

Tool 9 - Analyzing financing options

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Introduction: Financing Pro-poor Agriculture Value Chains

This supplementary tool provides guidance to Toolbook users to enable them to complete a preliminary analysis of the financial needs, challenges and opportunities of a given value chain. Toolbook users should also be able to assess the current situation and opportunities for agricultural value chain finance. In doing so, they should also be able to prepare a well-reasoned “business case” for commercial financing of a value chain by a formal financial institution. Much of the information needed to prepare that business case will be gathered in Tool 1 and Tool 2 in the M4P Toolbook. This Tool will pull together the key elements that are important for a financial institution like a commercial bank or donor¹.

Agriculture needs capital, in the same way that other economic activities require capital to grow and develop. Agriculture presents some unique characteristics that impact how agriculture and agribusiness are financed. The kind of value chain analysis of agricultural crops and commodities supported by the M4P Toolbook is also very useful for considering how best to finance agriculture and agribusiness. In this section, we present a tool that will help in identifying appropriate options for financing pro-poor value chains.

Basic Concepts and Definitions

First, some of the key terms and concepts related to finance, financial products, and financial institutions that are relevant for the agricultural sector are defined:

- **Rural finance** – Rural finance is the provision of financial services outside of urban areas. It includes payment products, savings and deposit products, credit (loans), insurance, etc. Rural financial services are offered by both formal and informal providers.
- **Agricultural finance** – In contrast to rural finance—which relates to *where* the finance is provided—agricultural finance refers generally to the provision of loans or credit to farming and/or agribusiness enterprises, where the risk of the loan is agricultural risk, and the purpose of the loan is to support agriculture or agricultural-related activity.

¹ *Note: It is assumed that people using the toolbook have a basic understanding of financial concepts but may not possess a high level of understanding about things like financial risk or credit underwriting. It's further assumed that they will not be experienced in thinking through or planning for the efficient financing of the value chains that they are analyzing.*

- **Agricultural value chain finance** – Though agricultural finance is provided to value chain actors in specific agricultural crop/commodity value chains, the term “agricultural value chain finance” as it is currently used refers to a financial arrangement involving two or more chain actors in a structured financing program, often facilitated by a formal financial institution like a commercial bank. For example, a bank may provide trade finance to a large trader, who is able to provide input credit to farmers, or cash to buyers-collectors to purchase product from farmers. We will explore the concept of agricultural value chain financing in more detail below.
- **Formal financial institutions** – Formal financial institutions (FIs) are providers of financial services that are established under a country’s relevant financial laws and regulations, and subject to supervision, usually by government regulatory authorities. Formal FIs include development banks, commercial banks, microfinance institutions (MFIs), cooperatives, finance companies, pawn shops (some of these FIs will be discussed further below). In contrast, lending by formal financial providers is almost always “asset-based”, which means loans are secured by collateral like property. Asset-based lending implies a much more elaborate and prolonged process of analysis and evaluation based on the review of documents (business plans, financial statements, collateral) prior to loan approval.
- **Informal financial providers (“informal finance”)** – informal providers of financial services, most notably informal lenders, do not hold a license to provide credit. Informal providers can be individuals (“moneylenders”) or companies, like a large agro-processing company or an agricultural trader. In contrast to lending by formal FIs, informal finance is highly “relationship-based”, that is, lending takes place based on existing relationships of trust and power. Informal lending is often not subject to formal requirements, like providing collateral, documents, or even signing formal contractual agreements.
- **Supplier finance** – The provision of credit within a value or supply chain between value/supply chain actors is often referred to as “supplier finance”. A loan provided by an agro-processing company to a trader to finance that trader’s collection of harvested crops for the agro-processor is an example of supplier finance. Another common example is a loan by a trader to a farmer, often made “in-kind”, that is, in the form of seeds and fertilizer, to be repaid after the crop is harvested and the farmer delivers either cash or an equivalent value of his crop to the trader. Supplier finance involves actors that have a long-standing business relationship and trust each other.

The Importance of Informal Finance in Agriculture

It is important to note that in both developed and developing countries, informal financial providers are highly active in the agricultural sector. Informal finance is not measured or captured by official statistics, but it occurs up and down many (if not most) agricultural value chains. Experts agree that informal financial providers are at least as

important as formal financial providers in financing agriculture, particularly in providing production credit and working capital for crop collection.

As noted above, a common form of informal finance in agriculture is credit provided by small-scale traders to smallholder farmers. The loans are mainly for farm inputs, like seed, fertilizer, and in some cases, pesticides. Traders often provide these inputs at a “markup” on their cost, that is, they add a margin to the cost of the inputs that essentially represents an implied interest rate. Farmers—particularly poorer farmers—engage in these kinds of transactions because often they do not have cash to pay for high quality inputs when they need them, i.e., at planting time, and they have few other ready sources of credit. These transactions often involve an agreement (explicit or implicit) that the farmer will sell to the trader who provided them the credit when harvest time arrives.

