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USAID Financial Services Implementation Grant Program Learning Network

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MANUAL

WOCCU Value Chain Finance Implementation Manual

Increasing Profitability of Small Producers

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Abstract

This document is a guide for financial institutions, development finance organizations, and donors interested in gaining a better understanding of value chain finance and how to integrate it into their product mix. It is based on WOCCU's award-winning program in Peru and its implementation with six partner credit unions. This manual presents a basic model for implementing value chain finance, including how to initially assess the potential for a value chain finance initiative, as well as the specific procedures to put one in place.

About WOCCU

World Council of Credit Unions (WOCCU) is the global trade association and development agency for credit unions. WOCCU promotes the sustainable development of credit unions and other financial cooperatives around the world to empower people through access to high quality and affordable financial services. WOCCU advocates on behalf of the global credit union system before international organizations and works with national governments to improve legislation and regulation. Its technical assistance programs introduce new tools and technologies to strengthen credit unions' financial performance and increase their outreach.

Worldwide, 54,000 credit unions in 97 countries serve 186 million people. In 2008, WOCCU's technical assistance programs reached 6.5 million people in 16 countries. To learn more about WOCCU's impact around the world, visit www.woccu.org.

About SEEP

The SEEP Network (www.seepnetwork.org), founded in 1985 and headquartered in Washington, DC, is an association of more than 70 international NGOs that support micro and small enterprise development programs around the world. SEEP's mission is to connect microenterprise practitioners in a global learning community. As such, SEEP brings members and other practitioners together in a peer-learning environment to produce practical, innovative solutions to key challenges in the industry. SEEP then disseminates these solutions through training, publications, professional development, and technical assistance.

About the Financial Services IGP Learning Network

The Implementation Grant Program (IGP) is a competitive grant program coordinated by the Microenterprise Development Office of the U.S. Agency for International Development (USAID), which is a key support of international and local providers of microfinance and value chain development efforts. The IGP is designed to both push the frontier of innovation in microfinance and enterprise development and to provide USAID Missions, and the development community as a whole, with case studies of "good practice." Since the first IGP grants were awarded in 1995, many of these practices have been copied, expanded upon, and/or integrated into programming by USAID Missions and practitioner organizations around the world.

The Financial Services IGP expands access to microfinance services and increases the financial viability of local institutions. The IGP Learning Network, managed by SEEP, brings together five grantees to share and document their experiences. These IGP learning products are written by and for practitioners in the field of financial services. For other learning products in this series, please visit the SEEP website at http://seepnetwork.org/pages/FinServicesIGP.aspx.

Introduction

The purpose of this manual is to provide a guide for financial institutions interested in value chain finance. It was created to assist financial service practitioners, development finance professionals, and managers of donor-funded technical assistance projects. This manual presents a basic model that should be carefully adjusted for local conditions, the enabling environment, and the risk profile of the specific financial institution.

While this manual endeavors to outline a general methodology for financing all types of value chains, special attention was paid to how *agricultural* value chain loans are different and require special treatment. The document is also applicable to non-agricultural value chains, such as handicrafts.

The authors welcome comments and feedback from other institutions pursuing value chain finance initiatives.

Background

The challenges associated with delivering rural and agricultural finance are well known, complex, and difficult to overcome. Most commercial financial institutions are not interested in financing farmers and other rural clients because they represent a less familiar market that is seen as riskier and less profitable than more traditional urban clientele. As a result, financial institutions are hesitant to put resources and time into hiring and training specialized staff, adapting existing and proven credit technologies, and developing new loan products necessary to reduce risk and increase profitability in serving the rural sector. In addition, it is almost always more difficult to secure rural loans using traditional collateral, something that further fuels the perception of high risk and keeps most banks on the sidelines.

While many donor and government-sponsored programs have attempted to overcome existing barriers and expand access to formal finance in rural communities, success has been elusive. Subsidized agricultural credit programs, guarantee facilities, or specialized lines of credit for specific segments of rural markets have successfully put financing into the hands of small farmers or other rural entrepreneurs. However, in most cases, these were short-term solutions that collapsed when donor or government support disappeared.

The value chain finance framework described in this manual offers a different approach to expanding access to affordable finance for rural populations (particularly small farmers) and helps mitigate many of the risks associated with agricultural lending. Often referred to as a *supply chain*, a *value chain* is a series of activities that takes a product or service from raw material or idea to actual product and eventual commercialization to end buyer or consumer. In this document, value chain most often refers to agricultural or rurally produced goods.

Alpaca farmers involved with WOCCU's value chain finance program in Peru sort and weigh alpaca fiber on a scale they purchased with a credit union loan. Alpaca fiber is one of 28 distinct value chains that have received financing through Peruvian credit unions. Others include beans, cacao, coffee, corn, garlic, guinea pigs, industrial oats, kiwicha (amaranth), milk, palm hearts, peas, potatoes, plantains, purple corn, quinoa, rice, tropical flowers, and trout.

Value chain finance is the provision of finance throughout the series (or chain) of transactions that result in the product arriving at market.[1]

Fundamentally, the value chain framework hinges on *market orientation, without which the resulting financial services would fail.* At its most basic, the value chain methodology requires that financial institutions take into account the financial potential of the entire value chain and not just the creditworthiness of a single individual. With this shift in focus, the financial institution can more accurately measure and mitigate the risk. Once a financial institution establishes the market-oriented logic for an investment, it leverages pre-existing relationships and *information* between value chain actors to assess risk and more effectively evaluate an individual farmer's ability to service a loan. It also (via specific assessment tools) provides access to multiple borrowers over multiple growing or producing cycles, achieving economies of scale and reducing overhead costs.

There are additional benefits to bringing in formal financial entities to finance value chains. By providing poor and low-income people with access to formal finance, a financial service provider can reduce the liquidity and production constraints that weaken the negotiating power of smaller producers. As a third party, the institution can also facilitate consensus building and align the incentives of different value chain actors, increase value chain competitiveness, and improve end products.

Value chain finance moves people who typically use only informal finance into safer financial institutions. This shift enhances financial literacy and preserves wealth by providing a secure place for savings and access to other financial products.

This manual is the culmination of two and a half years of field work in Peru under a USAID-funded program, implemented by WOCCU in collaboration with the country's national credit union association—Federación Nacional de Cooperativas de Ahorro y Crédito de Perú (FENACREP)—and some of its member credit unions. The program team worked with six credit unions to design and implement a value chain finance methodology.

