READER ON VALUE CHAIN FINANCE

A compilation of international documentation on value chain finance (with hyperlinks to documents on CD)

A WIKI document
(readers are welcome to add/adapt it to their needs)

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Glossary

BDS  Business Development Services
DFO  Development Finance Organization
FAST Finance Alliance for Sustainable Trade
FAO  Food and Agriculture Organisation of the UN
FS   Financial services
FSP  Financial service provider
MFI  Microfinance Institution
MOU  Memorandum of Understanding
MSME  Micro-, Small and Medium scale Enterprises
NFS  Non-financial services (like BDS)
NGO  Non-government organisation
SACCO Saving and Credit Cooperatives
SME  Small and Medium scale Enterprises
VC   Value Chain
VCD  Value chain development
VCF  Value chain finance
WOCCU World Council of Credit Unions
1. Introduction on value chain finance

1.1 What is value chain finance?
Value chain finance (VCF) can be described as *all financial products and services that flow to or through any point in a value chain in order to increase returns on investment and growth and competitiveness of that value chain* [Ref. 1.1]. The term VCF may also refer to an approach in which the specific *features* of trading within a value are exploited to reduce finance risks and to facilitate services by financial institutions [Ref. 1.2]. In other words, it describes not just products or approaches of financial institutions, but just as much the features of a value chain that facilitate those services. Others point at the *evolution* in time of the way in which finance for agricultural producers has been approached. Calvin Miller [Ref. 1.3] points at four phases that can be recognized;

- Agricultural credit era (1950 - 1985)
- Donor microfinance era (1980 - 2000)
- Commercialization of MFIs (2000 - present)
- Value Chain Finance (2005 - present)

This evolution in finance approaches shows a gradual movement towards inclusive financial systems that operate in accordance with the dynamics of the market.

1.2 Levels of maturity of value chains and related finance modalities
It should be noted that the literature on value chain finance spans a great diversity of finance practices, ranging from adapted microfinance products to highly sophisticated structured finance products for international commodity based trade. This wide spread is related to the differences between value chains, but also to varying degrees of maturity of the value chains concerned. In a presentation on VCF in Africa, Calvin Miller presents some salient facts about the size and growth of high value exports from developing countries [Ref. 1.3].

- Cereals exports grew 13% between 2000 and 2005 to a level close to $20 billion
- Traditional export grew 21% in the same period to $30 billion
- Meat, fish, dairy and eggs grew with 34% to almost $50 billion
- Fruits and vegetables grew with 32% to $46 billion.

This illustrates the importance of large mature value chains that are entirely commercially financed with the full diversity of financial products available in commodity markets. The sector is characterized by an *integrated agriculture finance structure*. The objectives of this structure include: risk mitigation for farmer financing, securing good quality raw material for processors, improve market position for equipment suppliers, and effective involvement of the bank in the agricultural value chain.
On the other extreme, one finds the small scale family agriculture, where the majority of small farmers produce for subsistence and selling is limited to local markets (often the open village market). This segment can be characterized as *embryonic or emerging* value chains. The term embryonic denotes the potential for a link to a commercial value chain, but it is a link that has yet to be ‘delivered’.

In between the two there is segment that could be characterized as *developing value chains*. It is this segment where most interventions for the facilitation of value chain finance of donors are focussed.

1.3 Two frontiers
Finance is a vital component of value chain development, as often in the early stages primary producers, processors and even commercial traders, find it hard to access credit. If access cannot be facilitated, development of the chain will often not succeed. But what is the role of donors in this sector? Should not the formal financial sector in the country take care? In value chains, donors are working on two frontiers. The first is to ensure inclusion of primary producers in the chain, usually through *value chain development (VCD)* programs. In this reader VCD is clearly distinguished from VCF, to point at the non-financial interventions leading to development in the chain (such as setting up farmers organisations)\(^1\). The second frontier is to create access to finance for actors in developing value chains.

The above diagram of agricultural value chains\(^2\) illustrates a few key characteristics of agricultural value chains in developing countries;

- The bottom of the pyramid (left) represents the majority of farmers who are involved in small scale family agriculture, usually selling in village markets at low prices. This segment represents large number of farmers, but the value of

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\(^1\) This reader does not elaborate upon the non-financial aspects of developing value chains. For further reading reference is made to:
- [http://apps.develebridge.net/amap/index.php/Value_Chain_Development](http://apps.develebridge.net/amap/index.php/Value_Chain_Development)
- [http://www.value-chains.org/dyn/bds/docs/detail/424/1](http://www.value-chains.org/dyn/bds/docs/detail/424/1)

\(^2\) It is noted that the diagram refers to the aggregate of value chains in developing countries, consisting of many products, with great variations from country to country.
their produce is low. Without special programs, these farmers are not linked to a commercial value chain (inclusion barrier).

- In the top of the pyramid one finds the mature value chain segment in which a relatively small number of farmers (entrepreneurs) produce high volumes. Usually this part of the value chain is fully commercially financed.
- In between these two segments one finds the developing value chains. This is the segment that usually find it hard to get access to bank finance. Commercial banks in developing countries finance only the ‘high end’ commercial value chains. Developing value chains usually have no access to commercial finance. It is this “missing middle” that is the target for most value chain finance interventions. Aiming lower, is ineffective because these producers are not linked to a value chain yet. Aiming higher is not relevant, because the formal financial sector could take care of it.

In a contribution to the FAO conference on VCF in Costa Rica [Ref. 1.8], Gonzalez Vega summarizes the three basic questions for rural financial deepening.

<table>
<thead>
<tr>
<th>Role of agricultural value chains in processes of rural financial deepening.</th>
<th>Three questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much does the lag in rural financial deepening restrict participation in modern agricultural value chains?</td>
<td>Barriers to entry</td>
</tr>
<tr>
<td>How much does participation in modern agricultural value chains improve access to financial services?</td>
<td>Creating and expanding access</td>
</tr>
<tr>
<td>How much does strengthening modern agricultural value chains improve the coverage of financial brokers?</td>
<td>Facilitating intermediation</td>
</tr>
</tbody>
</table>

In summary, donors have several good reasons to intervene in value chain finance:

a. To ensure inclusion of primary producers (realised in value chain development programs) together with access to financial services (i.e. lowering inclusion barrier).

b. To facilitate finance from the formal financial sector to ‘the missing middle’ (i.e. lowering the finance barrier).

A third justification for donors may be to ensure that established relationships in the chain are fair to primary producers and that chain organisation is environmentally sound (e.g. fair trade).

1.4 The link with microfinance

Microfinance features prominently in this reader, not just because it is one of the finance mechanisms at the bottom of the chain, but also because it is interesting to look at the parallels between microfinance and value chain finance from a donor’s perspective. The circle diagram helps to illustrate a few features of the connection between the two types of finance. Part of the primary producers, such as subsistence farmers, have no link yet

Diagram 3: Link Microfinance and VCF
to a commercial value chain. They are the target of value chain development programs aiming to establish the connection to a value chain (inclusion). Some do have access to microfinance. Those that do produce for a value chain, may be financed either by MFIs or by other finance mechanisms in the chain. So microfinance and value chain finance are partly overlapping, partly complementary.

**Emerging lessons of experience.** A review by ICCO of its portfolio on value chain finance aspects [Ref. 1.6], shows a picture of great diversity and ingenuity of practitioners. No one project has exactly the same solution for the finance issue. What is striking in some of these cases is the simplicity and effectiveness of the solution. An MFI in Ruanda, collaborating with a farmers producer cooperative, have installed a warehouse receipt system that is so simple in its administration, that one officer can handle it. The World Council of Credit Unions (WOCCU) has just published a guideline for value chain finance that is also worth noting [Ref. 1.4]. In a pilot project in Peru in a period of less then 2 years the participating credit unions have been able to finance a total of 18 value chains involving 3688 farmers. The methodology works with four steps;
1. Identify and evaluate value chain finance opportunities.
2. Facilitate and leverage market linkages.
3. Determine financial feasibility and design the product.
4. Grant, monitor and recuperate the loans.
A score card has been developed for determination of ‘go-no go’ decisions by credit union staff.

In studying the diversity and sophistication of financial instruments for VCF, it is worthwhile to consider that especially in the earlier phases of value chain development, VCF can be a rather simple and straightforward undertaking. Worldwide, many good examples exist where small farmers have effectively been linked to value chains with simple systems of finance. In fact also in VCF the motto of Dr. Mohamed Yunus of the Grameen Bank applies, with which that he used to challenge his staff; “If you can think of an even simpler solution, apply it!”.

**1.5 The graduation perspective**
The observation that value chains for specific products and specific areas, have greatly varying degrees of maturity, is a reflection of the fact that value chains are constantly developing. Each of them is involved in a dynamic process, with the aim to move forwards in terms of competitiveness and value added. This process of moving from one stage of maturity to the next can be described as graduation.

As the value chain graduates, so do the finance needs and finance modalities. And thus, the instruments and finance modalities have to be sufficiently flexible to grow with the chain. Microfinance can be appropriate, but with the growth of the chain it may at a certain point reach its limits. This is why alliances with formal financial institutions are important, a process that has also been described as building inclusive financial sectors [Ref. 1.5]. The role of the donor changes as the chain develops and matures. In chapter 3 five essential aspects of the graduation process leading towards a higher state of maturity is being described. Graduation in the value chain is related to the development a degree of chain governance, the forging of vertical links (producers - market), the creation of strong producer groups (horizontal linkages), the generation of a minimum of chain ‘intelligence’ (data for decision making), and a
chain management function and related control (risk mitigation mechanisms). In each of these processes, a donor can play a constructive role, as it deals with ‘building capacity’ of actors and structures. These are ‘investments’ in the chain with a potential high ‘return’ in terms of development, because once kick-started, value chain programs have a potential to become growth machines with sustained benefits for producers at the bottom of the pyramid.

Graduation also happens within the structure of financial services for a value chain. A few key features of this graduation process may include:

- Ability of the chain actors to reduce risk, improve credit worthiness and thus effectively access the finance needed.
- Ability of the financial service providers to meet rapid growth for financial services in the chain
- Introduction of more divers and specialised financial products and services for specific parts in the value chain.

1.6 North and South
This reader aims to highlight both the perspective of value chain actors and their financiers (South), as the role of donors and their ‘smart aid’ approaches (North). The next four chapters focus more on the South (chapter 2-5), while the last three chapters deal more with donor issues such as the design of intervention programs and ‘smart aid’ criteria (chapter 6-8).

Further reading (instantly accessible when CD is loaded):
1.1 MicroLinks WIKI Value Chain Finance - 2009.doc
1.3 Setting the Stage - Value Chain Financing in Africa Calvin Miller FAO - October 2007.pdf
1.4 WOCCU’s Value Chain Finance Methodology - 2009.pdf
1.5 Building Inclusive Financial Sectors - Blue Book - UN 2005.pdf
1.6 ICCO Deskstudy on linking FS to VCD - 2009.doc
1.7 Organisations agricoles et institutions financières rurale - CERISE - 2009.pdf
Part 1 - South

Landscape of Value chain finance, instruments and modalities

Building capacity for value chain finance

Developing chain intelligence

Emerging good practice standards
2. Value Chain Finance - landscape, instruments and modalities

2.1 The landscape of value chain finance

The review of donor experiences in VCF points at the great variety of VCF approaches and methods that have been applied. The segment of developing value chains portrays a landscape with a great variety of actors, service providers and finance modalities. The lead actors include:

a) Cooperative unions and membership organizations, that organize primary produces and set up processing and marketing organizations

b) NGOs that facilitate the establishment of a marketing organization within the value chain or establish a separate financial institution with a value chain development outlook.

c) Social enterprises and companies that operate in the value chain

d) Service providers that facilitate the creation of a more viable value chain or the establishment of a new value chain actor.

Yet, as shown in diagram 4 below, despite the great variety some order and structure can be recognized, when the actors, related service providers and their financial products are differentiated according to their level in the value chain.

