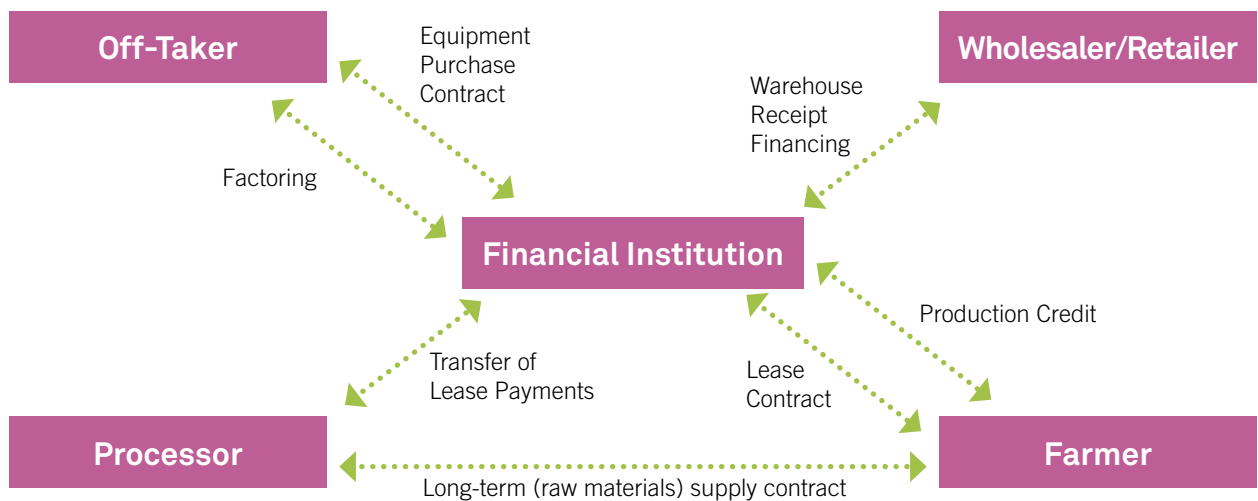


# 5. VALUE CHAIN FINANCIAL PRODUCTS

- ▶ **What differentiates value chain financial products?**
- ▶ **When should value chain products be used?**
  - ▶ The value chain financing model reflects the increasingly complex agribusiness market, encompassing financial products that respond to client needs, the operational environment, and the evolution of the value chain.
  - ▶ Value chain products can be grouped into five different categories, each responding to the particular needs of the client and the value chain: 1) product-linked financing; 2) receivables financing; 3) physical asset collateralization; 4) risk mitigation products; and 5) structured financing.
  - ▶ The applicability and attractiveness of these products will depend on the operating environment and legal systems, particularly contract enforcement, in which both the financial institutions and value chain clients operate.

Figure 5.1: Value chain finance products



Source: Miller and Jones, 2010.

Once established, the value chain relationship gives the bank opportunities to extend conventional loan products and services to all parties in the chain. Most of the financial products outlined here are familiar

to bankers, and so require only a brief description. The emphasis is on their relevance to a value chain financing approach (Figure 5.1). A more extensive description of each product is included in Annex C.

## Product-linked financing

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These are products that directly relate to financing production as well as the aggregator and processing or marketing company for the purpose of acquiring farmer's production. In this case, the aggregator uses financing or advance payments to producers as a way to secure product. Essentially, this works to deleverage the aggregator's supply risk. This can allow the aggregator to guarantee or even formally contract downstream sales.

Banks should structure the financial product to attract a significant number of farmers, ensuring it can defray repayment risk by limiting the potential impact from a default of individual or small groups of producers. Further, the smaller the value chain (in terms of number of farmer participants), the more bank oversight is required. By working with an aggregator (also referred within the industry to as an aggregator/off-taker), financial institutions are able to penetrate further

upstream in the value chain to offer financial services to smallholder farmers. The commercial relationship between the off-taker/aggregator varies according to the financial institution's objectives and the structure of the value chain. In the Indian dairy and Mexican sugar cases, the aggregator also assumed the role of the bank's agent. In the Mexican case, the credit is documented with the individual farmer. The sugar mill (the aggregator in this case), undertakes a number of operational functions (i.e. identifying the farmer, preparing the documentation, and

supervision). For this, the financial institution pays the mill a commission for their involvement. Through this arrangement, the financial institution has turned what would have been a fixed cost structure into a variable cost structure.

## Receivables financing

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These products are largely used as a means for providing working capital to aggregators, marketing companies, and processors. They include bill discounting, factoring, and forfaiting (the purchase of receivables from an exporter, for a margin). Although all three products revolve around the conversion of receivables, they differ in their method of managing

risk and collection payments. Receivables can also be structured as collateral. In a well-established VCF operation, farmers should be able to benefit from this form of financing to the extent that their contracts with aggregators are recognized as equally enforceable as with receivables further downstream.

## Physical asset collateralization

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These financial products rely on a physical asset as a guarantee or collateral. The two most common products, warehouse receipts and repurchase agreements, are used largely for working capital. Financial leasing, by contrast, involves the use of an asset over a fixed period of time, after which the client may or may not eventually take ownership.