The program's primary innovation has been the creation of a value chain lending methodology that helps financial institutions reluctant to finance rural activities to successfully break into that market. The methodology builds on best practices in value chain analysis. It is designed to enable such institutions to mitigate the risks associated with rural finance by:

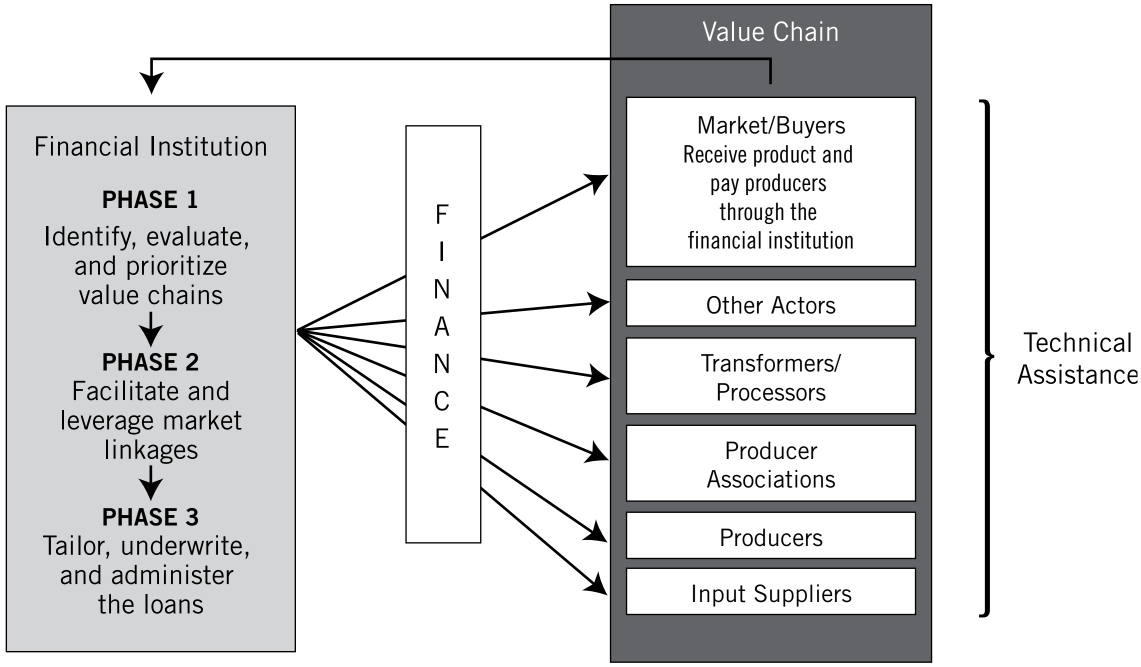
- thoroughly evaluating the viability of financing opportunities;
- bringing together all value chain actors to forge market linkages;
- designing custom products based on the producers' needs for finance; and
- ensuring that the process is mutually beneficial for all value chain actors.

While the methodology is easy to follow, it requires the active involvement of the financial institution's staff to bring value chain actors together, facilitate relationships to improve the chain, and help individual participants achieve their goals. In addition, it requires the presence of technical assistance providers that can work with the producers to upgrade production to meet market demand.[2] WOCCU also recommends that the financial institution seek upfront training and technical assistance from organizations or individuals that have value chain finance experience when implementing the methodology.

1. For more information on value chains, visit SEEP (http://edexchange.seepnetwork.org) and the USAID microLINKS Enterprise Development and Value Chain Resources, "Value Chain Development Wiki" (www.microLINKS.org/valuechains).

2. In Peru, WOCCU and the credit unions worked with and financed value chains that had received technical assistance from international donor-funded projects, local governments, and producer associations.

Figure 1. WOCCU's Value Chain Finance Methodology



WOCCU's value chain finance methodology provides credit unions with the technical and operational capacity to put resources into rural finance lending while maintaining an adequate margin and still mitigating the risk of loan default. The methodology includes tools for evaluating opportunities, designing products and administering loans—all crucial for rural financial institutions that want to control the risks of agricultural lending when they do not have access to subsidies, grants or guarantees. The model is adaptable to any type of financial institution. It may be applied to non-agricultural value chains. It can be used to deliver finance to any actor along the value chain.

Document Overview

This manual is divided into two chapters. The first chapter walks practitioners through preliminary assessments to determine if value chain finance is appropriate for the financial institution within the local environment. The second chapter outlines WOCCU's methodology for offering value chain finance, which consists of three phases:

Phase 1: Identify, evaluate, and prioritize value chains
Phase 2: Facilitate and leverage market linkages
Phase 3: Tailor, underwrite, and administer the loans

Chapter 1. Ground Work: Preliminary Assessments

Chapter 1 presents the first steps a financial institution should take to determine if value chain finance is a viable product line for it. These steps take the institution through a series of preliminary assessments to better understand its capacity to engage in value chain finance, to identify any constraints in the enabling environment that could affect its ability to offer financial services, and to complete preliminary market assessments for the different products and value chains in its geographic market.

To be successful, the value chain finance methodology requires a solid financial entity with appropriate institutional infrastructure, a clear commitment to rural finance, a supportive enabling environment, and a viable market of value chain activities that are suitable for this type of financial product.

Evaluating Financial Institution Capacity

Key question: Is the financial institution organizationally prepared to offer new value chain finance products?

As a first step, the financial institution needs to positively answer these questions:

- Is it committed and willing to invest the resources necessary to introduce value chain finance as a new product line?
- Does it have sufficient financial, administrative, and technological capacity to engage in value chain finance?
- Does it have, or is it willing to hire, the necessary personnel to implement the methodology and offer these new products?

Willingness and Commitment

Value chain finance requires a high level of operational and financial resources for successful implementation. The financial institution must be truly committed at every level—board, management, and staff—to working in rural areas and financing small producers. The institution must also be willing to invest the human and financial resources necessary to implement the methodology. This includes hiring and/or training personnel; covering start-up costs, such as increased transportation and logistical expenses; assessing the potential of different market segments; marketing the new products; and providing sufficient funds to make the loans.

Institutional Commitment

The San Martín de Porres credit union in Tarapoto, Peru, provides a good example of institutional commitment at every level. The credit manager, the marketing manager, and the financial manager—under the general manager's leadership—created new value chain finance products.

Together, they were able to access government-sponsored financing to ensure the availability of sufficient capital. They developed effective marketing materials and campaigns, complete with promotional materials and publicity spots. They hired additional staff dedicated to value chain finance to ensure that the credit union could provide clients with timely service and loans. Furthermore, the attendance of these managers at producer meetings enhanced the credibility of the new initiative.

Administrative, Financial, and Technological Capacity

In addition to willingness and commitment, the institution must possess adequate financial and organizational strength. An institution should be profitable, well capitalized, have sufficient liquidity, and possess strong loan administration and evaluation processes. A financial institution must also have solid loan-collection strategies in place. Beginning this new lending initiative is not recommended for institutions with high write-offs or portfolio-at-risk greater than 30 days (PAR>30) above eight percent. The institution should be able to produce timely financial statements and reports and actively manage time-horizon mismatches in its portfolio. Administrative norms and procedures, especially for loan portfolio management, should be well documented. Institutional governance must have sufficient checks and balances to ensure sound financial operations.

Critical Value Chain Champions

In Peru, each credit union that partnered with WOCCU to implement the value chain finance methodology had a team of at least two people with complementary skills who led the process. One of them—the general manager, credit manager, or business manager—took the lead in "selling" the new value chain finance methodology to the board of directors and prospective clients. This individual typically did not have technical experience in agriculture, but had influence within the institution and was convinced of the importance of lending more for agriculture. The second team member had knowledge and experience in rural production activities. This person (often referred to as the value chain analyst, rural credit analyst, or rural finance technical advisor), was directly responsible for implementation and contact with clients.

Personnel

Finally, a financial institution must have staff who is familiar with the new markets under consideration and who understands agriculture well enough to be able to evaluate the creditworthiness of relevant value chains within the local region. Ideally, credit analysts should exhibit good quantitative skills, have some technical training in agriculture, and understand basic economics and marketing. Equally important, credit staff must also (1) be familiar with the local area, (2) be willing to frequently travel to the countryside to meet with prospective or actual clients, and (3) be capable of facilitating and maintaining relationships with all types of value chain actors, from the producers to the large buyers and exporters.