Diagram 4: Chain operators, financial services and financial service providers

Each of the four main levels in the value chain have their own specific finance modalities. The bottom of the value chain is the most complex from the finance point of view as it involves large numbers of small farmers or micro entrepreneurs. Farmers need finance for land preparation, for inputs (seed, fertilizer, pesticides) and for hired labour during the harvesting period. They may also need finance for investments in agricultural equipment, drying and storage. This levels is currently mainly served by self help organisations like SACCOs, producer organisations and MFIs. In organised value chains finance can also be provided by chain actors (marketing organisations, processors). Small farmers rarely have access to credit from commercial banks.

The next level often consists of producer organisations (taking care of storage and marketing), local traders and local processors. These are the SMEs of the Missing Middle,
where new interventions in value chain finance are often most needed. Higher up in the value chain finance is needed by a smaller number of chain actors, for higher finance transactions. This reduces the transaction costs for the financial service providers (FSPs). For this reason, the higher levels in the chain often find it less difficult to get access to commercial finance from banks. Especially the processors, may need substantial finance at longer terms for investments in equipment and machinery. All higher levels require financing for investments in transport equipment and storage facilities.

2.2 Financial instruments

2.2.1 Embedded finance

Traditionally in many value chains most of the financial needs have been financed from within the chain. In an FAO study on VCF in Asia, a paper by Andrew Shepherd concludes that lack of working capital may not be a major constraint to the functioning of agricultural marketing systems in Asia [Ref. 2.1].

“One reason why the availability of working capital does not appear to present too many problems is the existence of many vertical financial linkages within marketing systems. These pivot around millers in the case of staples and wholesalers in the case of horticultural produce. Both millers and wholesalers lend to traders who buy from farmers and these traders may, in turn, make both production and consumption loans to farmers. But wholesalers and millers also lend in the opposite direction, to distributors and retailers. Farmers are significant providers of finance to the marketing system, by accepting short-term deferred payment from traders. The paper concludes that such linkages seem to be generally non-exploitative and serve primarily to secure supply, guarantee markets and reduce transaction costs.”

“Apart from loans from others in the marketing system, sources of working capital are own funds, friends and family and local moneylenders. Banks rarely offer a satisfactory alternative to these sources, even if interest rates are less than those of moneylenders. Working capital needs are often unpredictable and loans are often required immediately. In most of the case study countries banks do not presently appear organised to provide such a rapid service.”

Before discussing the instruments for external finance by banks or other financial institutions, it is good to realise that a lot of value chains have developed without the luxury of such services. However, increasingly external financial services are becoming available, thus replacing in part the embedded finance structures. Also hybrid structures are developed in which a bank finances a chain actor, in order to allow this actor to finance its suppliers. The various modalities encountered will be discussed below more in detail.

2.2.2 Overview financial instruments

Throughout the chain, different financial instruments are needed for different purposes, as illustrated in diagram 4 above. In table 2.1 below a distinction is made between the real finance instruments, and supporting mechanisms aimed to reduce risks for the financial service providers.
Table 1: Overview of finance instruments and modalities

<table>
<thead>
<tr>
<th>Financial services provided to value chain operators (South)</th>
<th>Possible role of the donor (North)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial instrument</strong></td>
<td><strong>Purpose</strong></td>
</tr>
<tr>
<td>Debt finance:</td>
<td>• To enable cash payment to suppliers</td>
</tr>
<tr>
<td>• Trade loan</td>
<td>• To bridge the period between supply and payment by the client</td>
</tr>
<tr>
<td>• Overdraft / Working capital finance</td>
<td>• Purchase of fixed assets</td>
</tr>
<tr>
<td>• Factoring</td>
<td></td>
</tr>
<tr>
<td>• Investment loan</td>
<td></td>
</tr>
<tr>
<td>• Guarantee mechanisms</td>
<td></td>
</tr>
<tr>
<td>• Warehouse receipts – inventory credit</td>
<td>• Reduce risks of FSPs</td>
</tr>
<tr>
<td>• Contract farming</td>
<td>• To collateralize the credit provided to suppliers</td>
</tr>
<tr>
<td>• Leasing (micro-leasing, equipment leasing)</td>
<td>• To reduce the risk of non-payment</td>
</tr>
<tr>
<td>• Savings</td>
<td></td>
</tr>
<tr>
<td>• Equity</td>
<td></td>
</tr>
<tr>
<td>• Financial sector product innovation</td>
<td>• To improve leverage for debt financing</td>
</tr>
<tr>
<td></td>
<td>• To invest in promising ventures with high returns (i.e. capital gain, social return).</td>
</tr>
</tbody>
</table>

2.2.3 Trade finance
For trade financing various instruments are being employed.

*Trade loans* are required to pay farmers upon delivery of their produce, or more in general to finance the time that lapses between production (or processing) and payment by the consumer in the end market. Trade credit exists when one firm provides goods or services to a customer with an agreement to bill them later, or receive a shipment or service from a supplier under an agreement to pay them later. In order to provide trade credit to their suppliers, chain actors may require trade loans from financial institutions (usually commercial banks). The bulk of global trade in agricultural commodities (like palm oil, soya bean, coffee etc.) is financed by sophisticated commercial financial services. However, especially at the bottom of the pyramid, and certainly when it involves small farmers, banks have no appetite to lend. Both transaction costs and risks are considered too high. This is a niche where donors can play a role, through programs that reduce the transaction costs for banks, mitigate the finance risks and demonstrate the feasibility of the finance process.
**Working capital** is the operating liquidity available to a business. It is calculated as current assets minus current liabilities. If current assets are less than current liabilities, an entity has a working capital deficiency, also called a working capital deficit. Working capital deficits can best be financed with an *overdraft facility* at the bank, as this allows credit to be adjusted on a daily basis to the cash flow in the business. However, this will usually require hard collateral, and thus rarely accessible to SMEs. Working capital is also financed with other forms of debt funding or with equity. Donors sometimes provide seed capital, for instance to producer cooperatives, to meet (part of) their working capital requirements.

**Warehouse inventory finance.** The use of a warehouse by for instance a producer cooperative can facilitate collateral management by a financial service provider in the supply chain. Warehouse Receipts are documents issued by warehouse operators as evidence that specified commodities, of stated quantity and quality, have been deposited at particular locations by named depositors. They can be used as credit enhancement instruments in order to structure finance around the chain which traditional trade finance structures do not allow (alternative collateral).

Collateral management is essential component of effective credit risk management. It enables the lenders to set up operational risk parameters while lending and also to control and monitor them. Structured finance transfers the risks from parties less able to bear them to those more equipped to bear them. It diversifies the risks among actors and converts wealth to capital. Structured commodity finance facilitators include warehousing Infrastructure, logistics management, quality assessment, insurance, and exit options.

In an article on Regulated Warehouse Receipt Systems in Africa By Gideon E. Onumah [Ref. 2.2] it is observed that collateralised financing is quite new in Africa. It argues in favour of more regulation, and refers to the case of Zambia where donors and a range of Zambian parties (including farmers, bankers, traders, millers and policy makers), to develop and implement a regulated warehouse receipts system.

**Contract farming** usually involves a large agribusiness firm forming alliances with groups of smallholders and, through written or verbal contracts, providing farm inputs such as credit and extension in return for guaranteed delivery of produce of specified quality often at a pre-determined price [Ref. 2.3]. This is a form of backwards integration. Such contracting arrangements may also involve horizontal integration where firms not only provide direct inputs into farm-level decision making but also encourage integration of various activities across a population of smallholders through farm groups. These groups may coordinate planting and harvest as well as facilitate or manage storage and transport arrangements. The credit provided for farm inputs by the agribusiness is ‘embedded’ in the contract. To the extent that the agribusiness has is refinancing this credit portfolio with commercial credit, it serves as a retailer of external financial services to the value chain.

**Comparison of trade finance modalities**
A study on rural finance by Robbert Vries [2.4] compares the above instruments and observes that each product offers different types of benefits, to varying degrees. Trader credit offers working capital to smallholders, allowing them to participate in promising value chains by expanding product sales both through better yields and more
secure market channels. Contract farming and outgrower schemes allow producers to gain access to high-value markets, as well as to increase their productivity by offering them loans with embedded services, such as technical and marketing assistance. Warehouse Receipt Systems extend the sales season of grains while providing small farmers access to higher average prices, and the economies of scale that derive from upgrading the marketing process with consistent standards and grades.

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>Trader Credit</th>
<th>Contract Farming /Outgrower Scheme</th>
<th>Warehouse Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Effective Screening</td>
<td>Though personal relationships</td>
<td>Through contractual relationships</td>
<td>Secured product/ inspected warehouses</td>
</tr>
<tr>
<td>of willingness and ability to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pay</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expanded Collateral</td>
<td>Future product</td>
<td>Future product/contract</td>
<td>Secured product/ legal receipts</td>
</tr>
<tr>
<td>Appropriate Terms/Conditions</td>
<td>Timing tied to product transactions: in-cash and in-kind</td>
<td>Receipts enable longer storage: delayed sales</td>
<td></td>
</tr>
<tr>
<td>Increased Yields</td>
<td>Via increased inputs; technical and marketing assistance</td>
<td>Reduced spoilage</td>
<td></td>
</tr>
<tr>
<td>Lower Costs</td>
<td>Bulk purchases of inputs</td>
<td>Reduced sales cost</td>
<td></td>
</tr>
<tr>
<td>Higher Product Prices</td>
<td>Increased quality/ bulk sales of high-value products</td>
<td>Bulk sales; extended sale season</td>
<td></td>
</tr>
<tr>
<td>Standards and Efficient Sales</td>
<td>Through agreements</td>
<td>Sight un-seen transactions through standards and security</td>
<td></td>
</tr>
<tr>
<td>Market Access</td>
<td>Informal</td>
<td>Formal</td>
<td>Systematic</td>
</tr>
<tr>
<td>Technical Services</td>
<td>Sometimes</td>
<td>Usually</td>
<td>No</td>
</tr>
</tbody>
</table>

**Guarantee mechanisms.** In instances that the local financial sector perceives the risk of a specific value chain as being too high, a guarantee arrangement can help those banks to build up experience with the subsector concerned, and build confidence in its credit-worthiness.

In a conference paper Hans Wortelboer of Rabo India Finance [Ref. 2.3] shares the experience of the Rabobank in building and integrating a more efficient agricultural supply chain environment using a special facility called the Sustainable Agriculture Guarantee Fund. Rabobank established this fund to enhance agricultural producers’ access to credit for

![Diagram: Guarantee Fund mechanism: the case of Rabobank](source Hans Wortelboer 2007)
production, processing and marketing of agricultural products on commercial and sustainable terms. The mechanism is a triangular agreement between eligible buyers, sustainable agriculture guarantee fund and local intermediary lender.

Similar constructions are used by donors in order to facilitate value chain finance by local banks.

2.2.4 Term finance
Apart from the trade finance, which usually involves credit of less than 12 months, other financial instruments are used for finance needs over one year.

**Investment finance** is usually done through **term loans** (i.e. over 1 year duration) as fixed assets are depreciated over a number of years. Formal financial institutions will normally require collateral for such loans, and may limit access to these facilities to the more credit worthy customers (good credit history). In the agricultural sector collateral is often posing great limitations (due to lack of title deeds, local legislation, cultural factors etc.). Local banks now tend to refrain from taking risks in agriculture. This also has a historical background as agricultural banks in the 80ties and 90ties experienced high levels of default. A KIT write shop on Value chain finance devoted specific attention to a cluster it called: ‘unleashing investments’ - about matching fixed assets to medium term loans. Through guarantee mechanisms and potentially risk baring capital (equity) banks could be pulled into agricultural finance again. An alternative for investment loans are leasing products (discussed below).

**Equipment leasing** is basically a loan in which the lender buys and owns equipment and then "rents" it to a business at a flat monthly rate for a specified number of months. At the end of the lease, the business may purchase the equipment for its market value (or a predetermined amount), continue leasing, lease new equipment or return it. Leasing separates the ‘use’ of asset from its ‘ownership’. Leasing has advantages both from the client perspective (like an asset it can serve as collateral whereby additional collateral may not be required, there is less need to have a credit history and less down payment requirements) and the leasing company perspective (for lower transaction costs, stronger security: ownership rights versus weaker collateral rights, and usually more flexible pricing). Leasing firms often prefer to limit themselves to equipment that is frequently used and sold in the market (such as water pumps, generators, miling equipment etc), as they have to realistically assess the rest value after termination of the lease agreement. The term micro-leasing is used to denote MFIs adopting a lease product, and leasing companies serving micro and small enterprises. The position of leasing
in the finance landscape is well expressed in a diagram of a recent IFC study on leasing [Ref. 2.5].

