your responses.

Josien Sluijs
Director NpM

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Executive summary

Field research
The NpM, Platform for Inclusive Finance (NpM), Rural Finance working group undertook a collaborative study of smallholder finance through or with farmers' organisations that included 14 projects of partners in Ethiopia, Mali, Rwanda and Uganda.

Smallholder finance - a common priority
The worldwide priority for smallholder finance is undisputed. The large under-utilized potential in the hands of smallholders, especially in Africa, offers promise for local food security and global solutions to feed a growing world population. Smallholder finance impacts on alleviating the poverty of rural households and can contribute to ecosystem resilience. There is developing consensus on a theory of change in which the top of the pyramid – successful commercial operators in the agri-food chains – assume responsibility for inclusive and sustainable sourcing, while smallholders and their producer organisations (POs) move towards market quality standards, improved yields and growth opportunities.

New territory – not yet fully charted
Smallholder inclusion through POs offers opportunities for financiers. Several NpM members have piloted finance programmes linked to POs with their African partners. These programmes have taken them into rather uncharted territory: not standard microfinance, not standard agribusiness financing, not commercial value chain finance, yet building upon elements of all of these in the context of smallholder agriculture. All members of NpM have long experience with microfinance. The social lenders among them have a prominent position worldwide in agribusiness finance. Rabobank is a major financier of global agri-food chains. But the field of smallholder finance in Africa and its connection to farmers' organisations - operating truly at the bottom of the pyramid – have proven to be unfamiliar territory yet to be fully understood and charted.

Management of agricultural risk
Modern instruments for managing agricultural risks – commodity exchanges, option and futures markets, crop insurance and tradable warehouse receipts – are still being developed in Africa and are currently inaccessible to much of the smallholder community. Nevertheless, advances can be made by exploiting all opportunities in the value chain for risk mitigation measures relating to farming, Good Agricultural Practices (GAPs), farmers' organisations, market arrangements and viability enhancement. These gains require the orchestration of stakeholders in the chain, a task in which the PO performs a pivotal role.

New roles for farmers' organisations
POs have traditionally focused on raising the living standards of their members by, for example, supporting functions in the farming process and marketing and being involved in savings and credit operations, processing produce or even all of these areas. But POs are also increasingly aware of a new theory of change, one in which the requirements of commercialisation open new perspectives and bring new challenges. Chain actors and financiers see the POs as bridges to smallholders and as important vehicles for joint action towards risk management. The POs feel supported when engaging in new functions, but they are also aware of being assessed in their capacity to perform these functions. Building the management capacities of their volunteers and staff is part of most successful programmes.

Pre- and post-harvest finance
Most smallholder credit delivery by microfinance institutions (MFIs) is limited to pre-harvest input finance. Yet for smallholders, post-harvest finance is just as crucial because it allows the off-taker, whether a PO or a private agribusiness, to pay farmers in cash upon delivery of their crop. Without post-harvest finance, farmers are unpaid for one or several months, which amount to 'smallholder-finance-in-reverse'. In such cases, they effectively provide trade credit to the next actor in the chain. Thus, even though post-harvest finance is not aimed directly at smallholders, the lack of it impacts on their livelihood. Nothing erodes loyalty to their own PO

more than late payment, even if the PO itself cannot be blamed as it awaits payment from its debtors. In order to avoid this anomaly and promote fair finance, post-harvest finance to the buyers of smallholder produce is equally vital.

Farm finance programming
Prior to financing, there is often a preparatory stage of scoping, crop selection, PO screening, chain actor consultation and the orchestration of collaborative agreements. Financiers and POs can and should play a pro-active and supportive role at this stage.

New roles for financiers
Thus, financiers face several new challenges. First, they need to build up a minimum of expertise to deal with agricultural finance. Second, they must revise their due diligence so as to accommodate a more comprehensive understanding of risk management. Third, they have to develop tailor-made financial products for the specific crop and market concerned. Fourth, they need to think of possibilities to engage in 'hybrid finance' at both the microfinance level (pre-harvest credit) and the PO or agribusiness level. Alternatively, two different financial institutions (FIs) can collaborate to serve the input and output finance components. Finally, a more pro-active role is required of their staff when developing farm finance programmes. Invariably, all of these challenges demand (external) support in staff capacity-building

Due diligence revisited
MFIs are not used to doing a full due diligence at the client level because they work with a standard set of eligibility criteria and conditions that can easily be verified. However, they need to do a full due diligence at the preparatory stage of the farm finance programming. And although social lenders are used to full due diligence at the client level, their staff also to orient themselves on the specific requirements for agri-finance. A standardised framework for due diligence, risk management and financial analysis for smallholder finance can serve both categories.

Implications for funding agencies
The need for both pre-harvest and post-harvest smallholder finance implies that the organisations for microfinance and agribusiness finance should collaborate. It may also imply collaboration between a social lender and a (grant-based) investor able to support microfinance development for smallholders. Hybrid finance creates new opportunities for partner identification. Existing microfinance partners may suggest POs or Small and Medium sized Enterprises (SMEs) for agribusiness finance, and the existing agribusiness partners of social lenders may be asked to suggest MF institutions that finance their smallholder suppliers.

The need for blended funding and investment
The modernisation and commercialisation of smallholder finance in Africa cannot be undertaken by social lenders and commercial banks only. Although most of the coaching of farmers and PO staff should be done with the supply chain, there are often other tasks for professional facilitators and service providers that require initial grant investments. A fair combination of grant financing and debt financing is needed to achieve results.

The search for good practice
The 'best practice' guidelines for regular microfinance are not entirely appropriate in smallholder finance. It is necessary to also consider the emerging documentation on agribusiness finance and value chain finance. In view of the complexity of smallholder finance, good practice guidelines should focus more on the process of farm finance programming and joint risk management rather than 'prescriptions' for financiers on financial products and services. Good practice can also apply to processes: the steps required for stakeholders to arrive at workable solutions. These steps can be supported by appropriate training materials and tools for practitioners.

1. Introduction

1.1.NpM and its purposes for executing the study

The study
Early in 2014 the Rural Finance working group of NpM, Platform for Inclusive Finance, took the initiative, in cooperation with AgriProFocus (APF), to investigate the financing of small producers and producer organisations (POs) in order to learn from, upscale and replicate best practices. NpM set up this research proposal in close consultation with APF, Agriterra, the European Microfinance Platform (e-MFP), the Consultative Group to Assist the Poor (CGAP) and the Wageningen University and Research centre (Wageningen UR). Funding for the study was provided by the Netherlands government through the Food & Business Knowledge Platform (F&BKP).

NpM, Platform for Inclusive Finance *(NpM)*
NpM, Platform for Inclusive Finance, consists of the Dutch development finance organisations (DFOs), social lenders and investors and the Ministry of Foreign Affairs. The DFOs are Cordaid, HIVOS, ICCO, ICCO Terrafina Microfinance, Oxfam Novib and the Rabobank Foundation. They are social investors providing seed capital, capacity-building support and Technical Assistance (TA). The social lenders are ASN bank, FMO, ING, Oikocredit, Rabobank and Triodos bank. NpM has several thematic groups, one of which is the Rural Finance working group; this working group focuses on building, sharing and exchanging knowledge and case studies on rural finance.

ICCO Terrafina Microfinance *(TMF)*
Via ICCO Terrafina Microfinance (TMF), ICCO pools its expertise and resources with Rabobank Foundation and Oikocredit. Rabobank Foundation and Oikocredit provide loans for microfinance institutions (MFIs), Savings and Credit Co-operatives (SACCOs) and cooperatives, whereas ICCO structures microfinance capacity building through the TMF team. The main aim of TMF is to sustainably boost the capacity of MFIs in Africa through a wide range of rural financial services while safeguarding good microfinance practices. TMF provides a mixture of small seed capital grants for starting MFIs, capacity-building (training) trajectories and product innovation for rural outreach as well as brokering services for loans and guarantees for its investment partners. TMF has been chairing the Rural Finance working group of NpM and it coordinated the current study together with APF.

AgriProFocus *(APF)*
AgriProFocus (APF) is a partnership with Dutch roots that promotes farmer entrepreneurship in developing countries with the aim of rallying together professionals, expertise and resources around a joint interest in farmer entrepreneurship. APF has organised 13 agri-hubs in countries in Africa to facilitate matches between banks and farmers; to that end, they have organised several finance fairs.

European Microfinance Platform *(e-MFP)*
The European Microfinance Platform (e-MFP) Rural Outreach and Innovation (ROI) action group brings together multilateral organisations, donors, researchers, practitioners and investors involved in rural microfinance who are willing to address the challenge of providing adequate financial services to the estimated 500 million smallholder farmers in developing countries. The main topic of the working session of the e-MFP ROI action group, held in November 2014, was the financing of POs; the initial findings of this study were presented at that time

Wageningen University and Research centre *(Wageningen UR)*
The Wageningen University and Research centre (Wageningen UR) is known for its focus on the agri-food disciplines and wants to explore the potential of nature to improve the quality of life. The Management and Economics faculty has been involved in the research and adjusts its curriculum using the cases of the research.

Photos by ICCO Terrafina Microfinance - Fransien Wolters

Aim of the study

It is already known that smallholder organisations face problems in accessing financial services because MFIs and banks are often hesitant to provide them with the credit suited to their needs. Some NpM partners have developed strategies to overcome these problems and have tried to facilitate the linkage between producer organisations (POs) and financial service providers. Some of these strategies include organising finance fairs, introducing assessment tools for POs and facilitating contacts and linkage to ensure that MFIs know and understand the producer's needs. The purpose of this study is to map these practices and assess what has been successful. It is important to learn from best practices (and also from cases that went wrong) in order to improve how the NpM, APF and members of both networks try to facilitate access to finance. The study may help NpM members in defining policy recommendations for its partners in developing countries. Findings and recommendations will be shared with the governments of the countries in which the research was carried out as well as with the Dutch government and the EU. The 6 specific aims of the study have been summarised in Figure 1.1.

Aim of the study

1. **Current practices** to address known problems and constraints of small producers and producer organisations (POs) to access finance
2. **Methodologies** used to overcome the constraints
3. How to provide **appropriate financial products and services** to POs and smallholder farmers?
4. How can linkages between these (potential) clients, MFIs and banks be strengthened and especially **what is the role of the Dutch support organisations in facilitating these linkages**?
5. What are **lessons learned**? **Policy guidelines**?
6. How can **best practices and guidelines** be incorporated in organisations?

Figure 1.1 Aim of the study

1.2. Projects and countries selected

The NpM partners in the Netherlands who initiated the research also suggested the cases for inclusion in the study. Although not an NpM member, Agriterra[1] participated through APF in two cases. Selection was done based upon the following criteria:

- The case is related to a partner MFI or PO that already had 2-3 years of experience in financing smallholders;
- The experience in financing contains lessons that could be useful for others;
- The case is interesting because, for example, it is innovative, offers a new solution to problems faced, contributes to effective risk mitigation and/or applies a scalable methodology.

[1] Agriterra supports farmers' organisations in fighting poverty with advice from experts from the Dutch agricultural sector and with finance from the Dutch government. The agribusiness team supports farmers' organisations in increasing their market power. They often lack solid business plans and entrepreneurial skills. Agriterra offers services to these companies in order to strengthen these weaknesses. Connections are made between cooperatives and other kinds of agribusinesses and the financial sector.

Selected cases

Partner	Crop	Financial institution	Partners in the Netherlands
Ethiopia			
E1. Amhara Credit Unions	Teff and Maize	Union of Multi-Purpose Cooperatives (MPC)	ICCO Terrafina Microfinance (TMF)
E2. Wasasa	Coffee	MFI	Cordaid
E3. Buussa Gonofa	Malt Barley	MFI	Rabobank Foundation (RBF), TMF
E4. Setit H.Famer's Union	Sesame	Union of MPC	Agriterra
E5. Finance fairs	Not crop specific	Many	AgriProFocus (APF)
Rwanda			
R1. Duterimbere IMF	Maize	MFI	RBF, TMF
AgriProFocus (APF)	Cassava Maize and vegetables	SACCO Union	TMF, APF, RBF
R2. Clecam Ejo Heza	Cassava Maize and vegetables	SACCO	TMF, APF, RBF
R3. Amesezerano Community Bank Ltd.	Various crops	Bank	TMF, APF
R4. Clecam Wisigara	Irish potatoes	SACCO	TMF, APF,RBF
Uganda			
U1. Cotton smallholders	Organic cotton	Crane Bank	RBF
U2. ENCOT MFI	Maize, rice and beans.	MFI	HIVOS
U3. NUCAFÉ	Coffee	Centenary Bank	Agriterra
U4. Finance fairs	Not crop specific	Many	APF
Mali			
M1. Biocarburant	Jatropha nut	MFI Paseka	TMF
M2. Soro Yiriwaso	Cotton, maize, rice	MFI	ICCO, TMF, APF
M3. myAgro - Mali	Sorghum, maize, millet, peanuts	Mobile banking	APF
M4. Finance Fairs	Not crop specific	Many	APF

It should be stressed that the projects selected often represent only a small fraction of the agricultural portfolio of the financial institution (FI) concerned and a small fraction of the farmers united in the PO. While the total outreach of the institutions involved is estimated at 531,000 farmers, the project cases described cover only a small sample. On the other hand, both the NpM partner and their partners in Africa were asked to select field locations representative of the strengths and weaknesses of their programmes. Hence, we feel that the cases studied are fairly representative in terms of approach, financial instruments and risk management strategies.

1.3. Method and organisation of research

Outline
NpM's terms of reference for the study provided a number of ideas to facilitate its execution, such as:

- All NpM members should be invited to propose cases for the study, assist in its dissemination among their African partners and consider recommendations for donor policy;
- APF should collaborate in preparing the study in the countries selected and in disseminating the results to relevant parties in Africa;
- Wageningen University should suggest two junior researchers from its pool of African alumni in the master's programme in Management and Economics;
- A senior consultant should be contracted to lead the research assignment and to select and coordinate the various researchers and local consultants.

While the idea was to start with desk studies for all cases selected in July 2014, there were delays in the case selection and problems with the availability of the junior researchers. Instead, the available time was spent on collecting source materials, preparing field research and extensive briefing and training within the research team. A standard format for case research was worked out and tested.

The **field research** invariably involved selecting a programme area for farm visits and extensive interviews with the POs, some farmers, the financier and, if possible, the providers of technical services. In general, two to three days per case could be spent in the field (including travel). The methodology for field research implied in the questionnaires and reporting formats is extensively described in the following chapters and in a separate report including all the cases. It is important to note that the case studies aimed to *factually* investigate the arrangement made for farmer and/or PO finance. They are not to be seen as project evaluations since the observations are often limited to only a small sample of farmers, and fieldwork had to be completed within a very limited period.

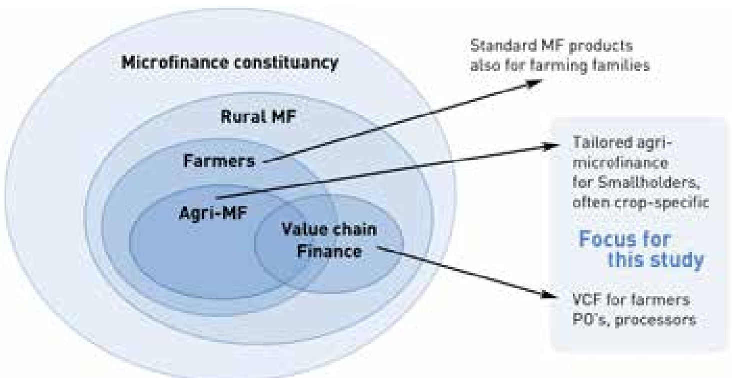

Figure 1.2 Study focus and target group

Study focus
After reviewing the nature of the cases, it soon became clear that there were at least three groups of finance models:

A. Microfinance for farmers, usually provided by microfinance institutions (MFIs) but sometimes also by Savings and Credit Co-operatives (SACCOs) or producer organisations (POs);
B. Agri-Small and Medium sized Enterprise (SME) financing, which in exceptional cases is done by MFIs but normally falls within the domain of local banks or international social lenders (like Oikocredit, Triodos or FMO);
C. Agri-chain finance, which includes farmer finance but also looks at the relationships downstream with, for instance, a processing SME, which can sometimes be the PO.

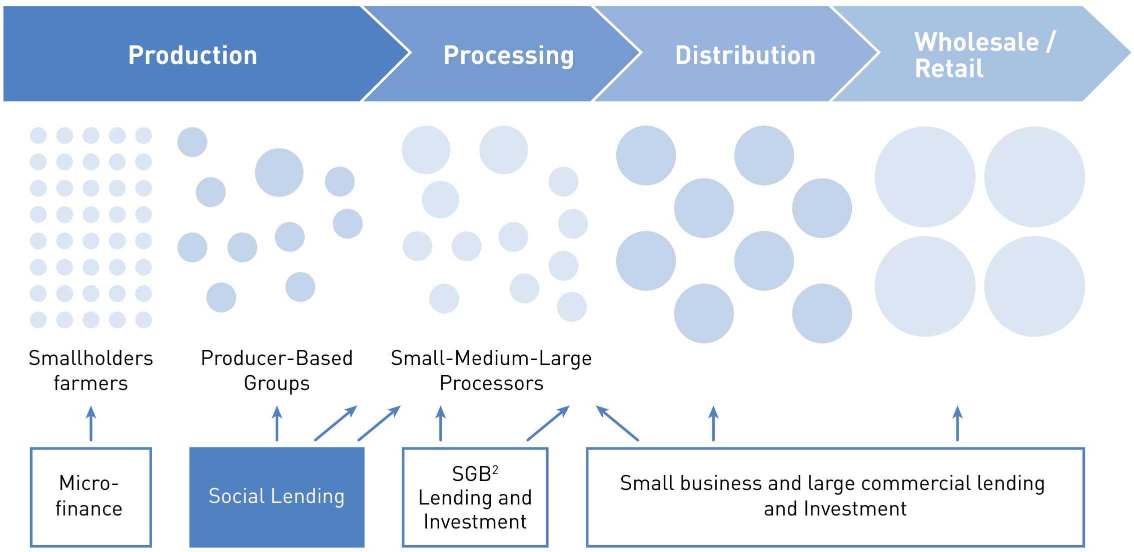

Figure 1.3 Modalities of agri-finance

While most of the finance for smallholder farmers falls within the general category of microfinance, the collaboration with farmers' organisations largely defines the type and characteristics of the finance. In general, the sub-set covered in this study is quite special and hence not representative of agricultural microfinance as a whole. Collaboration with a PO implies that the approach is often crop-specific and that the improvement and marketing of farm produce is often part of the programme. In some cases, the linkage with the marketing component also reveals some features of value chain finance. Finally, the fact that storage or processing may be included can result in the larger financial transactions often associated with SME finance. That level of finance transaction is typically served more often by banks and/or by international social lenders such as Oikocredit or Rabobank Foundation. These features have major implications for both the methodology and best practice references, as will be amply described in the study.

1.4. Mapping the complex world of smallholder agriculture and finance

New territory – not yet fully charted

Smallholder inclusion through POs offers opportunities for financiers. Several NpM members have piloted finance programmes linked to POs with their African partners. These cases have taken them into rather uncharted territory: not standard microfinance, not standard agribusiness financing, not commercial value chain finance, yet building upon elements of all these in the context of smallholder agriculture. All members of NpM have extensive experience in microfinance. The social lenders among them hold a prominent position worldwide in agribusiness finance. Rabobank is a major financier of global agri-food chains. Yet, the field of smallholder finance in Africa in connection with farmers' organisations - operating truly at the bottom of the pyramid - turns out to be unfamiliar territory, not yet fully understood or charted.

Mapping tools

Research in four countries involving farmers, POs and FIs that worked out programmes for over 20 crop-specific finance modalities poses a challenge in terms of a common framework to compare and describe the cases. Part of the research effort was to create the tools for mapping the complex world of smallholder finance, just like surveyors use their theodolite to arrive at a reliable sketch map. For this reason an effort has been made to structure the due diligence issues brought up by financiers in a standardised framework. Similarly, the efforts of POs have been structured in a framework of risk management to provide a 'common language' between POs and financiers.

Core questions for field research

Based upon the experiential information in the 14 cases, the study aimed to address some core questions relating to access to finance.

A. How have agricultural risks been managed?
B. What are the features of effective programme design and development of appropriate financial products?
C. What is specific to the due diligence process of agribusiness?
D. What are the lessons learned in view of the diversity of finance models and approaches?
E. What are the existing 'good practice' reference materials appropriate to these cases?

Photo by ICCO Terrafina Microfinance

1.5. Reader's guide

Chapter 2 contains brief summaries of each case together with an overview of the finance fairs in the four countries. Subsequently, the main features of the finance provided are described (section 2.6) as are the types of POs involved and the functions they performed (section 2.7).

Chapter 3 gives brief overview of the way stakeholders in the 14 cases (POs, financiers, chain actors, and facilitators) collaborated in creating access to finance. We describe three distinct finance strategies, the way farm finance programming has been carried out and the way new financial products and services have been developed. Finally, we give the features of and a justification for a more comprehensive approach to risk management in smallholder finance.

Chapter 4 provides an overview of the way stakeholders in the 14 cases collaborated when managing the agricultural risks in the programme. Risks are grouped in accordance with six due diligence topics: risks related to the specific crop and the way it is cultivated, risks related to farmer organisation and marketing and risks related to viability and finance. We describe the main topics and dilemmas of each risk as well as the way risks are mitigated through the collaboration of stakeholders. Details of identified risks and related risk-mitigation measures are given in tables, with reference to the case(s) in which they were applied.