In WOCCU's experience, these positions—referred to as "value chain credit analysts"—are better filled by people with existing agricultural expertise and local knowledge, who are then trained in banking and financial procedures, rather than the other way around. If the financial institution does not have staff with these qualifications, it will need to hire additional personnel with these skills before implementing the methodology.

Assessing the Enabling Environment

Key question: Does an environment exist that allows value chain finance to be successfully implemented?

The importance of an enabling environment that supports value chain finance should not be ignored. Key aspects of an enabling environment include adequate physical security, the existence of basic infrastructure, a legal system that permits contract enforcement, reliable and timely market information, and the availability of technical assistance resources.

Adequate Physical Security

Basic physical security is essential for routine and safe transit of people and goods, stable land tenure, and the administration and/or monitoring of loans. It is dependent on staff having reliable local knowledge and accurate information.

Basic Infrastructure

Because commercial orientation is the keystone of the value chain finance methodology, the ability to transport goods and people to markets is indispensable. This requires basic road and transportation infrastructure, as well as the flow of information between actors. The latter enables the principal value chain actors (producers and buyers) to communicate with one another and the financial institution in a timely and cost-effective manner. What constitutes adequate infrastructure is highly subjective and varies between areas and value chains. For some products, a dirt road and hired cart may suffice. For other goods, such as milk, a sophisticated chain with refrigeration may be required.

Sufficient Legal Foundation

A basic framework for legal structures and institutions must be in place. At the very least, a "contract" culture is important. People and institutions must have an understanding of what it means to enter into a binding agreement. Value chain actors must recognize that by signing a contract, they are committing to a set of conditions that are legally enforceable. Contracts have more credibility when they are enforceable by law or within the court systems. However, social and/or informal mechanisms of contract enforcement may be sufficient when formal systems, such as courts, are less reliable. It is also beneficial when the parties involved are motivated to follow through on contractual commitments.

Reliable Market Data

Financial institutions need reliable market data to more accurately evaluate and underwrite value chain loans. Without adequate information on market demand or a producer group's ability to meet this demand, it is more difficult and riskier to make a wise credit-investment decision. (One virtue of the value chain finance methodology is that it requires financial institutions to compile the required information by working directly with all actors in that value chain.) Through public information sources and/or other value chain actors, financial institutions must be able to identify:

1. a range of buyers for different products and the volume of business they manage;
2. input or equipment suppliers, as well as typical input and equipment prices in the market; and

3. the requirements for each actor in the value chain, such as product standards, quality requirements, timing, average prices, and payment methods.

Support Services (Technical Assistance)

In general, producers should have experience with a particular product and possess the technical skills to ensure production volume and specification compliance. Often, some external technical assistance is needed to help producers meet buyer requirements. It is not unusual for this technical assistance to come from other actors within the specific value chain. It can also come from government-funded initiatives or donor-funded projects.

Additional Factors

While the aforementioned elements are necessary to succeed in value chain finance, other criteria can further improve efficiency, mitigate risk, and permit greater and timelier monitoring and evaluation. Additional criteria will vary based on local context. Some examples include Internet access, irrigation, agricultural research centers, and credit bureaus.

Conducting Preliminary Market Studies

Key question: Is there a sufficient number of viable value chains within the financial institution's geographical market?

Given an adequate enabling environment, the financial institution must determine that there are value chains of sufficient number, size, and strength to create a large-enough market for value chain finance products to be viable. As a general rule, financial institutions should focus on the value chains located within the geographic areas near their offices or branches. Proximity leverages their familiarity with the region and its local actors. It also facilitates the logistics, monitoring, and evaluation of potential clients.

Market studies of prospective value chains can indicate the viability of the local value chains. A solid value chain—one that is profitable, and/or stable, and/or growing—has greater potential as a financial investment and as a client(s). For each potential value chain evaluated, the market study should review:

1. productive activities (agricultural and non-agricultural);
2. the profiles of rural producers (e.g., their location, size, technical level, socioeconomic condition, dependency on the principal product);
3. the organizational capacity of agricultural producer group(s);
4. the size and certainty of the current market and end-buyer(s);
5. the previous experience of the local population with credit; and
6. the presence of technical assistance providers for the value chain.

A financial institution should not move forward with value chain finance if market studies conclude that only weak or small value chains exist.

Chapter 2. Value Chain Methodology

Once a financial institution has determined that the institutional and enabling environment prerequisites have been met and that a market for value chain finance exists, implementation of the value chain finance methodology can begin. It will be necessary to designate or hire a value chain credit analyst(s), assign a manager, and identify key personnel (marketing, accounting, human resources, and information technology) who will be involved in value chain product development and implementation.

It is advisable to conduct an initial pilot test before rolling out the product on a large scale. Regardless of the scale of implementation, the sequential process remains the same:

Phase 1:	Identify, evaluate, and prioritize potential value chains
Phase 2:	Facilitate and leverage market linkages
Phase 3:	Tailor, underwrite, and administer loans

Performance risk greatly increases if the credit union, bank, or microfinance institution skips a phase in this process. Value chain credit analysts and their managers need to be sensitive to the process to ensure they follow through with all activities in each phase to increase the prospective for success.

Phase 1: Identify, Evaluate, and Prioritize Value Chains

This phase provides the financial institution with a framework for deciding which value chains warrant additional attention before moving to Phase 2. Using information gathered during preliminary market studies, the value chain analyst's first action is to complete in-depth research on each of the identified value chains with market potential. The objective is to gather sufficient information about each value chain and then rank and prioritize them for consideration.

Step A: Gathering Information for In-Depth Market Research

The matrix in figure 2 outlines the type of information that is needed to evaluate the value chains from a financial perspective. This information will feed into the development of the *Preliminary Diagnostics Report* discussed in the next step. The value chain analyst should attempt to answer specific questions through this research:

- Is the value chain connected to a viable market? If so, how big is that market and how many suppliers or other participants are engaged in it?
- Do producers have the technical and organizational capacity to meet demand, volume, and quality standards of different buyers?
- Are there links in the value chain where incremental access to capital adds value?
- Are there value chain actors who can effectively support a local value chain if provided with access to financial services?
- Are there external factors that could increase the risk of lending to any particular value chain or value chain participant?

The Importance of Working with Organized Producers

The producers must exhibit a minimal level of organization—at least meeting and working together as a group(s)— in order to aggregate sufficient volume for larger buyers, permit group purchases of inputs to lower costs, and reduce the cost of servicing the loans. These producer associations can also help monitor production, provide information on members who have little or no formal credit history, and reduce the risk of default by guaranteeing loans and/or applying social pressure for repayments.