For examples of leasing in Africa reference is made to an article of P. Schrieken [Ref. 2.6].

Factoring. Factoring is a financial transaction whereby a business sells its accounts receivable (i.e., invoices) to a third party (called a factor) at a discount in exchange for immediate money with which to finance continued business. Desjardin has applied factoring in the cotton value chain, as illustrated in the diagram below. The cotton company delivers inputs (2) to the cotton growers against and invoice (3). Subsequently it sells its accounts receivable with the cotton growers to the SACCO (the ‘factor’). After the harvest, the SACCO collects the repayment from the payment for the cotton that is channelled through the SACCO.

Diagram 7: Factoring model Dejardin

Equity finance is needed by processing and marketing organizations so as to create a sufficiently strong capital base. This enables them to finance further expansion with debt finance. A study of Eva Calves presented in an FAO conference [Ref. 2.7] looked more deeply into financing of working capital in Latin America. Major differences were found among countries, but owner’s equity is at the top of the list, making up 40 percent to 80 percent of the total. In second and third place is financing received from other agents in the agricultural value chain, ranging from 10 percent to 30 percent. Especially in the early phase of value chain development, the risks for entrepreneurs are quite substantial as the pilot programs yet have to prove their viability. External finance in the form of (quasi)equity can be justified, as term loans may be too rigid and risky at this stage. Dependent upon the debt-equity ratio required, equity finance can also have a substantial leverage effect.

International payment methods. The world Bank has produced a Basic Trade Finance Tool, which describes the many ways by which traders can arrange for payments to be
made [Ref. 2.8]. It provides a use full jargon free introduction in the world of Letters of Credit, drafts etc.

2.3 Linking value chains to finance
In two separate studies CERISE [Ref. 2.9] and ICCO [Ref. 2.10] have reviewed in what way the local partners are attempting to create sustainable structures for both financial and non-financial services in support of the value chain. Interestingly both studies arrived at very similar conclusions. Both studies found three different modalities for linking value chains to finance:

**Modality A: Finance by value chain operators.** The first modality is represented by “all-in-one” value chain operators, that render both non-financial services (NFS) and financial services (FS), as embedded finance within the value chain. They aim to become self sustaining organisations, including the financial and non-financial services they offer to producers. They perform all functions; that of chain operator (buying from the primary producers), financial service provider (FSP) and provider of NFS. If the lead actor is a membership organisation of primary producers (e.g. farmers union) this model may work well. But if it is a large commercial company (trader, processor, exporter) the arrangement creates dependency and may eliminate competitive pricing for the farmers. Scaling up of operations may also put the chain operator under strain as more and more finance capital needs to be mobilized.

**Modality B: Finance by specialised financial service providers that evolved out of a value chain actor.** This modality is characterised by organisations (value chain operators or non-financial service providers) which have established a specialised financial institution. These MFI’s link up with chain operators and providers of NFS.

**Modality C: Finance by specialised financial service providers which linked up with value chain actors.** The third modality is represented by chain operators establishing a cooperation with external financial service providers.

No model can be singled out as ‘best’ solution, as this depends critically upon the circumstances and maturity of the value chain concerned. It completely depends upon the specific features of the value chain and its stage of development. A number of factors needs to be considered in determining which option is to preferred in a specific situation. Table 2 below provides an overview of merits and drawbacks for each of the three modalities.

The first modality is often preferred by membership organisations (e.g. producer cooperative). In that case the dependence upon one buyer does not conflict with the interests of the primary producers, as they are represented in the governance structure of the institution. The first ‘all-in-one’ modality is less preferable in a fully commercial set up, unless it is a temporary arrangement, paves the way for external finance by independent FSPs. Over time embedded finance functions tend to be separated or left to specialized financial institutions for a variety of reasons (professional specialization, reduction of undue dependency, avoiding conflicting interest etc.). This highlights the need to look at finance modalities in the context of the development path (trajectory) that a value chain takes.
<table>
<thead>
<tr>
<th>Modality</th>
<th>Merits</th>
<th>Demerit / risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modality A:</td>
<td>a. Crucial factors for making the VC</td>
<td>a. The lead actor has to perform three roles</td>
</tr>
<tr>
<td>&quot;All-in-one&quot; -</td>
<td>succeed are in one hand. This helps to</td>
<td>(VC-Actor, FSP, BDS provider)</td>
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<tr>
<td>the chain</td>
<td>coordinate services and reduce transaction</td>
<td>b. Lack of functional specialization and possible</td>
</tr>
<tr>
<td>actor provides</td>
<td>costs</td>
<td>conflict of interest within one organisation</td>
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<td>both FS and NFS.</td>
<td>b. No need for contractual arrangements</td>
<td>c. Profits and losses are hard to attribute to each</td>
</tr>
<tr>
<td></td>
<td>between several actors, as risk mitigation</td>
<td>function – cross subsidization may hide the</td>
</tr>
<tr>
<td></td>
<td>for credit delivery is in one hand.</td>
<td>unavoidable nature of one function.</td>
</tr>
<tr>
<td></td>
<td>c. Primary producers can access finance in</td>
<td>d. Scaling up is a challenge</td>
</tr>
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<td></td>
<td>areas where the financial sector is not</td>
<td>e. Organisations that started with a social agenda,</td>
</tr>
<tr>
<td></td>
<td>well developed (or declines access).</td>
<td>need to make a shift towards a commercial approach.</td>
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<tr>
<td></td>
<td>d. Effective delivery of FS in the early</td>
<td>This requires a different mind-set and expertise.</td>
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<td></td>
<td>stage of development.</td>
<td>f. If producers engage in side-selling, it endangers both</td>
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<td></td>
<td>e. Cross subsidization may allow non-</td>
<td>the lending portfolio and the marketing operations of</td>
</tr>
<tr>
<td></td>
<td>profitable NFS to be sustained, which</td>
<td>the chain.</td>
</tr>
<tr>
<td></td>
<td>would not be possible otherwise.</td>
<td>g. If the lead actor is a large buyer (trader, processor)</td>
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<td></td>
<td></td>
<td>the primary producers become unduly dependent (</td>
</tr>
<tr>
<td></td>
<td></td>
<td>competition eliminated).</td>
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<td></td>
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<td>h. Input providers are generally constrained by the fact</td>
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<td></td>
<td></td>
<td>that they are financed by their providers through 30- or</td>
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<td></td>
<td></td>
<td>60-day sales arrangements, and they have no means by</td>
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<td></td>
<td></td>
<td>which to extend credit for a longer period without gaining</td>
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<td></td>
<td></td>
<td>new forms or sources of financing themselves.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modality B:</td>
<td>a. Chain operators do what they are</td>
<td>a. The FSP needs to adapt its products and delivery</td>
</tr>
<tr>
<td>Chain actor</td>
<td>best at.</td>
<td>methods to the needs of the VC.</td>
</tr>
<tr>
<td>establishes</td>
<td>b. Finance is left to specialist FSP</td>
<td>This requires consultation between the various actors.</td>
</tr>
<tr>
<td>separate FSP</td>
<td>c. Governance of FSP is geared to</td>
<td>b. Views between FSP and mother NGO may differ. FSP may</td>
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<tr>
<td>(e.g. MFI)</td>
<td>development of VCF products</td>
<td>find it hard to become really autonomous, which may</td>
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<td></td>
<td>d. Better chances for sustainability of</td>
<td>compromise its prospects.</td>
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<td></td>
<td>FSP through portfolio diversification</td>
<td>c. FSP may be over-exposed to agriculture (lack of</td>
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<td></td>
<td>e. Primary producers can access finance in</td>
<td>portfolio diversification)</td>
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<td></td>
<td>areas where the financial sector is not</td>
<td>d. Risk mitigation measures depend partly upon the good</td>
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<td></td>
<td>well developed (or declines access).</td>
<td>collaboration with NFS providers.</td>
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<td></td>
<td>f. Good prospects for scaling up</td>
<td>e. If the mother NGO is the lead-actor in the chain. It</td>
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<td></td>
<td></td>
<td>may give priority to NFS at the expense of (the</td>
</tr>
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<td></td>
<td></td>
<td>prospects for viable) FS.</td>
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<tr>
<td>Modality C:</td>
<td>a. Chain operators do what they are</td>
<td>a. The FSP needs to adapt its products and delivery</td>
</tr>
<tr>
<td>Chain actor</td>
<td>best at.</td>
<td>methods to the needs of the VC.</td>
</tr>
<tr>
<td>works with</td>
<td>b. Finance is left to specialist FSP</td>
<td>The willingness to do so may not be there.</td>
</tr>
<tr>
<td>independent</td>
<td>c. Better chances for sustainability of</td>
<td>b. Access to finance in areas where the FSP is not</td>
</tr>
<tr>
<td>FSP (MFI or</td>
<td>FSP through portfolio diversification</td>
<td>represented may be problematic.</td>
</tr>
<tr>
<td>bank)</td>
<td>d. Good prospects for scaling up</td>
<td>c. The FSP must be familiarised with the VC, which</td>
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<td></td>
<td></td>
<td>takes time.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Risk mitigation measures depend partly upon the good</td>
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<td></td>
<td></td>
<td>collaboration with NFS providers – which may not be</td>
</tr>
<tr>
<td></td>
<td></td>
<td>acceptable to the FSP.</td>
</tr>
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</table>
2.4 The dynamics of value chain finance

2.4.3 The virtuous circle of finance
Geoffrey Chalmers in a presentation for an FAO conference on VCF [Ref. 2.11], has argued that “if we want to take a leap forward by introducing new technologies, if we want to incorporate producers who have remained outside the organized chain, financing from inside the chain is not likely to meet the investment needs”. In other words, what is needed is transition from embedded finance within the chain to external finance. He points at a case study of farmers who supply a supermarket chain, that showed that access to funds from financial intermediaries external to the chain improves their situation, leading to the formation of a virtuous circle. In a chain in which initially the primary producers were dependent upon embedded finance, the introduction of external credit lifts up all major functions in the chain. Financing facilitates the growth of production activities by each farmer and expansion of the overall chain when financing begins to flow in from outside the chain in the form of credit from financial intermediaries (see Diagram 2.).

**Diagram 8: Virtuous circle of finance (Source: Chalmers - 2006)**

Chalmers explains that the idea behind the virtuous circle of external financing is that producers can build their creditworthiness with financial intermediaries. This happens when their ensemble of market relations develops and grows stronger through participation in a modern, organized chain. When farmers receive technical assistance from buyers or when their buyers in some way guarantee purchase of the product, they improve their standing for receiving loans from financial intermediaries. This means they can obtain or improve financing from outside the value chain. The very existence of these contractual relationships, whether explicit or implicit improves producer creditworthiness.
In the same conference another interesting contribution was made by Claudio González Vega [Ref. 2.12]. He argues that embedded finance by an agribusiness poses an increasing system risk, as the portfolio of credit is likely to be concentrated in a relatively small area. If weather conditions in this area are unfavourable, the entire portfolio is affected.

The solution we will consider here calls for a third party. This third party is the institutional buyer, such as a consolidation centre for the supermarket chain. Such a third party can play either one of two different roles for improving the supply of rural credit. First, under the traditional perspective, the bank grants a loan to the institutional buyer, who then extends an advance (loan) to the producer. That is, the institutional buyer becomes a retailer of loans for the bank, which operates as a wholesaler. Nevertheless, this traditional vision has a fundamental weakness. Both buyer and producer are in the same incidence zone of systemic risk. If coffee prices should plummet, for example, everyone in the sector is in trouble at the same time -coffee growers, traditional buyers who work locally, and the cooperative that processes the crop. It is because of this close correlation that financial intermediation cannot develop well at this stage, based exclusively on the relationship between these two players.