At harvest time, small traders themselves may be receiving loans from larger traders and agro-processors who use the small traders to collect products from farmers for delivery to processing operations. These informal systems are often criticized as being “exploitative”, but often farmers and small traders have no other source of credit than their fellow chain actors. These informal financing systems work on the basis of trust, where providers of credit are in a good position to evaluate the character and capacity of the borrowers to repay. There is risk involved in providing credit, which we will discuss in more detail below.

The information and trust inherent in these value/supply chain relationships are hard for formal financial providers to duplicate, which is one reason why informal finance is so prevalent in agriculture. However, there are ways in which formal financial providers can enter a value chain and take advantage of these existing relationships to provide more affordable alternatives to informal lending, and their generally high implied interest rates.

The main point about informal finance is that it is most likely already happening, and therefore requires no intervention to promote further. The kind of value chain interventions that will be facilitated by this Toolbook lead naturally to considerations of how to promote a more formal supply of agricultural finance—and other pro-poor financial products—by formal financial institutions. We need to briefly consider key characteristics of the different kinds of **formal financial institutions** engaged in, or interested to engage in, agricultural finance.

Some Suggested “Principles of Agricultural Finance” for Smallholder Farmers

In light of the foregoing, we suggest a set of general principles related to agricultural finance worth thinking about. When considering how best to facilitate financing of agriculture, particularly how to provide for the financing needs of smallholder farmers, one should:

- ***Be agnostic about the source of credit for agriculture or agricultural activities.*** Credit can flow efficiently from both formal and informal sources, and

often informal sources like suppliers understand the credit requirements of farmers better than bankers.

- ***Start from the market—the demand side—for the crop/commodity.*** When looking to assist smallholder farmers, one can focus too much on production-related issues. Often the temptation is to promote a crop or commodity without first properly evaluating market demand. The most important thing to think about when working with smallholder farmers is the market demand for the crop that the farmer is growing or wants to grow. It is essential to ask whether the farmer can grow the kind of crop that the market really wants—including meeting the latest quality standards. Also, it is essential to identify the likely buyers of that crop; the more buyers, the better.
- ***Be mindful that lending is risky.*** Banks and other formal financial providers are interested in clients who can repay loans based on the cash flow from their economic activities—not serving the poor per se or supporting agricultural livelihoods. Often observers complain that “banks don’t want to lend to small farmers”, but it is not unreasonable (as well as very commonplace) for a formal FI to be hesitant to lend to farmers. Before trying to convince a reluctant financial institution to lend to a farmer, ask yourself, “Would I be willing to finance this activity with my own money?”
- ***Understand that lending to agriculture is a specialization.*** Most banks or FIs will not be interested to engage in agricultural finance, let alone “pro-poor” agricultural finance. In fact, in any given emerging market country, there may only be a handful of banks, MFIs, or other financial providers interested in financing agriculture. Banks prefer lending to industries whose risks they understand, or where there is collateral to support their lending. Also, many FIs do not have the rural “footprint” that encompasses agricultural activity—they are often clustered in urban areas. It is possible to help FIs overcome their lack of skill or experience in agricultural finance, but it is worthwhile spending time identifying which formal financial providers are already comfortable with agricultural-related risk and that are already servicing rural areas.
- ***Appreciate that financial services include more than just credit.*** Historically there has been an excessive emphasis on farmers’ need for credit, and until now not enough emphasis on financial inclusion. Credit is a financial obligation of the borrower that has to be repaid. Providing credit to farmers for agricultural production or other purposes means increasing the financial risk of that farming household. Farmers, even poorer smallholder farmers, are often financially conservative and do not want to borrow if they can avoid it. Having access to multiple financial services—being “financially included”—can help poorer smallholders to better deal with multiple economic risks. Access to savings deposit services means having a safe place to keep their money when they need it—potentially reducing their need to borrow, for instance, for crop production inputs. Access to low cost payments or transaction services means people can

more cheaply receive money from relatives living in urban areas—or even in another country.

- **Take a financial inclusion approach.** Smallholder farmers, as well as all other rural dwellers, be they rich or poor, male or female, benefit by having access to a variety of financial products. While credit may be useful and very important for smallholders, savings, payment facilities, and other products, like insurance (life, health, agricultural²), also provide a high degree of utility for consumers. All other things being equal, if a supplier and a formal financial institution are both offering credit to a smallholder on the same terms, a farmer is better off receiving credit from a bank or other formal financial provider that is also willing and able to provide other financial products to that farmer. If you want to be pro-poor, you should try to follow the financial inclusion approach to agricultural finance.
- **Be patient while FIs develop competence and confidence.** It takes a long time—measured in years—to develop a lending business focused on farming and agricultural activity. Generally, financial providers develop expertise in one or two crop / commodity value chains, and then apply what they have learned and adapt their lending approaches to new value chains through a step-by-step process. It can take more than one year to pilot a loan product for a single value chain, with its own unique growing cycle, sets of value chain relationships, and other unique characteristics. Building a sizeable book of lending to agriculture, starting from zero, can take a bank more than five years to achieve the kind of size and scale that would be considered commercially interesting. If you are working with a bank or other kind of FI to develop agricultural lending, you should be prepared to provide at least 2 years of support just for the pilot phase.