Figure 2. Data Collection for the Value Chain Market Analysis

Market demand	Estimates of 1) current and future demand from major buyer(s); 2) end-market specifics (who are the ultimate customers and how are they using the product?); 3) current supply and competing suppliers (domestic and imports); and 4) current supply and/or demand mismatch, in terms of quantity, timing, quality, etc.
Product specifics and market specifications	Specific varieties of crops; growing and/or production specifications; location and distance from major city center; number of years crop has been grown in the location; buyer specifications for different quality levels and prices paid for each; planting and/or production seasons; harvest seasons; and access to and quality of infrastructure to principal markets
Value chain actors and history	Identification of value chain actors, including input providers, intermediaries, buyers, technical assistance providers, among others; for each actor: a brief history of experience in the value chain; description of role, responsibility, and capacity to fill each role; location; comparison to competition; value added; organizational capacity; credit culture and financial management history; and pre-existing relationships with specific value chain actors
Financial feasibility	Lowest average market price for crop and/or product; production costs per unit; average yields (worst, average, and best-case scenarios); payment mechanism; existing formal and informal financial service providers, including loan terms and conditions; options for collateral
Other non-market considerations	Socioeconomic level of producers; security situation (issues with drug-trafficking, terrorism, or ethnic conflict); history of paternalism that may degrade the credit and contractual culture (frequent agricultural loan forgiveness and/or donations provided); encouragement of under-age workers or unfriendly environmental practices

In conducting the market research, the value chain analyst will need to consult a variety of public and private institutions and use a combination of primary and secondary data:

- Primary data includes interviews with producers and other value chain actors, government representatives, and industrial/commercial enterprises.
- Secondary data consists of statistical reports and data collected about the rural and agricultural sector, specific products, or markets (domestic and international). This information generally comes from public sector organizations (national, regional, and local governments, as well as government development programs); private sector organizations (cooperatives, labor unions, vendors, and manufacturers); and non-profit and/or non-government organizations and development projects.

Ultimately, good analysis depends on the accuracy of the data gathered during this step. It can be difficult, time-consuming and costly to collect quality data.

While completing the research, the analyst will make contact with many different value chain actors. This can provide an excellent opportunity to explain and market the financial institution's intent to engage in value chain finance, to gauge interest in participating in the program, and to determine which value chains merit more attention. If there is no strong market-based argument for a value chain, or the actors do not show interest in participating, the value chain analyst does not need to go to the next step.

Value Chain *Preliminary Diagnostics Report* Suggested Outline

1. Introduction
   - Description of the product
   - History of the value chain
   - Identification of each value chain actor and their role
2. Market rationale
   - Summary of general market potential
   - Demand for product, either domestic and/or export
   - End markets (sustainability, liquidity, consistency of demand)
   - Link(s) in the chain where incremental access to capital adds value
3. Map of the current value chain structure
4. Strengths, weaknesses, opportunities, and threats (SWOT) analysis
5. Scorecard
6. Potential financing opportunities
7. Recommendations and next steps

Step B: Evaluating Individual Value Chains

The value chain analyst should next prepare a *Preliminary Diagnostics Report* for each value chain, using the series of value chain exercises and analysis tools (detailed below) to consolidate and evaluate the information gathered. These reports provide the financial institution with a framework for evaluating, comparing, and prioritizing value chains.

Value Chain Analysis Tools

Specific exercises and tools below can assist the financial institution in understanding the most important aspects of the chain—with their pros and cons—in an organized and thoughtful fashion. A brief description of each tool is outlined below.

1. ***Value Chain Map.*** The analyst first "maps" the value chain as it currently functions, identifying all the actors, their respective roles, and the process by which the product moves from conception to sale in final markets.[3] Having a graphic representation of the value chain makes it easier for the financial institution's staff to identify existing linkages, possible inefficiencies, and potential financing opportunities within each value chain.

2. ***SWOT Analysis.*** A SWOT analysis can be used to outline and analyze the strengths, weaknesses, opportunities, and threats within each value chain.[4] When carrying out the SWOT analysis, the following aspects should be considered:

- Competitiveness of the value chain
- Producers' technical capacity and ability to compete with other producers, both local and international
- Presence of strategic partners, such as input suppliers, marketing agents, or processing firms
- Infrastructure or business/enabling environment constraints
- Financial rationale for engaging in value chain finance

3. ***Scorecard.*** The information gathered and analyzed to this point serves as the foundation for drafting a scorecard that allows the financial institution to quantify results from the evaluation and to rank different value chains.[5] While the analyst can employ a variety of approaches to compose the scorecard, one optional format involves grouping variables based on common criteria:

a. *Market-based rationale:* Measures degree to which the value chain is related to a strong, potentially profitable market with sufficient demand to be an incentive for production. It looks at whether the producers under consideration for financing are able to compete with their peers to successfully meet all or part of the established demand.

b. *Producers' technical ability:* Determines and ranks the producers according to their level of technical skills to understand and meet the demand specifications (i.e., size, color, uniformity) of the market and/or the availability of technical assistance to enhance these capabilities.

c. *Producers' organization:* Measures the degree to which the producers are organized, formally or informally, and if they will require external technical support to strengthen their organizational structure.

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3. Instructions and examples on value chain mapping can be found at USAID microLINKS Enterprise Development and Value Chain Resources, "Value Chain Development Wiki," "The Process of Developing a Value Chain Map" (http://apps.develebridge.net/amap/index.php/Mapping).

4. A SWOT analysis is a managerial tool which allows the user to assess an organization, product, strategy, or course of action, based on its intrinsic merits and demerits, and the environmental conditions that could threaten or open opportunities for the manager to capitalize on those factors. An example can be found at USAID microLINKS Enterprise Development and Value Chain Resources, "Value Chain Development Wiki" (http://apps.develebridge.net/amap/index.php/Phase_2_Tools:_Choices). An overview of SWOT can be found at http://www.quickmba.com/strategy/swot/.

5. Scorecards can be used to compare value chains, looking at common variables to derive a numerical total as an indication of the value chain potential. An example can be found in Damien van der Heyden et al., 2004, *Guía Metodológica para el Análisis de Cadenas Productivas* [Methodological guide for the analysis of commodity chains], prepared by SNV, CICDA, and Intercooperation (Lima, Peru: Ruralter), 24 (http://pdf2.biblioteca.hegoa.efaber.net/ebook/16823/guia_metodologica_analisis_cadenas_productivas_2004.pdf).