New perspective. The solution is a diversified portfolio. The institutional buyer has a second role to play, under the new perspective outlined here. The bank (a diversified intermediary) lends directly to the producer. In any direct connection between lender and borrower, the opacity of information continues to be a problem. However, the new arrangement successfully thins the veil because the bank lends to the producer by virtue of the fact that the institutional buyer has performed a pre-screening and has identified star producers. In gauging creditworthiness, the bank does not limit its focus exclusively on the producer, but it attaches extra importance to the signal that emerges from the farmer’s participation in the chain. In its risk assessment, the bank examines relationships in the chain.

Thus, in the new perspective, a direct relationship is created between the bank and the producers, based upon the creditworthiness of the chain relationship.

Diagram 9: Graduation from embedded finance to external finance of the VC actors

2.4.2 Can microfinance scale up to the needs of value chains?
It is often argued that microfinance lacks the capacity to deal with the scope of demand in value chains. Transition towards credit by commercial banks is deemed necessary. The first answer is as correct as evasive: both have a role to play. In addressing this question more substantially there are three development to look at:

1. The capacity of the microfinance industry to scale up
2. The establishment of vertical linkages within the financial sector, connecting MFIs with banks (refer to paragraph 3.3.2).
3. Graduation of microfinance clients to commercial banks
With respect to the first point, it is interesting to look at the global trends in Micro-
finance [Ref. 2.13].

Worldwide there are an estimated 10,000 Micro Finance Institutions, with charters ranging from non profit NGOs to Credit Unions and Commercial Banks. The 1,300 MFIs who at the end of 2008 were reporting to the Microfinance Information eXchange (MIX) have 70 million borrowers and a similar number of savers. Total loan portfolio stands at US$ 40bn. In the past years key volume indicators have been growing by 20-30% per year, more in some countries. The stock of foreign capital invested in the sector, which more than tripled to US$4bn between 2004 and 2006, keeps on growing and now stands at over US$ 10bn. Much of it is held by specialised microfinance investment vehicles, with an increasing proportion coming from the private sector that sees investment in microfinance as an attractive asset. The industry has definitely entered into a stage of commercialisation although at the same time there is increasing interest in running operations respecting the triple bottom line.

Source: Trends in Microfinance, by FACET BV. for MicroNed - 2009

The total portfolio of MFIs of $40 billion compares quite favourably to total commodity exports from developing countries of US$150 billion, as a large part of this is commercially financed. No reason to discount microfinance, at least as a partial solution. The use of structured finance for microfinance investments through Microfinance Loan Obligations points at the potential for private investment in the microfinance industry [Ref. 2.14].

Documentation

Further reading (instantly accessible when CD is loaded):
2.2 Warehouse receipts systems in Africa - Onuma - 2007.pdf
2.3 Agrirevolution conference FAO - Hans Wortelboer RaboBank.ppt
2.5 Leasing in Developing Countries - IFC Experience and Lessons Learned - 2008.pdf
2.6 Microleasing - Schrieken - 2008.pdf
2.7 Financing Agricultural Marketing by Eva Galvez - FAO 2006.pdf
2.8 Payment Methods in International Trade - Daniele Giovannucci - World bank - 2002.doc
2.9 Organisations agricoles et institutions financières rurale - CERISE - 2009.pdf
2.10 ICCO Deskstudy on linking FS to VCD - 2009.doc
3. Building capacity for value chain finance

3.1 Trajectory towards mature value chain finance systems

How to get financial service providers interested?

In the past it has been observed that in value chain development programs the focus has often been on production and marketing aspects. Finance was considered as an appendix that somehow has to be arranged. However, financial service providers, whether MFIs or banks, have their own logic and business model. In its eagerness to ‘get the program going’, a donor may be tempted to influence the financial service provider with special incentives. This may work in the short run, but is very unlikely to yield sustainable results. A value chain finance approach differs fundamentally in the sense that conditions for sustainable finance are taken into consideration right from the start. The process of risk mitigation, that finally allows commercial banks to gain confidence, is an all encompassing effort throughout the chain. This process can best be characterised as building the capacity for value chain finance. Unlike capacity building for MFIs, this involves not just one actor, it refers to the ability of the various links in the chain to work together on the basis of mutual trust, solid contracts, clear standards and strong performance motivation.

The WOCCU study on VCF through SACCOs [Ref. 3.1] gives the following preconditions for finance.

Preconditions

- Solid financial institutions that have offices near the producers and are committed to the rural sector
- Organized producer groups with market potential • Basic infrastructure including roads, electricity and telephone networks
- Legal systems that enforce contracts and provide some type of land ownership documentation (not necessarily a title)
- End buyers who are willing to actively participate in the value chain • Staff members who meet a basic profile to manage the process
- Projects or private providers of technical assistance
- Access to basic, reliable market data either through public sources or other value chain participants

Source: WOCCU - Integrated Financing for Value Chains

3.2 Building capacity for integrated value chain finance

In Chapter 1 three stages of value chain development have been distinguished (emerging, developing, mature). Despite all variety, there are certain features of the process leading towards a mature value chain, that are common. The maturity of the finance system depends not primarily on the maturity of the supplier (banks have reached that stage), but especially on the maturity of the chain actors and the relations between them. Hence the trajectory leading towards mature finance arrangements in the chain, cannot be separated from the development of the value chain itself. The crucial elements for a mature value chain finance system include the development of;
- A degree of chain governance.
- Vertical linkages, especial between primary producers (farmers, micro-entrepreneurs) and a value chain operator (trader, processor, exporter).
- A certain chain ‘intelligence’ to serve the requirements of chain actors and financiers.
- Strong horizontal linkages, especially among primary producers (producer organisations) and related facilitation of finance.
- Management and control functions in the chain to meet the requirements of end-markets and financiers.

The main indicator of the maturity of the chain is the degree of financial self-sufficiency, i.e. the growth towards full commercial sustainability of all chain actors, including financial services.

A ‘mature’ value chain finance system requires all these aspects to be developed, as illustrated by the following representation of the model for Value Chain Financing in Africa by Mwangi Kariuki of the Commercial Bank of Africa [Ref. 3.2].

As all these aspects of chain development represent as many challenges for ‘building capacity’ within the chain. Donors can play an important role in each of these processes, be it that they are most needed in the early stages of the process. The more developed a chain, the more the chain actors will be capable to innovate and strengthen capacities on their own strength.

The five aspects of capacity building mentioned above are valid in any value chain development programme. They are of particular importance for successful VCF however
as credit worthiness and risk mitigation critically depend upon the consistency of collaboration within the chain.

Feasibility studies, risk mitigation measures and the growth towards credit worthiness on all levels of the chain, are critical aspects of value chain finance, and all are closely related to the degree a value chain has developed. Below, each of these five aspects of ‘capacity building’ will be discussed. As the topic of ‘chain intelligence’ is worked out in more detail, it is dealt with separately in chapter 4.

3.3 Strengthening chain governance

The actor that sets the parameters with which other actors in the chain must comply is referred to as the lead actor in the chain. The relationships lead actors have with their suppliers can either be helpful (mutually beneficial relationships with suppliers), or they can be predatory (focused on realizing a quick profit in the short-term). So, a fair deal for the primary producers is not something to be taken for granted - it needs to be organised and safeguarded.

The USAID WIKI on VCF [Ref. 3.3] gives the following suggestions for the study of chain governance.

### Analyze chain governance

to determine leverage points: where, how and when can practitioners intervene to effect systemic change and influence industry behavior. Analysis should seek to understand:

- **Economic interests**: Assess interests and incentives at aggregation points and determine how changes in the system will impact the benefits, profits, and power that are likely to accrue to lead firms versus suppliers.
- **Social structure**: Work with respected social figures, such as key farmers, chiefs and elders who can influence others to adopt or purchase new techniques, technologies, services or inputs.
- **Competition and strategy**: Changes in the level of competition or in lead firm strategies can pressure buyers, traders and others to change predatory or abusive behavior.

Primary producers themselves, the main target-group for donor interventions, rarely manage to be the lead actor in the chain. Being organised is not enough. Only when a producers organisation becomes a commercially viable actor by itself (e.g. a marketing cooperative), could it perform such leading role. Otherwise another actor in the chain needs to perform this function. In markets with a great distance between the primary producer and final consumer, active involvement of the exporter or main trader is required. Identification of a lead actor is very important, also for donors, as they may present the logical entry point for interventions geared towards building a chain governance structure that is inclusive in terms of donor target-groups and effective in terms of access to finance. Hence, before proceeding with the design of VCF interventions a number of governance issues need to be considered;

- Do one or more lead actors already exist in this chain? If so, can an alliance be built with one or some of them? What is the process leading to alliance building?
- If no lead actor exists yet, can an organisation representing primary producers assume this role? What does it take to perform that function?
• How can chain governance be improved in a way that strengthens the value chain and includes the donor target groups of primary producers and SMEs?
• Which option creates the most favourable conditions for value chain finance?

While the question on chain governance is not limited to VCF, it is of particular importance for the finance aspect because there is no prospect of sustainable (local) finance unless there are commercially viable actors that are considered creditworthy for the FSP.

In their handbook on global value chain analysis, Schmitz and McCormick (2002) list four alternative ways in which chains are organized, rules are developed and enforced, and resources, activities and power are distributed:
• Decisions on transactions are left entirely to the market, with multiple buyers and sellers of a commodity entering into transactions based mostly on price factors. This governance structure can be problematic for value chain financing. As the Product Overview section of the paper will show, easy access to alternative sellers reduces the incentive to make loans, and easy access to alternative buyers increases the options for side-selling.
• There is a balanced network of firms that co-operate and no firm is dominant. A warehouse receipts system in which standards are well developed and transparent, and actors collaborate to make the system effective, is an example of this type of governance structure.
• Lead firms form a directed or captive network through which they control production. This governance structure is reflected in relationships conducive to value chain financing, ones that develop around outgrower schemes, and with niche products. However, sellers who lack access to market information and some degree of competition can be exploited.
• One or two firms own and control the process from start to finish through vertical integration and the use of parent and subsidiary structures.

Within a captive network, one may be a leader or a dependent player. The nature of this relationship is not necessarily exploitative. In order to ensure consistent, reliable and adequate supply, lead firms may be motivated not only to dictate specifications, but also to embed such services as technical assistance, training, and finance into the marketing services they provide. Finance can be an incentive for contracts that ensure supply, as well as fund the working capital a producer needs to upgrade a product to meet a buyer’s standards. It is unlikely to fund investment, however, except in a vertically integrated structure.

Source: Value Chains and Their Significance for Addressing the Rural Finance Challenge Robert Fries Banu - 2004

3.4 Developing vertical links
Value chain development interventions invariably deal with the creation of a link between primary producers and “the market”. Sometimes this happens through the establishment of a marketing organisation, or just by linking up to existing marketing actors. But in all cases, interventions were geared to the creation of this “vertical” link. Forging and sustaining effective vertical linkages is a challenging endeavour. The presence of vertical links does not automatically lead to increased benefits to primary producers, since such linkages could have both predatory and symbiotic elements [Ref 3.4]. Vertical linkages can, however, be configured to ensure a maximum flow of benefits to MSEs while facilitating improved value chain competitiveness.
From a finance point of view, strong vertical links are important because of several reasons:

- A marketing organization or processing firm is likely to have better access to commercial finance than producer organisations. This may allow them to provide ‘embedded’ finance to their suppliers.
- The organization buying from primary producers is likely to know them well, and hence can assess the risks of finance more easily than a formal financial institution. Embedded finance is often observed, especially in the early stages of VCD, often at that stage few alternatives exist.
- If the marketing organisation is established by the primary producers, or when it is a social enterprise that takes the interests of producers at heart, this organisation may be an interesting partner for a donor as an entry point into the chain. This organisation may well be capable to deal with the multitudes of producers and their organisations, as well as being capable of coordinating efforts and reporting on it.