The Formal “Supply Side” of Agricultural Finance

Figure 1. below helps to illustrate the market for agricultural finance supplied by formal financial institutions.

² In this Toolbook we will not touch upon agricultural, crop or livestock insurance in detail. There are many interesting insurance products that have been created to help manage the risk of agricultural activity. Many emerging market countries have state-supported agricultural insurance programs; in quite a few places insurance pilots are testing innovative products and business models. There is certainly an interesting discussion to have about the different kinds of insurance cover available for agriculture, but that discussion would take a significant amount of space, and likely be irrelevant for many readers. In our References section below, we include a short list of recent articles on agricultural and agricultural-related insurance to facilitate individual study of the issue.

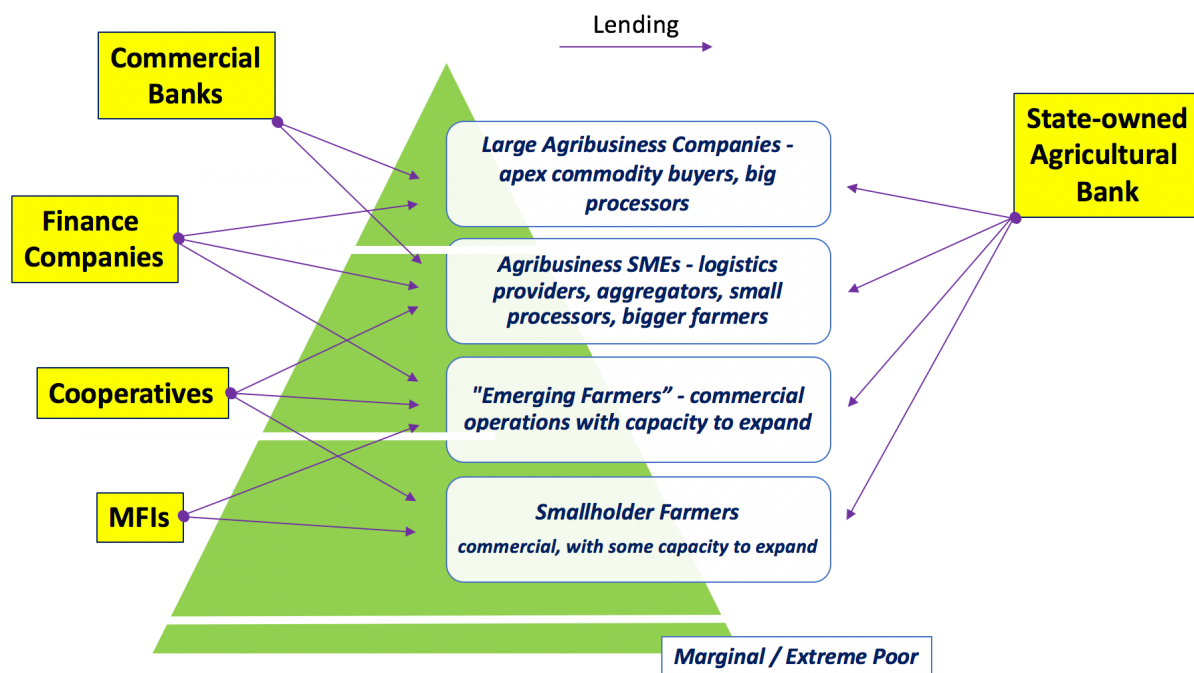


Figure 1. The market for formal agricultural finance

The pyramid in Figure 1. shows the distribution of different kinds of enterprises, with a relatively small number of large enterprises at the top of the pyramid; smallholder farmers at the bottom of the pyramid represent the largest number of potential clients for formal financial institutions in most countries. In between the large agribusiness companies and smallholder farmers are small and medium-sized agribusiness companies, larger farmers, and medium-sized farmers often referred to as “Emerging Farmers”. Emerging farmers differ from smallholders in being more commercially oriented, having larger landholdings, and possessing more technical capacity to expand their production, adopt new methods, or experiment with new crops. At the very base of the pyramid are the most marginal, i.e., poorest farmers. These farmers have limited commercial prospects and therefore are generally not a viable customer segment for formal financial institutions providing agricultural finance.

It is important to understand some of the essential characteristics of different kinds of FIs to understand how to approach them with a business case for financing a specific agricultural value chain. We recognize that every country is different and that countries have unique legal and regulatory environments and conditions for agricultural finance, as well as varying sets of formal financial institutions serving agriculture. Table 1 below lays out the different kinds of approaches to providing agricultural finance that different FIs are commonly observed to take.