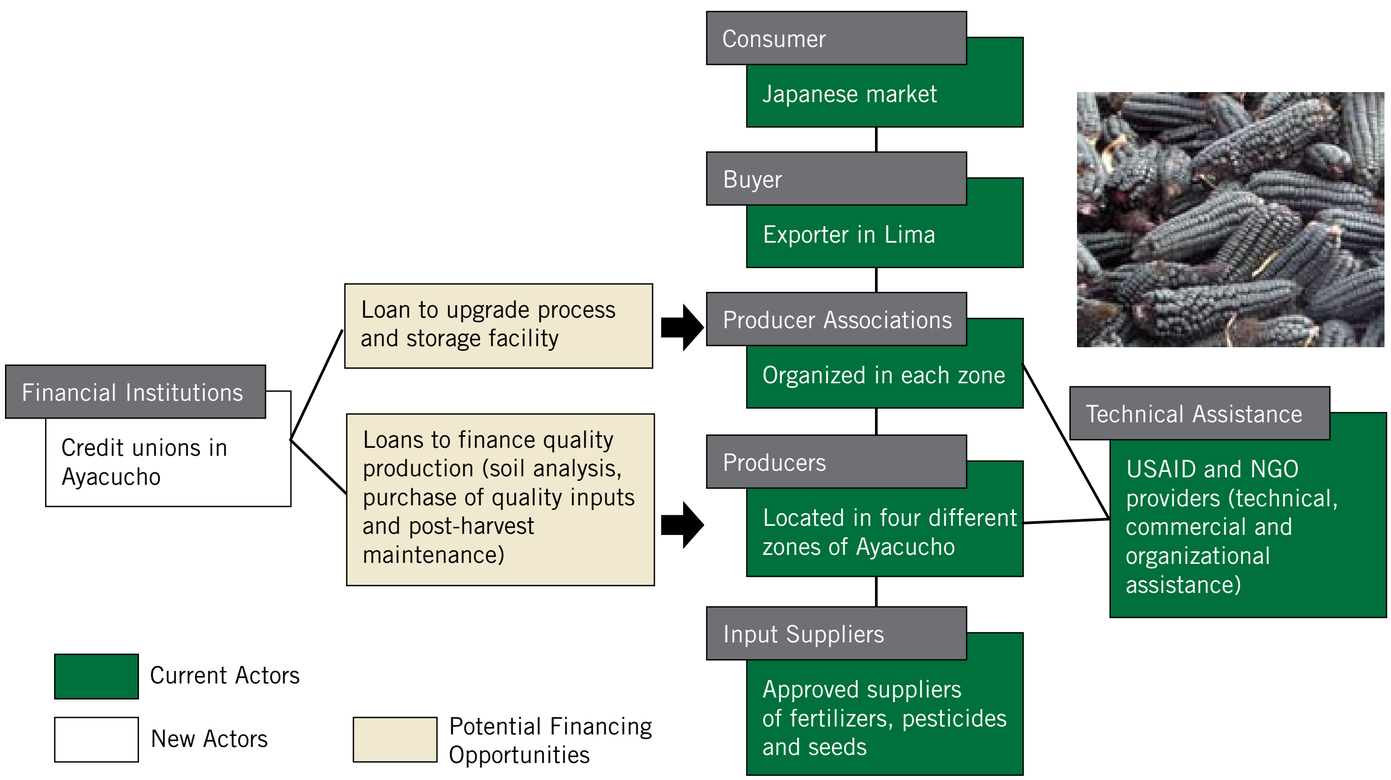
d. *Access to markets:* Measures how well (and to what extent) producers are able to transport their goods to buyers and the market, and have reliable communication channels between buyers, sellers, and other actors.

e. *Environmental factors:* Determines whether supporting a specific value chain would adversely affect the local environment, that is, encourage employment of underage workers or interfere with the completion of their schooling, encourage practices that are environmentally damaging, or encourage practices or activities that violate local or national laws. This approach would also assess whether there is a history of paternalism that may degrade the credit and contractual culture.

Identification of Potential Financing Opportunities

At this stage, the financial institution should have sufficient information to identify points along the value chain, where the delivery of credit could increase the efficiency of the value chain and add the most value to the actors—ideally small producers—and be a good investment opportunity for the financial institution. Building on the value chain map prepared at the beginning of the evaluation, the analyst adds new information to it, identifies relevant actors, and prioritizes potential financing opportunities. Figure 3 shows an example of the purple corn extract value chain in a community in Peru.

Figure 3. Potential Financing Opportunities for the Purple Corn Extract Value Chain



Step C: Prioritizing Value Chains

After compiling the data generated from the tools above and completing a *Preliminary Diagnostics Report* for all potential value chains, the analyst meets with management and other key personnel to determine the best value chains for the next phase—conducting a workshop for all the different value chain actors, hosted by the financial institution. While many value chains may warrant further study based on the evaluations, the financial institution will want to start with those that are best organized and show the greatest promise as financial customers.

Prioritizing Value Chains

San Cristóbal de Huamanga credit union initially identified 15 potential value chains within its geographic region. Carrying out in-depth market research, the credit union found that 11 of the 15 value chains had significant market potential. The credit union then used value chain tools and exercises to analyze and rank these 11 value chains.

The five value chains that showed the greatest lending potential were selected before the credit union moved on to Phase 2. It then organized a workshop with all of the actors in each value chain to further assess their potential and decide which value chains the credit union would finance.

The number of value chains the financial institution chooses to advance will depend on the institution's financial and operational capacity. For value chains that are not selected, the analysis documents should be filed for future reference. Value chain potential should be re-evaluated periodically as market conditions evolve, which may make some chains more attractive. (Completing this phase of the methodology does not provide a "green light" for investment, but it does help the institution refine its financing options.)

Phase 2: Facilitate and Leverage Market Linkages through a Value Chain Actors' Workshop

After selecting the value chains that merit further investigation, the next step of the methodology is to organize an "actors' workshop" for each value chain. The financial institution should make every effort to ensure that all key actors in the value chain—identified during the first phase—participate. At a minimum, workshop participants should include producers, buyer(s), technical assistance providers, and the financial institution. It is highly valuable to include other actors in the value chain who are available, such as major input suppliers, processors, marketing intermediaries, and transport or logistics businesses.

The workshop objectives are to bring together the different actors to discuss findings and clarify Phase 1 research, to work together and develop possible solutions for increasing value chain efficiency and competitiveness, and to identify different ways in which financing could add value. Specific goals include:

- identifying problems along the value chain that prevent mutually beneficial arrangements from developing;
- seeking commitments from each actor to find and eliminate constraints along the value chain;
- reaching agreements among actors on payments, rates, sales arrangements, production volumes, product quality, and delivery dates; and
- gathering production and financial data needed to design appropriate loan products.

Benefits of Bringing Actors Together in Rural Areas

In Peru, the credit unions organized the actors' workshops in rural areas, where the producers live and work. This served two key purposes. First, the willingness of buyers to travel to the meetings was an indicator of their commitment to the value chain. Second, credit unions found that "seeing is believing" for buyers accustomed to working with intermediaries. Initially the buyers were skeptical of the capacity of small producers, but became more comfortable as a result of the workshop. Going to the producers gave them the opportunity to see firsthand the producers' potential and the benefits of direct connections.

WOCCU has found that these workshops increase buy-in and participation from value chain actors and help to solidify relationships among them. In many cases, the workshop is the first time small producers—who primarily work through marketing intermediaries—have direct, face-to-face contact with buyers and marketing agents. Building these relationships and facilitating mutually-beneficial arrangements among the actors is critical to creating market-driven financing arrangements sustainable beyond the current production season.

Activities presented in this phase instruct the financial institution how to prepare for, facilitate and document results from the workshop. Additional resources for facilitating actors' workshops are available on the USAID microLINKS Enterprise Development and Value Chain Resources website.

Preparing General Loan Products

Before the workshop, the financial institution should design a variety of general value chain loan products—with individual terms and conditions—to meet the potential financing needs for that chain identified during Phase 1. By doing so, the financial institution will be prepared to offer actors loan products to fill the gaps in their financing as they become clear during the workshop.

The value chain products should be flexible enough to address the specific needs of producers, marketing agents, and processors of the different products, while also allowing the financial institution to maintain its credit standards and respond to the realities of local financial markets.[6] After the value chain actors' workshop, these loan products will be refined to meet the specific needs of each value chain, using production data gathered during the workshop. This will take place in Phase 3, *when the financial institution tailors, underwrites and administers the loans.*

Value Chain Credit Products

In Peru, the credit unions designed three general value chain finance products:

1. Working capital loans for production or maintenance;
2. Commercialization loans for producer associations; and
3. Fixed-asset loans for equipment, machinery, and buildings.