**Stimulate embedded finance?** In situations where formal financial institutions have demonstrated little or no interest in a value chain, information about the industry is critical in order to engage the right partners. Compared with conventional financial institutions, value chain firms possess cheaper access to information about other value chain participants, particularly with regards to the willingness and ability of potential clients to honour contracts. Through their business relationships, these firms have advantages in delivering timely products, with lower transaction costs, and with cost-effective mechanisms for enforcing contracts. Conversely, because financial institutions have access to capital and less personalized, more efficient systems of monitoring and controlling large numbers of customers, they offer advantages in increasing scale and rapidly expanding outreach. As mentioned above, this access helps firms demonstrate the feasibility of lending to borrowers in competitive value chains, which in turn provides a solid business case for financial institutions to begin serving new markets and thereby scale up the services.

**What are the drawbacks of embedded finance by chain actors?** While the advantages of a value chain financing approach are significant, financing by value chain participants is not a panacea. Challenges include:

- Financing is mostly in the form of short-term loans. Input providers are generally constrained by the fact that they are financed by their providers through 30- or 60-day sales arrangements, and they have no means by which to extend credit for a longer period without gaining new forms or sources of financing themselves.
- The cost of finance may not be transparent. Value chain participants tend to have opaque pricing mechanisms for their services, compared to formal financial institutions. Part of the finance cost may be incorporate in trade prices. This can limit the producer’s understanding of what the real cost is. When a financial institution enters a market dominated by trader credit, producers may be unaware of the effective price they pay for their financing, and view rates offered by the institution as high; but a transparent comparison may show the rates to be reasonable.
- Finance volume may be restrictive. Because credit from traders and buyers draws mostly on business relationships, it is rarely possible to achieve the same volume of business as a specialized financial institution.
• There is potential for *exploitative relationships*, such as buyers who control the market and price their services unfairly; or producers who sell to competing buyers, breaking contracts they have signed with the firms providing them with financing.

Effective vertical linkages are generally characterized by:

**Mutually beneficial relationships.** Symbiotic relationships that benefit all of the actors in a value chain are a major trait of effective vertical linkages. In such a scenario, various market actors focus on their own core competencies and through collaborative action realize synergies that improve the competitiveness of the entire chain. Trust, long-term joint vision, and mutual respect usually form the foundations for developing such relationships.

**Knowledge transfer.** Upgrading of production processes, technology, equipment, management systems, etc. is critical for the survival and growth of firms in a competitive marketplace. It is often difficult for small firms to access information about global best practices. Effective vertical linkages facilitate the transfer of knowledge between firms and create the incentives and knowledge platforms required for effective upgrading of MSEs. Prompt information transfers and transparency between vertically linked firms help a value chain respond effectively to changes in market demand.

**Quality standards.** Well-defined, widely understood, and constantly upgraded quality standards are another defining element of effective vertical linkages. Vertically linked firms are proactive, not reactive: Large firms empower and help small firms to understand and adopt the quality standards to meet market demand.

**Embedded services.** The frequent provision of high-quality embedded services (where a service is provided as part of the transaction at no extra cost) typifies effective vertical linkages. Lead firms can provide a wide range of embedded services to affiliated suppliers and buyers to ensure consistent quality of end products and services. These embedded services are often seen as an integral part of business transactions and considered a necessary cost of doing business.

**Financial flows.** Effective vertical linkages are often accompanied by a high volume and variety of financial flows. Larger firms may employ a variety of financial instruments (supplier credit, working capital loan, leasing services, etc.) to support the operations of their linked suppliers.

*Source: VCF - Vertical linkages - MicroLinks WIKI - 2009.doc*

3.5 *Improving process control and risk management*

Let's return to the donor officer discussing with partners in the field why the link to the more promising markets could not be established so far. Invariably, the answers to this question make it abundantly clear that a lot needs to be done to make this happen. Just to mentions a few;

• How to ensure that produce is delivered in time and meets the minimum quality standards?
• How to ensure that sufficient volume is created to meet the threshold of economies of scale for transport, shipping, packaging etc.
• How to ensure that primary producers are treated fairly and paid in cash upon delivery?
• How to ensure that the finance, required at each step is available in time and in sufficient volume?

In all successful cases of value chain development these complex questions have been solved effectively, but it is clear that a strong management function must exist either with a leading chain actor or with a chain facilitator, to arrive at that point. Without this, even with abundant finance, the intervention will not succeed.

*Sources of risk.* In appraisal or design of value chain finance interventions, it is crucial to identify the specific sources of risk as a prerequisite for any attempt to facilitate greater access to finance. There are various sources of risk inherent in value chain finance—first and foremost is non-repayment due to limited collateral conditions. De-
signers must have a comprehensive understanding of all risks before designing sustainable interventions.

De WOCCU guideline for VCF [Ref. 3.1] gives the following practical guidelines for managing risk:

<table>
<thead>
<tr>
<th>Managing Risk at Every Step in Agricultural Lending</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ensure Market Demand for Crops.</strong> Loans are made only for crops with reliable buyers that have already been contracted. Crops to be financed are selected according to local conditions as well as the farmers’ technical experience and ability to perform labor.</td>
</tr>
<tr>
<td><strong>Create Proper Policies and Procedures.</strong> The credit union addresses the following risks when establishing the policies and procedures for value chain financing: geographic distance from the borrower, weather, crop failure and the use of balloon payments at the end of the production cycle.</td>
</tr>
<tr>
<td><strong>Assess Real Financing Needs.</strong> Loan officers use WOCCU tools to conduct pre-loan surveys that evaluate the total cost of production based on available land, expected yield, pricing of inputs and labor. They base the loan amount on the evaluation.</td>
</tr>
<tr>
<td><strong>Establish Appropriate Guarantees on Individual Loans.</strong> Credit unions are able to lend to small farmers without requiring traditional forms of collateral. In Peru, loans are guaranteed by a combination of collateral and signed contracts with other value chain participants. In Kenya, individual loans have group guarantees. If one farmer fails to pay, the other farmers in the group are responsible for repaying the loan. As a result, group members monitor and help each other with farming activities. Credit unions in Kenya may also use crops as collateral.</td>
</tr>
<tr>
<td><strong>Diversify the Loan Portfolio.</strong> WOCCU recommends credit unions invest no more than 30% of their total loan portfolios in agricultural production. They should further diversify the agricultural portfolio by financing a variety of crops in different geographic regions.</td>
</tr>
<tr>
<td><strong>Adapt Loan Terms According to Crop Seasons.</strong> Loan terms are structured around the production cycle of different crops. Repayment occurs after harvest, once the purchase contract is fulfilled.</td>
</tr>
<tr>
<td><strong>Distribute Loans in Vouchers.</strong> When possible, borrowers receive the loan in the form of vouchers to purchase inputs from pre-approved suppliers during different phases of the production cycle. The farmers are also able to borrow small amounts of cash to pay field laborers if necessary.</td>
</tr>
<tr>
<td><strong>Encourage Farmers to Diversify Crops.</strong> Crop diversification helps ensure that small farmers will not become dependent on a single crop. It also encourages commercial production beyond the traditional crops they grow to feed their families.</td>
</tr>
<tr>
<td><strong>Monitor Crop Performance.</strong> Agricultural loan officers and other technical assistance providers visit the farmers throughout the growing season to provide technical support and monitor production.</td>
</tr>
</tbody>
</table>

Source: WOCCU VCF Methodology - 2009

Based upon an action research project of SEEP [Ref. 3.5] has tested four risk sharing models:
1. Market Facilitator partners with a Bank to develop Credit Franchisee Model
2. Market Facilitator Links Buy Back Arrangements as a Guarantee for Drip Irrigation
3. Risk-Sharing Model with a Trust-Fund Financed Red Pepper Value Chain
4. Financial Institution uses Buyer Contracts as a Guarantee for Soybean Farmers

Based upon the findings the following conclusions were drawn in respect of risk sharing.
The agricultural sector is usually considered high risk by financiers in view of crop failure risk, relatively low education levels (illiteracy) and lack of effective securities. Thus the success of lending to primary producers depends crucially upon the array of risk mitigation measures put in place. In an ‘all-in-one’ type of organization this can relatively easily be implemented, because the combination of functions (marketing, financial and non-financial services) can help to create an optimal package of services and incentives. With the separation between chain operator, the financial service provider and the Business Development Services (BDS) provider, these measures must be agreed upon between the parties (in MoU or contract).

Risk mitigating measures may include;
- Tailor-made credit products to optimally meet the need of farmers (timely disbursement, appropriate repayment schedule), effective penalties on default
- Presence of the financial service provider in the field at the time of harvesting to collect what is due
- Insurance against crop failure
- Inventory credit/warehouse receipts - the crop itself secures the credit/advances.
- Strengthening farmer groups in a way that creates cohesiveness and a degree of social control (in the way of solidarity groups in microfinance).
- Effective penalties for the defaulting farmer (in Rwanda the right to work on the common land is suspended by the cooperative)
- Alternative security arrangements (informal collateral, group pressure, method for the group to recover defaulted amounts)
- Contract farming with clear rights (e.g. promise of a fixed price, credit, seeds etc) and obligations (supply of all produce, credit repayment).
- Use of futures and options
- Access to technical assistance

Side-selling and risk mitigation. In the ICCO desk study on VCF, the single biggest problem reported for credit is the risk of side-selling: Side-selling occurs when a producer, who obtained pre-harvest credit against the security of a delivery agreement to a value chain operator (for example a marketing company), sells to another trader who offers a higher price. It enables these producers to default on their loans. In that case, both the marketing activities and the lending scheme of the value chain operator is affected. In one case, the marketing company decided not to fix the price in advance anymore, but rather to use current market prices with a small add-on, so as to be always competitive. So, the pricing policy, and cash payment of farmers upon delivery strongly affects the extent of side-selling. This in turn, is a crucial factor for achieving sustainable finance for the value chain.

3.6 Strengthen horizontal linkages
In developing value chains, the strengthening can take two different forms, and both are equally important for the finance aspect [Ref. 3.6].
a. The formation and strengthening of horizontal alliances, especially on the level of primary producers (producer associations, cooperatives etc.).
b. The process of functional differentiation and specialization, like the separation of finance from marketing.
The importance of horizontal alliances for effective finance. A minimal level of organization among the producers in the value chain is required for a number of reasons [Ref. 4.1]. The first is to aggregate sufficient volume for larger buyers. Second, associations help ensure the application of the technical assistance packages that enable small producers to meet buyers’ quality requirements. The volume and quality increases producers’ bargaining power with both buyers and suppliers. In addition, working through an association is more cost-effective for credit unions, for example in organizing meetings and monitoring loans. Lastly, associations can provide information on their members, who may have little or no formal credit history, and can also lower lending risks by applying social pressure and cosigning loans (in some cases the association guarantees the farmers, in other cases, farmers guarantee each other). Reduced costs and risks eventually translate into lower interest rates.

Horizontal differentiation and specialization. The opposite movement is also observed, when within the value chain new operators emerge, with specialization on one particular function. This is a normal trend in a developing value chain. For instance ploughing is contracted out to an SME with motorised equipment, training of farmers is contracted out by the cooperative to specialised training institutions etc.

An important feature for VCF is the process to separate finance from marketing. Some cases in the desk study show that value chain operators change modalities over time. Initially they provided embedded finance within the value chain, yet at a later stage they left financing to a specialised service provider outside the value chain. Finance can be ‘delegated’ to a specialised financier (modality C). Or the value chain operator established an autonomous financial services organisation (modality B). Setting up a financial unit within the organisation may be a first step towards separating finance from marketing activities. Some organisations would have preferred leaving finance to specialised, external financiers. Yet when trying to link producers to such financiers, they found this process very time-consuming and seeded with too many obstacles. Delegating finance to external financiers is only possible when the circumstances are conducive (e.g. when financiers are available in the region, and when they are willing to take over the lending programme). Sometimes chain Actors are drawn into finance because producers could not access it from regular financial institutions. They may be faced however with the dilemma that the same farmers they depend on for supply of produce, may become defaulters that need to be taken to court. Marketing organisations are normally ill equipped to render financial services and hence leaving it to specialised FSPs is normally the preferred option. If this turns out to be infeasible, the establishment of a separate FSP (modality B) may be the only way out. Donors can play a useful role in making this possible.