Table 1. Different financial institution approaches to agricultural finance

<p>1. State-owned Agricultural Banks</p>
<ul style="list-style-type: none"> • Mandate: established by governments to serve the agricultural sector broadly; often have an official “pro-poor” mandate to work with farmers. • Client Segmentation: often focused on smallholders, but in many cases used to finance preferred government support programs for specific crops. • Key Characteristics: can be highly bureaucratic and inefficient, and slow to adopt new methods; tend to rely on paper-based applications and complicated disbursement methods; rarely employ digital technologies in product design/delivery. • Preferred loan types: <ul style="list-style-type: none"> ✓ Production Loans to farmers (often at subsidized interest rates) to finance specific crops with short-term loans repayable at harvest; ✓ Investment Loans to agribusinesses for upgrading plant and equipment, e.g., milling or other forms of agro-processing (also at preferential or subsidized rates); ✓ Equipment Loans for farmers to purchase tractors, other needed equipment, like irrigation kits. • Other Financial Products: in some cases, provide payment/transaction services and may take retail deposits; some development banks offer crop insurance (usually highly subsidized).
<p>2. Private Commercial Banks</p>
<ul style="list-style-type: none"> • Mandate: maximize profitability through the provision of a variety of financial services, which means taking and safeguarding deposits and placing those funds with high-quality borrowers. No “pro-poor” mandate; subject to high degree of (costly) regulation to safeguard customer savings and protect the payment system. • Client Segmentation: often focused on larger agribusinesses due to the cost efficiencies inherent in serving fewer, larger clients and the ease of evaluating risk and lending on a secured (collateralized) basis. May serve agribusiness SMEs and Emerging Farmers through branch networks; rarely reach smallholders due to lack of information, as well as risk and operational cost considerations. • Key Characteristics: more selective about VCs they are willing to finance; prefer certain larger VCs with lower risk characteristics. Look for ways to provide multiple products to preferred client segments to boost profitability. Increasingly open to digital delivery methods and emerging financial technologies and innovative models (e.g. credit scoring) that can lower costs and risks.

- **Preferred loan types** (all “asset-based”, requiring extensive documentation and generally secured by collateral):
 - ✓ **Working Capital Loans** to agribusiness to finance receivables and inventory with an “asset-based approach” (lend against security of collateral);
 - ✓ **Investment Loans** to agribusinesses for upgrading plant and equipment, e.g., milling or other forms of agro-processing
 - ✓ **Equipment Loans** for farmers to purchase tractors, other needed equipment, like irrigation kits;
 - ✓ **Production Loans** for larger farmers
- **Other Financial Products:** usually provide payment/transaction and savings/deposit services; may offer crop insurance on an agency basis (but do no insurance underwriting).

3. Finance Companies

- **Mandate:** maximize profitability through the provision of a loans to agribusiness. No “pro-poor” mandate. Do not take deposits or offer payment services so subject to much less regulation. Able to take more risk, and usually have much higher cost of funds than banks or MFIs, making it essential to focus on profitable value chains.
- **Client Segmentation:** often focused on larger agribusinesses, though may serve smaller agribusinesses and large to medium sized farmers, through fairly standardized products. Operate through branch offices, but rarely reach smallholders due to lack of information and risk and operational cost considerations, except when engaged in value chain financing arrangements with large agribusiness off-takers.
- **Key Characteristics:** highly selective about VCs and often specialized in a few commercial VCs that they understand extremely well. May employ credit scoring or be open to digital approaches. Usually open to value chain financing arrangements that offer opportunities to save costs and lower risks.
- **Preferred loan types** (all “asset-based”, requiring extensive documentation and generally secured by collateral):
 - ✓ **Working Capital Loans** to agribusiness to finance receivables and inventory with an “asset-based approach”;
 - ✓ **Investment Loans** to agribusinesses for upgrading plant and equipment, e.g., milling or other forms of agro-processing;
 - ✓ **Equipment Loans** for farmers to purchase tractors, other needed equipment, like irrigation kits;
 - ✓ **Production Loans** for larger farmers and emerging farmers, often linked to offtake agreements with agribusinesses.

- **Other Financial Products:** may offer insurance products, especially for agricultural equipment.