Chapter 5 summarises our observations and conclusions. Here we discuss the search for good practice and elaborate on current practice in farm finance programming. We subsequently describe a number of 'good practice' features in financial product development, due diligence, risk management, etc. Finally, we reflect on the lessons learned for investors and social lenders.

Photo by Bart Debruyne

2. Current practice – 4 countries - 14 cases

2.1. How access to finance is created

The collection of cases shows a great array of interesting examples of how smallholder farmers managed to get access to finance through the support of their producer organisations (POs). Sometimes the process of creating access is as simple as bringing financiers and farmers into contact; this is the formula of the finance fairs organised by AgriProFocus (APF). But quite, more is required. The 14 cases presented here are examples of how farmers, POs, financiers, chain actors and service providers together managed to create a business case that passed the due diligence requirements of their financiers. No small feat, considering the risks connected to smallholder agriculture. The contours of the projects studied are sketched below, and the methods and finance instruments of these approaches are analysed in detail in the next chapter. But let's start where the first step is always taken: getting in touch.

Finance fairs

In line with its mandate of "improving farmers' access to finance", APF promoted and initiated finance fairs in each of the four countries studied. Financial service providers exhibited their products and services to smallholder farmers, and smallholder farmers or their organisations were able to meet them and explore opportunities to improve access to finance. The goal of finance fairs is to support the development of smallholder agribusiness by facilitating access to financial services and credit. The key aims of the APF agri-finance fairs are:

- Promote business linkages for promoting deal-making among chain actors in the agricultural value chain;
- Increase the access of farmers to information on the financial products and services available in the market;
- Promote farming as a viable investment for financial institutions (FIs) and other service providers by providing space for dialogue and business deals;
- Encourage the development of appropriate financial products and services for farmers;
- Encourage learning from good practices, in which financial services match the needs of farmers, processors and traders.

The feedback from exhibitors and visitors to the different finance fairs on closed deals, business networks and partnerships sheds some light on whether or not the finance fairs were successful. Concrete deals were reported in several categories, including financial services but also between different actors in the agricultural value chain. Some of the feedback even reported on the value of the deals, although this was not standard. While it is difficult to determine the success of the finance fairs from a quantitative perspective, the separate report with all the cases (annexes) does indicate the areas in which most of the deals were made, who dealt with whom and what the differences were between exhibitors and visitors. The report also shows that the chance to establish partnerships and networks was considered to be important.

Photo by Marloes van den Berg

2.2. Ethiopia

We have chosen to briefly describe four cases in Ethiopia.

Cases	Financial Institution	Producer Organisation
E1. Lidet Credit Union	Union of Cooperatives	Primary Multi-Purpose Cooperatives (MPC)
E2. Wasasa	MFI	Coffee farmer Association and Oromia Coffee Farmers Union
E3. Buussa Gonofa	MFI	Rural Service Facilities (RSFs established by the MFI)
E4. Setit H. Farmer's Union	Union of Cooperatives	Primary Multi-Purpose Cooperative

Case E1: Lidet Savings and Credit Cooperatives Union, Amhara Region: *"Improving Financial Services from Financial Cooperative Unions to Producer Marketing Cooperatives"*
Lidet Cooperative Union operates as a financial cooperative for 111 primary cooperatives with a total of 115,713 active individual household members. Lidet Cooperative Union is not just Savings and Credit Co-operatives (SACCOs) since it also includes other producer and marketing primary cooperatives such as Multi-Purpose Coops and Unions. Microfinance is provided both to individual farmers and to farmer groups. Apart from credit and savings, the services include micro-insurance, finance training and farm-related extension. Despite the progress, a preliminary study revealed that there was a huge need for capacity building in governance and financial management issues. In response to this, ICCO Terrafina Microfinance (TMF) designed a capacity-building programme and trained union staff, board members and the union credit control committee. Also capacity building training was given to the staff of cooperative promotion agencies at regional, zonal and district level. To improve lending procedures, training was developed for loan officers of financial cooperatives, including a Cooperative Credit Assessment Matrix (CAM).

Case E2: Wasasa MFI - *Coffee Value Chain Finance to smallholder farmers in Chora District*
Wasasa MFI (microfinance institution) participates in the Agricultural Finance Programme (AFPEU) funded by the EU and implemented by MicroSave-Cordaid. Starting from October 2012, the EU programme has been working with MFIs in four countries to implement a project to increase access to agricultural finance for farming households through product development As a result of the support; Wasasa MFI has developed an inclusive financial scheme called the *Coffee Improvement Loan*. Because Wasasa MFI had no previous experience in providing loans to smallholder coffee farmers, they had to start by assessing financial needs, developing products and assessing the risks involved in lending to smallholder coffee farmers. The programme is currently being operated with 200 coffee farmers in the Chora District.

Case E3: Buusaa Gonofaa (BG) MFI - *Value chain finance scheme for malt barley smallholder farmers in Arsi district, Oromia*
With the support of ICCO Terrafina Microfinance, BG MFI identified the malt barley value chain as a promising sub-sector for a pilot scheme in value chain finance (VCF) and they started discussions with the main actors in this chain, the Assela Malt Factory (AMF), the Oromia Seed Enterprise (OSE) and the local Zonal Agricultural Office. This resulted in a collaboration agreement to promote high-quality barley as a profitable crop for smallholder farmers.
The agreement stipulated that BG MFIs would implement the financing for smallholders' malt barley producers and that OSE would supply certified seeds to farmer clients of the BG MFI. Moreover, the Zonal Agricultural Office agreed to collaborate with OSE to provide technical support to these farmers. As AMF is interested in obtaining high-quality malt-barley, it agreed to enter into purchase contracts with the farmers and provide them with technical support. This value chain finance scheme aims to reach 1000 farmers in two districts (Lima Kara

and Sirbo). Actual adoption levels in the period 2011-14 varied between 124 and 989. Loan retailing to farmers is done through Rural Service Facility (RSF) centres promoted by BG MFI that have substantial flexibility for determining loan size, pre-disbursement conditions and loan management as well as facilitating seed distribution and marketing for the smallholder farmers.

Case E4: Setit-Humera Farmers' Cooperative Union - *Sesame value chain finance*
Setit-Humera Union was established in 2002 with four primary cooperatives and some 2000 farmer-members. Currently, Setit-Humera Union includes 19 primary cooperatives members with about 12,000 farmer households. With support of Cordaid and Agriterra, the SHU has been able to acquire finance to produce and export sesame. The finance was provided by the Commercial Bank of Ethiopia (CBE) and the Cooperative Bank (CB). CBE provided an export credit of Birr 25 m, which was 25% of the actual finance application. The Cooperative Bank Oromia provided Birr 7 million for the pre-harvest expenses (farm inputs) of some 400 farmers on the basis of a 50% guarantee by Agriterra. It also provided Birr 5 m. for marketing, which fell short of the need (Birr 22 m.) despite the collaterals offered. SHU transfers these bank loans to primary cooperatives that are considered sufficiently creditworthy, based upon standard criteria such as strength of leadership, size, landholding, trade participation and credit record.

Ethiopia finance fairs
In Ethiopia a total of 5 finance fairs were organised in the period of our study. There was no available Information on the first two fairs in Jimma and Hawassa in 2012, but they all had the same aims. Besides the general purposes of finance fairs, a specific aim in Ethiopia was to influence bankers to consider seed as a profitable business and to promote seed production, processing and marketing as a viable investment. The fairs in 2013 were organised in collaboration with the Integrated Seed Sector Development (ISSD) project of Mekelle University and with the ISSD II programme of Bahir Dar University. The setup of the finance fairs in Ethiopia is somewhat different from the fairs in the other countries because of the visits of FIs to

2.3. Uganda

Cases	Financial Institution	Producer Organisation
U1. TechnoServe Conservation Cotton Initiative	Rabobank Foundation Crane Bank	Informal farmer groups (PBG)
U2. ENCOT MFI	MFI	Informal farmer groups
U3. NUCAFÉ	Commercial Banks	Coffee Farmer Associations

Case U1: Conservation Cotton Initiative (CCIU) – *Improving income of smallholder cotton farmers and service providers by facilitating access to finance and institutional building in northern Uganda*
With the support of the luxury-clothing brand Edun and Rabobank foundation, TechnoServe was asked to establish a programme with cotton farmers who had had to abandon their farms as a result of the civil conflict in northern Uganda. The Conservation Cotton Initiative (CCI) aims to improve farmers' incomes from cotton by encouraging the adoption of better agronomic and post-harvest practices and by linking farmers to better markets. Additionally, the programme is working to improve marketing efficiency by building and strengthening smallholder cotton farmer business groups, providing business development services and facilitating access to finance. As a result, an agreement was made between Rabobank Foundation and Crane Bank,

  

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stipulating that the bank would finance CCIU's farmers and service providers. To this end Rabobank Foundation has granted Crane Bank a three years' loan of USD 500,000 and a grant of Euro 50,000. During the first cotton-cropping season (2013), only a few loans were disbursed, but intensive field trips were made and 1,200 farmers enlisted in the programme. As of mid-May 2014, Crane Bank had approved 465 loans for a total of UGX 431 million (USD 170,000).

Case U2: Enterprise Support and Community Development Trust (ENCOT) - *Making agricultural microfinance work*
ENCOT MFI was founded in 2006 as a developmental MFI with a strong agricultural orientation. It aspires to position itself as a preferred lender to the local farmer and, to this end; it has developed products and delivery channels that best respond to the farmers' needs for production, processing, trade/marketing, and farm-asset acquisition. ENCOT MFI uses both the individual and traditional peer-guarantee methodologies combined with other new innovations and practices. The financial product was tested and yielded outcomes that strongly encouraged ventures in agricultural lending. It currently serves over 5000 farmers with a portfolio of €2.1 million (averaging €420 per farmer) who grow such crops as maize, rice and beans. ENCOT collaborates in the field with informal farmer groups only.

Case U3: National Union of Coffee Agribusiness and Farm Enterprise (NUCAFÉ) - *Facilitation of access to finance*
NUCAFÉ is a national union of 170 coffee-growers' primary societies with a total membership of 170,000 coffee farmers. It has established 8 business hubs strategically located in the coffee growing area of the country. The hubs, usually on the premises of a hulling factory, consist of a small building with an office and storage space. The development partner Agriterra played a major role in facilitating the financial access of NUCAFÉ farmers in the Kabonera Coffee Farmers Association (KCFA) in the Masaka hub. It trained NUCAFÉ staff in financial management and guided them on how to develop a bankable business plan, a plan that was presented to Centenary Bank. This led to a fruitful finance relationship in which the bank acquired experience in coffee farm finance and gained confidence in its clients. Thus over the past three years Centenary Bank has enabled bank loans to grow from UGX 40 m. to 100 m. at gradually decreasing interest rates.

Uganda finance fairs
The first finance fair was organised in Uganda in 2011 to "support the development of smallholder agribusiness by supporting access to financial services and credit". The fair included an election of the most popular financial service provider among farmer groups and among individual farmers as well as a financial literacy game. Certificates of good performance and attendance were issued to all the participating FIs and farmer groups. The theme of the second finance fair in Mbale in 2012 was "promoting farmer finance deals", and the third finance fair in Lira was preceded by a one-day workshop on "innovations in agricultural finance in Uganda". The theme of the 2013 finance fairs was "linking farmers to wider agribusiness opportunities". At the finance fair in the Ruwenzori region in 2013 farmers could speed-dates with service providers.

2.4. Rwanda

Cases	Financial Institution	Producer Organisation
R1. Duterimbere IMF Ltd.	MFI	Primary cooperatives
R2. Uniclecam Ejo Heza	SACCO	Primary cooperatives
R3. . Amesezerano Community Bank Ltd.	MF Bank	Informal farmer groups
R4. Union des Clecam Wisigara	SACCO	Informal farmer groups

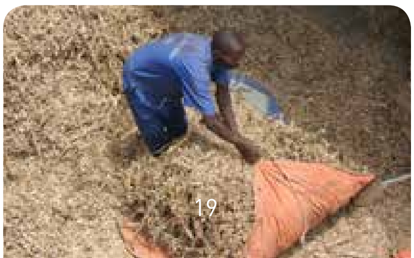
Case R1: Duterimbere IMF Ltd/Nyagatare Branch
Duterimbere IMF Ltd is a MFI founded in 2004 by the NGO Duterimbere ASBL in order to provide financial services to low-income entrepreneurs - particularly women - to improve their socio-economic conditions. In some cases Duterimbere IMF Ltd collaborates with NGOs and donor-funded projects to help farmers to improve their agriculture practices and the production, processing and marketing of their products. Currently, the IMF serves more than 62,000 clients with a portfolio of RWF 3,248 million, of which only 8.4% is invested in agriculture. The farmers' cooperatives that were financed by the Nyagatare branch of Duterimbere IMF Ltd are single-crop oriented, focussing on the maize value chain. Based on warehouse receipts, Duterimbere extends credit to these cooperatives at 60 % of the market value of the stocks to enable farmers to wait for a price increase on the open market or for buyers willing to pay better prices.

Case R2: UNICLECAM Ejo Heza – *Farmers' accessibility to credit through local micro-financing institutions*
Uniclecam Ejo Heza is a Cooperative/SACCO Union founded by ten Coopératives Locales d'Epargne et de Crédit Agricole Mutuel (CLECAM) and a women's Savings and Credit Cooperative (Ejo Heza). Since its founding, the Union now has 5 Clecam because of mergers and consolidations. Ejo Heza is a registered MFI operating in Rwanda's southern province with the aim of reducing poverty by mobilising savings and allocating credit to farmers. This MFI serves 45,952 clients with a total portfolio of RWF 1,256 million, of which 64% is invested in agriculture.

Case R3: Union des Clecam Wisigara - *Increasing the capacity of rural farmers through access to microcredits*
The Union des CLECAM Wisigara is a MFI whose members are largely crop and cattle farmers. Started in 2004, its mission is to promote the agriculture value chain and agribusiness and to increase the capacity of farmers through microcredits and other financial services. Uniclecam Wisigara is one of the main actors in the northwest of the country in terms of number of clients actively involved in agricultural production. In 2013 Uniclecam Wisigara introduced a new credit product for beekeepers in its area of operation to increase the welfare of its members. It operates with informal farmer groups.

Rwanda finance fairs
The first finance fair in Rwanda shared the same theme as the first fair in Uganda: "support the development of smallholder agribusiness by supporting access to financial services and credit". Both the first and second fairs organised an election for farmers to choose the most innovative and popular bank, the best financial product and the best exhibitor. The theme of the finance fairs in the Kayonza and Nyanza region was "agribusiness market linkages".

Photos by NpM, Platform for Inclusive Finance – Josien Sluijs



2.5. Mali

Cases	Financial Institution	Producer Organisation
M1. Biocarburant	PASECA OSK	Fondation Mali Biocarburant (FMB)
M2. SORO YIRIWASO	MFI	Cooperative COPAM
M3. myAgro - Mali	Social Enterprise	FMB

Case M1: Mali Biocarburant
The Foundation Mali Biocarburant (FMB) is a Malian farmers' association created in June 2010 by Mali Biocarburant Enterprise, the company that produces biodiesel from jatropha. Guided by the principles of the "triple bottom line" (people, planet, profit), Mali Biocarburant Enterprise created FMB to develop jatropha cultivation by smallholder farmers so as to diversify their activities, improve their livelihoods and protect the environment. Over the past three years a jatropha nut value chain has been developed in Mali for the extraction of oil and the production of biodiesel. The project described in this case involves a private Biocarburant enterprise, several farmer cooperatives, the (FMB) Foundation supporting the farmers and PASECA MFI financing the participating farmers. The financial services of PASECA OSKs were supported by ICCO Terrafina Microfinance. ICCO supported non-financial services.

Case M2: Soro Yiriwaso MFI and its partners' POs - *Increasing the productivity and production of smallholder farmers in Mali through access to finance*
Soro Yiriwaso is a Malian, rurally oriented MFI founded in 2000 that mainly finances agricultural activities. The principal objective of this MFI is to increase the productivity and production of farming activities in Mali and thus improve the economic situation of disadvantaged smallholder farmers, particularly women. To achieve its mission, this MFI has initiated various agricultural finance products to help farmers access credits for agricultural inputs. Soro Yiriwaso is currently serving over 59,000 farmers who grow and market millet, sorghum, maize, cotton (mostly grown by men), rice and peanuts (mostly grown by women). It carefully addresses the gender differentiation in agricultural practices by acknowledging the differences in needs and serving them appropriately.

Case M3: myAgro - *Promotion of agricultural activities through myAgro's mobile savings programme*
myAgro (n'gaSènè) is an award-winning social enterprise/non-profit in Mali that uses a mobile technology platform to provide a comprehensive set of services to farmers. It sells agricultural inputs (fertilizer and seed packages) on layaway to farmers via a mobile phone (SMS) platform and a network of local village vendors. myAgro's model increases farm income and helps farmers to move out of poverty. Currently, myAgro serves more than 3500 farmers and hopes to extend its services to 75000 farmers in West Africa (Mali and Senegal) by 2017.

Mali finance fairs
In Mali the first finance fair was organised in March 2014. This fair lasted for three days with a thematic conference every day. The first thematic fair focused on the experiences of financing agriculture in Mali, the second on innovative financial products in agriculture and the third on the risks related to agricultural finance and risk-management mechanisms. Besides the exhibitions, business-to-business sessions were organised between farmers and FIs. The farmers had to submit their project plan in advance so the FIs could prepare and evaluate them beforehand.

2.6. Types of financial institutions and features of finance provided

This study has revealed a great variety of microfinance instruments as well as a great diversity of FIs and finance arrangements. The cooperative unions are by nature two-tier institutions, and hence the logic of combining retail and wholesale lending. The PO or the retail lender is sometimes responsible for selecting farmers and final clients as well as assessing the financier's credit risks. In the cases studied, the financier invariably needed to screen and appraise the capacity of the PO or retail lender to perform its functions. Table 2.1 shows how these characteristics are represented in these cases.

Project	Type of financial institution	Retail or wholesale?	Farmer selection by FI?	PO assessed by FI?
Project	Type of financial institution	Retail or wholesale?	Farmer selection by FI?	PO assessed by FI?
E1. Lidet Credit Union	Union of MPC	WS-PO	No, by the PC	Yes
E2. Wasasa	MFI	Retail	Yes	No PO
E3. Buussa Gonofa	MFI	WS to RSF	Yes, through RSF	Part of the MFI
E4. Setit H.Union	Union of MPC	Both	Yes, by Setit	Primary MPC assessed by SHU
R1. Duterimbere IMF	MFI	Retail	Yes	Yes
R2.Uniclecam Ejo Heza	SACCO	Both	Yes in retail	Yes
R3. Amesezerano Community Bank Ltd.	MF Bank	Retail	Yes	Yes
R4. CLECAM Wisigara	SACCO	Both	Yes in retail	Yes
U1. CCIU	Commercial Bank	Retail	Yes,	Yes
U2. ENCOT MFI	MFI	Retail	Yes	Yes
U3. NUCAFÉ	Commercial Bank	Through PO	No	Yes
M1. Biocarburant	MFI	Retail	No	No
M2. Soro Yiriwaso	MFI	Retail	Yes	Yes
M3. myAgro - Mali	Social enterprise	Retail	-	-

Table 2.1 Type of financial institutions and finance arrangements

Finance instruments
The following instruments were used for smallholder finance in the 14 cases studied:

A. Solidarity group lending: The standard microfinance model is also used for farming households. Loans are repaid in weekly or monthly instalments, but the timing of disbursement and repayment may take the growing season into account. We noted that, since the large majority of clients are women, these loans are often used for off-farm activities. The bulk of the MFI's portfolios consist of this type of loan; in our sample, it was only used in a quarter of the cases.