Facilitating the Workshop

The value chain analyst serves as the workshop "facilitator." In order to determine how and at which point in the value chain access to finance can add value, the group needs to identify key constraints and gaps between the current and ideal functioning of the value chain. Based on this analysis, actors can then suggest solutions to closing the gaps and commit to taking action to resolve the problems. Effective financing hinges on the success of the overall value chain; as a result, non-financial activities improve the chain's efficiency and minimize loan default risk. The workshop provides an opportunity for all participants to improve overall value chain function through financial and non-financial activities. The facilitator should strive to make the discussion open and participatory to encourage all participants to express their opinions.

There are specific workshop exercises:

1. Introducing value chain theory and its importance
2. Presenting the value chain map created in Phase 1
3. Asking participants to correct the value chain map, by—
   a. identifying where each different group participates in the value chain;
   b. correcting steps (i.e., from the producer to the market);
   c. adding and subtracting actions and actors; and
   d. clarifying roles (i.e., what each actor does within the value chain).
4. Conducting a gap assessment, by—
   a. creating the ideal value chain wherein all participants (producers, marketers, processors, buyers, etc.) have their needs met;
   b. identifying the gaps between the current value chain and the ideal one; and
   c. suggesting practical actions to close these gaps.

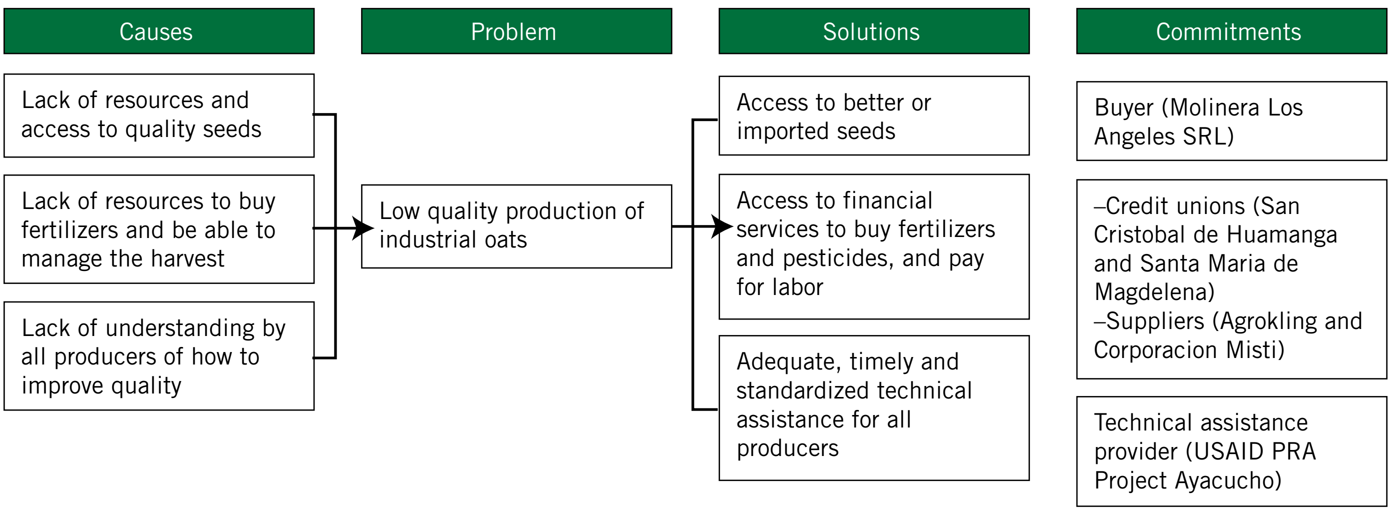
6. For each potential value chain loan product, the financial institution should prepare a loan policy that includes general parameters for 1) location, 2) amount, 3) term, 4) interest rate, 5) delinquency fees, 6) guarantees/collateral, 7) payment, 8) amortization, 9) other costs, 10) risk determination, 11) levels of approval (how much signing authority is required to approve the loan), 12) documentation required for underwriting, and 13) documentation required for loan disbursement.

5. Analyzing problems by—
    a. discussing the underlying causes of the gaps;
    b. identifying possible solutions using financial and non-financial activities; and
    c. identifying the responsible parties (see figure 4).

After completing these exercises, each actor will have a list of problems and solutions and commit themselves and the other actors to resolve the problems. This list will include time commitments and/or due dates to ensure each actor is accountable to the other actors in addressing the problems.

Figure 4 illustrates how value chain actors worked to solve one of the problems that was identified in an industrial oats value chain.

Figure 4. Problem Tree Example



Once workshop participants have identified the problems and possible solutions in their specific value chains, the facilitator should present the menu of financial products and services that could fill the financial gaps identified earlier. The facilitator should solicit participants' feedback on those products and services, encourage actors to agree upon business parameters, and gather additional information needed for loan underwriting. These are specific activities:

- Present potential financial products and services to fill financing gap
- Work with participants to decide which financial products are most appropriate for their specific needs
- Identify and agree upon the basic parameters of the business relationships between the actors, in the following areas by—
    - identifying product quantity and quality being sought;
    - establishing conditions, location and timing for deliveries; and
    - designating payment options and possible floor prices, linked to market conditions.
- Outline key terms and conditions for the loans,[7] such as—
    - determining the documentation required from borrowers for loans;
    - specifying the conditions for loan disbursement; and

7. The financial institution should not yet make statements to the applicants about the interest rate. The only information about interest rates that can be shared at this point is that the financial institution will work to close the loan with the lowest rate the applicants qualify for. This is important because credit analysis will affect pricing, and it is detrimental to raise expectations that cannot be met.

- considering the loan repayment terms in which, ideally, the buyer receives product and pays the producers through the financial institution.

- Gather production and financial input data needed to structure and underwrite loans (this data confirms or refutes the information gathered during the evaluation process), such as—
  - cost of production and expected yield per standard unit (hectare, head of cattle, etc);
  - expected market price of the good;
  - seasonal cash flows (including planting season, harvesting, maintenance, other inputs [labor, fertilizer, seeds], income from sale [timing], and other expenses and sources of income); and
  - number of producers and expected yield and total production.

In leading this discussion, the facilitator needs to exercise caution and not promise or suggest that access to a loan is guaranteed or pre-approved.

At the end of the workshop, the facilitator should get all participants to commit verbally to following through with their individual responsibilities as discussed in the workshop. For example, technical assistance producers may commit to overseeing production and providing guidance to ensure production quality. Producer groups could commit to pre-categorizing all production prior to delivery to the buyer to ensure quality, size, and color standards. Buyers could then agree to guarantee a floor price for the product. In addition, WOCCU recommends that the buyers and producers agree that payments be made through the financial institution, as a means of ensuring loan repayment and reducing delinquency risk.

If participants are unwilling to commit to the responsibilities and solutions outlined during the workshop, the financial institution should not move forward with financing the value chain. Where possible, legally binding contracts outlining the specific commitments should be drawn up (in Phase 3) as part of the loan underwriting process.

Documenting Workshop Results

After the workshop, the value chain analyst should prepare a report for each value chain under consideration. The *Final Value Chain Diagnostics Workshop Report* should include a summary of the discussions and agreements reached during the workshop, as well as all relevant quantitative and qualitative data necessary for financial institution management to decide as to whether the credit should be extended to the value chain, in what quantity, and on what basis.