4. Cooperatives

- **Mandate:** provide affordable financial services to cooperative members, including in many cases agribusinesses and farmers. No “pro-poor” mandate *per se*, but support inclusive approaches to expanding membership. Take deposits only from members and may also offer payment services to members. Member deposits are main source of funding for loans. Subject to less strict regulation and may have a dedicated regulator.
- **Client Segmentation:** focused on membership, which often does not include large agribusiness members. Members tend to be agribusiness SMEs and emerging farmers; may include smallholders. Larger cooperatives may have branch offices.
- **Key Characteristics:** smaller cooperatives often have non-professional management and can suffer from lack of technical capacity that hinders their ability to grow and innovate. Often specialized in a few VCs in which members are clustered—this may increase credit risk due to lack of diversification. May employ credit scoring or be open to digital approaches, though often do not (or are unable) to invest in technology. Usually open to value chain financing arrangements that benefit members.
- **Preferred loan types** (generally “asset-based”, though documentation requirements may be less than those of a banks or finance company. Due to need to protect members’ deposits, generally make loans secured by some form of collateral):
 - ✓ **Working Capital Loans** to agribusiness to finance receivables and inventory with an “asset-based approach”;
 - ✓ **Investment Loans** to agribusinesses for upgrading plant and equipment;
 - ✓ **Equipment Loans** for farmers to purchase tractors, other needed equipment, like irrigation kits;
 - ✓ **Production Loans** for farmers and emerging farmer members, which may include smallholders.
- **Other Financial Products:** may offer insurance products, especially for agricultural equipment.

5. Micro Finance Institutions (MFIs)

- **Mandate:** provide microloans to micro and small enterprises (MSEs) and the working poor. Generally, MFIs have a “pro-poor” mandate, but due to the requirements of sustainability, they often charge very high interest rates to cover the higher administrative costs of serving many clients with very small loans. Depending upon a country’s financial regulations, MFIs may offer savings deposits and some payment

services. Subject to less strict regulation (if they are not taking customer deposits) and may have a dedicated regulator.

- **Client Segmentation:** focused on bottom of the pyramid as main client segment, though some larger more commercially-oriented MFIs move “up market” to serve larger businesses (SMEs vs. MSEs). Traditionally, provide credit for micro and small traders in urban areas, but it is not uncommon to find MFIs with an explicit mandate to serve smallholder farmers in areas in which they operate. Customers are served through a network of branch offices.
- **Key Characteristics:** to keep costs down, MFIs rely on “cookie cutter” loan products that have a fairly rigid repayment structure that combines frequent principal and interest payments, which is more suited to urban small traders with steadier income streams. Traditional MFI lending methods do not match well with the “lumpy” cash flow characteristics of agriculture (i.e., prolonged periods with no income). MFIs rarely undertake industry or agriculture VC analysis, relying heavily on well-tested underwriting approaches aimed at low income people. May employ credit scoring and be open to digital approaches, though MFIs are laggards in adopting fintech approaches. Do not usually participate in value chain financing arrangements due to lack of familiarity with VCs and because they have no customer relationships with larger chain actors.
- **Preferred loan types** (can be “asset-based”, though documentation requirements are usually much less than those of a bank or finance company. May allow unsecured lending, take group or personal guarantees, and generally are more flexible on the nature of collateral that can be used to secure loans):
 - ✓ **Short-term Working Capital Loans** to MSEs that can be “multi-purpose”, that is, it can be used for financing inventory needs of micro enterprises, supporting production of a good for sale (including agricultural goods, like chickens, eggs, or vegetables), or for “income smoothing”. This type of loan is either secured by a group guarantee or in many cases unsecured by formal collateral;
 - ✓ **Small Investment Loans** for purchasing fixed assets needed by a micro business;
 - ✓ **Equipment Loans** for small-scale farm equipment, including backpack sprayers, and even small tractors in some cases for larger smallholders;
 - ✓ **Production Loans** for smallholder farmers that finance a large percentage of production costs, and that allow repayment post-harvest.
- **Other Financial Products:** may offer microinsurance products, mostly “credit life”.

Selecting value chains for financing

Often a first step is to identify value chains where agricultural value chain financing provides opportunities for financial institutions, and where financing can overcome major constraints to investment that are impeding productivity improvements and increased competitiveness.

A set of criteria and guiding questions have been identified that can be used to systematically evaluate agricultural value financing opportunities (Table 2).

Table 2. Criteria for evaluating agricultural value chain financing opportunities.

1. Scale and Growth

- i. Is the value chain (VC) substantial enough to support an attractive level of transaction volumes / total credit exposure for a financial institution?
- ii. Would the average potential loan size to VC actors (value chain client segments) be attractive to a financial institution?
- iii. Does the VC have stable-to-good growth prospects?

2. Level of Organization

- i. Are the primary producers organized, i.e., are they members of effectively functioning groups or is there a prospect of their becoming well organized?
- ii. Are there strong apex buyers with a track record of substantial buying?
- iii. Are the distribution and marketing systems within the VC relatively efficient and well developed?

3. Risk

- i. Are price and production volatility low enough that these risks are acceptable?
- ii. Are there mechanisms for contract, off-take and/or other forms of pricing agreements?