B. **Crop-specific microfinance (mutual guarantee):** In most cases the FI developed a crop-specific arrangement for smallholder lending in collaboration with the PO. This means that all major parameters are adjusted to meet the credit need for this specific farming activity, like loan size, timing of disbursement and a bullet-type of repayment after harvest. The loan is sometimes disbursed in the form of seeds, fertilizer or pesticides to prevent its being spent for other purposes. The group solidarity for mutual guarantees is used as security, together with mandatory savings.
C. **Microfinance to individual farmers:** In the cooperative types of MFIs, like the Clecam in Rwanda or the primary savings and credit cooperatives in Ethiopia, the lending tradition is not based upon solidarity group lending. Loans are provided individually, even though one or two co-guarantors may be required. All of the clients in these cooperatives or farmers' associations are farmers. In some cases the PO and the FI are one and the same (for example Lidet Union in Ethiopia).
D. **Finance by chain actor (embedded):** While embedded finance for farmers is quite normal in modern value chains to enhance supply loyalty, in Africa it is still quite rare. The one case in Uganda is the Cotton Conservation Initiative with support from the luxury cotton- clothing brand Edun. The project may not be fully considered as embedded value chain finance because the Edun funding is part of their CSR campaign and not primarily part of their sourcing strategy.
E. **Warehouse receipts:** Warrantage is a microfinance product that helps farmers to sell their produce at a better price. Through warrantage, the MFI Duterimbere in Rwanda offers credit to the cooperatives to pay 60 % of the stocks to farmers at the current price while waiting for the market price to increase or buyers willing to pay more. The warrantage product allows farmers to meet their daily family needs and wait for the remaining 40% to be paid at better prices after the stocks are sold. The farmers' cooperatives and Duterimbere jointly manage the stock to guarantee the prepayment (on loan) offered to farmers until the whole stock has been sold. The cooperative is responsible for negotiating sales with the market parties and is also obliged to deposit the loan balance amounts in the farmers' accounts opened Ejo Heza Duterimbere MFI.
F. **Wholesale finance through the PO:** Smallholders can also be financed by using the PO as delivery channel. This happens not only in credit unions (like Setit in Ethiopia or Clecam Ejo Heza in Rwanda), but also the in the large Agriterra project with NUCAFÉ in Uganda, where Centenary Bank finances coffee farmers through the PO (the Masaka coffee hub). It is convenient for the lender because the PO can also perform tasks such as screening the farmer-borrowers. Wholesale finance is also applied to the post-harvest finance needed to pay the farmers in cash upon the delivery of their harvest to the PO. Just like in the case of Duterimbere above, POs sometimes store produce if prices drop immediately after the harvest when supplies are abundant. In those cases the PO would be unable to pay the farmers upon delivery unless provided with working capital finance to bridge the stocking period. While the primary beneficiary is the smallholder farmer, the primary borrower in this case is the PO. When the payment to the farmer is treated like an advance, the farmer can be seen as the secondary borrower. However, the debt is self-liquidating because the PO clears it against sale of the stock. Just like the warehouse receipt system, these are examples of two-tier lending for post-harvest finance.
G. **Financing PO activities (like processing):** In some cases of two-tier financing, the post- harvest component is used to for processing by the next actor in the product chain. An example is the finance for the coffee hubs in the NUCAFÉ case as working capital for coffee processing (storing, grading and drying), even though the coffee hulling is still a separate business.
H. **Mobile banking:** Though only one project in the sample uses mobile technology, it is highly relevant to smallholder microfinance because it is another 'game changer' in this field. myAgro in Mali allows farmers to save (by buying credit on their phone) and to use that credit for agricultural inputs (fertilizer and seed packages) through a network of local village vendors.

The sample projects studied were not always representative of the agricultural portfolios of the finance institutions concerned. For instance, while solidarity group lending was found in just a small number of our cases, it is the major instrument for MFIs operating in rural areas. Hence the sample of smallholder finance through or with POs is a specific niche in the larger picture of agricultural microfinance, as illustrated in Figure 1.2.

2.7. Types of Producer Organisations and their functions

As Table 2.2 shows, the POs described in the cases studied are diverse in both their forms of organisation and the functions they perform. Each country has its own tradition with respect to farmers' organisation. In Ethiopia there are combinations of credit and savings cooperatives and multi-purpose cooperatives that are united under the umbrella of a regional union. Similar structures can be found in Rwanda, where they are called Clecam and Coopers. In these cooperative modalities the financial services and other farm services are linked and operating under one union.

Project/FI	Type of Producer Organisations	Role of Producer Organisations
Ethiopia		
E1. Lidet Credit Union	Primary MPCs	Retail SACCO services and/or MPC services
E2. Wasasa	Coffee farmers' association and OCF Union	Farm extension, Fair Trade & organic certification, export
E3. Buussa Gonofa	Rural Service Facilities (RSFs established by MFI)	Credit retail and NFS: seed, transport, bulking, storage, quality control
E4. Setit H.Union	Primary MPCs	Primary of Union
Rwanda		
R1. Duterimbere	Primary cooperatives	Drying, storage, milling, warehouse receipts
R2. Clecam Ejo Heza	Primary cooperatives	Multiplying seeds, farm inputs, bulking, farm training, marketing
R3. Amesezerano Community Bank Ltd.	Informal farmer groups	Improve farming for selected crops like onion
R4. Wisigara	Informal farmer groups	Improve farming for selected crops like Irish potato
Uganda		
U1. CCIU	Informal farmer groups (PBG)	Store for bulking, screening farmers, marketing, linking to input suppliers & BDS, exposure meetings
U2. ENCOT MFI	Informal farmer groups	Facilitating finance and marketing/bulking.
U3. NUCAFÉ	Coffee farmers' associations	Bulking, storage, hulling & marketing, certification.
Mali		
M1. Biocarburant	FBM farmer assoc.	Promote jatropha, extension, input supply; seed, fertilizer, GAP, help in selling produce.
M2. Soro Yiriwaso	Cooperative COPAM	Input supply, coaching farmers, insurance, stores, marketing
M3. myAgro - Mali	FMB	Input supplies + farm coaching

Table 2.2 Roles of the Producer Organisations

In the Ugandan cases the producers' groups are informally organised or legalised as farmers' associations; they do not operate in a standard legal setting. The three cases in Mali have different modalities. Biocarburant Enterprise is an example of a private agribusiness promoting the establishment of a farmers' group for the production of jatropha. myAgro is also a private initiative, operating with individual farmers or existing farmers' groups. One feature of mobile technology is that it offers open access irrespective of location or organisation. The services provided by POs differ in their organisational form and may include financial services, as shown in Table 2.3.

Type of Producer Organisations	Role of Producer Organisations
Primary SACCO	Saving and credit and retail of union Loans
Primary MPCs	Retail SACCO services and/or MPC services
Informal farmers' groups	FS: Facilitating finance, credit retail, screening farmers NFS: Linkage to suppliers of seed & farm chemicals, transport, bulking, storage, quality control/grading, marketing, exposure meetings and marketing/bulking.
Primary cooperative	Drying, storage, milling, warrantage
Coffee farmers' association	Bulking, storage, hulling & marketing, certification, export
Cooperative	Input supply, coaching farmers, insurance, stores, marketing
Social enterprise	Input supplies + farm coaching

Table 2.3 Functions of Producer Organisations in relation to their type

Photo by ICCO Terrafina Microfinance

3. Methodologies: finance strategy and product development

3.1. Methodologies used to facilitate access and overcome constraints

In the cases where finance and farmers' organisations were separate institutions, access to finance for smallholders required more than 'getting to know one another'. The lack of access for smallholders is popularly attributed to the conservative risk perceptions of financiers. If the current sample of cases is anything to go by, that notion can be laid to rest. In the majority of cases the financier turned out to be the leading actor. However, prior to financing, a preparatory stage of scoping, crop selection, screening of producer organisation (PO), chain actor consultation and orchestrating collaboration agreements was often necessary. In the context of this study, this preparatory phase is labelled "*farm finance programming*". Both financiers and POs played a pro-active and highly constructive role at this stage. Considering the institutional arrangements and local context, we can distinguish three broad finance strategies. In section 3.3 we analyse the nature of farm finance programming and identify the drivers of the process. In section 3.4 we discuss the financiers' financial product development the features of their products. Finally, as a precursor to the next chapter, which is devoted to how agricultural risks have been assessed, mitigated and monitored, we will outline the element of risk management in the due diligence procedures of financiers.

3.2. Finance strategies observed – three modalities

Three finance modalities

In our sample of projects, there is a great diversity of financial institutions (FIs), finance instruments and their connection with POs. In Chapter 2 we did not elaborate on the rationale behind the various strategies for smallholder finance or the implications for the instruments and terms and conditions for financing. As Table 3.1 shows, the 14 cases and the various agri-finance instruments used (described in section 2.5 above) can be divided into in 3 broad categories:

Type 1: Direct finance to smallholders for farm inputs (pre-harvest)
Type 2: A two-tiered finance system that involves both pre-harvest finance to smallholders and post-harvest finance to the buyers of produce, mostly POs
Type 3: Agricultural Value Chain Finance (AVCF) that involves either type-1 or type-2 finance, together with arrangements with value chain actors.

Each of these types is described in more detail below with reference to the methodologies practiced in the cases concerned.

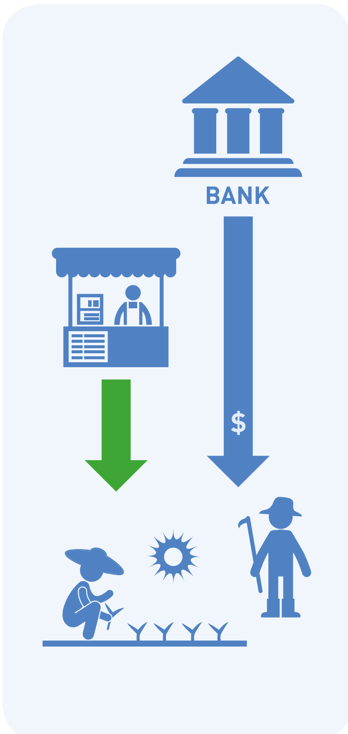
Photo by ICCO Terrafina Microfinance - Harm Haverkort

Agri-finance instrument	Type 1	Type 2	Type 3	#	%
Solidarity group lending	E2, E3, R1, R3, U2	R1, R2, M2	-	8	28%
Crop-specific MF					
(mutual guarantee)	E2, E3, R3, R4	-	E3	5	17%
Microfinance to individual farmers	U1, U2, R3, R4	E1, U2, R2	E4, M1	9	31%
Finance by chain actor (embedded)	-	-	(U1)	1	3%
Warehouse receipts	-	R1	-	1	3%
Wholesale finance Through PO	-	M2	E4, U3	3	10%
Financing PO activities (like processing)	-	E1	-	1	3%
Mobile banking	M3	-	-	1	3%
Frequency	14 (48%)	9 (31%)	6 (21%)	29	100%

Table 3.1 Finance methodology

Type 1

Pre-harvest finance to smallholders
Pre-harvest finance is provided for farm inputs (seed, fertilizer and pesticides), for farm services (e.g. ploughing, insemination) and for farm labour (e.g. when extra hands are required in a short harvesting period). This is done through standard group solidarity microfinance, but in the selected cases, more often with crop-specific microfinance products so that the group solidarity methodology is combined with a credit product tailored to the needs of that crop (timing, repayment method , etc.). For the crop- specific credit product, a bullet repayment is invariably used after harvest. For crops with a long harvesting period, two or three harvest instalments may be used (case E2). Sometimes the credit is disbursed in kind, i.e. in the form of certified seed and appropriate fertilizer or pesticides (case E3). This is done to protect the farmer from dishonest trading practices and also to prevent the loan being consumed. In the cooperative types of finance, like Credit Unions in Ethiopia (cases E1 and E4) and the Clecams in Rwanda (case R3 and R4), individual lending methods are traditionally used even though some farmers received training in the use of group solidarity lending (case E1). Individual loans can also be reserved for successful clients who, after a number of loan cycles in solidarity groups, are promoted to larger loans on an individual basis. Finally, the mobile banking approach of myAgro (case M3) falls into this type of smallholder finance because the credit built up after the previous harvest is used to buy farm inputs from accredited local suppliers.

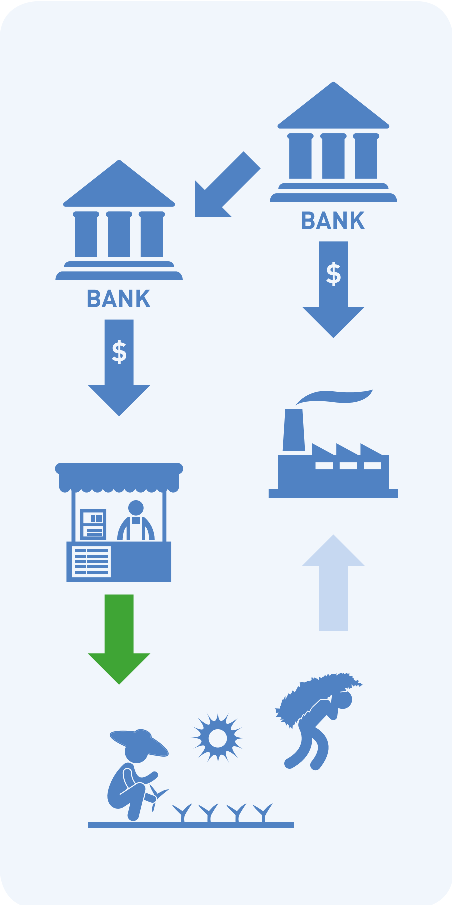


Type 2

Pre- and post-harvest finance

In the cases studied, post-harvest finance is complementary to the type 1 farm-input finance described above. Thus type 2 describes how the two are combined. Post-harvest finance can be provided for a variety of reasons: for crops with a concentrated harvesting period and, especially when freshness or shelf-life is limited, when abundant harvests lead to price dips Farmer cooperatives or farmer marketing organisations (FMOs) may create storage capacity for the farmers so as to postpone selling until prices have returned to 'normal' once supplies have levelled off. The warrantage system of Duterimbere (case R1) is a good example. In Ethiopia ICCO has long been supporting Cereal Banks of Teff farmers who constructed their own stores for this purpose. Type-2 is a two-tier finance system since the pre-harvest finance disbursed to the farmer is complemented by larger finance for the PO or for the off-taker/processor. The second modality of this type is the cases of the two-tier financial cooperatives like the unions in Ethiopia and Rwanda. Both are second-tier conglomerates of primary cooperatives. While the primary cooperatives finance the smallholders, they can be refinanced by the union. This finance does not need to be exclusively for their farm credit portfolio, but may also be used for investments in stores, transport or processing equipment. This complementary finance is quite attractive to a FI for a number of reasons:

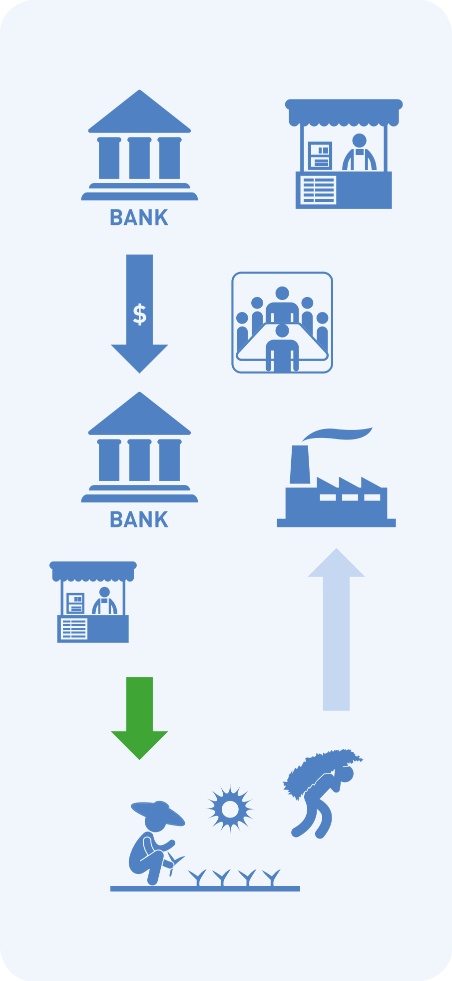
a. **Cash flow:** Microfinance institutions (MFIs) typically face a seasonal fluctuation in their portfolio outstanding to farmers since the 6-months loans are timed to the growing season. The dip in farming loans outstanding in the other 6 months may result in a yield deficit for that period if the opportunities to reinvest in other sectors are limited. Reinvestment in a large post-harvest loan to the off-taker safeguards a more stable loan portfolio (case R1). In the malt barley case (E3) the pre- and post-harvest cash flow shows that the cash flow surplus due to repayment of the pre-harvest loans coincides with the cash flow deficit of the processor when it buys the harvest.
b. **Social performance:** Post-harvest finance allows the buyer to pay the farmer in cash upon delivery of the crop. In terms of 'client satisfaction' this is probably one of the most prominent criteria for smallholder clients.
c. **Deal size:** The FI can disburse more in one large credit than all farm credits together. A larger deal implies relatively low transaction costs.
d. **Security:** Post-harvest credit can be made self-liquidating by tying loan repayment to the sale of the crop (i.e. asset-based lending – case R1). In the value chain finance approach, the financier could reinforce security by creating a tripartite arrangement with asset holder (e.g. the PO) and the buyer (trader, processor, exporter).



It should be noted that, despite the fact that some MFIs provide post-harvest finance, the financier is in fact entering into the sphere of Small and Medium sized Enterprises (SME) finance. This requires expertise and finance technology that is usually not present in MFIs.

Type 3

Agricultural Value Chain Finance (AVCF)
Agricultural Value Chain Finance differs from the previous two finance modalities in that the financier actively participates in arrangements with chain actors (buyers, processors, input suppliers) and other stakeholders (facilitators, service providers, government agencies, certifiers). The active involvement of the financier results from a more comprehensive understanding of risk management in the value chain. The Rabobank has been one of the frontrunners in this approach in global agri-food markets. In chapter 4 the risk management potential of the AVCF approach is extensively analysed, and we see that the same perspective can also reinforce the other modalities of smallholder finance. The cases provide interesting examples of the many shapes the AVCF approach can take. The malt-barley project (case E3) is a convincing example of the fact that smallholders can produce for such a well-known international brand as Heineken. Not only do smallholders open a new and highly sustainable market for barley production but, by doing so, they also contribute to import substitution and savings of forex. Another interesting case in Ethiopia is the Setit Humera Union of sesame farmers (case E4). With support from Cordaid and Agriterra, the SHU has been able to acquire finance for the production and export of sesame. It provides its services to smallholders through 19 primary cooperatives with a combined membership of 12,000 farmers. The finance was provided by two banks; the Commercial Bank of Ethiopia (CBE) and the Cooperative Bank (CB). Completely different, but also AVCF, is the case of Biocarburant in Mali (case M1).



Here we see a chain actor, the Mali Biocarburant Enterprise, taking the initiative to promote jatropha cultivation and mobilise farmers to form a PO for jatropha crop growers. Subsequently, a local MFI, PASECA, was interested in providing microfinance to the farmers. The NUCAFÉ case in Uganda (case U3) is another example of AVCF. This is a case of a very large, nationwide Coffee Farmers' Union (with 170,000 members), where Agriterra was able to facilitate finance from a local commercial bank for the local PO (Kabonera Coffee Farmers' Association) in the Masaka area.

Photo by ICCO Terrafina Microfinance - Harm Haverkort

3.3. Farm finance programming

Nature of the programmes

As previously stated, most cases involved a preparatory stage in which the leading partner - whether a PO, financier or chain actor – defines the focus and invites potential collaborators around the table. What follows is a process of investigation and programme development that involves steps like scoping, crop selection, PO screening, chain actor consultation and the orchestration of collaboration agreements. While every case is different, the collaborating parties in our sample consisted of at least the PO and a financier. Additional stakeholders were engaged depending on the needs and opportunities. A farm finance programme is defined by the answers given to following questions (not necessarily in this order) during the preparatory stage:

a. Which crop is most promising and where can it be produced?
b. Which farmer groups in the PO are selected to pilot it? Which groups or sub-POs are participating?
c. Which financier is willing to be engaged? (In cases where the financier is not the lead actor)?
d. How can the necessary extension and farm support services be safeguarded for the participating farmers?
e. What farm inputs are required and how/where can they reliably be obtained?
f. Where / how is the farm produce bulked / stored / processed and sold?
g. Depending upon the answers to a-f, is the crop sufficiently attractive to farmers?
h. Does the proposition pass the due diligence check of the financier?
i. What are the credit needs and the requirements for the financial product?

For AVCF projects *chain mapping* [2] also needs to be carried to determine:

j. Who are the chain actors to be considered?
k. What is their market position?
l. What type of business arrangements might they be interested in?

Negotiations must then be held to agree on terms and conditions for trading and risk management. In most of our cases, this took the form of a Memorandum of Understanding or trading contracts between two or more parties.

Scoping & selection

As Figure 3.2 illustrates, in the process of farm finance programming a stage of design and development precedes actual disbursements. During the programme design, answers to the above set of questions need to be found. The initiating organisation in the project usually first goes through a scoping exercise to identify the potential crops to be considered, the pilot area for the project, the actors to be consulted and possibly the facilitators or service providers to be engaged. Once the focus of the project has been determined, a finance needs assessment is done at the farm level; this often results in a credit budget per farm related to the acreage cultivated for the crop concerned. If the PO is the lead actor, a business plan for the whole project may be drawn up to present to a financier. This was the modality practiced by Agriterra in Ethiopia (case E4) and Uganda (case U3). When a FI is the leading actor, the result of the scoping & selection exercise defines the outline of a finance strategy, and the internal terms of reference can be formulated for whoever will be assigned to develop a financial product for this market segment.

Orchestration

In the next phase, project development, the lead actor needs to meet and talk to all parties that should be engaged. In brief, this process is referred to as "*orchestration*". The term came to be used in value chain development programmes because the effort of getting independent players in the value chain around the table is not unlike the work of a conductor making the orchestra play harmoniously together. In this study the term is used for all efforts to engage different stakeholders in an agricultural product chain. Even in simple input finance, for instance, such

[2] Reference is made to a handbook on chain mapping:
http://valuechains4poor.pbworks.com/w/page/12518345/Mapping%20the%20Value%20Chain

Preparatory phase:

Design ➔ Development ➔ Disbursement

Design phase:

Scoping & selection
- Crop / VC
- Area / branch
- POs
- VC actors
- Facilitator

Finance strategy

Development phase:

- Joint vision, trust
- Orchestration
- VCD / CB PO
- Risk mitigation
- **Financial product**

Pre-disbursement:

- Due diligence on the product
- Financial risk management
- MoU, contracts

Disbursement:

- Standard eligibility criteria
- Standard loan conditions

Figure 3.2 Different stages

efforts may be required to facilitate the availability of supplies on time or to protect farmers against scrupulous traders. In most programmes it involves arrangements with a wide array of stakeholders, such as input suppliers, farm-service providers (including advisors and extension workers), bulking and grading places, storage facilities, processors and the final buyers in the market. Figure 3.3 below shows the core of this orchestration process: getting parties around the table for mutually agreed approaches and business arrangements.