This is a general outline for the *Final Value Chain Diagnostics Workshop Report*:

1. **Present the ideal value chain structure**
2. **Analyze the problem and/or use decision trees—**
   a. problems and their root causes
   b. identified solutions
   c. responsible parties and their commitments
   d. clear reiteration of the commitments made by the financial institution
3. **List primary market agreements—**
   a. quantity and quality needed
   b. conditions and timing for delivery
4. **Describe basic elements needed for the agreements and contracts**
5. **List basic information needed to make a credit evaluation—**
   a. expected production costs
   b. estimated yields
   c. analysis of the number of competitors and the total area under production
   d. estimated loan amount

6. **Include general credit terms and conditions**
7. **Explain and include the competitiveness diamond**[8]

Financial institutions will use these reports to determine whether a specific value chain should proceed to Phase 3, where the financial products can be finalized and loans underwritten.

Phase 3: Tailor, Underwrite, and Administer the Loans

Building on information gathered and relationships established during the value chain actor workshop, the financial institution is now ready to tailor, underwrite, and administer the loans, within the parameters of general value chain loan products developed in Phase 2, using these specific steps:

- Evaluate the credit history to prequalify potential borrowers
- Analyze cash flow to evaluate capacity to pay and tailor loans to the real needs of the borrowers
- Establish loan terms and conditions
- Secure signed contracts with qualified producers, buyers, technical assistance providers, and other actors as applicable (input suppliers, processors and marketers)
- Disburse loans based on the individual contracts
- Monitor producers' production in the field
- Recover loans payments (principal and interest) per repayment schedules

Lending to Multiple Actors

Santo Cristo de Bagazán credit union provides value chain finance to both the coffee growers and the growers' association. *Production loans* provide growers with finance to cover the real costs of production, resulting in increased quality and yield. *Short-term commercialization loans* provide the growers' association with the capital needed to buy more coffee from the producers, which in turn, increases the association's bargaining power with the buyer on behalf of the growers. Under this arrangement coffee grower earnings have increased on average by 53%.

It is important to note that just because a value chain has made it to this phase does not mean that the financial institution should automatically approve and disburse loans to value chain actors. *The financial institution's goal is always to make successful loans and to minimize default risk.*

This section is not meant to be a comprehensive guide to loan underwriting and administration, as each financial institution will have its specific policies and procedures. Rather, it highlights specific aspects and processes of value chain finance that may differ from traditional loans—principally the risks associated with rural finance and the opportunities that exist to leverage information and relationships within the value chain to improve loan quality and recovery.

In addition, the financial institution must thoroughly research and review the implications of new loans for its operations, especially with respect to the institution's management information systems (MIS), liquidity management, and the marketing of loan products to the different value chain actors.

8. "Michael Porter's Diamond of Five Forces" can be used to as a framework for evaluating a value chain's strategic and competitive position. For more information, visit USAID microLINKS Enterprise Development and Value Chain Resources, "Value Chain Development Wiki" (http://apps.develebridge.net/amap/index.php/Phase_1_Tools:_Context#Porter.27s_5_Forces_Analysis).

Evaluating Credit History

In most rural areas in developing countries, formal credit information systems, like credit bureaus, do not exist. However, information within the value chain can be leveraged to assess creditworthiness even when small producers have little or no formal credit history.

Existing value chains often contain information that can serve as a proxy for a rural producer's credit history. Producer associations, technical assistance providers, or buyers may have records of individual producers' production performance, their track record of delivering quality products, or even repayment of in-kind credits, such as agricultural inputs or land preparation services. The financial institution is well advised to investigate such proxy information to ascertain a producer's ability and willingness to service a loan.

Analyzing Cash Flow

The value chain analyst—using all the information garnered about the value chain in the earlier phases—should outline each borrower's potential cash outflows and inflows (amount and timing) over the production season. By doing so, the financial institution will be able to evaluate the producer's capacity to repay and tailor loan amounts, as well as disbursement and repayment schedules to the real needs of the borrower.

In agricultural products, for example, outflows may include purchase of seeds and fertilizer; land preparation; improvements, such as irrigation or terracing; certification or inspection costs; and seasonal labor. Inflows for many crops often consist of one balloon cash payment when the crop or product is sold—standard practice with many traditional crops. In other cases, cash inflows may be frequent (short season crops), which would reduce the financial institution's risk and may warrant a lower interest rate to the borrower.

WOCCU's experience worldwide suggests that lending institutions should seek to use total household cash flow and income, including non-production-related activities, when determining a borrower's capacity to repay a loan. Verified income streams from additional activities, such as off-farm labor or sales of livestock, should be included in the cash-flow analysis, as well as the expenses for these same activities. Considering this information helps mitigate the risks of non-payment if the principal venture fails.

Looking at these cash flows, the analyst can determine certain factors:

- The loan amount needed to cover the costs of production
- The borrower's capacity to repay
- Disbursement and repayment schedules, which should be tied to the production schedule and cash flow needs
- Possible need for a grace period before the first repayment
- Amount of control or influence a producer can exert over the value chain in which he or she is engaged

In addition, the cash flow analysis helps the financial institution determine: 1) what guarantees are possible and necessary to adequately protect against non-payment; and 2) what interest rates the loan should carry to cover costs, while still permitting the borrower to repay the loan.

Individual cash-flow analysis is a critical element for reducing financial risks associated with granting loans with unrealistic repayment terms and/or inadequate loan amounts. By basing loans on the actors' real needs and their individual capacity to repay, the financial institution is more likely to guarantee loan repayment and the profitability of the transaction.

In the case of Peru, credit unions financed up to a maximum of 70 percent of the total production costs of any one producer as a risk mitigation technique. Proper administration of financial products can also help. Poor disbursement management adversely affects clients and reduces impact and adoption of value chain financing. Delayed (late) provision of loans to the primary producers could prevent them from planting on time. This may severely reduce output (yield), decreasing expected income and limiting repayment capacity.

Setting Terms and Conditions

In addition to evaluating credit history and structuring the basic disbursement and payment schemes based on cash flow, the analyst must determine the appropriate interest rate and give careful consideration to guarantees that further mitigate risk.

Interest Rate

The financial institution should charge a sufficient interest rate to recover all administrative and financial costs associated with value chain finance, if the loan products are to be sustainable over the long term. When calculating the interest rate, the financial institution should ensure that it:

- covers direct and indirect costs associated with providing and administering the loan;
- reflects a risk adjusted yield;
- is competitive in the local marketplace; and
- is sufficiently attractive to producers to permit them to engage in profitable production.

Value chain loan interest rates are likely to fluctuate within a range defined by applicant creditworthiness, the degree of perceived loan risk, and the operational efficiency and desired profitability of the particular financial institution.

Collateral

The primary purpose of collateral is to secure a loan against non-payment. While collateral is an important consideration, this requirement may be quite difficult for poor farmers—who possess few real assets that can be secured—to meet. Small producers rarely have the kinds of assets that interest a financial institution. Pledging such collateral as the deed on a small plot or livestock is more of a psychological tool to pressure the borrower to repay than an alternative source of money to retire a delinquent loan.

Personal guarantees are also valuable in value chain financing. An interesting form of personal guarantee is for a rural producers' association to serve as the guarantor for each member who borrows. If the association agrees, it may want to be involved in the process of deciding which members receive credit and how much they are eligible to receive. The association commits to covering the obligation to the financial institution and follows up with the member on its own accord.