4. Bankability

- i. Do VC actors who are potential customers of a financial institution own collateral that can be readily and legally pledged to secure loans?
- ii. Can the creditworthiness of VC actors, e.g., primary producers, be enhanced by use of alternative data (e.g., payment/transactions data, other behavioral data)?
- iii. Is there scope for the use of credit guarantees or partial credit guarantees to facilitate lending to primary producers?
- iv. Are there additional financing opportunities in the VC, e.g., working capital and equipment loans, factoring, cash management, and other "cross-selling" opportunities?
- v. Does the geography of the VC overlap with the financial institution's branch network?

5. Development Impact

- i. Does the VC contain significant numbers of low-income, women, ethnic minorities or other disadvantaged primary producers or VC actors that lack access to affordable financial services?
- ii. Would the availability of affordable VC-related financial products significantly benefit low-income, women, ethnic minorities or other disadvantaged primary producers or other VC actors?
- iii. Would an intervention in the value chain create the potential for positive employment and/or income impacts for low-income, women, ethnic minorities or other disadvantaged people?

Identifying financing opportunities in value chains

There are two lenses through which financing opportunities can be assessed. From an inclusive development perspective, the main questions concern the critical finance problems and barriers faced by farming households, the poor, by women, SME firms or other target groups? What problems are impacting the competitiveness of these farmers and firms, as well as the whole value chain? How can innovative finance solutions improve this situation?

It is also important to take the perspective of the financial provider, who will only be interested in selecting the most commercially viable—the most “bankable”—value chains and upgrading opportunities, while at the same time managing the risk of that lending. This requires thinking more like a banker. Unless you are able to engage the FI on their own terms, using their own vocabulary, it will be very difficult to convince them to provide financing to a selected value chain. This requires a developing convincing “business case” for financing. Financial institutions need to be convinced that the risks in that value chain are manageable, and that the selected value chain offers an excellent opportunity for doing profitable business.

The previous section has described the key agricultural finance principles and business approaches taken by potential financial providers. The following steps provide a guide to identify and promote pro-poor approaches to financing agricultural value chains.

Step 1 – Map the financial relationships and flows in the value chains

This step builds on the value chain map developed in Tool 2. It maps the financial institutions and the flow of money and finance parallel to the input and commodity flows in the chain.

Sub-steps include:

- Map and characterise the formal and informal financial institutions and service providers in and around the value chain. The typology of financial institutions in agriculture finance described above can be used.
- Map the flow of payments associated with exchange of value chain products between buyers and sellers (including trade credit)
- Map the loans, leases, grants and guarantees between actors – informal and formal, internal and external
- Identify points along the chain where financing issues constraint value chain performance, or there are opportunities for improvement

An illustrative example of mapping finance flows in the value chain is shown in Figure 2. below.

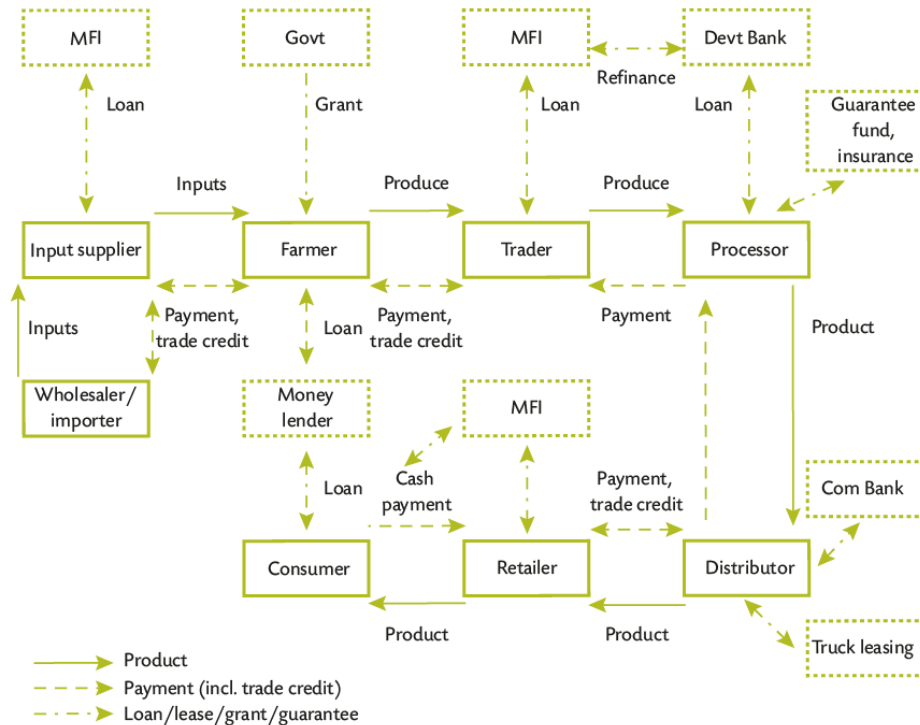


Figure 2. Mapping finance flows in the value chain³.