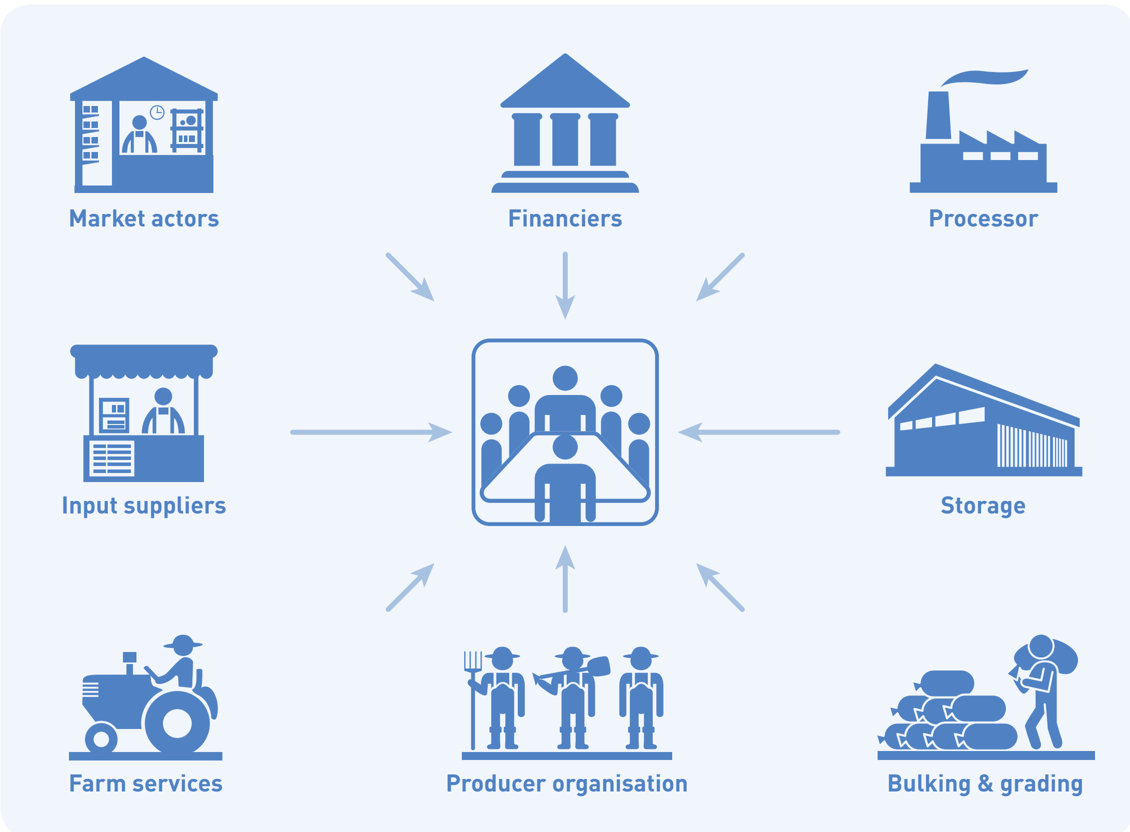


Figure 3.3 Stakeholders in programme design and implementation

Who is driving the process of programme design?

Table 3.4 below explains which party was driving the process of programme design and orchestration. This is important to know because it greatly determines the nature of the process. If the financier is the lead actor, the question is primarily which PO could be selected for the programme. This goes together with PO screening, crop selection and area selection. However, if the PO is leading, all those parameters are 'given', and the search is primarily for a financier willing to meet the member's credit needs. In the case of chain actors (agribusinesses), both the financier and the PO selection need to be addressed. Because these study cases were proposed by NpM, Platform for Inclusive Finance members (mostly providing grant-based support), it is not surprising that facilitators played a role in most programmes. They could be the local staff of the NpM member concerned, a specially trained staff member of the financier or a local consultant. While the literature on VCD also refers to facilitator- driven programmes, this is not a preferred mode of presentation in this study since it can easily fuel the (mis)perception of a donor-driven event. In all cases studied, the leading local organisations were sufficiently in the driver's seat despite the fact that external facilitators played a vital role.

Table 3.4 is relevant to the question of how access to finance is created. Three observations:
- In 2/3 of all cases the initiative came from the financier
- In 3/4 of all cases the facilitator / investor played a major role in the sense that the project would probably not have materialised without their assistance.
- Producer-organisation-driven projects required the facilitator/investor to play a prominent role, whereas two of the actor-driven projects required no external facilitation.

In other words, in the majority of cases financiers were positively interested in engaging in smallholder finance. But they indicated that the investment in programme design and product development would not have been possible without the support of the NpM members involved (examples are E2 and E3).

	No / minor external facilitation	Supporting role facilitator	Prominent role facilitator / investor	#	5
Financier driven	M2	E1, R1, R2, R3, R4, U2	E2, E3,	9	64 %
Producer driven			E4, U3	2	14 %
Chain actor driven	M1, M3		(U1)	3	21 %
Frequency	3 (21 %)	6 (43 %)	5 (36 %)	14	100 %

Table 3.4 Stakeholder orchestration

Photo by Marloes van den Berg

A. Financier-driven orchestration

When the initiative is taken by a MFI the three preliminary questions that need to be answered relate to the choice of crop, area and PO. Subsequently, the implications of financing this target group need to be investigated, and an appropriate credit product needs to be developed. The Wasasa coffee project in Ethiopia is good example.

In August 2013, Wasasa staff members participated in the two-day Agricultural Microfinance Risk Management training programme provided by Cordaid staff. Participants made an inventory of all risks related to the production of coffee and the provision of loans to coffee farmers. To start, a risk register was developed. After the training participants and the Cordaid staff member continued working on the risk register. In May 2014, Wasasa and a Cordaid consultant organised a multi-stakeholder meeting with the Woreda Agricultural Department, the Cooperation Promotion Agency and the Sedenten Chora Cooperative Union; some private coffee traders and other stakeholders were met individually: TechnoServe, OCFCU and ACDI/VOCA. A Memorandum of Understanding was signed with the aim to aligning the efforts to improve the production, quality and marketing of Chora coffee. During a two-day visit in June 2014, the risk register and action plans were finalised.[3]

The strength of financier-driven orchestration is that all considerations with respect to viability and risk management are considered immediately. Access to finance has considerably better chances of success when the financier is closely involved in programme design right from the start.

B. Producer-driven orchestration

Surprisingly, only 2 out of 14 cases were clearly driven by POs, and in both cases an external facilitator played a prominent role.[4] Agriterra assisted the Setit Humera farmers' cooperative for sesame in mobilising credit from two local commercial banks by producing a solid and bankable business plan. In Uganda Agriterra supported NUCAFÉ in a similar exercise for Centenary Bank. In a way an "Agriterra approach" can be detected in these two cases in which a business-planning training exercise helped to secure commercial finance. The strength of this approach is that both POs already have a large outreach to smallholder farmers (12,000 for Setit and 170,000 for NUCAFÉ). So a limited intervention created a relatively big impact with substantial scope for scaling up and replicating in other areas. Moreover, POs already have a vast network of agricultural professionals in the sector that can quickly be mobilised in a specific project where the 'orchestration' of various actors and stakeholders is needed.

C. Chain-actor-driven orchestration

Both the Biocarburant case (M1) and myAgro (M3) in Mali are private business initiatives in the agricultural sector, and both needed minimal external support or facilitation to realise their project. The large CCIU project is another example, be it that the international chain actor – Edun – is not primarily doing it for commercial sourcing purposes but rather as an SCR activity. The strength of chain-actor-driven initiatives is the prospect of sustainability in a commercial environment, independent of (continued) external support.

[3] Risk Register for Coffee Improvement Loan – Wasasa MFI Ethiopia - Teklemariam Awoke (Wasasa) Mosisa Soboka (Wasasa), Resi Janssen (Cordaid) - June 2014.
[4] The fact that NpM, Platform for Inclusive Finance members selected the cases may partly explain this low number.

3.4. Financial product design and financial services

Parameters of credit product design
In all cases specific credit products were developed for the crop and the farmers concerned. This is invariably done by staff of the FI involved and based upon confidence in the programme developed in the design phase. Figure 3.5 shows the main parameters to be determined for a new credit product. In all cases (except M3) crop-specific credit products have been developed in which the timing of disbursement and repayment, eligibility criteria and security arrangements were tailored to the specifics of the farm finance programme.

Main aspects of credit product design

- Timing of client screening, disbursement and repayment
- Debt service method: regular instalments, bullet repayment, harvest instalments
- Interest rate (APR) and calculation method: flat or reducing balance
- Loan size (amount/ha, minimum and maximum)
- Client appraisal criteria / procedure
- Eligibility criteria
- Security arrangements, guarantors, mandatory savings, collateral
- Loan conditions

Figure 3.5 Main aspects of credit product design

Due diligence
Credit appraisal and due diligence are not done on the basis of individual smallholder clients. In microfinance, eligibility criteria are defined and individual clients (farmers) are then screened against those criteria. A systematic due diligence is, however, done during the preparatory phase of programme design and product development. In order to assess the feasibility of credit delivery to this specific group of smallholders, the financier needs to consider the following topics as part of its due diligence:

- The crop – What are its characteristics and what specific risks are related to it? What quality standards apply, how are they measured, how is grading done and how can farmers be certified?
- The farming system – How is farm production done and what risks are related to it? What are the factors influencing production volumes and what is done to avoid crop failure?
- The farmers' organisation – What role does the PO play in order to help farmers succeed in their production plans and how well is the PO equipped to perform these roles? When the PO also performs tasks in the credit cycle (e.g. screening farmers, assessing land cultivated etc.), can it be relied upon?
- The market – How is produce marketed? What is the nature of the market (spot market, local traders, corporate buyers, processors, etc.)? Is the market stratified in terms of quality produced? Which markets are accessible to the farmers, also in terms of storage and transport facilities available? What risks are related to the market (contract compliance, price volatility, etc.)?
- The business case – What are the gross margins for farmers and what does the monthly/ seasonal cash flow look like? Do they allow debt servicing? What are the margins for price volatility? Are farmers paid in time?
- The financial service – What are the finance risks related to this programme? Do standard microfinance procedures suffice or should more security arrangements be formulated?

These six aspects are the core of the due diligence process that needs to be done as part of the project design phase.

Observed features

Table 3.6 lists some of the features of these credit products. It is interesting to note that, in every respect, the repayment of these loans is tied to the crop financed. This is evident from the design of the product, timing of disbursement, loan period (to match the growing season) and repayment method (bullet loan; one repayment after harvest).

Project	Crop-pecific credit	Type of finance	Instalment or bullet	Crop as security?	Other securities?	Repayment crop-linked
E1. Lidet Credit Union	Yes	Input, Output, Equipment	Bullet	No	No	Not explicit
E2. Wasasa	Yes	Input	3 h.i. [5]	No	Group guarantee	Yes
E3. Buussa Gonofa	Yes	Input	Bullet	No	Group guarantee	Yes
E4. Setit H.Union	Yes	Input, Output, Export	Bullet	Yes	Guarantees Agriterra & government	Yes
R1. Duterimbere IMF,	Yes	Input, Output (Warrantage)	Both	Yes	Group guarantee	Yes
R2. Clecam Ejo Heza	Yes	Input, Output	Both	No	Land, house	Yes
R3. Amesezerano Community Bank Ltd.	Yes	Input	All	No	Yes	Yes
R4. CLECAM Wisigara	Yes	Input	Bullet	No	Joint	Yes
U1. CCIU	Yes	Input	Bullet	Yes	Yes	Yes
U2. ENCOT MFI	Yes	Input, Equipm.	Bullet	No	1 guarantor	Yes
U3. NUCAFÉ	Yes	Input	1 or 2 h.i.	Yes	Yes	Yes
M1. Biocarburant	Yes	Input	Bullet?	Yes	No	Yes
M2. Soro Yiriwaso	Yes	Input	Bullet	Yes	PO guarantee	Yes
M3. myAgro - Mali	No	Phone credit farm inputs	_	_	_	_

Table 3.6 Features of smallholder finance products

The data in Table 3.6 lead to the conclusion that, in every respect, the credit product was tailored to the characteristics of the crop. In this sense the financial services in most cases "violate" the good practice standards for agricultural microfinance as defined by the Consultative Group to Assist the Poor (CGAP), stating that repayment should not be linked to the farm activity financed. In Chapter 5 we examine this discrepancy and its implications for 'good practice' standards in smallholder finance.

[5] h.i. = harvest instalment; This system is used for crops with a harvest period that spreads over a longer period, like coffee.

3.5. Mapping agricultural risks

Known territory?
Modern instruments for managing agricultural risks – commodity exchanges, option and futures markets, securitisation, crop insurance and tradable warehouse receipts – are still being developed in Africa and inaccessible to much of the smallholder community. Much can be achieved, however, by exploitation all opportunities in the value chain for risk- mitigation measures in the areas of farming, Good Agricultural Practices (GAPs), farmers' organisations, market arrangements and viability enhancement. Risk management requires the orchestration of stakeholders in the chain in which the PO and the financier play pivotal roles.

Investigating pragmatic approaches on risk management
In every case, the stakeholders in the project - POs, FIs and TA providers – were asked three questions:

A. How did you assess the agricultural risks, and what were your findings?
B. What did you do to mitigate these risks (possibly in collaboration with other chain actors and stakeholders)?
C. How do you monitor risks after disbursing the finance?
   Based upon the answers, a risk catalogue was created for each case. In order to systematically approach this analysis, we distinguished the following 6 types of risks:
   1. Risks related to the specific crop/product financed
   2. Risks related to the farming process / farming system for this product
   3. Risks related to the strength (or weakness) of farmers' organisations in general and the PO in particular
   4. Risks related to the market for this product
   5. Risks related to the viability of this product for farmers, the PO and the financier
   6. Financial risks, e.g. the risks of default

This analytical framework was applied in all cases. Agricultural risks are diverse and so dependent on crop, farming system and market structure that some structure is needed to describe the risks systematically. The six topics above were aligned with the due diligence framework applied. Thus for a financier, there was a logical sequence from due diligence – which includes risk assessment – to the farm finance programme – which includes a host of risk-mitigating measures by the stakeholders concerned. In this stage the financier can play a constructive role by suggesting risk-mitigating measures to the PO and or chain actors.

Risk mapping
As described in section 1.4 risk mapping was done for each case to investigate how the various stakeholders managed agricultural risks in their projects. All of the interviewed stakeholders (farmers, POs and financiers) were asked how they assessed the risk for their projects, what risk-mitigating measures had been taken and how these risks were monitored. This was done for the 6 types of risks mentioned above. We were thus able to collect information in each of the 18 cells of the risk matrix shown in Table 3.7

Risk drivers in the field of:	Risk assessment	Supporting role facilitator	Prominent role facilitator / investor
1. Farm product			
2. Farm production			
3. Farmer organisation			
4. Market			
5. Business case/viability			
6. Finance			

Table 3.7: Risk mapping matrix

These six aspects of agricultural risks, tally with the major topics for due diligence described in figure 3.7. They could be applied to all cases, despite their differences. In the next chapter, the findings for these six dimensions of risks are described in separate sections.

Risk management as a common agenda
The cases showed that it proved possible to engage different stakeholders in an agenda on risk management. Crop failure or agricultural stagnation is in nobody's interest.
Hence it proved possible to come to operational agreements with chain actors (input suppliers, buyers, processors) and farm service providers (like extension agencies) to design a plan of action to mitigate agricultural risks and to translate this plan into operational agreements (MoU or contracts). In Chapter 4 we summarise the actual risk-management practices observed in the cases studied.

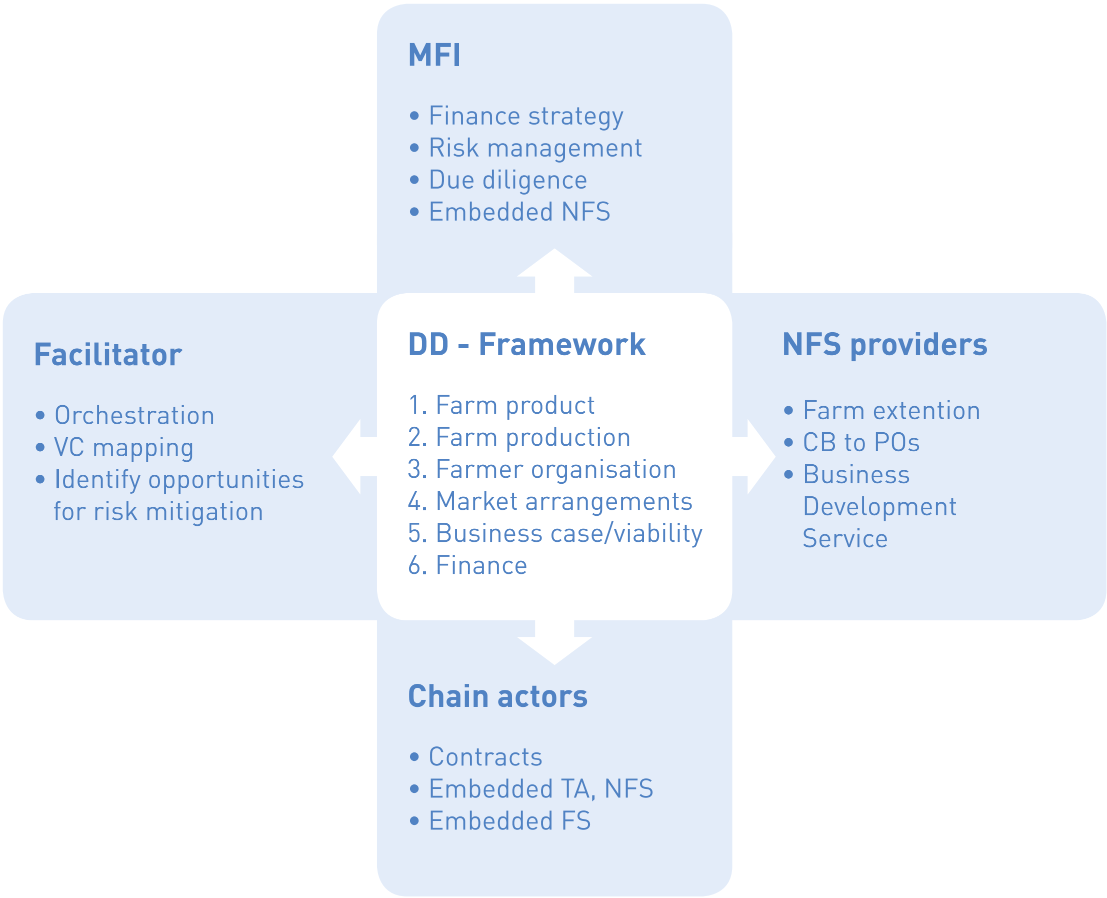


Figure 3.8 Risk management as a common agenda

4. Managing agricultural risks

Below is an overview of how stakeholders in the 14 cases (producer organisations (POs), financiers, chain actors and facilitators) collaborated in order to manage the agricultural risks in the farm finance programmes. In the following sections, risks are grouped according to the six aspects of due diligence discussed in Chapter 3: risks related to the specific crop and how it is cultivated, risks related to farmers' organisations and marketing and risks related to viability and finance. We describe the main topics and dilemmas of each as well as how risks are mitigated through the collaboration of stakeholders. Details of identified risks and related risk mitigation measures are given in tables with references to the case(s) in which they were applied. Part 3 contains the full risk mitigation catalogue.

4.1. Product/crop related risks

Capacity to meet market quality standards
In most of the cases analysed, the crop-specific programmes were set up to benefit farmers not only by providing access to finance for expanded production. Often the programme was accompanied by efforts of the producer organisations (POs) to come to market arrangements with one or more buyers or processors who offer better remuneration compared to the prices offered by local buyers in spot markets. The potential premium can only be realised, however, when the PO - and its member farmers – is able to meet the product specifications of the buyer, which may be specific to the variety of seeds used, the way it is produced (like organic products, fair trade), quality parameters for the produce delivered (freshness, colour, humidity, etc.), the separation of different grades of quality and other criteria such as the absence of pollution (sand, stones, etc.). Meeting these standards requires farmers to adjust their cultivation practices, post-harvest handling and the quality screening of their produce. Not only must they be aware of these standards, but farmers need to know how to meet them and how to grade their own produce in accordance with these standards. When the PO does the grading, tensions can easily arise if the produce of a member-farmer is downgraded, thus fetching lower prices. Because farmers are all familiar with examples of untrustworthy traders (cheating with weighing scales, etc.), they are likewise alert to similar treatment by their own PO. In other words, not only is it necessary to produce the quality, but also to set up a transparent system of grading that farmers understand. The feedback to farmers should be such that it helps them to upgrade their produce in the next growing season. And price premiums for better quality must be sufficient for the farmer to make the investments (time, equipment) to meet these standards.

In order to assess the risks related to a specific agricultural product or crop, it is necessary for the stakeholders (credit officers, facilitators and PO staff) to be familiar with its features and to be alert to the types of potential risks. We made an inventory of this aspect for all cases, and our observations are summarised in Table 4.1 below.