Refinancing Conditions

The financial institution should establish specific policies in advance for re-negotiating agricultural loans, when output is negatively impacted by weather or crop failure due to factors beyond the farmers' control. In Peru, the credit unions only allowed refinancing in the case of natural disasters and, even then, only on a case-by-case basis, when the borrower had no other means of loan repayment.

Securing Contracts with Value Chain Actors

The commitments that value chain actors make to one another and to the financial institution are fundamental for mitigating risk and increasing probability of loan repayment. It is recommended that these commitments be formalized, where possible, by having all value chain actors sign legally binding contracts that include:

- a product floor price;
- clear quantity, quality, and timing specifications for the product to be delivered;
- a well-understood repayment process, where the buyer channels payments to producers via the financial institution;
- a description of all non-financial activities that will improve efficiency and productivity, such as technical assistance; and
- the consequences for non-compliance with the terms of the agreement.

Disbursing Loans

Once the loan has been approved by the financial institution, through its usual approval process, the appropriate staff disburses the loan. Disbursement schedules, set at the beginning of Phase 3, should reflect client cash-flow needs and the production cycle. If a farmer requires cash twice a year—planting season and harvest time, for example—the financial institution should disburse the loan in two distinct tranches. For crops with short growing seasons, a line of credit with staggered disbursements may be more appropriate. Disbursement schedules tailored to the particular crop and producers being financed should:

- allow the borrower to avoid accumulating interest when money cannot be put to applicable use, thereby lowering finance cost and avoiding unnecessary indebtedness that might jeopardize repayment; and
- help the borrower manage cash and resist the temptation of using excess funds for other purposes, which endangers expected yield and thus income and often loan repayment.

In addition to timing disbursements, the financial institution may consider providing all or part of the loan through vouchers or direct payments to the relevant actors, rather than to the client. This may not only help facilitate input purchase discounts through economies of scale (bulk purchases) but also increase the probability that loan proceeds go directly to the financed activity. Many borrowers may be initially wary of corruption or back-dealing and may be reluctant to delegate input purchases to the institution. The financial institution should work with the borrower to reach a transparent, competitive mechanism for choosing an input provider.

Monitoring Loans

As with any loan, value chain loans require monitoring, including client visits. Given the longer distances and higher operational costs of working with remote clients, it is difficult and costly for staff to visit each and every borrower regularly. For this reason, it is recommended that the lender leverage relationships with producer associations, technical assistance providers, and/or the final buyer to assist in monitoring the value chain loan portfolio. Ideally, the value chain analyst or the proxy should visit the rural communities at least once a month, visiting different producers each time. Where the number of clients is large, the value chain analyst can use a register or data management system to track monitoring by multiple parties. Notes on the different clients can be recorded from a variety of monitoring actors. Such a register helps ensure that all borrowers are visited at least twice during the production process. Whenever monitoring occurs, the analyst or proxy should also generate a brief report, highlighting circumstances that could endanger loan repayment.

The analyst may also leverage the social guarantee that the association or other producers provide, knowing these actors have incentives to be good stewards of their own money and reputations. This can encourage them to be good stewards of the financial institution's money.

Receiving Repayment

In Peru, once the buyer receives the product, all payments are made through the credit union. The credit union deducts the full loan payment—principal plus interest—from the sale amount and deposits the remainder into borrowers' accounts.

It is important to note that financial institutions can offer a variety of repayment options to different borrowers, based on their particular cash flow. Some institutions expect borrowers to make a single or balloon payment of interest and principal at loan maturity. Others offer loans with monthly payments of interest and principal. Certain institutions offer loans with interest-only payments for the initial months and a final payment of the principal once the crop has been sold. Still others use individual loan repayment schedules, based on a specific borrower's expected cash flow, including all household income sources. The specific repayment procedures followed are best determined by familiarity and comfort in lending to a particular client; that is, new clients have more restrictions or tighter repayment schedules than older, well-known clients.

Financing the Same Value Chain Again

After financing a value chain once, lenders only need to reapply Phase 3 activities on subsequent loans, unless there have been significant changes in the chain. Lending staff should reaffirm market demand prior to a new financing cycle.

After the first loan cycle is completed, the financial institution should gather feedback from value chain actors on loan use to improve the process and hone the product. The financial institution may also uncover other value chain actors that need financing. Having established the value chain's viability, the financial institution increases economies of scale by financing additional actors in the same chain.

Learning and Innovating

Once the financial institution has implemented its first set of value chain loans, it should continue to learn and innovate; the methodology should not remain static. As presented in this manual, the guidelines are deliberately general and conservative to help institutions be successful in their first attempts at value chain finance. As a financial institution gains experience, it will identify areas in which the methodology could be made more flexible, more efficient, or more risk tolerant. For example, additional segments in the value chain may be identified for financing, but they may require new or different loan products. The financial institution may become better able to assess risk as it gains experience with the value chain methodology and clientele, and thus expand its value chain lending portfolio and subsequent profitability.

Conclusions

The value chain finance methodology developed in Peru can be adapted to diverse contexts, products, and environments. It is suggested that the following preconditions should exist:

- Strong financial institutions should be committed to serving the rural sector, with offices near producers.
- Value chains should be well established, profitable, and/or growing, and include significant numbers of organized producers.
- Producers should have access to technical assistance to help them improve production methods and thus increase their output and quality (the ability to meet buyer requirements).
- Regions where value chains will be financed should have basic infrastructure, including roads and telephone networks.
- Existing legal systems should allow for contract enforcement. Farmers should have some type of documentation of land ownership (not necessarily a title) to tie the producer to the land where production will occur.
- End buyers should want to actively participate in the value chain.
- Financial institutions should have the necessary human resources or be willing to hire specialized staff with the agricultural skills and ability to facilitate value chain relationships.
- Financial institutions should be able to access basic, reliable market data, either through public sources or from interactions with other value chain actors.

Based on the lessons learned in Peru, WOCCU has found that successful value chain finance includes the following elements:

➔ ***Experience:*** Financial institutions need to see that the methodology works before they increase their lending. As positive results emerge, these institutions will more readily look for new value chain financing opportunities.

➔ ***Borrower credibility:*** The market determines the success or failure of value chain financing. Financial institutions should work with established producer groups and select buyers who have experience and good business reputations.

➔ ***Formal commitment:*** Open conversation about each participant's objectives ensures clear arrangements. All participants should sign contracts that include penalties for not fulfilling their responsibilities. While this is not a 100-percent guarantee for compliance, it does reduce abuse by any one participant.

- ***Thoroughness:*** The risk dramatically increases if the financial institution skips any of the three phases of the methodology. Value chain credit analysts and their managers should be trained to understand the importance of completing each phase, and not cutting corners, to ensure long term success.

By applying the value chain finance methodology, financial institutions can mitigate numerous risks, reduce operational costs, and provide quality, affordable financial services for small-scale producers and other value chain actors. The long-term sustainability of the methodology depends on value chain actors' continued commitment and willingness to participate in and improve their value chain. It also relies on the financial institution's ability to iteratively learn, innovate, and improve the methodology over time. As the initiative in Peru indicates, value chain finance has the potential to help small-scale producers achieve more profitable and sustainable arrangements, and transparent, formal financing. It further encourages financial institutions to break into new, profitable markets that can be beneficial to all parties. However, in value chain financing, it is critical that the financial institution manage its processes well and that all value chain actors buy in to the relationship to ensure long term sustainability.

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