Step 2 – Define the market opportunity (“Market sizing”)

This step also draws on market information and analysis from Tool 1 and Tools 2. Here the size, value, growth and potential of the market and its segments is assessed. The geographical “footprint” of the value chain markets and segments are described. Researchers and FI’s need to understand the market situation and dynamics in relation to intra and inter-seasonality of production and prices, exposure to external shocks and risks and the current and potential share of domestic and export market. Risks can include production risks, supply risks, finance risks, marketing risks, climate risk and price risk.

Step 3 – Analyse the financial situation and needs of value chain actors, and identify financial risks

This step characterises the financial situation and needs of value chain actors and firms at each process level and identifies financial risks. Again, this step draws on key information collected about different groups, either households and value chain firms in Tool 2, 5 and 6.

³ R. Jessop, B. Diallo, M. Duursma, A. Mallek, J. Harms and B. van Manen. *Creating Access to Agricultural Finance. Based on a horizontal study of Cambodia, Mali, Senegal, Tanzania, Thailand and Tunisia.* Agence Française de Développement, July 2012, <https://www.afd.fr/en/ressources/creating-access-agricultural-finance-based-horizontal-study-cambodia-mali-senegal-tanzania-thailand-and-tunisia>

An understanding about the financial and livelihood situation of households and firms should be developed. This requires characterizing financial and physical assets, debts, savings, sources of on-farm and off-farm income and cash-flow. The characterization should also consider the livelihood priorities and strategies of households, the financial decision-making roles of men and women, perceived risks and current attitudes and practices in relation to credit, saving, loans and insurance. It is particularly important to understand the finance related reasons that constrain households and firms from investing in or adopting innovations that can upgrade their competitiveness in the value chain.

It is also helpful to gather information that helps understand the credit worthiness of potential borrowers is also helpful. This includes the “five C’s”: **character**, the persons credit history or other predictable indicator of reliability to repay the loan; **capacity**, the persons debts in relation to income; **capital**, the amount of money or other assets the person has; **collateral**, the assets that can be used as security for the loan, and **conditions**, the amount and purpose of the loan, the business’s agroclimatic suitability and proximity to markets.

It is especially important to identify opportunities for increasing women’s financial inclusion, as women disproportionately experience poverty, often due to unequal divisions of labour and a lack of power and control over economic resources⁴. This will require paying special attention to gender-based barriers to financial inclusion outlined in Table 2.

Table 2. Gender-based barriers to financial inclusion.

Demand Side Barriers	Supply Side Barriers	Legal & Regulatory Barriers
Lack of bargaining power within the household	Inappropriate product offerings	Account opening requirements that disadvantage women
Concentration in lower-paying economic activities	Lack of gender-specific policies and practices for product design and marketing	Barriers to obtaining formal identification
Competing demands on women’s time related to unpaid domestic work	Inappropriate distribution channels	Legal barriers to owning and inheriting property and other collateral
Lack of assets for collateral		Lack of gender-inclusive credit reporting systems
Lack of formal identification		
Reduced mobility due to time constraints or social norms		
Lower rates of cell phone ownership among women, needed to access many digital products		

Source⁴.

⁴ K. Holloway, Z. Niazi and R. Rouse, *Women’s Economic Empowerment Through Financial Inclusion. A review of existing evidence and remaining knowledge gaps*. Innovations for Poverty Action. March 2017. <https://www.poverty-action.org/sites/default/files/publications/Womens-Economic-Empowerment-Through-Financial-Inclusion.pdf>

For characterizing private sector firms, a typology based on the stage of financing for different sized firms can help tailor support mechanisms around most pressing needs⁵. For example, Table 3 presents a summary of types and size of investments, the nature of funds, the platform, and debt instruments required for typical early stage SMEs, late SMEs and large enterprises in Myanmar.

Table 3. Typology for characterizing private sector agribusinesses based on stage of financing

	EARLY STAGE SMES	LATE STAGE SMES		LARGE ENTERPRISES
	Preparing	Investing		Facilitating Capital Projects
	Incubating			
	“Seed”	“Venture”	“Growth”	“Facilitating Capital”
<i>Types of investments</i>	<ul style="list-style-type: none"> • Farm Service Centres • Seed company start-up • Small warehouse service • Equipment start-up • Cooperatives/unions 	<ul style="list-style-type: none"> • Pulse packaging/trading • Irrigation • Seed company • Rice mill start-up • Mechanisation services • Farmer extension service 	<ul style="list-style-type: none"> • Packaged good exporter • Rice mill expansion • Food quality laboratory • Warehousing and logistics provider • Seed company 	<ul style="list-style-type: none"> • National distributor • Fertiliser blending and retailing • Large-scale seed company • Textile mills
<i>Platform</i>	<ul style="list-style-type: none"> • Incubator program 	<ul style="list-style-type: none"> • Agri venture fund 	<ul style="list-style-type: none"> • Impact investment fund 	<ul style="list-style-type: none"> • Capital facilitation
<i>Estimated investment-ready companies</i>	• ~100	• ~10	• ~5	• ~2-5
<i>Investment size</i>	• \$25-50K	• \$500K-1M	• \$1-3M	• \$30-50M
<i>Nature of funds</i>	• Grant	• Philanthropic funding as significant minority investor (20-49%)	• Philanthropic funding as minority investor (20%)	• Private equity, strategic corporate investment
<i>Debt instruments required</i>	• First-loss bank loan guarantees (1:2 cover)	• First-loss bank loan guarantees (1:10 cover)	• First loss bank loan guarantees (1:100 cover)	• No risk-sharing needed
<i>Example agribusinesses</i>	<ul style="list-style-type: none"> • Genius Coffee • Bayin 	<ul style="list-style-type: none"> • Myanmar Innovative Life Sciences • Proximity Designs 	<ul style="list-style-type: none"> • Star Alliance Rice Mill • Chin Corp 	<ul style="list-style-type: none"> • MAPCO • Aya Seed