Documentation

Further reading (instantly accessible when CD is loaded):
3.1 WOCCU’s Value Chain Finance Methodology - 2009.pdf
3.2 VCF Models Kariuki Mwangi CBA - FAO Agribanks forum Africa - 2007.ppt
3.3 Value Chain Governance - MicroLinks WIKI - 2009.doc
3.4 VCF - Vertical linkages - MicroLinks WIKI - 2009.doc
3.6 VCF - Horizontal linkages - MicroLinks WIKI - 2009.doc
4. Developing chain intelligence

4.1 The quest for market information

All investors, whether they are farmers, a financial institution or an international donor, require good information on the prospects of their investments. Farmers are guided by their expectations on increasing or decreasing prices for their different crops or products. The prices they receive, do not only depend upon the price for the ultimate consumer, but just as much on the structure of the value chain that delivers it. Investments prosper in areas where reliable information on the main economic parameters are available - and tends to stall where it is lacking.

Hence for any investment in a value chain it is quite vital to develop a degree of ‘chain intelligence’ if does not already exist. This can be done by means of;

- A simple scorecard check, as shown in the example of WOCCU [Ref. 4.1].
- Value chain analysis
- Feasibility analysis for the actor or intervention to be supported

Ideally these functions should be ‘institutionalized’ so that chain actors are always guided by up to date and reliable information.

It is noted that donors are ‘investors’ as well, as they wish to see a return, be it in terms of development benefits. The following types of analysis serve as illustration that investment decisions need be addressed in a SMART3 way with quantitative methods.

4.2 Value chain finance analysis

Value Chain Analysis in general is well described in de IDRC handbook [Ref. 4.2] and will not be elaborated in this reader. Value chain finance analysis is a specific component of it. It identifies the financial needs of a value chain if it is to take advantage of end-market opportunities and address key constraints to these opportunities. Value-chain finance analysis asks where in the chain finance may be a constraint, whether there are other conditions and risks impeding access to finance and what is the best of use of capital. Factors regarding the enabling environment and financial sector issues that may impact the availability of financing should also be examined during the information-gathering stage. A very useful toolkit for market analysis has been published by USAID and

---

3 SMART – Specific, measureable, Achievable, Realistic and Time bound
ACDI/VOCA [Ref. 4.3], with practical guidelines for the performance of various tests, such as:

- Diamond of Competitive Advantage
- Five Forces Analysis
- Value Chain Waterfall Chart
- Market Map
- Seasonality Analysis

### Phase I - SECONDARY End-market Research Tools

<table>
<thead>
<tr>
<th>Cs</th>
<th>Tool</th>
<th>Summary</th>
</tr>
</thead>
</table>
|            | Diamond of Competitive Advantage | Uses four determinants of international competitiveness:  
1) Factor Conditions: The natural resources, human capital, infrastructure, capital, and other attributes of a society that provide a competitive advantage.  
2) Demand Conditions: Strong domestic competition spurs innovation by forcing companies to identify early buying habits and how to meet changing needs. This increases substantially when domestic trends are pushing international habits.  
3) Related and Supporting Industries: Other local, key industries provide easier communication that often spurs innovation.  
4) Firm Strategy, Structure, and Rivalry: “Nations tend to be competitive in activities that people admire or depend on — the activities from which the nation’s heroes emerge.” Additionally, strong local rivals provide a stimulus for creating a sustainable competitive advantage. |
|            | 5 Forces Analysis              | One of the most well-known and used frameworks for developing a strategic plan. The five competing forces include:  
1) Threat of entry.  
2) Bargaining power of suppliers.  
3) Bargaining power of customers.  
4) Threat of substitutes.  
5) An overview of the industry. These five forces are usually the forces that drive profitability in a market and are therefore the keys to success. |
|            | Value Chain Waterfall         | Tool for taking a snapshot of how value is shared and distributed among Value Chain actors. The graphic provides a clear picture of where value or profit is retained across a Value Chain. Although it is grouped in the Context section of this toolkit, its value extends through to identifying how much value is captured by channel partners. |
|            | Market Map                    | A succinct, brief, and simple overview of the different channels involved in getting a product from production to the final customer. The output of this analysis should enable a Value Chain expert to clearly outline how product moves from Value Chain clients through various channels to the end consumer. |
|            | Seasonality Analysis          | Designed to look beyond the averages of the market in order to gain a better understanding of the monthly, seasonal, or holiday business cycles. |
|            | Boston Consulting Group (BCG) Matrix – Importers | Originally used for the product mix of corporations, this simple tool can be designed to analyze the products of a portfolio of countries and the customers in these marketplaces. Tools provide the framework on how to interpret each quadrant in the chart and when used with countries and customers, provides a useful outlook of the forces at play within the market. |
|            | Trends Analysis               | A review of selected reports on the target Value Chain is critical for understanding the global marketplace in terms of requirements of current and future attractive market segments. This type of research will typically yield a few key trends that the Value Chain can take advantage of or protect itself against. |
|            | BCG Matrix – Exporters        | See above – BCG matrix importers |
|            | Shaded Grid Analysis          | First prioritization of opportunities based on the Phase I “4 Cs” analysis. There are three major components to the analysis:  
1) the markets to choose from,  
2) the selection criteria, and  
3) the weights. Output should inform target market segments for in-depth Phase II research. |
|            | Single versus Double Loop Learning | For a Value Chain practitioner, productive communications are key to building trust, credibility and encouraging inter-firm collaboration with business clients from the Value Chain. This reading describes how to reduce defensiveness by using data to inform discussions and engaging in “double loop” learning to think about how to reframe the entire mode of competition in a Value Chain. Ultimately, this type of approach should build the capacity of Value Chain clients to deal more productively with each other independently of the Value Chain advisor. |

Source: End Market Research Toolkit - 2008 - USAID - ACDI/VOCA
The value chain waterfall chart for instance, is a crucial tool for analysing current value added in each link of the chain.

『The Value Chain Waterfall Chart』is an excellent tool for taking a snapshot of how value is shared and distributed among Value Chain actors. The graphic provides a clear picture of where value or profit is retained across a Value Chain.

The basis of this analysis can be retained revenue, net profit or both, at each stage of the Value Chain. The prices at each level are recorded and then graphed to gain a visual representation of the cost mark-ups. (The analysis should be careful to account for the impact of tariffs on the cost bars.) Once completed, the Value Chain should be analyzed for discrepancies. Remember that each process should add value and in turn should earn a “fair” rate for their work. Two areas to examine are steps that earn significantly more than the work they do or steps that might be able to be skipped over to lower the final price to the consumer.

**Source:** End Market Research Toolkit - Upgrading Value Chain Competitiveness with Informed Choice November 2008 - USAID - Rob Henning and Neal A. Donahue, and Margie Brand for ACDI/VOCA

**How to...?** In conducting the value chain finance analysis, the purpose of the study must not get lost. It should provide clear answers to questions such as;

- What is the potential for primary producers to be included (creation of vertical linkages)?
- Is the current type of producer organization (horizontal linkages) adequate for the facilitation of finance at this level?
- What can be done to ensure that these linkages are “fair” (creates substantial benefits at the bottom)?
- What are the sustainable sources of finance, especially for the lower links in the chain?

For the value chain finance analysis interviews are to be conducted with financial providers in and outside of the value chain to reveal the degree to which financing is already available and, if finance gaps exist, finance providers’ perspectives on why the gaps exist. Interviews should include formal financial institutions (microfinance institutions, banks) as well as input suppliers, brokers and dealers that may provide working capital loans or input supplies on credit to their clients. Once information is obtained on the availability of and/or gaps in financing, a schematic can be developed showing product and financial flows. This schematic may help to identify overall finance gaps which can constrain the prioritized improvements in performance of the value chain.
Financing gaps are further analyzed to determine why they exist. In general, financing is absent because potential cost is seen to outweigh the potential benefit. In some cases, financing is absent because of perceptions on the side of the finance providers, e.g., that the venture is too risky, or from the side of the potential borrowers, e.g., that the investment is a bad risk. Financing may be absent because the finance provider or potential borrower cannot accurately determine the benefits of increased investment, and in other cases the lender or borrower may correctly assess the risk of lending and investing. The analysis of financing gaps can inform donors about what type of intervention may be needed, and whether the interventions should be on the financial side, the enterprise side, or both. A challenge for donors and governments is identifying ways to support a value chain without undermining or crowding out private-sector solutions. Interventions should be geared toward facilitating private-sector solutions, addressing market failures and ensuring a functioning enabling environment.

4.3 Facilitate information flow from the value chain to finance providers

Facilitating the flow of information from value chain actors to finance providers can reduce real and perceived risks, especially of agricultural finance. Donors can play a role in strengthening agricultural markets by;

- Supporting the creation of market information systems (e.g., radio, news bulletins, information databases)
- The exchange of value chain contacts between value chain actors and financial institutions.

Financial institutions can forge strategic relationships with dynamic agricultural value chain actors, such as large processing firms, to expand their loan portfolio by either lending directly to its related producers or making larger loans for the processor to on-lend to producers.

4.4 Financial self sufficiency

Value chain development is geared towards commercial viability on all levels. Just like in the microfinance sector, the progress in financial terms can be measured by the ability of chain actors to achieve OSS (Operational self sufficiency or ‘breakeven’ of income and expenditures) and FSS (financial self sufficiency - breakeven after elimination of all subsidy elements in finance). But rather than looking at one institution, in value chain development one has to consider the entire chain as a system. The process of achieving financial self sufficiency is measured on three levels;

- The chain actors become profitable. Especially farmers move from subsistence agriculture to commercial agriculture, that renders them increasing cash income.
- Financial services are provided and charged at sustainable (or market-) rates of interest. This process requires that all chain agents in need of finance, have become creditworthy by the financial service providers.
- Non-financial services are rendered in a sustainable manner either by chain operators or by service providers that charge for their services.

Especially the last step may take long, in view also of the fact that primary producers usually have to come from far in terms of education, experience and exposure.

The ultimate purpose of value chain finance by a donor is to make itself redundant within a reasonable time span, especially when grant instruments are concerned. In
the microfinance sector donors expect that after one or two cycles (of e.g. 3 years) grant support, the MFIs reaches OSS and qualifies for debt funding. Similarly for a value chain, donor grant aid serves to bring the chain actors to the point where their transactions can be conducted on a purely commercial basis, without dependence on outside grants.

### Documentation

**Further reading (instantly accessible when CD is loaded):**

1. WOCCU’s Value Chain Finance Methodology - 2009.pdf
4. VCF - Value Chain Analysis - MicroLinks WIKI - 2009.doc
5. **Emerging ‘good practice’ standards in VCF**

Below a number of recommendations are given, based upon donor experience until now and on international documentation regarding ‘good practice in value chain finance.

1. **Data.** Design interventions based on value chain analysis and solid understanding of the dynamics of the chain.

2. **Select partners carefully.** Effective design entails bringing together the right players. In situations where formal financial institutions have demonstrated little or no interest in a value chain, information about the industry is critical in order to engage the right partners. Compared with conventional financial institutions, value chain actors possess cheaper access to information about other value chain participants, particularly with regards to the willingness and ability of potential clients to honour contracts.

3. **Embedded finance:** Recognize both the limits and the benefits of financing by value chain actors.

4. **Design sustainable value chain finance interventions.** The single most important piece of information for the assessment of the sustainability of VCD interventions (both FS and NFS) is an analysis of the value added potential (cost-structure) in the chain. Another simple test for the first stage of processing of agricultural produce, is a gross margin analysis for a particular product or crop.

5. **Focus on economic opportunities.** While traditional donor partners usually display a supply orientation (serving existing producer organisations), a VCD approach argues from the market downwards. This may require existing producers to alter their crops or adjust their ways of working. A feasibility study is necessary to demonstrate the viability both from a commercial and social-investment point of view.

6. **Organized Producers.** Good organization of primary producers is vital for effective finance on this level.