Product characteristics related to five essential feature of the crop:

A. The **quality of farm products**, which depends upon the seed or planting materials used, the care of the farmer in grading according to quality and the type of processing that must be done on the farm in order to retain quality. Risk mitigation by the chain actors focuses on ensuring that the right farm inputs are available and used, that the farmer is aware of the quality grades and the way of distinguishing them and that there is an incentive for farmers to invest time and money in quality management through price premiums on higher grades.
B. **Product cultivation features**, such as vulnerability to diseases, drought resistance or the needs for additional fertilizer. Depending upon the crop requirements, farm extension services need to be arranged to ensure that minimum conditions for the farming system are met and Good Agricultural Practices (GAPs) observed.

C. **Post-harvest characteristics**, such as the sustainability of the product's shelf life, the crop's vulnerability to rapid loss of quality. The risk of high post-harvest losses when shelf life is exceeded is mitigated either by rapid marketing arrangements or by avoiding the most vulnerable crops in the programme.
D. **Product storage characteristics and requirements**. A crop like teff in Ethiopia can be stored for years, while other cereals have more stringent storage requirements to prevent quality loss, rot, fungus, animal damage, etc. Hence, measures to mitigate losses due to inadequate storage need to be tailored to the crop concerned.
E. **Product processing requirements**. While some crops can be sold as harvested (like vegetables), others need some form of processing, either on the farm (solar drying of maize) or by specialised processing businesses (like coffee hulling).

Each of these aspects has been a topic of active concern in the cases described. The types of risk-mitigating measures and the way they were organised may provide useful hints for practitioners in agri-finance. Table 4.1 lists our actual observations with reference to the case(s) concerned.

Photo by Bart Debruyne

Due diligence aspects	Risk assessment (pre-loan)	Risk mitigation (pre- & post-loan)	Case
A. Quality of farm products			
Seed / planting material	Lack of quality seed	Linking to seed supplier	E1
Farmer quality awareness	Poor quality and contamination	Agri-extension officer	E1
Quality of farm product	Poor quality produced, resulting in low prices	Agronomist and MFI staff to train on GAP	U2
Grading by farmer	Farmers mix different varieties or quality grades	Education on post-harvest handling. Competitive price setting as incentive for high quality, high margin between low and high quality	E3, U2, U3 E3
		Coaching by farmer group	E3
		Introduction of quality grading tools for farmers (moisture metre, weighing scales).	U3
Drying at farm level	Insufficiently dried coffee	Drying sheets supplied by PO	U3
Quality management of POs		Support quality improvements for unions and primary cooperatives	E4
B. Product cultivation characteristics			
Sensitivity to diseases	Risk of crop failure	Introduce better varieties	E2, E3
		Better use of farm chemicals	E2, E3
		Seed material prescribed by buyer/ processor	E4
C. Post-harvest characteristics			
Harvesting (timing, process)	Sensitivity of skilled harvesting on time	Input loans to pay for farm labour	E4
	Post-harvest losses	Training on post-harvest management and treatment	E4
D. Product Storage / characteristics			
Perishability, shelf life	Need to store so as to avoid selling at dump prices immediately after harvest when supply is abundant	Teff is preferred because it can be stored for long periods	E1
	Maize is perishable if not well dried and well stored	Advice to sell on spot market in such cases or to World Food Programme	R1
E. Product processing requirements			
Suitability for existing processing capacity in the country	Supplying barley that does not meet the buyer specification	Introduction of new barley seed materials meeting the requirements of the malt factory	E3

Table 4.1 Farm product related risks

4.2. Farm production related risks

The farmer's perspective
Crop failure can have different causes, which farmers know all too well. Their risk management consist of coping strategies and even survival strategies to deal with the adversities of weather, plant diseases, declining yields and market uncertainties. While the farmer's natural response to these risks is crop diversification, efforts to increase yield and farm income often imply a degree of crop specialisation and investment in better quality produce. As described in the case studies, this is achieved through a form of farmers' organisations – POs – that often act as intermediaries for bulking and bulk selling. Farmers need to permanently rebalance the trade-off between income growth through commercialisation and family food security through subsistence coping strategies. Traditional farmers may turn a deaf ear to advocates of commercialisation when the management of risks at the farm level are not addressed.

The PO's perspective
Bulk selling opens opportunities to exploit the expertise, human resources and investment capacity of larger commercial buyers in an attempt to safeguard a steady source of supply at standard quality. POs can only benefit from these bulk sales when they are able to meet their supply agreements in terms of quality and volume targets. The risks related to production volumes were managed in our cases by a wide variety of risk-mitigating measures ranging from the full array of agronomic advice, extension services, investments in water supply / irrigation, better use of farm inputs and many others. By their nature these interventions are tailor-made and specific to the crop, the location and the market concerned.

The financier's perspective
The programmes described in the cases studied are all geared towards increasing smallholder incomes though the stable and expanded production of specific crops. For the financier, the risk management and even financial security arrangements depend upon the PO's capacity to meet the targets of the farm finance programme. When the financier uses self- liquidating *lending arrangements* [6] , the repayment of those loans may depend upon the volume of farm produce offered to the off-taker who had guaranteed to recoup the financier's debt service obligations from the payment to the farmer. Another example of this risk is "side-selling", when farmers ignore delivery contracts related to input finance by selling to others. This breaks down the risk-mitigating measures taken by the off-taker and financier of farm input credit. This can only be resolved when the loyalty of farmers to their PO is strengthened through effective services and on-time payment for the crop. *This shows that risk mitigation is a chain of interventions that need to go together to be effective*.

In general the risk-management interventions in this group are related to:

A. Farm production capacity (quantity)
B. Availability and use of farm inputs
C. The reliability of production or lack of predictability
D. The application of Good Agricultural Practices (GAPs)
E. The farming systems and the need for improvement

We observed a very broad range of risk-mitigation measures for all of these five categories, as shown in Table 4.2 below. A wide range of stakeholders is drawn into the process, which involves buyers, input supplies, extension agencies, service providers, government agencies and research institutions.

[6] A type of short-term credit that is repaid with money generated by the assets it is used to purchase. The repayment schedule and maturity of a self-liquidating loan are designed to coincide with the timing of the assets' income generation, which for agricultural loans is the harvesting period and subsequent sale of produce.

Farm production risks & risk-mitigation measures	Case
A. Farm production capacity (quantity)	
Chance of poor harvest due to weather extremes	
Crop diversification for farmers, advice by agronomist	E1, U1
Diversifying cooperatives (crop specific)	E1
Crop insurance (but premiums are very expensive for farmers, almost prohibitive)	U2
Historical records indicate the extent of variation to be expected	U3
Digging water wells for irrigation	M2, M1
Crop insurance by Planet guarantee proves good mechanism to secure agricultural activities	M2
Insurance on farm inputs reimbursed all expenses for farm inputs	R2
Cyclical reduced harvest	
Link to research institute	E2
Offer appropriate savings product	E2
Farmer education	E2, U1, U2
Crop diseases - Crop failure	
Introduce better varieties	E2, U1, U2
Better use of farm chemicals	E2, U1, U2
Traditional treatment (using ashes)	U3
Sufficient diversification at farm level	U3
Poor farming techniques- Declining yield	
Link to farm extension, composting and seedling preparation	E2
MoU with government wildlife department to prevent animal attacks	E3
Import of barley to supplement shortage of local production	E3
Fencing to prevent theft at coffee farm	U3
B. Availability and use of farm inputs	
Lack of appropriate seeds, suppliers too far, poor/unreliable quality, volatile pricing	
Agreement with seed supplier Equator for door-to-door distribution of seed to farmers and POs	U1
Victoria seed Ltd agreed to establish a seed research and multiplication centre in the region	U1
Cooperatives are producing seeds for member farmers	R2
Looking for seed providers that can supply seeds suited to the soil	M1
MoU with seed suppliers	E3, U2
Farmers are given a list of approved input suppliers	U2
Farmers to follow advice by field staff	U3
Seed insurance	R2
Quality of inputs - Fake and non-effective farm chemicals - Insufficient use of available seed and farm chemicals	
Training on integrated pest management by agronomist	U1, U2
Package of certified seed, pesticides, fertilizer and advice for farmers through mobile phone credit	M3
Linking farmers to input suppliers	U1, M2
Training and sensitisation of farmers	M1
Bring supplies close to location of cooperatives	M1
Link up with private seed suppliers	M1
Lack of access and price volatility of farm inputs & farm services	
Stick to approved input suppliers	U3
Cooperative bulk buying of fertilizer and distribution to farmers	R2

Table 4.2 Farm production related risks and risk-mitigation measures

Farm production risks & risk-mitigation measures	Case
Advocacy of government subsidies fertilizer supply to farmers	M2
Linking farmers to SPs for ox ploughing, spraying, etc.	U1
Linking to government and private sector extension services	U2
MFI facilitating government extension workers to come by offering transport.	U2
PO voucher system for fertilizer purchase by member farmers (but only 1% cheaper than market)	R4
C. Reliability of production	
Farmer behaviour - Reselling of seed provided on credit by farmer	
Education of farmers by PO and supervision	E3
Farmers switch from sesame to sorghum as an alternative crop due to crop failure	E4
D. Good Agricultural Practices (GAPs)	
Advice on Good Agricultural Practices (GAPs) - Lack of scientific knowledge of crop and area-specific GAP	
Collaboration with Kabarole Research and Resource Centre for Western Uganda	U2
Government programme to produce hybrid seeds adaptable to the regional conditions	R1
MoU with government agri-officers	E3, U2
Lack of good agronomical advice - Low willingness and uptake of fertilizer - Low yield per hectare	
Create awareness; training, coaching	U1, U2
Sensitising farmer to GAP	U1, U2, M2
Educating farmers on GAP and inspection of farms by MFI staff	U2
Agronomist of cooperatives coaches farmers	R2
Training farmers in modern GAP	M2
Tractor hire service	M2
MFI hires an agent to guide the farmers in GAP	M2
FMB to recruit agronomist	M1
Agronomist to assist farmers to modernise	M1
E. Farming systems & need for improvement	
Farmers reluctant to adopt more profitable crops	
Continuous sensitisation of farmers to grow jatropha	M1
Farmers to be given a stronger voice in crop selection by PO / coop.	M1
Diversify farming system to include food crops	U1
Lack of farm investment	
Assistance in preparing business plans (by TechnoServe)	U1
MFI is exploring drip irrigation for smallholder farmers	U2
Hiring the services of a private company for irrigation	R1, R2
Government programme for controlled drainage allows for irrigated rice cultivation	R2
Leasing to acquire tractors	R1
F. Post harvest - role PO/aggregator	
Poor drying and grading - unreliable traders - lack of storage	
Post-harvest handling education for farmers	E3, M1
Farmers' store at schools	E3
Farmers sensitized to sell to coffee hub (PO) only	U3
Use of manual maize sheller (locally made)	R1
Promotion of solar drying techniques and use of building halls for drying	R1

Table 4.2 Farm production related risks
and risk-mitigation measures

4.3. Farmer organisation related risks

PO governance

Cooperation of independent producers is deeply rooted in the agricultural sector, and various models and philosophies are actively promoted and practiced in Africa. Many of the models are based upon the democratic principles of cooperative organisation, implying that elected farmer-members constitute the governance bodies of the PO. While the merits of cooperative approaches are undisputed, so are the challenges in terms of management and governance. Traditional smallholder agriculture does not offer the high returns on the basis of which famers can easily build a professionally managed PO. But without some kind of entrepreneurial management, the PO may not be able to pull itself up by its bootstraps. This is why an external facilitator - be it a service provider, a chain actor or a financial institution (FI) - is often needed to set in motion the process of PO capacity building tied to a programme boosting smallholder production. In other words, while greatly beneficial in smallholder finance, POs tend to have a comparative weakness as a chain actor and/or facilitator due to their governance structure. This constitutes a potential risk to trade partners and financiers that was effectively mitigated by external support and capacity building.

Farmer loyalty

One of the reasons for farmers to organise themselves is to get better prices for their products. Farmers in need of immediate cash after harvesting can always find local buyers, but then at a very low price. The advantage of selling through the PO is the opportunity of bulk selling to a buyer who has direct excess to premium markets for standard quality produce, like processors, supermarkets and exporters. The downside of such arrangements is that the PO often deals with large (corporate) buyers in a non-symmetrical relationship. More commercial trading relations introduce terms of trade laid down in contracts in which larger off-takers may negotiate favourable payment terms. If the PO does not have access to extra working capital, payments to farmers are delayed. In the anecdotal evidence collected in the field research from farmers, some 10% indicated payment within 30 days, and some 18% payment between 31-90 days. Loss of farmer loyalty is a threat to the PO because it may also cause side-selling. This highlights the importance of post-harvest finance in securing fair trade with farmers in order to maintain their loyalty to their PO and for the PO to position itself as a reliable trading partner.

Impact of under-financing of POs

When POs buying from farmers have no access to working capital finance to bridge the period between buying and selling, payment to farmers get delayed. To the extent it happens, smallholder finance is in reverse – farmers are paying for the trade credit provided (by POs) to the off takers. For this reason it is essential in smallholder finance programmes that the financial services include post-harvest finance to the PO or the buyer so that farmers can be paid in time. If "finance-in-reverse" persists, the farmer-PO relationship is bound to deteriorate, thus undermining the sustainability of farmers' organisations. The implication of this approach is that pre-harvest finance to smallholders for inputs, land preparation and hired labour needs to be accompanied by post-harvest finance for the next level in the product chain. While the former is mostly the terrain of microfinance institutions (MFIs), the latter moves to the level of Small and Medium sized Enterprises (SME) finance. This is sometimes done by MFIs, but more often by local banks or social investors.

New roles for farmer organisations

Traditionally, POs were focused on advocacy and on improving the farmers' standard of living. The latter is achieved through supporting functions in the process of farming and marketing, savings and credit operations, produce processing and sometimes all of these measures. Moreover, a new theory of change is emerging for POs, in which the requirements of commercialisation open new perspectives and bring new challenges. Chain actors and financiers see POs as a bridge to smallholders and as important vehicles for joint action towards risk management. They see themselves supported when engaging in new functions and simultaneously being assessed in their ability to perform them. Ideally, most smallholder finance programmes should offer POs the opportunity to build management capacity.

Risk mitigation
With respect to the finance arrangements through or with a PO, the financiers in our cases looked at various aspects of due diligence:

A. Who are the farmers? What is the degree of commercialisation?
B. How strong is the farmer-PO relationship?
C. What is the PO's strength to perform the tasks assigned?
D. What is the PO's capacity to facilitate farm extension and other services
E. What is the PO's capacity to facilitate or retail financial services?

Table 4.3 lists the risk-management issues related to these five topics that were observed in the cases studied, together with the *risk-mitigation measures* taken by the various stakeholders.

Photo by ICCO Terrafina Microfinance

Farmer organisations’ risks and mitigation measures	Case
A. Farmer: Degree of commercialisation	
Lack of business understanding - Poor knowhow of farmers, illiteracy - Lack of entrepreneurial approach by farmers	
Farmer-led business development training by Agriterra	E1, E4
Extension service, show how	E3
Abi Trust support to agribusiness development in Uganda	U2
Farmers' attitudes on borrowing - Bad experience with other FIs - Inability of the farmer to take full advantage of the credit	
Loan appraisal by primary coop. to prevent inflated demand for credit	E1
Negative attitude on financial services based on religion to be addressed by centre-group meetings, training	U2
Emphasis by MFI on customer services, client education etc.	U2
Graduation principle; in each subsequent loan cycle, the credit eligibility is raised based upon farmer's agronomic progress	U2
Late payment of farmer demotivates and disrupts subsequent farm activities	
Warehouse receipt serves to pay farmer on credit upon delivery at warehouse, thus supporting next harvest cycle	U2
B. Farmer-PO relationship	
Loyalty, risk of side-selling	
Pooling of harvest by the farmers’ group representatives	E3
Blacklisting by MFI of farmer non-compliance with VCF contracts	E3
Contract farming whenever input credit is provided. Farmers repay in-kind.	E4
Price premium for delivery to cooperative and incentives for higher quantities sold to coop.	U3
Immediate cash payment upon delivery of coffee to hub.	U3
Tracking farmers’ records at the hub to enforce delivery of quantities pledged by farmers	U3
Lack of trust in POs - Farmers are sceptical about cooperatives	
Certification process for coffee hubs to address lack of trust in unregistered coffee hubs	U3
Farmers sensitisation and training of board members to create credible cooperative	R2
Training of farmers to assume functions in governance bodies, to address lack of trust in Savings and Credit Co-operatives (SACCOs).	R4
Chain actors are not in compliance with agreed programme	
MoU, constant follow-up and monitoring of contract with seed suppliers	E3
Formalisation of a strict 'farmer supply contract' to address failure to effectively link the farmers to the agreement between MFI, PO and buyers	E3
Lack of consensus among farmers on common activities like pooling	
Sensitisation on benefits of pooling for have better negotiation and higher prices	U2
Next loan dependent upon willingness to pool supplies	U2
Registration of uncertified farmer groups with district authorities	U2
C. Strength PO	
POs unable to perform the tasks assigned to them under the programme	
Facilitator (TechnoServe) screens POs (PBG) and classifies in 3 classes: strong, medium, weak	U1
Training of farmers to assume functions in governing board	R4, M1, M2
CB for board members and regular meetings with district authorities	R1,

Table 4.3 Farmer organisations’ risks and mitigation measures

Farmer organisations' risks and mitigation measures	Case
Management and leadership training and HRD by Cordaid	E4
Weak POs are exposed to the experience of strong POs (PBG)	U1
Agricultural cooperatives in Ethiopian programme of USAID	E2
Leadership training by NFSP	U1, R
Improving remuneration to address lack of skilled staff	E1, E3
Exposure visits to successful business cases	E4
Lack of accountability towards members and financiers	
Training staff in accounting and financial systems by Agriterra and Cordaid	E4
Financial education PO RBF	U1
Audit committee to address fraud by PO staff	E1
Avoid cash transactions - use bank transfers in absence of cash safe / strong room	U3
D. PO ability to facilitate NFS	
Lack of effective extension services for farmers	
PO employs full time agri-officer for effective extension to farmers in VC scheme	E3
ToT model for farmers by SNV	E4
Agronomy training by Cordaid	E4
Training of RFS staff, creating a multi-purpose committee	E3
Grading allows better prices for the top grade maize sold to RAB. Without grading all maize is sold at the lowest price in the market	R2
Maize mill increases income for the cooperative and its members	R2
Non-availability of transport when needed and poor crop handling	
Processor applies price discount if produce is to be transported to factory	E3
Coaching POs on transport arrangements	U1
Insurance by NUCAFE for theft, loss, damage in transport	U3
Sale on spot market inevitable until transport facilities are arranged by PO	R1
Lack of storage for farmers after harvesting results in high post-harvest losses	
Sell on spot market inevitable until storage space is built	M2
Farmers are stimulated to save and build their own stores	M2
Support to storage facility buildings by CDI VOCA	E4
Support to storage facility buildings by CCA	R2
Training for storekeepers in keeping track of stock to avoid high post-harvest losses due to poor storage	U1
Stimulate PO to improve storage facilities	U1
Tight recording, accountability & supervision rules to address theft at store level	U3
PO' to invest in better stores to avoid damage by rodents, insects and humidity	R1
E. PO ability to facilitate FS	
Non-availability of finance to member-farmers	
Finance fairs	FF
CAM tool & improved due diligence by union supported by capacity-building programme of TMF to avoid inflated credit demands by primary cooperatives	E1
Agriterra capacity-building programme for cooperatives regarding inability to qualify for bank finance	E4
Bankable business plan training by CID Voca	E4

Table 4.3 Farmer organisations' risks and mitigation measures

4.4. Market risks

Is the tide turning?
Farmers face the impact of volatile market prices that are often hard to predict. Non-symmetric trading relations have historically put smallholder farmers in an extremely weak negotiating position. They are dependent on what the market offers in return for their produce. If that does not cover farm expenses for the crop, they withdraw from that market and most likely move back to the mode of subsistence farming. Yet over the past decade, slowly but surely the odds are turning in favour of suppliers. International corporate buyers were the first to start worrying about the long-term sourcing of agricultural supplies in their lines of business. Sourcing strategies are being revised in favour of building long-term alliances based upon mutual benefit. With it comes a willingness to invest their expertise and even capital in further developing the productive capacity of smallholders where substantial yield gains are yet to be made.

The benefit of market arrangements
While the conversion from buyers' markets into suppliers' markets is slowly advancing, the organisations of smallholder farmers have to grab their chances. POs are vital because larger chain actors and investors cannot deal with individual smallholders. Bulking is necessary both in terms of produce and the ability to negotiate supply contracts and exploit the potential of chain finance. Financiers are more easily interested in farm finance programmes that include arrangements with chain actors; the reasons for this interest are:

- Supply contracts minimize the market risks and open up possibilities for self-liquidating finance modalities
- Chain finance requires quality standards to be met, but also provides premium potential to smallholders, making their agribusiness more viable and more capable of carrying debt service obligations
- Chain finance is building market discipline into the chain, which, if it proves to operate as planned, will offer the potential for scaling-up and reducing risks.

The challenge is for farmers and POs to keep up with the requirements of commercialisation, both in terms of farm production and quality standards as well as in terms of business viability and risk management.

Risk mitigation
The due diligence issues for financiers with respect to the market can be divided into two broad categories: the nature of the market (chain actors, dominant players, competitive structure) and price issues (volatility, trends, attractiveness). In the cases studied, other due diligence issues included the quality-price relationship, the competitiveness of local farm production and the uncertainties in farm business planning. Table 4.4 shows how the market risks related to these issues were perceived in our 14 cases and the risk-mitigating measures that were taken.