Source⁵

Step 4 – Match the needs to types of financial products, innovations and appropriate financial institutions

This step involves identifying possible financing products, options and innovations needed by value chain actors and groups. These needs will often be in relation to a specific upgrading opportunity, investment or intervention that is constrained by financing. This could be trade credit for purchasing fertilizer and hybrid seeds, equipment loans for new machines, investment loans for land, livestock or constructing a new packing and processing facility.

⁵ Business for Development and Rogers MacJohn, *Myanmar Private Sector Agribusiness Landscape Analysis: Rice and Pulses*. Strategic Insights. ACIAR Small Research Activity. AGB-2018-125. February 2019.

Various financial instruments used in agricultural value chain financing can be grouped into five categories (Table 4).⁶ This step requires identifying financing instruments and innovation options, identifying the value chain actors involved and the likely banks or financial service providers.

Table 4. Categories of financial instruments commonly used in agricultural value chain financing

Category	Instrument
Product financing	<ul style="list-style-type: none"> • Trader credit • Input-supplier finance • Marketing and wholesale company finance • Lead-firm financing
Receivables funding	<ul style="list-style-type: none"> • Trade-receivables finance • Factoring • Forfaiting
Physical asset collateralization	<ul style="list-style-type: none"> • Warehouse receipts finance • Repurchase agreements • Financial leasing (lease-purchase)
Risk mitigation products	<ul style="list-style-type: none"> • Insurance • Forward contracts • Futures
Finance enhancements	<ul style="list-style-type: none"> • Securitisation instruments • Loan-guarantees • Joint-venture finance

Source⁶

Step 5 – Define potential entry points and opportunities for agricultural value chain financing

This requires the following sub-steps:

- Identify the technical upgrading solutions and opportunities in the value chain, including the potential investment and operating costs and income improvements;
- Identify the finance instruments or products needed to overcome financing barriers to upgrading;
- Identify who are key actors and stakeholders involved. Identify who are the target group of farmers or firms for financing and estimate how many there are, where are they located. Also identify other key actors in the chain (e.g. larger traders, dealers, input suppliers, processors, or lead firms), and the potential financial institutions;
- Analyse and compare financing options, their relative strengths, risks and costs of financing for each level of participant in the chain; and

⁶ C. Miller, *Agricultural value chain finance strategy and design*. Technical Note. IFAD. November 2012. <https://www.ifad.org/documents/38714170/39144386/Agricultural+value+chain+finance+strategy+and+design.pdf/1ae68ed6-4c3c-44f4-8958-436e469553bb>

- Identify other innovations that can reduce the costs and risks of value chain financing and improve service, e.g.
 - **Process innovations** e.g. better business models to reduce transaction and application costs
 - **Financial innovations** e.g. growing use of interlinked supplier-buyer-producer-bank financial arrangements to reduce cost and risk
 - **Technological innovations** e.g. applications of mobile banking, mobile technical support, digital networks, and innovative credit scoring models
 - **Policy innovations** e.g. government and institutional policies supporting more competitive and efficient financial sector services

Linked innovations to financing may include: in-kind provision of inputs/vouchers; asset based collateral; bundling financial services with technical support; receipt based collateral, field force networks; offtake agreements; farmer groups; technical assistance and training; digital or mobile data collection; and data consolidation and analytics.

The suitability of the credit and financing products or models to target group should be evaluated. A principle of “do no harm” should be applied to all possible financing innovations. The suitability of the credit or financial service product or model to the financial service provider and other intermediaries should also be assessed.

Step 6 – Formulate a Business Case for financing selected value chains

This step involved developing a detailed business case for agricultural value chain financing interventions, including key service providers, and risks and weaknesses. This includes assessing the number of potential customers, the size and number of loans, the opportunities to bundle other products, the transaction cost of assessing, disbursing, and collecting the loan and possible risks.

The following questions should be considered: How strong is the business case for the intervention, practice or innovation requiring credit? What is the likely adoption? What is the likely return on investment and outcome?

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