7. **Identify the finance potential and potential financiers (FSPs).** The spectrum of value chain financing runs from small input loans to increasingly complex loan products—all needed to serve as engines for increased value chain competitiveness and growth. These value chain financing structures can help reduce costs, manage risks and build trust—themes that are critical not only to the value chain but also to bankers and financial institutions as they assess types of profitable future investments.

8. **Can embedded technical assistance to producers facilitate finance?** Donors can design interventions with leading chain actors to create arrangements between actors that focus not only on increasing access to finance, but also providing technical knowledge in growing high value-added products that meet the demands of growing and dynamic markets. Looking at forward and backward linkages, lead actors can identify opportunities to strengthen the value chain as a whole, including
addressing financing gaps. By providing additional support at the smallholder level, such as in the negotiation of agreements and the design of win-win contracts, donors can facilitate the flow of benefits to poor rural farmers, who, without a degree of organization, often are in a weak position to solicit this type of support.

9. **Work to change perception of FSPs.** There are cases when financial institutions are wary of a new value chain because of limited information or concerns about risk or lack of collateral. It is expensive to assess risks in a new market, or to meet collateral requirements with small farmers or other borrowers who lack clear title to property. Solid information (Value chain assessments, or feasibility studies) are the best tools for changing perceptions of financial service providers. Guarantees can be used in addition to reduce the risk for banks to enter the market and to test it out for themselves. If perceptions are the problem, the need for guarantees may only be temporal.

10. **Viability of agricultural lending by MFIs.** Many primary producers in the value chain are small farmers. The exposure to agricultural loans for e.g. MFIs needs to be well assessed, as the yield on agricultural loans is normally lower than other (micro) finance products. Reasons:
   a. Agricultural loans are often given a lower interest, as farmers do not have the very short trade cycles that allow the typically high MF rates.
   b. Agricultural loans typically have a long grace period, usually with full repayment at the end (bullet loan). This reduces the effective yield very substantially (by 30 -50%).
   c. The loan losses on agricultural loans are often higher than other sectors, due to risk of crop failure.

   MFIs usually maintain the sustainability of their lending programmes by a degree of *cross-subsidization* between products with higher yield (trade) and low yield products (agriculture). For this reason, and also as a measure to control risks, financial service providers have to limit their exposure in the agricultural sector to a predetermined part of portfolio. Diversification of portfolio is important for long term sustainability of the agricultural lending program and for the FSP as an institution.

11. **Change of mind set with chain actors.** Often donors will work with partners that were predominantly engaged in organising producer organisations, provision of extension services etc. A product-bias or supply-orientation is often observed. It needs to be replaced with a commercial outlook, where by definition ‘demand’ reigns. It requires not only knowledge about end markets and its requirements, but a commercial attitude in general. While there may be a place in programs for traditional training activities, it is better to design value chain interventions that lead to behaviour change, not simple information transfer.

12. **Look for aggregators or leverage points.** It is often unrealistic to expect banks to work with large numbers of small players: transaction and screening costs can be prohibitive. However, viability can be enhanced by seeking out entities that can reach and serve larger numbers of people. Credit unions can make promising partners in value chain finance initiatives due to their community ties, strong rural presence and lending experience with low-income or small firms. Value chain actors can serve as effective aggregators, using extensive networks to lower a financial institution’s costs for screening and serving new clients. Information and com-
munication technology can also help to lower costs, expand outreach and blend fi-
nancial and non-financial services.

13. **Identify sources of risk reduction and new incentives.** Institutions and individu-
als involved in designing new value chain finance interventions must identify the
specific sources of risk that exist while drawing on incentive structures that will
facilitate greater access to finance. There are various sources of risk inherent in
value chain finance—first and foremost is non-repayment due to limited collateral
conditions. Designers must have a comprehensive understanding of all risks before
designing sustainable interventions. Coupled with a strategy of risk reduction, a
successful value chain project should also create or identify incentives that will
encourage expanded lending to the sector under consideration. The agricultural
sector is usually considered high risk by financial institutions in view of crop failure
risk, relatively low education levels (illiteracy) and lack of effective securities.
Thus the success of lending to primary producers depends crucially upon the array
of risk mitigation measures put in place.

14. **Assess the needs for capacity building.** Try find out what is required to for grad-
uation towards a mature value chain, in which financial services are increasingly
taken care of by established financial service providers.

15. **How can links be facilitated with financial institutions?** Donors that are probing
for ideas to facilitate value chain finance can consider the introduction of value
chain connector firms (i.e., input suppliers, wholesalers and distributors), to finan-
cial institutions and provide them with training and technical assistance on agricu-
tural lending. Formal financial institutions need assistance in understanding value
chains and how to manage risks associated with lending to the agricultural sector.
While most financial institutions are averse to lending directly to farmers, by in-
troducing mechanisms to draw on value chain connector firms they can lower their
risk exposure while facilitating access to finance for the entire value chain.

16. **Choose the right instruments for VCF programs.** Grants or seed capital is appr-
ropriate for all proper ‘capacity building’ interventions. For the funding of finance
operations by commercial enterprises grants are to be avoided. Loans, guarantees
for commercial credit or quasi-equity may be appropriate instruments.

**Documentation**

**Further reading (instantly accessible when CD is loaded):**
The lessons learned presented in this chapter are mostly extracted from documents previ-
ously referred to.
Part 2 - North

Appraisal and program design (donors)

Smart aid criteria

How to use this reader as a growth document in your organisation?

References
6. **Appraisal, program design and monitoring issues**

6.1 **Identification of partners - chain governance**

**Facilitate the ‘orchestration’ of a promising VCF strategy.** A donor can play a crucial role, directly or through a professional chain facilitator, to get together the right partners, stimulate discussion on VCF strategies, and to agree on who in the chain is well placed to take the lead. Before this results in business plans or funding applications, the donor can participate in the design process or support the design process indirectly (e.g. through a professional chain facilitator).

**Select partners carefully.** Effective design entails bringing together the right players. In situations where formal financial institutions have demonstrated little or no interest in a value chain, information about the industry is critical in order to engage the right partners. Compared with conventional financial institutions, value chain actors possess cheaper access to information about other value chain participants, particularly with regards to the willingness and ability of potential clients to honour contracts.

**Identify the most effective lead partner in chain finance.** For donors the entry point to a new VCF project may often be a producer organisation or facilitator (NGO) with which it has already a relationship. However, existing partner NGO’s are not necessarily best placed to act as financial service provider (the "all-in-one" model). A leading chain actor may be more effective, especially when this will facilitate the linkage to financial service providers. This has several implications;

a) Rather that waiting for partners to apply for funding, a more pro-active approach may be needed to scout for potentially promising partners (chain actors and financiers) that are well placed to be engaged in a VCD/VCF program. This requires scouting and reconnaissance visits.

b) Private parties (companies) should not be funded with grants, unless it is for earmarked activities where they provide services that are not part of the commercial relationship. Appropriate funding instruments will be needed (debt financing, quasi-equity).

c) Embedded finance arrangements must be checked on ‘fairness’ vis-à-vis the primary producers. A donor can perform a constructive role in designing a symbiotic business relationships. Through transparent pricing mechanisms for goods (up) and financial services (down), with related monitoring, the risk of ‘predatory’ exploitation of a dependency relationship can effectively be prevented.

**Change of mind set with chain facilitators.** Often donors will work with partners that were predominantly engaged in organising producer organisations, provision of extension services etc. A product-bias or supply-orientation is often observed. It needs to be replaced with a commercial outlook, where by definition ‘demand’ reigns. It requires not only knowledge about end markets and its requirements, but a commercial attitude in general. While there may be a place in programs for traditional training activities, it is better to design value chain interventions that lead to behaviour change, not simple information transfer. A similar shift is needed in the minds of farmers. However, if the chain facilitator (NGO) is not market-oriented, it is unlikely they can achieve the necessary shift at farmer level.
In the USAID research toolkit [Ref. 4.4] reference is made to the distinction between single and double loop learning as introduced by Chris Archyrus, illustrating the importance changing the mind set, based upon a good understanding of the market environment and the value chain structure.

![Single versus Double Loop Learning Diagram]


6.2 Design and Assessment

**Chain actor led design.** While the donor can play a facilitating role, the detailed design of the VCD and VCF strategy must come from a leading chain actor. It can best be presented in the form of a business plan, with financial projections showing the finance requirements and the way these can be mobilized. A vital characteristic of a promising VCF approach is that the leading actor is prepared to invest time and resources in the relations with suppliers (primary producers) and clients higher up in the chain. Sharing of information and building up trust is both a precondition and a good test (indicator) for a genuine VCF approach. As chain actors by definition have a vested interest in the chain, it is advisable to have a chain facilitator who looks to it that discussions and interest of the various actors are balanced, especially when the lead actor is the company.

**Design interventions based on value chain analysis.** Effective interventions require an appreciation of the structure and the dynamics of the value chain. Ensure a value chain analysis is conducted and that the study involves an analysis of the value added potential in the chain. Another simple test for the first stage of processing of agricultural produce, is a gross margin analysis for a particular product or crop. This will reveal whether the cost of financial services (and related other services) can be recovered from the product margin. Avoid interventions where the prospect for long term sustainability has not been demonstrated.

**Assess the institutional modalities of finance delivery in the local context.** In a donor’s portfolio a great diversity of VCF modalities may be observed. No model can be singled out as ‘best’ solution, as this depends critically upon the circumstances and maturity of the value chain concerned. Over time embedded finance functions tend to be separated or left to specialized financial institutions for a variety of reasons (pro-
fessional specialization, reduction of undue dependency, avoiding conflicting interest etc.). Recognize both the limits and the benefits of financing by value chain actors (see table 2 in 2.3 and 3.3).

**Clear separation of roles** - The roles of VC facilitator, VC operator and FS-provider and should be clearly defined and separated. An MFI or bank cannot be expected to take over responsibility for certain aspects of chain organisation. The other actors first have to get their act together, and only then approach the financiers. If the finance function is performed by a chain actor, like a producer marketing cooperative, their separation in terms of institutional capacity, governance and accounting (cost centres) should be well considered.

**Identify sources of risk reduction.** Institutions and individuals involved in designing new value chain finance interventions must identify the specific sources of risk that exist while drawing on incentive structures that will facilitate greater access to finance. There are various sources of risk inherent in value chain finance—first and foremost is non-repayment due to limited collateral conditions. Chain relations, and especially the contracts between them, can help convince banks that the risks are manageable. So are crop collateralization mechanisms such as warehouse receipts. Designers must have a comprehensive understanding of all risks before designing sustainable interventions. The agricultural sector is usually considered high risk by financial institutions. Thus the success of lending to primary producers depends crucially upon the array of risk mitigation measures put in place.

**Assess the needs for capacity building.** A donor can play an important role in facilitating the graduation towards sustainable value chain finance, by giving support for adequate chain governance, stimulating strong horizontal alliances (producer organization), forging of vertical linkages in the chain, development of chain intelligence and the establishment of chain control and risk mitigation measures. The success of graduation of the valuation chain finance is measured by the degree in which it is taken care of by local MFIs and formal financial institutions. The development of credit worthiness of chain operators for debt financing is a vital step in this process.

**Assess the perspective for growth towards maturity in the value chain.** An ‘all in one’ organisation may be an effective solution in the early stage of value chain development, but the combination of roles may create limitations for scaling up. Handing over of the financial services to specialised MFIs or commercial banks may often be necessary to meet the ever growing needs of successful value chains. Consider the trajectory leading towards sustainability. A donor can play a very constructive role in discussing with their partners the merits and demerits of one strategy versus another. Ultimately there should be agreement on the trajectory to be followed, preferably laid down in a strategy plan or business plan.

### 6.3 Engaging Financial Service Providers

*How can links be facilitated with financial institutions?* Donors that are probing for ideas to facilitate value chain finance can consider the introduction of value chain connector firms (i.e. input suppliers, wholesalers and distributors), to financial institutions and provide them with training and technical assistance on agricultural lending.
Formal financial institutions need assistance in understanding value chains and how to manage risks associated with lending to the agricultural sector. While most financial institutions are averse to lending directly to farmers, by introducing mechanisms to draw on value chain connector firms they can lower their risk exposure while facilitating access to finance for the entire value chain. Tripartite agreements between bank, trader(s) and a processor may help to reduce the credit risk.