Photo by ICCO Terrafina Microfinance - Harm Haverkort

Market-related risks and mitigation measures	Case
A. Nature of the market / chain structure	
Dependence on spot markets/traders offering minimum prices	
PO does bulking and selling, also contract farming	E1
PO facilitates access to more lucrative markets by advice to farmers and bulking in central stores	U1
POs employed marketing agent to look for new buyers	U1
Insufficient competition, too few traders	
Collective selling through cooperative	E1
Collective selling organised by MFI	E2
FBM will open link to international market for jatropha nuts, farmers of jatropha are fully dependent upon local processor FBM	M1
Disruptive trading practice - Unreliable / distorted weighing scales. Farmers are cheated by trader(s)	
Collective marketing & farmer education to avoid unknown middlemen	U1, U2
SMS info over current prices because farmers are misguided	E2
COs of MFI provide info & coaching	E2
B. Price characteristics of the market	
Structurally low prices for smallholder farmers because of weak negotiating position	
MoU with the main processor of the VC	E3
Bulking of farm produce (local collection centres) for collective marketing	M2
Cooperatives organised into marketing organisation, training in marketing strategies	M2
Opening offices in terminal markets (in capital and other big towns)	M2
Establishing links to importers in France, Switzerland and Korea	M2
Unpredictable price fluctuations (local supply-demand situation)	
Forward contracting together with farmer education (but not yet realised by ENCOT)	U2
AMF "Competitive Price-Setting Mechanism" at the factory gate	E3
Purchase agreement with the processor, requiring bulking of minimum size to be supplied	E3
By going around local traders	E3
Seasonal fluctuation of prices (prices drop during the harvesting period because of abundant supply)	
Farm groups establish 'grain banks' to store their crops until the price picks up (several months after harvesting)	E1
The warrantee programme of Duterimbere allows coops to pay farmers an advance upon delivery to the bonded warehouse, keeping the crop as security for the working capital credit to coops.	R1
Collaboration with RAB / WFP programme for post-harvest storage task force, to improve storage	R1
Volatile world market prices	
TNS provides training to POs as price fluctuations in cotton market undermines farmers' confidence in the programme	U1
NUCAFE links exporters with farmers through MoU (kind of forward contracting)	U3
Coffee hubs in the process of fair trade certification	U3
Cooperatives in the process of double certification (FT and UTZ).	U3

Table 4.4 Market-related risks and mitigation measures

Market-related risks and mitigation measures	Case
C. Price-quality characteristics	
Farmers do not understand prices difference per quality grade and feel cheated	
Transparency and quality measurement tools	U3
Better grading & quality measurement techniques as higher quality is not rewarded, so farmers get discouraged from investing in higher quality production	E2
Transparent grading standards and measuring mechanisms since farmers do not trust / appreciate price setting	E3, U3
D. Competitiveness	
E. Uncertainty for farmers	
Farmers switch to other crops because of uncertainty or price fluctuation world market	
Forward contracting	E1
Forward contracting	E2
Negotiations with government and other buyer	M1

Table 4.4 Market-related risks and mitigation measures

Photo by Bart Debruyne

4.5. Viability risks – business case

Viability risks refer to fact that the agribusiness financed might not be sufficiently profitable to cover the debt service obligations. In the cases studied, the due diligence focussed on the viability of the farming operations, the viability of the PO and the timing of payments to farmers. Less prominent in the stakeholder interviews, but evident from the case descriptions, is the dependence on 'subsidy' components for the success of the programme in the form of embedded services by chain actors, local government support and donor grant funding for these programmes. These components are briefly discussed below. Table 4.5 contains some details and case references.

Due diligence issues	Risk assessment (pre-loan)	Risk mitigation (pre- & post-loan)	Case
A. Viability of the farming activity			
Debt service capacity from gross margin	Inability of the farmer to take full advantage of the credit	Graduation principle; in each subsequent loan cycle the credit eligibility is raised based upon farmer's agronomic progress	U2
	Changing prices do not cover production expenses	Storage of maize to wait for prices to increas e	R1
B. Viability of the PO			
Accounts	Poor financial records distort analysis	Training financial management and record keeping	U3
	Lack of permanent accounting capacity at cooperative level	Hire competent staff for coop's	
Finance risks	Forex risks for export of coffee	Forward contracting with exporters	U3
		Monitoring world market prices	U3
Integrity	Fraud by staff		
	Cash handling - absence of cash safe / strong room	Avoid cash transactions - use bank transfers	U3
C. Cash flow at PO level			
Are farmers paid upon delivery of harvest?	Buyers from cooperatives do not pay on time, urging PO to delay payment of farmers Side-selling	Loan from Uniclecam to avoid postponing the payment to farmers Warehouse receipts	R2
Can loan repayment be linked to sales?			R1
D. Embedded funding for NFS			
	Farm finance programme will not materialize without NFS	Programme finance by chain actor	M1, U1
E. External funding for NFS			
Sustainability	Farm finance programme will not materialize without NFS	All cases received some form of support from external DFOs	All

Table 4.5: Risks related to viability of farming and PO operations

The following aspects of viability involve risk-management issues:

A. Viability of the farming operation

In none of the cases was the viability of farming appraised at the individual farmer level; instead, it was part of the process of programme design that preceded crop-specific credit delivery. In this earlier stage the selection of crops and related farmer groups were appraised, and it was assumed that when the farming operation was sufficiently profitable, the individual farms would be as well. The appraisal of individual clients is done on the basis of simple eligibility criteria and sometimes screening by group-members of the cooperative staff. Risk mitigation in one case focused on a graduation policy in which credit eligibility was raised in each subsequent loan cycle based upon the farmer's agronomic progress. The viability of farming can also depend upon the timing of selling the farm produce. For seasonal crops, when prices tend to drop immediately after harvest, gross margins may be very small. Storage for some time, as practiced by cereal banks, helps farmers to postpone sales until prices have increased. In the cases in which a value chain development approach was adopted, access to more lucrative markets had a positive effect on the viability of farming. Hence the viability risk is greatly reduced by the measures taken with respect to farm production, farmers' organisations and marketing.

B. Viability of PO operations

When the PO performs the role of a chain actor, either for marketing farm produce or for processing, social investors do appraise the viability of the operation as part of their due diligence. In that case the normal SME appraisal methodology applies. In terms of risk management what is added is concern about PO accounting and staff integrity. Hence the risk mitigation focussed on training programmes in bookkeeping, reduced cash handling and staff recruitment.

C. Cash flow farmers-PO

POs invariably face the challenge of paying farmers on time. As they often deal with larger corporate buyers that are more skilful in cash flow management, they accept sales contracts with payment terms primarily reflecting the buyer's interests. Depending upon the characteristics of the chain, payment terms may vary anywhere between 0 – 90 days. The problem for POs is exacerbated when the contractual terms are not met by the buyer. Contract compliance for a PO is hard to enforce because they often do not want to jeopardise valuable trade partners. Consequently, delays occur. This is where the PO finds itself between a rock and a hard face. Their only way out is usually to delay paying their own member-farmers. This phenomenon is highly detrimental to agricultural development, not only because it is smallholder finance in reverse, but also because it erodes the trust relationship between farmers and their PO.

D. Embedded funding for non-financial services

In many cases there are forms of embedded funding for non-financial services, like farm advisory services by a processor, extension services by government officials, or soil analysis by a research institute. The risk assessment in these cases focuses on how essential these services are to the success of the finance programme and whether they can be sustained over the lifetime of the programme.

E. Donor funding for non-financial services

It is not surprising that in all of the selected cases of the NpM, Platform for Inclusive Finance partners, there was a degree of donor funding, either in the form of direct grant funding or in the form of technical assistance by the staff of the NpM partner concerned. For debt financiers is it important to know whether this support will continue and what happens after the donor withdraws. In the 14 cases studied, this aspect was not explicitly raised during stakeholder interviews, probably because they considered it 'a matter of course' in the context of the study.

4.6. Finance risks

Chain-view on finance risks
In all 14 cases access to finance was created for smallholders; consequently, each case passed through risk assessment by the financier. These cases show that the access of smallholders to finance is intricately linked to the management of the agricultural risks. Financiers in these cases took a more comprehensive view of risk, going beyond the 'classical' approach where the emphasis is on the collateral and viability of the client's business (SME lending) or group solidarity guarantees (microfinance). In all cases studied here, the finance for smallholders was facilitated by additional risk-mitigation measures in farm production, farmers' organisations and marketing.

The financiers' dilemma
From the point of view of stakeholders participating in the cases (and the parties in NpM), the finance risks needed to be considered in two ways: the risk of withholding finance to farmers as well as the risk of providing it. For the MFIs, the credit cooperatives and the social lenders, this dilemma is a day-to-day reality. Despite their mission and ambitions, no financier can sustain services that result in high portfolio risks. They have begun to embrace new approaches to risk management that look focus on the root causes of debt failure in the agricultural sector. The main stumbling blocks for implementing these new approaches are the manpower needed for these projects and the question of the sustainability of the non-financial services that, for the time being, appear to be vital to success.

Apart from portfolio diversification, innovative instruments are available to reduce the risks related to agricultural investment.

Insurance through *weather-indexed risk management products* where payments are linked to a weather proxy for crop losses like rainfall deficit, thus eliminating the need for monitoring actual losses.

Futures and options markets provide hedging against price risk. There are a few such markets in SSA. While these markets are still small in SSA, the South African Futures Exchange (SAFEX) is the biggest and oldest. However, exchanges are still being created (recently in Ethiopia and currently in Rwanda).

Partial credit guarantees to share risks with selected commercial banks on portfolios of new loans.

Warehouse receipt systems allow farmers to deposit a stated quantity of a specified quality of a commodity into a private warehouse and receive a receipt, as evidence of location and ownership, which can be claimed as collateral. This system also protects farmers against low sales prices (by providing storage until market prices become more attractive) and helps large-scale accumulation.

Source: Agricultural value chains in Sub-Saharan Africa - From a development challenge to a business opportunity - Deutsche Bank Research April 2014

Figure 4.6 Financial sector instruments for reducing the risk of lending to agribusinesses

Financial risk management
Smallholder finance builds upon the microfinance techniques of solidarity group lending (mutual guarantees) and the PO's capacity to train, screen and monitor clients. Asset-based lending can be applied to post-harvest credit, with self- liquidating credit arrangements in the value chain or warehouse-receipt financing. Guarantee instruments can help financiers to gain experience in the sector and build creditworthiness for POs, processors or off-takers

Management of agricultural risks
Modern instruments for managing agricultural risks – commodity exchanges, option and futures markets, crop insurance and tradable warehouse receipts – are still under development in Africa and inaccessible to much of the smallholder community. Much can be achieved by exploiting all opportunities in the value chain for risk-mitigation measures in the areas of sustainable farming, Good Agricultural Practices (GAPs), farmers' organisations, market arrangements and viability enhancement. This depends on the orchestration of the stakeholders in the chain, a task in which the PO plays a pivotal role. Because these mitigation measures are beneficial to chain actors, POs, farmers and financiers, the management of agricultural risks is a common goal for all.

In view of the above remarks, the assessment of the finance risks in the cases studied showed that they were related to:

A. Lack or insufficient access to finance for smallholders
B. Credit demand & eligibility
C. Staff capacity
D. Financial product
E. Security requirements
F. Delinquency

Table 4.7 lists our field observations on these six issues with references to the cases concerned.

Due diligence issues	Risk assessment (pre-loan)	Risk mitigation (pre- & post-loan)	Case
A. Access			
Bank credit for smallholders			
	No bank willing to finance smallholders	Scouting and sensitisation of local banks to discuss access for smallholders (by RBF). Selection of the bank that best serves the aims of the programme	U1
		Sensitisation and training of bank staff by Agriterra	U3
		PO staff training to produce bankable business proposals	U3
		Guarantee for pilot project	?
		Facilitator employs a financial service manager	U1
	Financiers lack knowledge about the sector	Training bank staff	U3
MFI			
	Hesitant to use existing credit products in agriculture	Assistance by donors to develop crop-specific products and VCF products	All MFI
	Will new product work?	Pilot projects previously rolled out over branches	
SACCOs & MP Cooperatives			
	Used to financing member-farmers, but internally mobilised funds inadequate to meet credit demand	Refinancing by local banks	
	Standard financial products less appropriate for smallholders	Plans to develop more products	M2
	Interest rate is too high for small margins in agriculture	Most MFIs use bullet loans for farming, thus reducing the real effective interest as compared to other MF loans with reducing balance.	E2, E3, U2
		Negotiating government subsidies to reduce interest rates	M2
B. Credit demand & eligibility			
Diversion by farmers			
	Credit for coffee improvement is used for other purposes	Controls by group members or CO	E2
	SACCO members use credit for agriculture for other purposes	Supervision on credit use by farm group members	
Loan size			
	Farmer requests/needs exceed MFI limits	-	E3
Credit demand satisfied			
	High unmet finance needs	Commercial banks to gain experience and build trust, so as to expand financing the sesame sector	E4
	Credit need of farmers is only partially met	MFI negotiating for more funding	M2
	Farmers may ask more than needed	Crop Production Plan requested by Crane Bank	U1

Table 4.7 Risk assessment of finance risks and mitigating measures

	The SACCO's loans are too small and do not cover the cash expenses for production	Farmers need to save for the shortage	R2
	Some farmers are over-indebted due to multiple loans from other institutions	Regular check of credit bureau Africa (CRB)	R3
Eligibility			
	Farmers lack finance card	Crane Bank helps farmers get it	U1
	Challenge to get consent of spouse and children	Sensitisation by TechnoServe and Crane Bank	U1
		Sensitisation (much needed, partly effective)	M1, M2
	Absence of land titles	Land certification by Crane Bank (consent by neighbours and subsequent cartography)	U1
C. Staff capacity			
Agricultural expertise			
	Agricultural expertise is lacking, as are facilities for field visits (no transport)	Link agronomists from existing institutions to member farmers (not easy)	R4
D. Financial products			
Disbursement			
	Loans are disbursed too late	Agronomist talks to FI and actors	U1
		MFI opted to fasten appraisal and bringing disbursement a full month forward	M2
Portfolio risk			
		Loan demands requested earlier, so as to allow MFI time for appraisal	M1
Repayment			
	Instalment loans less appropriate for farming activities that do not generate regular cash flow	Bullet loans – repayment at once at harvest time	Most
Distance from clients			
	Catastrophic crop failure could affect many farmer loaners	Diversified portfolio in each branch	U2
Value chain finance			
	MFI far from farmers location	MFI agrees to open sub-branch	M1
Insurance			
	Commercialisation of barley production by smallholders	Facilitation and orchestration of the malt barley value chain with chain actors and BG MFI by TMF	E3
	Poor harvest due to drought, weather failure	Crop insurance (but premiums very expensive for farmers, almost prohibitive)	U2
Portfolio management			
	Higher PAR for agri-sector portfolio	Ceiling on agri-portfolio of 15%	U2
		Diversified crops in agri-portfolio	U2
E. Security			
Finding Co-guarantors			
	Fear of premature death for guarantors	Life insurance	E1
	Non-eligible guarantors such as family members	Screening by farmer group (PBG)	U1
		Group guarantee and personal guarantee	U2

Table 4.7 Risk assessment of finance risks and mitigating measures

Due diligence issues	Risk assessment (pre-loan)	Risk mitigation (pre- & post-loan)	Case
Farmer ignorance of obligations linked to borrowing			
	Taking too much credit	Financial education	E1
Land titles			
	Farmers lack title deeds	Crane Bank helps farmers to overcome problem through cartography and land certification	U2
Appropriate finance			
	Late disbursement by commercial bank	-	E4
Asset-based lending			
	Delinquency	Crop is pledged to the Crane Bank	U1
	Side-selling	Warehouse receipts	U2
	Side-selling	See PO 2 – Loyalty	U2
	Credit to cooperatives to pay farmers an advance upon delivery to warehouse	By going around local traders	R1
	High credit risk on agri-finance	Credit insurance from SORAS, 7% paid by farmers, 7% by government	R4
		50% guarantee by main buyer / chain actor to MFI	M1
F. Delinquency			
Loan use			
	Loan diversion	Staggered loan disbursement and close follow-up by agricultural officers of Crane Bank	U1, U2
		Inter-guarantor control (2 guarantors for the loan)	U1
		Follow-up by field visits of FMB	M1
		Members of cooperative will check one another	M1
	Wilful defaulting	Peer group mutual guarantees, group solidarity lending, mandatory saving	E2, E3
Delay in repayment by farmers			
	Inability to repay explained by agricultural activity	On-the-spot visits and securities	E1
		Close follow-up by local farmer group 'credit committee' or CO of the MFI	E3, U2
		Post-sanction report by Crane Bank as an early warning system	U1
		Rescheduling	U1, U3
Default - bad debt			
	Moral hazard - intentional default	Collateral security	E1, E4, U1, U2, U3
		Last resort; taking the case to court	E3
		Blacklisting for new loans	E3

Table 4.7 Risk assessment of finance risks and mitigating measures

5. Lessons learned for financiers and facilitators

5.1. Some observations and conclusions

A. Diversity rules

Looking at the 14 cases one cannot help but be sur¬prised about the diversity, not just with respect to the types of financial institutions (FIs), but also in the role that producer organisations (POs) play in this process and in the approaches towards agricultural finance. Especially when it comes to mitigating the risks of agricultural finance, the POs have a vital role to play. The way they do this differs in virtually every case. With seven different types of FIs, a similar number of different finance models, and at least ten different functions that POs can perform, the number of possible combinations is dazzling. Solutions creating access to finance appear to be primarily determined by the opportunities that the unique combination of local institutions, finance models and POs offers.

Observation 1: Diversity rules

Financial institutions	Finance models	Role of POs
1. MFI;	1. Solidarity group lending;	1. Retail or facilitate FS;
2. MF Bank;	2. Crop-specific MF;	2. Sensitization, coaching, exposure meetings;
3. Commercial Bank;	3. VCF;	3. Facilitate seed supply;
4. Multipurpose Cooperative;	4. Warrantage;	4. Link to input suppliers;
5. Union (SACCO);	5. Wholesale finance through PO;	5. Drying, milling, hulling;
6. Primary (SACCO);	6. Mobile banking;	6. Bulking, storage;
7. Social enterprise.	7. Individual (micro)finance.	7. Transport and marketing;
		8. Link extensions and BDS;
		9. Certification;
		10. Insurance.

Figure 5.1 Observation 1: Diversity rules

B. Access to finance does not just depend on financial risk management

Most cases demonstrate quite convincingly that it is possible to create access to finance for smallholders without sophisticated financial risk-management instruments such as structured finance, crop insurance, agricultural price-management instruments or commodity exchanges. A great variety of risk mitigation in smallholder agriculture exists when resources within the agri-chain are mobilised. Most of these deal with the root causes of risk in agriculture due to poor farming practices, non-access to inputs, ignorance about quality and grading, dependence upon local spot markets and the extremely weak negotiating position of individual smallholders.

C. Farmers' organisation is vital for exploiting the full potential of risk management in smallholder agriculture

Chapter 4 described how agricultural risks have been managed through a great many different risk-mitigation measures. None of these would have been possible without the farmer's organisation (PO). Figure 5.2 illustrates these measures as a virtuous circle – activities that reinforce one another. Through the totality of these measures, the risks for farmers and their families are reduced. Secondly, buyers gain confidence in the supply potential of the smallholders and are thus willing to invest in collaboration arrangements. Finally, it is highly unlikely that financiers would have been able to engage in smallholder finance without these risk-management measures.

The concept of the virtuous circle in Figure 5.2 is also highlighted in a Rabobank publication on the role of cooperatives for smallholder inclusion, supporting this analysis [7]. We can conclude that farmers' organisations and the POs that embody them are a vital component in exploiting the full potential for risk management in agriculture.

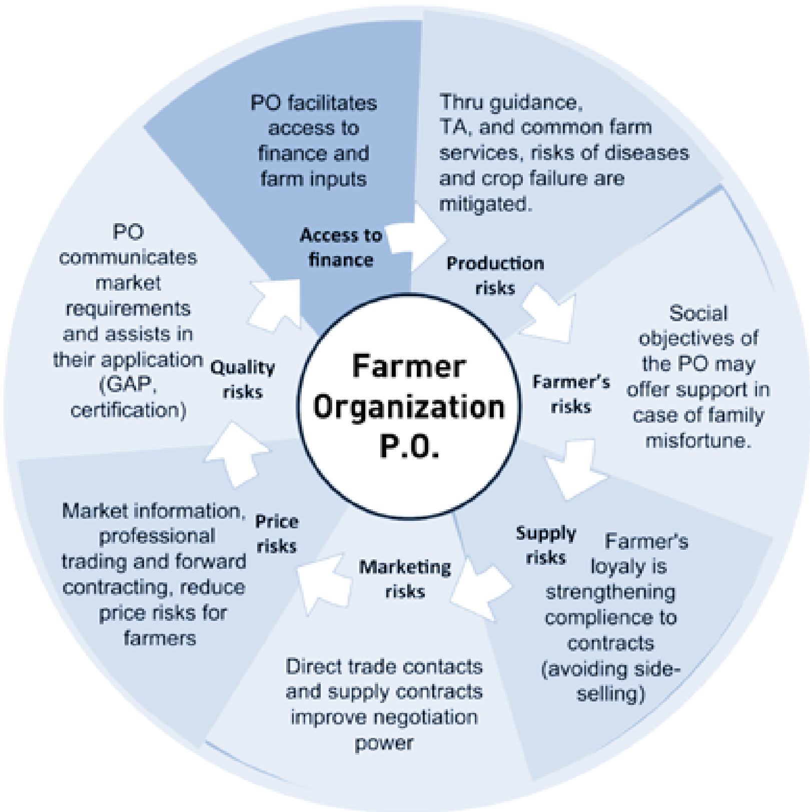


Figure 5.2 Risk management potential of farmer organisations

D. Finance strategies are highly context dependent

The way finance is structured and financial products are developed and delivered depends on three contextual factors: crop, market and chain actors. The risks management measures in the cases studied particularly illustrate the large difference between crops for agribusinesses. Because teff can be stored for long periods, farmers can choose to wait until prices have risen from the dip after harvest. With vegetables or other fresh products such options do not exist. In some Rwandan cases farmers were recommended by their POs to sell at local spot markets when efforts to arrange for storage or better market deals did not work out. They were paid cash, but prices were very low. In these cases post-harvest finance for the PO is not needed. But in more developed markets, where POs sell to corporate buyers, processors or exporters and prices are better, the terms of trade also become more commercial. Depending upon the market traditions, larger buyers negotiate payment terms that allow them to pay after 30 days, 45 days or even longer. Even with those contracts, full contract compliance may not always be assumed.