**Look for “aggregators”**. It is often unrealistic to expect banks to work with large numbers of small players: transaction and screening costs can be prohibitive. However, viability can be enhanced by seeking out entities that can reach and serve larger numbers of people. Credit unions can make promising partners in value chain finance initiatives due to their community ties, strong rural presence and lending experience with low-income or small firms. Value chain actors can serve as effective aggregators, using extensive networks to lower a financial institution’s costs for screening and serving new clients. Information and communication technology can also help to lower costs, expand outreach and blend financial and non-financial services.

**Work to change perception of financial service providers**. There are cases when financial institutions are wary of a new value chain because of limited information or concerns about risk or lack of collateral. It is expensive to assess risks in a new market, or to meet collateral requirements with small farmers or other borrowers who lack clear title to property. Solid information (value chain assessments, or feasibility studies) are the best tools for changing perceptions of financial service providers. Guarantees can be used in addition to reduce the risk for banks to enter the market and to test it out for themselves. If perceptions are the problem, the need for guarantees may only be temporal. Donors can also support MFI’s in appropriate financial product development for VCF and stimulate linkages in the financial sector e.g., between MFI’s and Banks.

### 6.4 Choice of aid instruments - implementation

**Avoid crowding out with grants**. The donor should not intervene with grants in a market where debt financing for the same purpose is already practiced. This can easily happen in programmes where VCF interventions are combined with value chain development interventions, for instance when also Terrafina works with MFIs in the same sector.

**Before considering financial interventions, consider non-financial alternatives**. Financial support to chain actors should only be considered when no alternatives exist. Consider;

- Workshops bringing together stakeholders to see whether solutions can be found within ordinary business relationships
- Technical assistance to producer organisations or lead actors in the chain, allowing them to meet the requirements of viable and sustainable chain operations (including related financial services).
- Brokerage of contacts with formal financial institutions
- Brokerage contacts with exporters (or importers in Europe), providing financiers with the comfort of well established market outlets, providing sufficient value added potential at the local level.
**Chose appropriate financial instruments.** Value chain facilitators are usually funded with grants, also when they facilitate financial services. MFIs are funded in accordance to best practice standards (seed capital policy). For the financing of private chain actors grants are not appropriate, unless they are tied to grant worthy activities (training, certification etc.). In general for private companies debt financing is to be preferred. However, as some cases, early interventions in an emerging value chain may be considered highly uncertain and risky for a commercial actor. Debt financing may not be adequate under such circumstances. A quasi-equity instrument may prove useful.

6.5 Monitoring and evaluation

**Agree on key performance indicators.** Unlike the microfinance sector, for Value chain finance no generally agreed performance indicators have emerged yet.

- Increased involvement of target primary producers (numbers)
- Increased sales volume of primary producers
- Increased value added (incomes) of primary producers
- Credit worthiness (graduation towards commercial debt funding on all levels).

**Return on Investment.** Similar to interventions in the microfinance sector, grant support for value chain finance should be assessed as an investment, that produces a social return. The social returns can be measured in terms of the agreed key performance indicators. The ratio between total donor investment and total increase of value added (income) for primary producers is a good proxy for “return on investment” in socio-economic sense.

**Exit strategy** - The realisation of self sustaining operations is the natural exit strategy for donors, especially as far as the grant-components are concerned. The conditions for exit, and the performance indicators used to assess it, need to be well specified in the business plan underlying the intervention.

**Documentation**

Further reading (instantly accessible when CD is loaded):
The lessons learned presented in this chapter are mostly extracted from documents previously referred to.
7. Smart aid issues to be considered

7.1 The parallel with ‘good donor practice’ for microfinance

For donor policy the parallel between VC-finance and microfinance is interesting, as for the latter a high degree of consensus has been achieved with respect to ‘good donor practice’. For further exploration of these criteria reference is made to:

- Agreement among DFOs in MicroNed on e.g. seed capital policy and rural finance.
- Donor Guidelines on Good Practice in Microfinance of CGAP [Ref. 7.1].
- Smart Aid criteria and related scoring methodology of donors (as shown in the diagram) [Ref. 7.2].

The reason for the similarities in donor policy and practice between microfinance and VC-finance lies in the fact that in both sectors (social) enterprises are supported, that must lead to viable and self sustaining operations. In both cases the role of donors is not just to kick-start the finance process, but also to build the capacity of the institutions involved, to allow effective and sustainable financial service delivery. Donor involvement should be temporary, connected with a clearly defined exit strategy.

Lessons of microfinance for ‘good donor practice’ in VCF? As the microfinance sector has developed in the past decades into a mature industry, with global standards for performance indicators, benchmarks and good practices, value chain finance can benefit from this experience. Value chain finance in the developing world is a relatively new endeavour in which best practices are still in the process of being documented, analysed and evaluated. Can any parallels be discovered between microfinance and VCF in terms of good practice for donors? Especially in the bottom of the chain, where most of the donor’s interventions are concentrated, the parallels are quite obvious:

- Interventions are geared towards improving the position of underprivileged population (primary producers, micro-entrepreneurs, small farmers).
- Capacity building is geared towards the creation of a system that can be sustained by commercial operators.
- A process of graduation towards a greater level of maturity of the actors makes donor involvement with grants gradually less necessary (exit strategy).

So, wherever relevant, these parallels may be used to extract guidelines and good practice standards for finance interventions in the value chain.

7.2 Strategic clarity

In the task group discussions on experiences in the south with specific VC-finance projects, inevitably led to reflection on how to deal with such issues. Overall it was felt that further policy development for organizations engaging in value chain financing would be needed, tapping on both (micro) financial services policies and value chain developments policies of the organizations. Value chain financing is a broad area.
touching upon VC-development, Trade finance and commercial investments as well as microfinance and the connections between these. A policy should outline the niche focus areas of organizations and describe links and connections as well as develop strategic choices for the organization. In order to ensure that value chain finance has the capacity to be scaled up and create broad impact on poverty reduction, it is needed to seek the connections between the players.

Other observations on policy issues
- Even if the intervention focuses on the finance aspect, knowledge of the production process is crucial (chain intelligence).
- Subsidized loans are to be avoided.
- When the contracting partner for the MFO is a company, this requires a new approach. What financial instruments are appropriate? Is embedded finance to farmers recommendable? Does it not create too much dependence?
- In multi-stakeholder agreements it may become unclear who is responsible for loan repayment and risks. This needs to be well specified. Credit risk and operational risks are to be identified and to be mitigated to the maximum extent.
- Better (internal) communication is required between the grant funding department (or agency) and the lending department (or agency). Often this distinction also relates to the need to closely coordinate VC-development and VC-finance interventions.

Key questions on Strategic Clarity
- What is the approach of our organization on VC-finance? Do we have a policy in this respect that is shared throughout the organization? How is it related to the policy for VC-development? Are the two separated at all?
- What is the niche where we can make a difference?
- Are our interventions in VC-finance in line with emerging good practice?
- Does an agency-wide commitment exist towards this policy and good practice principles?
- Is compliance with this policy and good practices checked at all stages of the project cycle?

7.3 Staff capacity

The point of departure for the taskforce has been that knowledge and staff capacity for value chain finance is very limited. Moreover, staff can be scattered in different departments. This may hamper an integrated strategy for VC-development and VC-finance. And due to the complexity of the subject, specialist advice may be needed from other institutions. The establishment of the taskforce is a reflection of this reality.

Key questions on Staff Capacity
- Do we have staff with value chain development and finance expertise to ensure quality of design, implementation, and monitoring of programs?
- Do we have a focal point with VC-development/financial sector experience and
responsibility to provide technical advice to program managers?

- Do we make resources available for technical expertise to be involved in the design of VC-development/VC-finance programs?
- Do we have specialist staff in countries/regions where it has its most significant portfolio of VC-development/VC-finance programs?
- Can collaboration with other Dutch organisations active in VC-Finance substitute for building up in-house staff capacity and expertise?

### 7.4 Accountability for results

Unlike the microfinance sector, for VC-finance no generally agreed performance indicators have emerged yet. If the taskforce would continue its activities, this should be an issue to be addressed. **A good starting point would be an inventory among Dutch players on the key questions listed below.**

**Key questions on Accountability for Results**

- Do we have the systems in place to ensure the transparency and performance-based management of VC-finance programs?
- Do we have systematic tracks and reports on performance indicators for VC-finance programs or components?
- Do we use performance-based contracts?
- What are the performance indicators?
- Do we have any measure for cost effectiveness or “return on investment”?

### 7.5 Knowledge management

Specific knowledge on chains is needed for proper finance decisions and for monitoring and evaluations of interventions. The dilemma for most funders is whether this knowledge/experience should be developed in-house or should be outsourced. Outsourcing to local/international service providers is an option.

Knowledge is also required to monitor performance of the chains and the links between chain performance and risk management. Discussion on decentralized and centralized knowledge and information sharing should be part of the discussion.

Collaboration in the taskforce was very much appreciated by the participants for knowledge exchange and learning and many feel it should continue in one way or the other. Dutch knowledge institutes and universities could also be contacted for further knowledge development.

**A logical starting point would be a brief inventory for the participating organizations in the Taskforce on their current involvement in VC-finance, existing staff capacity and the current expertise. This could be the basis for identification of a joint ‘learning agenda’**.

**Key questions on Knowledge Management**
• Do we have systems to create, disseminate, and incorporate learning from our own and others’ experience?
• Does the focal point’s responsibilities and budget include knowledge management for VC-finance?
• Do we have mechanism(s) in place for exchanging learning on our VC-finance programs and latest developments throughout headquarters and field offices?
• What expertise is contracted from outside?

7.6 Appropriate instruments

A big dilemma for funders in VC-development and VC-finance is what should be subsidized and what not. Where is grant funding appropriate? No clear guidelines on this where reported. Generally it appears that subsidies are acceptable for capacity building and for facilitation of collaboration. For risky new markets and interventions, some risk sharing mechanisms e.g. in the form of guarantees for loans can be accepted. Also risk baring capital for these type of interventions may be justified (seed capital, quasi equity). For more commercial interventions (like trade financing) usually more commercial instruments such as loans and equity are used. It is also noticed that investment financing (e.g. SME financing requirements) is often undertaken through international SME funds (e.g. Fast members) sometimes with TA. Commercial funding through local banks is not really well developed yet. It should be decided whether SME special funds for investment should become sustainable in itself or should be connected to local banks eventually.

In general there is a big need for funding particularly in agricultural value chains, which is currently only partly met by international investment funds and only very limited through direct funding of local commercial banks.

A vital instrument, non-financial but yet essential, is the factor of ‘brokerage and alliance building’. A donor can play a key role in this respect as a neutral facilitator between the parties. It can do so directly (local field office) or indirectly through an appointed chain facilitator or a BDS provider.

Key questions on Appropriate Instruments
• Do we have appropriate instruments for VC-finance that are used in a flexible manner and adapted to market needs?
• Are we able to work directly with private actors (companies)?
• How do we manage the support for VC-development and for VC-finance: are they sufficiently separated and yet well coordinated?
• Is the nature and use of instruments consistent with our strategy and with the requirements for supporting VC-development and VC-finance?
• What is the role of the Task force partners in unleashing funding for agricultural investments?
• How could brokerage and alliance building functions best be organised?
7.8 How to use this reader as a growth document for your organization
This reader is made like a WIKI document, in which every user is invited to contribute or edit. Since it is not web-based, it is not possible to track all changes or additions by all users. However, within one organisation, it is possible to coordinate this process, and thus develop a Reader that is appropriate for the staff of your organisation. The instant links to supporting documents can be made by using the function ‘insert’ - ‘hyperlink’ in Word.

Further reading (instantly accessible when CD is loaded):
7.2  CGAP Donor Peer Reviews Microfinance - 2004.pdf
8. Reference materials on Value Chain Finance

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<td>End Market Research Toolkit - 2008 - USAID - ACDIVOCA.pdf</td>
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