[7] Co-operatives - a Key for Smallholder Inclusion into Value Chains - Framework for an Inclusive Food Strategy – Rabobank 2012.

E. Pre- and post-harvest finance

Most smallholder credit delivery by microfinance institutions (MFIs) is limited to pre-harvest input finance. Yet, for smallholders, post-harvest finance is just as crucial, allowing the off-taker, whether a PO or private agribusiness, to pay farmers in cash upon delivery of their crop. Without post-harvest finance, farmers find themselves not being paid for up to one or several months, which amounts to "smallholder-finance-in-reverse". In such cases they effectively

Observation 2: Finance strategies vitally depend upon "Context"

1. 17 Crops and value chains:

- Tef
- Maize
- Coffee
- Malt
- Barley
- Sesame
- Cassava
- Vegetables
- Irish Potatoes
- Organic Cotton
- Groundnut
- Beans
- Rice
- Jatropha nut
- Sorghum
- Millet
- Peanuts.

2. Range of Markets:

- Spot market
- Export value chain

3. Chain actors

- Seed and input suppliers
- POs/cooperatives
- Local processors
- Multinationals.

Figure 5.3 Observation 2: Finance strategies vitally depend upon "Context"

provide trade credit to the next actor in the chain. Thus, even though post-harvest finance is not directly aimed at smallholders, the lack of it impacts on their livelihood. Nothing erodes loyalty to their own PO more than late payments, even if the PO itself is not to be blamed while it waits for payment from its debtors. In order to avoid this anomaly and promote fair finance, post-harvest finance to the buyers of smallholder produce is equally vital.

F. Microfinance and Small and Medium sized Enterprises (SME) finance are linked

Chapter 1 contains a Figure of the smallholder finance landscape (see figure 1.3) taken from a publication of the Smallholder Finance Initiative. It shows a neat distinction between the segments of smallholder farmers served by MFIs and producer-based groups served by social lenders. In the cases of this study, such separation often does not exist. In Chapter 3 we distinguished three finance models, and two of these three included post-harvest finance. In these two categories (over half of the cases) the post-harvest finance is disbursed to the buyer, whether a PO or a private agribusiness. This brings the finance transaction into the sphere of SME finance. As described in Chapter 3 there are cases where farmers are paid in cash upon delivery of the harvest, but in other cases the late payment to farmers can be anywhere between 30 and 90 days. If the buyers concerned were adequately financed they could also pay farmers in cash upon delivery of the harvest.

5.2.The search for good practice

What constitutes good practice?
Looking at the enormous variety of finance solutions described in the cases, this question becomes even more pressing. The obvious start in the search for good practice is the agricultural microfinance literature, such as the latest report of the Consultative Group to Assist the Poor (CGAP) report on "Managing risks and designing products for agricultural microfinance" (short paper 2005, re-issued as a full report in 2014). Drawing on a number of successful experiences in various developing countries, the paper offers a model for agricultural microfinance. It combines the most relevant and promising characteristics defined by the ten main features listed in

If the 10 features of the CGAP study are compared with the practices observed in our 14 cases, we can see that six out of ten fully apply. For the other four features, one or more cases "violated" the good practice or failed to apply it.

- In none of the cases did the first feature apply (requiring that repayments are not linked to loan use).
- In one case – myAgro - the second feature did not apply because through the mobile platform only savings and no lending takes place
- In three cases no savings mechanism were offered because the arrangements with the POs focused on credit-lines from commercial banks
- Area-based index insurance (feature 9) was not applied anywhere.

The linking repayments to loan use deserves special scrutiny since none of the projects seemed to comply.

CGAP – Good practice for agricultural microfinance
1. Repayments are not linked to loan use.
2. Character-based lending techniques are combined with technical criteria in selecting borrowers, setting loan terms and enforcing repayment.
3. Savings mechanisms are provided.
4. Portfolio risk is highly diversified.
5. Loan terms and conditions are adjusted to accommodate cyclical cash flows and bulky investments.
6. Contractual arrangements reduce price risk, enhance production quality and help guarantee repayment.
7. Financial service delivery piggybacks on existing institutional infrastructure or is extended using technology.
8. Membership-based organisations can facilitate rural access to financial services and be viable in remote areas.
9. Area-based index insurance can protect against the risks of agricultural lending.
10. To succeed, agricultural microfinance must be insulated from political interference.

Figure 5.4 CGAP – Good practice for agricultural microfinance

Repayments are not to be linked to loan use?
From the early days of microfinance, when Muhammad Yunus started Grameen in Bangladesh, the practice of weekly instalments for repayment emerged. In those days, only one microfinance product existed – group solidarity lending – in which disbursements to all group members are done at the same moment and credit is used for any type of income-generating activity. With a strong focus on female clients who, apart from farming, are involved in off-farm activities and trade, this model became the foundation for microfinance worldwide. In the countries studied, Ethiopia, Mali, Rwanda and Uganda, MFIs also practice this model, both in urban and rural areas. However, as shown in Table 5.4, most cases violated this rule. The only way in which the CGAP rule applies is legally: creditors have to repay irrespective of business results, as in any loan agreement. But in terms of finance strategy, finance product, type of due diligence, timing of disbursement and repayment, the finance is intimately linked to the crop and the way it is marketed. In some cases credit is provided in kind (seed, farm chemicals) to ensure its proper application for the selected crop. In other cases the credit is made self-liquidating through contractual arrangements with the buyers of the crop to repay the credit component. *Does all this constitute poor practice?*

Agri-microfinance models	Cases	Finance strategy	Finance product	Due diligence	Timing disburse-ment	Mode of repay-ment	Legal
1. Agricultural group solidarity lending	Amasezerano, Lidet, Ejo Heza, Duterimbere	T	T	T	N	N	T
2. Crop-specific microfinance	Wasasa, Wisigara, ENCOT, Biocarburant	N	N	N	N	N	T
3. VCF	BG, Setit, CCIU	N	N	N	N	N	T
4. Warrantage	Duterimbere MFI	N	N	N	N	N	T
5. Wholesale FS through POs	NUCAFÉ, Setit, Lidet,	N	N	N	N	N	T
6. Mobile banking	myAgro - Mali	N	N	N	N	N	T
7. Individual MF	Lidet	N	N	N	N	N	T

Table 5.5 Is repayment linked to loan use in the 14 cases? (T = true; N= Not true)

We can conclude that the 'good practices' for regular rural and agricultural microfinance do not all apply to the type of smallholder finance that is done in conjunction with farmers' organisations.

5.3. Entering a new mode of finance and investment

A new mode of smallholder finance?

It seems justified to conclude that the cases with a PO-approach to finance, as selected for research by the NpM, Platform for Inclusive Finance members, represent a new field of finance in which elements of microfinance, agribusiness finance and agricultural value chain finance come together. Improving the business perspectives of smallholders cannot be achieved by pre-harvest input finance only. This needs to be complemented by adequate post-harvest finance to avoid the risk of "smallholder-finance-in-reverse". While it is generally concluded that smallholder agriculture has a large, underutilised potential for boosting food supplies, it is believed that this approach will offer great potential in the future. This potential can be exploited only if the business modalities for smallholders, the supply chain in which they operate and the financial services developed for this purpose are supported by investors and social lenders in a manner that suits the needs. This involves a review of the vital components of the finance chain, starting with finance targeting (scoping), partner selection, due diligence methodology and risk management approaches and including modalities of collaboration between stakeholders and properly combining grant, debt and equity instruments (blended finance).

In the combination of (M)FIs and farmer organisations, the rules of the game are different:

A. Focus on one crop	▶	A. Crop-specific finance
B. Broad spectrum of measures to manage agricultural risks beyond financial risk management	▶	B. Involvement of chain actors, service providers, facilitators
C. Preliminary stage of Design and Development	▶	C. Financier takes a more proactive role in multi-stakeholder process

Figure 5.6 New mode of finance

New roles for financiers
Thus, financiers face several new challenges. First they need to build up a minimum of expertise to deal with agricultural finance. Second, they must revise their due diligence to accommodate a more comprehensive understanding of risk management. Third, they have to develop tailor-made financial products for the specific crop and market concerned. Fourth, they should think of possibilities to engage in hybrid finance, at both the microfinance level (pre-harvest credit) and the PO or agribusiness level. Alternatively, two different FIs can collaborate to serve the input and output finance components. Finally, a more pro-active role is required of staff in developing farm finance programmes. Invariably, all this requires (external) support in staff capacity building.

Widening the sources of good practice documentation
It seems that, for the type of smallholder finance involving farmers' organisations, there are good reasons to widen the scope of good practice literature as a source. This is based upon the following observations:

- The financial transactions for pre-and post-harvest go beyond the domain of microfinance
- Not all good practice standards for agricultural microfinance appear to be appropriate to this target group
- For smallholders, the post-harvest finance component is just as vital as the input finance in situations where farmers cannot be paid in cash upon delivery of the harvest and situations where there is a lack of contract compliance in the chain.

We feel that, for smallholder finance through POs or with the support of POs, the proper reference documentation needs to include:

- Experience from agricultural microfinance. Main source: CGAP
- Experience from the social lenders in agricultural finance. A good source is the Smallholder Finance Initiative
- Experience in Agricultural Value Chain Finance

Define 'good practice' in terms of process
In view of the complexity of smallholder finance, and the observed difficulty of capturing this reality in terms of finance recipes, we prefer another approach to defining 'good practice'. Looking at the actual organisation of activities by the stakeholders - financiers, POs, facilitators and social investors – good practice can very well be defined in terms of the process stakeholders undertake to arrive at workable solutions. This refers to:

- The preparatory process of programme design
- The due diligence on the programme undertaken by the financiers and the financial product development
- The risk-management strategies worked out among stakeholders
- The financial analysis of an agribusiness to determine credit needs and viability
- The way investors and social lenders organise their portfolios
- Each of these topics is further elaborated upon in the following sections.

5.4. Good practice in farm finance programming

Based upon the way access to finance was created in the 14 cases and together with the above observations on good practice, we can draw some conclusions about the preparatory process of programme design. In section 3.3, we distinguished three phases of programme preparation:

Stage 1 – Scoping and selecting
Stage 2 – Programme and product development
Stage 3 – (Pilot) financing

Scoping and selecting
As highlighted in Figure 3.2, research needs to be done in the preparatory phase in order to select the crop, the (pilot) area, the participating farmers/POs, the VC actors and other service providers. This often requires a form of value chain mapping. Once these programme parameters have been delineated, the outline of the programme is established and the corresponding finance needs can be estimated. Even if the financier is not the lead actor at this stage, it is vital to engage one or more financiers in this process early on in order to reinforce the concept of 'ownership' for the programme and to benefit from their views and experience.

Programme development
Once the basic decisions on the programme outline have been made, the plan needs to be translated into tangible action and agreements. This requires:

A. Orchestrating chain actors and service providers. Access to finance requires a preparatory process of consultation and negotiation in which stakeholders make commitments for collaboration to help improve smallholder production in terms of stable and premium pricing, improved agronomic practices, higher productivity and the adoption of sustainable farming. In the process, trust must be created based on shared value, shared risk, a voice for each actor and ownership of productive assets across the agricultural value chain.
B. Designing a strategy shared by stakeholders (including finance strategy)
C. Managing risks by assessing the major agricultural risks and agreeing on risk-mitigating measures
D. Facilitating the Non-Financial Services (NFS) required: farm extension, BDS, certification
E. Having the financier design an appropriate finance strategy (who, where, how much, for what, pre- or post-harvest or both?) and financial product for this programme (all parameters as in Figure 3.5).
F. Pilot testing. Decide where the programme is going to be piloted and how results are going to be monitored.

The agreement is laid down in a Memorandum of Understanding between the parties or in contracts in the case of chain actors.

5.5. Financial product development

Using the above programme outline, the financier can work on a two-step smallholder finance plan to 1) elaborate the finance strategy and 2) develop a tailor-made financial product.

The finance strategy determines:

- **Who** is going to be financed (i.e. eligibility criteria for the farmers)
- **Where** the programme will be implemented, considering the proximity to the branches in the production
- **How much** credit will be accessible to farmers, considering the credit needs assessment
- **For what** purposes the credit can be used and how proper application can be ensured (even credit in-kind may be considered)
- **When** the credit should be available and whether it should be limited to pre-harvest finance or post-harvest finance or both?

An important part of the financial strategy is the question of which phase of farming is finance: pre-harvest input financing, post-harvest financing or both. Post-harvest finance is the relatively easier and more attractive part of smallholder finance. It is easier because it is not difficult to make the loan self-liquidating against sale returns (for instance, through a warehouse receipt system), and it is more attractive because it involves only one relatively big finance transaction with relatively low transaction costs and default risk expenses. In our study post-harvest finance was used in only four of the fourteen cases. Three of those are two-tier credit cooperatives, where primary cooperatives are financed by the union. The fourth case is Duterimbere MFI, which utilises the warehouse receipts methodology. A warehouse receipt is a document issued by a licensed warehouse operator certifying the quality and quantity of a specified commodity placed by a named depositor into a secure storage environment. It specifies the location of the warehouse, the name of depositor, the date of delivery, storage charges, commodity type, the quality of the produce and the quantity delivered. But even when the legal framework and formal certification of warehouses is lacking, the system can still be used, for instance by keeping a local warehouse under double lock and giving access to only the FI and the PO.

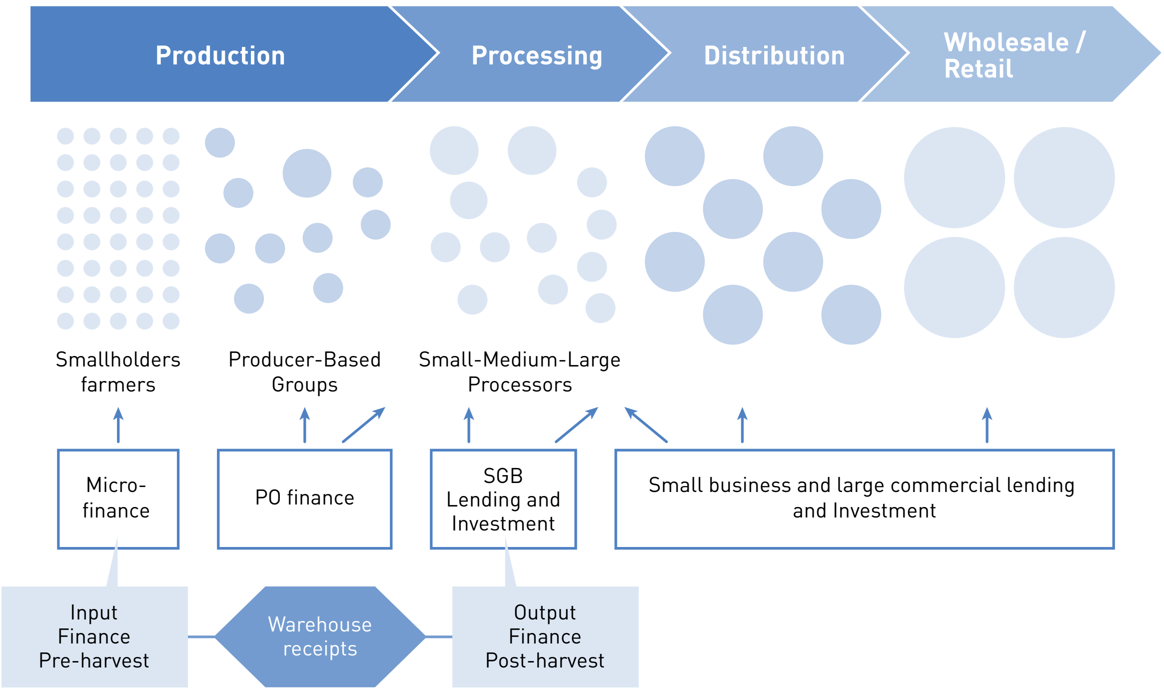


Figure 5.7: Pre- and post-harvest finance linked

Product development by the FI

Once the programme has been worked out and the finance strategy defined, the process of tailoring a financial product needs to begin:

A. **Timing of client screening and disbursement**: The client screening should start early enough in the season to have time for all pre-disbursement procedures. Disbursement should allow farmers to procure inputs well before the planting season starts.
B. **Client screening criteria / procedure**: Often simple eligibility criteria are formulated that can be checked without the need for individual client appraisal or farm plan assessment.
C. **Debt service method**: Regular instalments, bullet repayment, harvest instalments. Repayment is usually tied to the harvest season (bullet loan) unless regular cash flow allows normal instalments. When the harvest period takes time, two or three harvest instalments are also used.
D. **Interest rate (APR) and calculation method**: flat or reducing balance. A flat rate normally yields almost twice as much to the FI as the same interest calculated over reducing balance.

With bullet loans for agriculture, this yield benefit vanishes, however, because the balance outstanding is constant. For this reason there is often an element of cross-subsidisation for agricultural loans by the (urban) portfolio using regular instalments. This is favourable for farmers since it makes the loan more affordable.

E. **Loan size (amount/ha, minimum and maximum)**: This can be tied to the loan cycle and also to the area (ha) cultivated for the crop concerned (with a fixed amount/ha).
F. **Corresponding saving facilities and requirements**: A percentage of mandatory savings may be defined, but farmers should also be stimulated to deposit a certain amount of money after harvest in preparation for the next growing season (Case M3)
G. **Security arrangements**: mutual group guarantees, individual guarantors, mandatory savings, collateral, warehouse receipts.
H. **Loan conditions**: In the context of a given farm finance programme, loan conditions may refer not just to loan use and securities, but also to supply agreements with the PO or the buyer of the crop, the use of certain inputs (certified seed), the quality standards applied, participation in farm training events, etc.

5.6. Due diligence and risk management in a Farm Finance Programme (FFP)

Due diligence by the FI

The FI does not appraise individual smallholder farms but rather the various components of the farm finance programme (FFP). In the FFP preparatory stage, the FI performs its due diligence closely linked to managing agricultural risks in that programme, as shown in Tables 5.8 - 5.10. Using this programme assessment, the FI can translate critical parameters into eligibility criteria or loan conditions to be applied at the individual smallholder level. As the FI helps to formulate the programme, the due diligence is not static. In discussions with stakeholders, the FI expresses its conditions and concerns; subsequently, the FFP takes shape. The relationship between due diligence and risk management is discussed briefly below with respect to the farming component, the PO/market component and the viability/finance component. The three tables give examples only to illustrate the issues at stake.

Due diligence checklist	Risk assessment items	Risk-mitigation measures (examples)
1.Farm product Quality - characteristics for cultivation, harvesting, storage & processing	• Lack of quality seed • Post-harvest loss of quality • Mixing of grades • Lack of quality awareness • Lack of knowledge of GAP • Lack of on-farm equipment • Plant diseases	• Linking to seed supplier – better plant variety • Better use of farm chemicals • Farm extension, agronomist • Education on post-harvest • Coaching by PO • Quality grading tools
2. Farm production Production capacity, yield, farm inputs, GAP, farming system	• Lack of working capital for farm inputs and labour • Crop failure, poor weather • Poor farming techniques, declining yield • Lack of farm inputs, cheating by traders • Low yield per ha, traditional farming • Poor prices, volatility	• Pre-harvest farm finance • Crop diversification • Crop insurance • Irrigation, wells • Link to research institute • Approved input suppliers • Link to farm extension agents, tractor service PO • Bulk buying by PO, storage

Table 5.8 Due diligence and risk management – farming component

A. Farming component
The FI cannot appraise the farming side at the level of the individual smallholder. Neither will it normally play a role in the non-financial interventions at the farm level. The risk-mitigating measures fall almost entirely in the domain of the PO, making the PO a leading actor for this component. The FI can, however, indicate to the PO that it should look for appropriate solutions to risks that the FI feels have not been adequately addressed. Table 5.8 lists typical items in the risk assessment of the farm product (the crop selected for the FFP) and the way it is produced by the participating farmers, together with the type of measures included in the FPP to mitigate those risks. All this needs to be settled before the first disbursement is made.

B. Producer Organisations and market
POs and farmer cooperatives are traditionally the prime movers in strengthening the market position of smallholders both in terms of their capacity to meet markets needs and their negotiating power. By their nature of being democratically organised membership organisations, the capacity of their governance structures reflects the educational level of the farmer-volunteers for the governing functions. Even when board member training programmes have taken place, regular elections make these a recurrent effort. Union structures mitigate the governance risks by their institutionalised capacity-building activities and supervisory functions. For chain actors, especially the off-takers of farm produce, POs are a valuable conduit for improved farm supplies and farm finance. Both parties want to be certain that the PO can perform the functions it undertakes to carry out in the programmes. Several risks are related to the strength of the PO, as outlined in Table 5.9. The PO will use it negotiating power to mitigate the market risks through trade arrangements with chain actors. Table 5.9 shows how both elements of risk management can be approached from the point of view of the financier (due diligence), the chain actors (mitigating the risks of a PO as trading partner) and the PO (mitigating the market risks).

Due diligence checklist	Risk assessment items	Risk-mitigation measures (examples)
3. Farmer organisation (PO) Commercialisation of farmers, their loyalty to PO, PO strength, PO ability to link farmers to chain actors, finance and non-financial service provider	• Lack of working capital finance to ensure cash payment of farmers upon delivery of the crop • Farmers lack business knowledge / attitude • Weak management & governance • Poor loyalty, side-selling, lack of consensus among farmers, lack of trust in PO • Lack of extension capacity • Lack of transport capacity	• Post-harvest finance to the PO or the off-taker in the chain • Farmer-led business Development training • CB for board members • PO appraisal by or for the FI • Quantity pledge, premium pricing, forward contracting, cash payment upon delivery • TOT model for farmers • Processor collects • Finance fairs, FFPs
4. Market Chain structure, price trends, reward for quality, competition, uncertainty	• Dependence on spot markets – low prices • Disruptive trading • Weak negotiation position • Price volatility • Seasonal price drop • Small margin for farmer • Capacity to meet market quality standards	• PO bulking & selling • PO links to better markets • PO by pass local traders • PO – MoU with processor • Forward contracting • PO stores – warehouse receipts • Certification of farmers • Coaching, transparent grading standards, grading tools

Table 5.9: Due diligence and risk management – PO/market component

C. Agribusiness viability and finance
Prior to the question of finance, the question of whether or not a business case exists needs to be answered. The two questions are related, not just because viability is of prime concern to financiers, but also because the business plan needs to show the cash flow deficit for which the finance is sought. Financiers of smallholders do normally not assess viability on an individual basis, but rather as part of the preparatory phase of farm finance programming. The seasonal cash flow of farming and agribusiness, while at the heart of the finance operation does not always reach a satisfactory standard of accountability.

Financial analysis: farming and agribusiness
Post-harvest finance is usually a working capital credit to a PO or agribusiness meant to bridge the cash flow deficit between buying and selling the crop. If both transactions are done on a cash basis, the timing, duration and volume of the cash flow deficit – in other words the credit need – can easily be established. More often than not, especially in commercial value chains, the terms of trade are laid down in a sales agreement that specifies the terms of trade and the payment period. Thus 'income' shows up on the balance sheet as 'debtors'. And when payment of farmers depends upon payment by the off-taker, the expenditure for buying the crop from farmers shows up on the balance sheet under 'creditors'. This is where assessing the credit need becomes more difficult. It crucially depends now upon the average collection period for debtors and the average payment period for creditors (farmers). We observed that POs and agribusinesses do not usually maintain accurate and up-to-date monthly accounts. Hence, the financier has to make a 12- month cash flow projection together with a PO or agribusiness. When the farmers' supply spreads over a few months and delivery to the off-taker has a certain distribution over time, the calculation of the actual monthly cash flow becomes a rather complicated exercise. It is necessary to go into the details of the major debtors, the type of contracts with each of them (terms of trade and payment) and the actual payment performance for each of them in the previous period. The assumption of full contract compliance may not always prove justified. Historical analysis normally shows that when the average collection period of debtors goes up, so does the average payment period of creditors. In other words, the payment to farmers is the 'elastic' in the cash flow management of the PO or agribusiness unless they have adequate cash to bridge the gap. This is why post-harvest credit and the accurate assessment of credit needs are vital to a fair smallholder finance system.

Due diligence checklist	Risk assessment items	Risk-mitigation measures (examples)
5. Business case/viability Viability of farming, cash flow farmers Viability PO Cash flow PO level	• Farmers divert to other crops if margin too small • Farm business drained of cash due to late payment • PO unable to pay farmers in time (ACP debtors) • Cash handling / fraud • NFS not sustainable	• Farm finance programming • Credit eligibility depends upon performance • Post-harvest finance to farmers using warehouse receipts • Working capital finance for PO to cover ACP debtors • Training financial management & accounting • Chain actors take over donor part
6. Finance Access for farmers, credit needs, eligibility, capacity FI, financial products, loan delinquency management	• No FI willing to finance smallholders • FIs lack agri-knowledge • FI agri-risk avoidance • Standard product not appropriate for farmers • Diversion by farmer	• Scouting & sensitisation FIs • Farm Finance Programming • TA for financial institution • Guarantees and warehouse receipt financing • Crop-specific credit products developed • Control by PO

Table 5.10: Due diligence and risk management in a farm finance programme

Table 5.10 shows the viability issues for both the farming and the PO components together with the risk management issues for both the PO and the financier. The risk management for a typical finance case is also indicated. We found in the study that two specific financial instruments for risk management were used: warehouse receipt and guarantees. Some of the more sophisticated risk management instruments were not applied, such as insurance through Weather-indexed risk-management products, futures and options markets (for hedging against price risk). There are a few such markets in Sub Sahara Africa. While these markets are still small in SSA, the South African Futures Exchange (SAFEX) is the biggest and oldest. However, commodity exchanges are still being created (e.g. in Ethiopia and Rwanda).

5.7. Summary of good practices in smallholder finance

Define "good practice" in terms of process
In view of the complexity of smallholder finance, it is difficult to capture this reality in terms of finance recipes or blueprint solutions. However, good practice can be defined in terms of the processes that stakeholders follow to arrive at workable solutions. This refers to (a) the preparatory process of farm finance programming, (b) risk-management strategies worked out among stakeholders, (c) outlining the finance strategy, (d) due diligence by the financiers, (e) financial product development and (f) financial analysis of agribusinesses to determine credit needs and viability.

The following guidelines could be extracted for the organisation of smallholder finance in this framework.

The preparatory process of farm finance programming

GP-1 Scoping and selecting
Smallholder finance may be preceded by a farm-finance programming exercise led by the PO, a financier or a chain actor. It starts with research on comparative options in order to select the crop, the (pilot) area, the participating farmers/POs, the chain actors, financiers and other service providers. The lead actor or facilitator should involve the financier(s) from the start in this process.

GP-2 Orchestration
Access to finance requires a preparatory process of consultation and negotiation in which stakeholders make commitments about collaboration to help improve smallholder production in terms of stable and premium pricing, improved agronomic practices, higher productivity and the adoption of sustainable farming. In the process, trust must be created based on shared value, shared risk, a voice for each actor and ownership of productive assets across the agricultural value chain [8].

[8] Formulation based upon elements of the Theory of Change diagram – Smallholder Finance Initiative - 2014

Photo by NpM, Platform for Inclusive Finance – Josien Sluijs

Photo by Bart Debruyne

Risk management

GP-3 Financial risk management
Smallholder finance builds upon the microfinance techniques of solidarity group lending (mutual guarantees) and the PO's capacity for client training, screening and monitoring. Asset-based lending can be applied to post-harvest credit, with self- liquidating credit arrangements in the value chain or warehouse receipt financing. Guarantee instruments can help financiers to gain experience in the sector and build creditworthiness for POs, processors or off-takers.

GP-4 Managing agricultural risks
While financial risk management primarily aims at limiting default risk expenses for the financier, there is considerable scope for eliminating the root causes of agricultural risk. Much can be achieved by exploiting all opportunities in the value chain for risk- mitigation measures in the areas of sustainable farming, Good Agricultural Practices (GAPs), farmers' organisations, market arrangements and viability enhancement. All this depends on the orchestration of stakeholders in the chain in which the PO performs a pivotal role. Because these mitigation measures benefit chain actors, POs, farmers and financiers, managing agricultural risks is a common goal for all. In order to implement these measures, non-financial services are needed in addition to financial services. Invariably this requires some form of subsidisation or grant financing as part of the total finance package.

Financial services

GP-5 Finance strategy
The financier in a farm finance programme needs to make a go/no-go decision based upon due diligence analysis that includes a risk analysis (taking into account the management of agricultural risks by stakeholders), the assessment of credit needs, a financial analysis and the requirements for an appropriate finance product. The FI must also decide whether to focus on pre-harvest finance, post-harvest finance or both.

GP-6 Pre- and post-harvest finance
Most smallholder's credit delivery by MFIs is limited to pre-harvest input finance. Yet for smallholders, post-harvest finance is just as crucial because it allows the off-taker, whether a PO or a private agribusiness, to pay farmers in cash upon the delivery of their crop. Without this form of finance, farmers may find themselves not being paid for up to one or several months, which amounts to "smallholder-finance-in-reverse". In such cases they effectively provide trade credit to the next actor in the chain. In order to avoid this anomaly and promote fair finance, post-harvest finance to the buyers of smallholder produce is equally vital.

GP-7 Hybrid finance structure
The combination of pre- and post-harvest finance implies that microfinance for smallholders is combined with SME finance for the PO or agribusiness. While in general microfinance and SME finance require different skills and professional specialisation, in the specific situation of smallholder finance the two may well be combined by one MFI if asset-based lending techniques are used (like the warehouse receipt method) to mitigate financial risks for the MFI.

GP-8 Due diligence
MFIs are not used to doing a full due diligence at the client level because they work with a standard set of eligibility criteria and conditions that can easily be verified. However, they need to do a full due diligence at the preparatory stage of the farm finance programming. Social lenders are used to doing a full due diligence at the client level, but their staff also needs orientation and training in the specific requirements for agri-finance. A standardised framework for due diligence, risk management and financial analysis for smallholder finance can serve both categories.

GP-9 Finance product development
Finance product development by the FI should be tailored to the needs of the smallholders concerned, this in the context of the farm finance programme that also addresses managing agricultural risks through non-financial services and agreements with chain actors.

GP-10 Financial analysis of agribusiness to determine credit needs
Due to generally low accounting standards in farming businesses and POs, accurate monthly cash flow statements are rarely available. Financiers and facilitators should be prepared to facilitate monthly cash flow projections as a basis for assessing their credit needs. Payment terms in trading contracts should not be taken at face value, but rather actual collection periods should guide the assessment of working capital requirements. Under-financing of the working capital needs of the PO invariably leads to involuntary financing by creditors, who, in the case of POs, are primarily the member-farmers.

5.8. Lessons learned for investors and social lenders

The above ten topics for 'good practice' guidelines, have been formulated in terms of processes for practitioners in Africa. The implications for investors and social lenders are as follows:

1. Facilitate preliminary farm finance programming
The practice demonstrated in the cases of NMP partners of investing time in preparing a new smallholder finance programme is considered highly beneficial to generating access to finance, stimulating comprehensive risk management and supporting the commercialisation process of smallholder agriculture.

2. Facilitate comprehensive management of agricultural risks
While modern instruments for managing agricultural risks – commodity exchanges, option and futures markets, crop insurance and tradable warehouse receipts – deserve wider adoption, they are still in development in Africa and inaccessible to much of the smallholder community. Yet the cases demonstrate that there are ample opportunities to mitigate agricultural risks in the chain. Investors and social lenders could stimulate their partner-FIs to adopt a more comprehensive understanding of agricultural risk management beyond the more limited financial risk management approach.

3. Facilitate and support new roles for partner financiers
Financiers of smallholder farming face several new challenges. First, they need to build up a minimum of expertise to deal with agricultural finance. Second, they have to revise the due diligence to accommodate a more comprehensive understanding of risk management and a more accurate assessment of credit needs. Third, they have to develop tailor-made financial products for the specific crop and market concerned. Fourth, they need to think of possibilities for engaging in "hybrid finance", both at the microfinance level (pre-harvest credit) and at the PO or agribusiness level. Alternatively, two different FIs can collaborate to serve the input and output finance components. Finally, a more pro-active role is required of staff in the development of farm finance programmes. Invariably, all this requires (external) support in staff capacity building.

Photos by Bart Debruyne

4. Hybrid finance implications for funding agencies
The need for both pre-harvest and post-harvest smallholder finance implies that the departments for microfinance and agribusiness finance should collaborate. It may also imply collaboration between a social lender and a (grant-based) investor in order to support microfinance development for smallholders. Hybrid finance creates new opportunities for partner identification. Exiting MF partners may suggest POs or Small and Medium Sized Enterprises (SMEs) for agribusiness finance, and existing agribusiness partners of social lenders may be invited to suggest MF institutions that finance their smallholder suppliers.

5. Stimulate and support financial product development for smallholder finance
Investors and social lenders may do so with their partner-FIs through staff training, coaching, exposure visits, etc.

6. Promote asset-based lending techniques for post-harvest finance
Investors and social lenders could coach their partner-FIs in the strength of asset-based lending (self-liquidating loans backed by stocks in a tripartite agreement with the seller and buyer of the produce or warehouse receipt mechanisms).

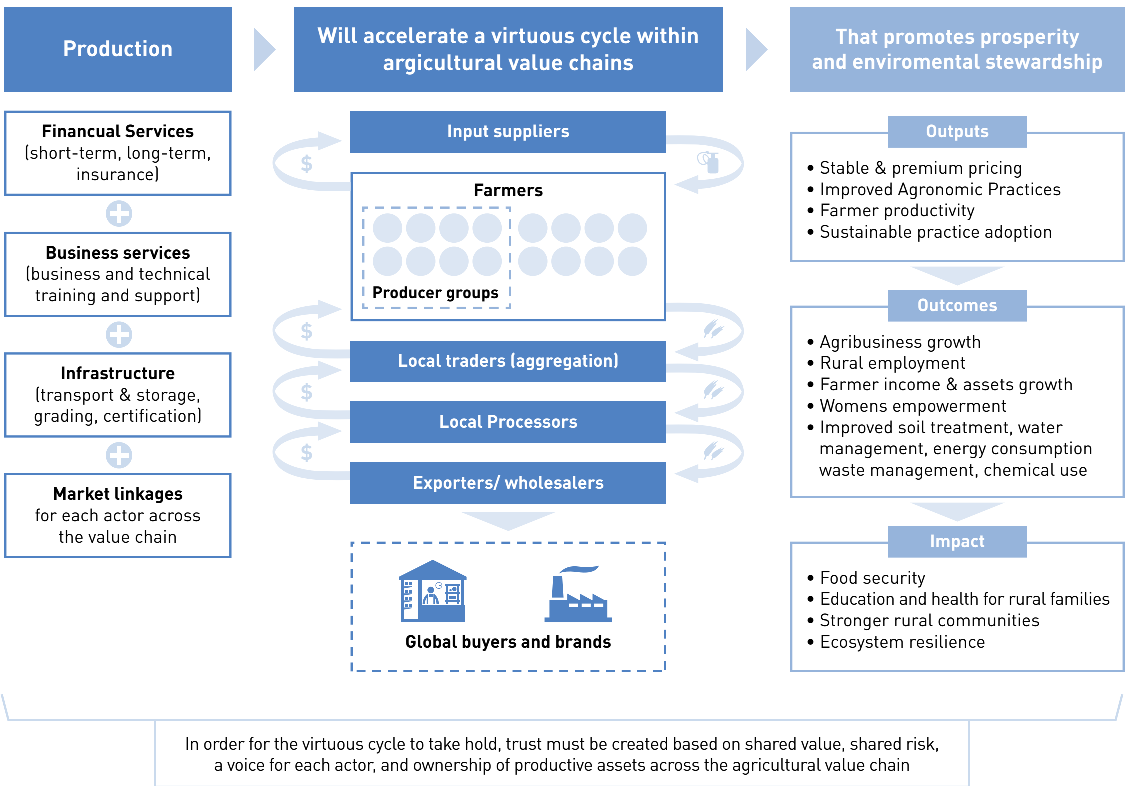
7. Credit needs assessment
Social investors must be aware of the risk of under-financing with respect to working capital finance to agribusinesses (see GP10 above). Tools for financial analysis could help POs and agribusinesses to develop a better understanding of the seasonal nature of their cash flow and could assist FIs in more accurately assessing credit needs.

8. The need for blended funding and investment
The modernisation and commercialisation of smallholder finance in Africa cannot be undertaken by social lenders and commercial finance only. Although coaching farmers and PO staff should be mobilised with the supply chain as much as possible, there are often tasks for professional facilitators and service providers that require initial grant investments. A fair combination of grant financing and debt financing is needed to achieve results.

9. The search for good practice
The 'best practice' guidelines for regular microfinance are not entirely appropriate in smallholder finance. It is necessary to also consider the emerging documentation on agribusiness finance and value chain finance. In view of the complexity of smallholder finance, good practice guidelines should focus more on the process of farm finance programming and joint risk management rather than serving as "prescriptions" for financiers on financial products and services. Good practice can be greatly supported by appropriate training materials and tools for practitioners.

10. Theory of change
The findings of the current study are fully consistent with a "Universal Theory of Change" in a recent publication of the Smallholder Finance Initiative (Dalberg 2014). In Figure 5.11, farmers and POs are shown in their connections with the chains actors and the service providers (including financiers).

"The right blend of inputs will accelerate a virtuous cycle within agricultural value chains that promotes prosperity and environmental stewardship. In order for the virtuous cycle to take hold, trust must be created based on shared value, shared risks, a voice for each actor and ownership of productive assets across the agricultural value chain."



Source: Smallholder Impact And Risk Metrics: A Labyrinth Of Opportunity, The Initiative for Smallholder Finance, Briefing 03, March 2014

Figure 5.11: Theory of change of the Smallholder Finance Initiative (2014)

About

NpM, Platform for Inclusive Finance

NpM, Platform for Inclusive Finance (NpM), promotes inclusive finance as a contribution to poverty alleviation in developing countries. The platform, established in 2003, brings together developing organisations, social investors, private foundations and commercial banks from the Netherlands. Together with the Dutch Ministry of Foreign Affairs, the 13 Dutch members share a commitment to expanding access to finance in underserved regions and anticipate the changing need in the sector to grow towards a responsible industry.

The members of NpM are active in over 90 countries. They support organisations that offer financial services to community-based organisations, cooperatives, non-governmental organisations, banks and other financial institutions. The NpM members also support various global initiatives in order for the industry to grow in a sustainable and responsible way.

The members of NpM have different fields of expertise and offer a broad range of financial services at each development stage of a microfinance institution (MFI).

NpM has several thematic working groups, of which one is on rural finance. The rural finance working group aims to build, share and exchange knowledge and case studies on rural finance. Not only on what is working well but also on what is not. The rural finance working group follows closely all other rural finance initiatives and working groups on similar and related subjects. It will coordinate efforts and make sure the work is complementary where possible. The members of the working group are: Cordaid, FMO, Hivos, ICCO, Oxfam Novib, Rabobank Foundation and ICCO Terrafina Microfinance (coordinator).

www.inclusivefinanceplatform.nl

npm platform for inclusive finance

AgriProFocus

AgriProFocus (APF) is a partnership with Dutch roots that promotes farmer entrepreneurship in developing countries with the aim of rallying together professionals, expertise and resources around a joint interest in farmer entrepreneurship. The APF network members are organisations and companies that gather, train, connect and provide inputs and credit to farmer entrepreneurs and producer organisations. The network operates both at a Dutch (-based) level and at a developing country level, the latter in so-called country networks. Currently APF has 13 country networks of which 12 in Africa and 1 in Indonesia.

The country networks a.o. facilitate the matching of financial institutions and farmers and for that purpose they have organised several finance fairs. NpM would like to connect to APF in order to know more of the challenges faced by farmers and farmer organisations to access MFIs and banks. Through APF and its country networks we can easily access their network of producer organisations, MFIs, banks and supporting organisations.

www.agriprofocus.com

AGRI PRO FOCUS

Food & Business Knowledge Platform

The Food & Business Knowledge Platform (F&BKP) is the gateway to knowledge for food and nutrition security. It is one of the five Knowledge Platforms initiated by the Dutch Ministry of Foreign Affairs. The F&BKP is an open and independent initiative where representatives from international networks and organisations of business, science, civil society and policy work together. Knowledge generation and sharing between main stakeholders, including stronger and new partnerships, are needed to improve relevance (focus and coherence) as well as efficient use of Dutch, local and international knowledge and research capacity.

Nearly one-eighth of the world's population suffers from chronic hunger. And the world's population is projected to reach nine billion in 2050. Thus, the demands on land, water and climate, as well as the supply of affordable and good quality food, are growing significantly. The F&BKP aims to stimulate the following long-term changes to increase food and nutrition security: coherent policy development and programmes supported by an efficient knowledge and research system; increased investments and collaboration from the Dutch private sector in Low- and Middle-Income Countries (LMICs) and thriving Small and Medium-sized Enterprises (SMEs) in inclusive agro-food value chains in LMICs.

The F&BKP has defined its activities based on three pillars:

1. Providing overviews, disseminating knowledge and inspiring professionals by presenting good practices and cutting-edge knowledge under the selected topics on the F&BKP Knowledge Portal.
2. Supporting knowledge activities of networks through sharing knowledge, co-creating knowledge, deepening existing knowledge and translating knowledge into policy and practice. For key themes several knowledge initiatives and studies are organised.
3. Preparing the scope of NWO-WOTRO's F&B Global Challenges Fund (GCP) and Applied Research Fund (ARF), and actively supporting research teams within these programmes to achieve impact on practice and policy.

The Food & Business Knowledge Platform has financed this research together with NpM and AgriProFocus.

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