As with the other value chain products, the legal system has to recognize the rights and obligations inherent in the control of the assets as a precondition for the development and use of these products. Additionally, there should be a known market for pricing the assets (mark-to-market), as well as a fairly liquid resale market for the assets. For agricultural commodities and foods, the markets should also reflect the types and grades used commercially for the assets under control.

## Risk mitigation products

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These are financial products used to reduce risk by transferring it to a third party. This is achieved through the use of insurance, futures, and forward contracts. For the financial institution, risk mitigation products are particularly attractive as they can be offered to participants across the entire value chain. The role that financial institutions play varies depending on both an

institution's structure and the regulations in the country in which it operates. As a result, financial institutions may acquire the risk directly or through a subsidiary, or alternatively sell part of the risk to a specialized company or broker. In some instances or products, the financial institution's role will be limited to providing financing for the operation.

## Structured financing

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These are specialized products that facilitate and deepen financial availability, frequently involving third parties outside the value chain. Of these products, the most common for primary producers are loan guarantees. In this case, a third party will provide a guarantee to the lender, shifting the risk (partially or wholly) from the primary producer to the third party. The assumption is that the third party guarantor represents less of a risk than that of the primary producer. The third

party will charge the producer a fee for the guarantee. The producer is willing to pay the fee when it is required in order for banks to grant them a loan. The option of paying a fee is also attractive when this results in a lower cost of credit. The third party can be a private firm or even a government institution. In fact, governments (e.g., Mexico) have used this as a policy instrument to entice financial institutions to lend to agriculture.

## Cross-selling

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Cross-selling is the selling of more than one financial product to an individual client, or, in the case of value chain finance, to multiple value chain participants. This should be an important part of a financial institution's business strategy, turning a potentially attractive business into a highly valuable one. The business strategy of value chain financing, as such,

is to focus on the entire value chain, identifying or creating opportunities for selling multiple products that satisfy the value chain's financial needs, while further enhancing the financial institution's bottom line. Typical products and services that banks cross sell include: payroll and supplier payments, credit cards, short to medium term loans, insurance, letters of credit.

# ANNEX C. AGRICULTURE VALUE CHAIN FINANCIAL PRODUCTS

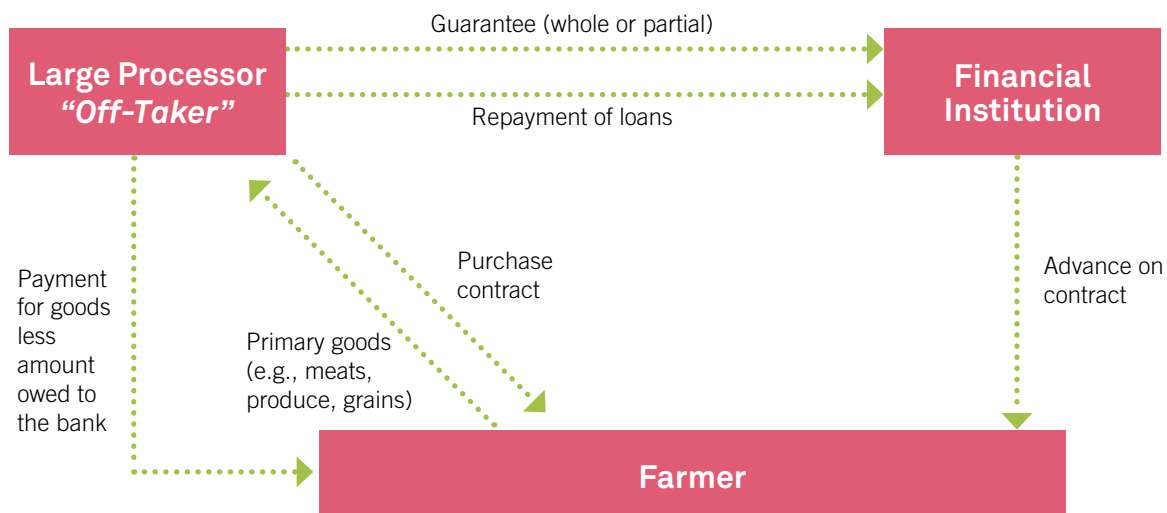
This Annex covers in further detail the value chain finance products summarized in Chapter 5. A synthesis diagram is included below in Figure C.1.

## 1. Product-linked Financing

These are products that directly relate to financing production, as well as financing the aggregator and processing or marketing company for the purpose of acquiring farm production. In this case, the aggregator uses financing or advance payment to producers as a form of securing production. Essentially, this works to de-leverage the supply risk to the aggregator (see Figure C.1).

Product-linked financing may also be an option in working with trader-suppliers. Additionally, product-linked finance can be tailored to input suppliers, who in turn will finance producers. The underlying advantage of input-supplier credit is that it works to assure the timely availability of inputs. This is especially important in agriculture where plantings, fertilizing, and other

**Figure C.1: Producer financing**



Source: AgriFin VCF Bootcamp, 2014

practices have to be carried out at fixed times. If not appropriately timed, production can be negatively impacted. By the careful selection of the input supplier, the financial institution can assure that the producer is getting proper, quality inputs, which should result in improved productivity.

For the financial institution, the pre-conditions for mitigating the risks related to product financing revolve around assuring that the aggregator-client (whether or not acting as a commission agent) is able to work with reliable supplier producers. Even when contracts are signed, the key element is the relationship and trust between the producer and the off-taker/aggregator. Additionally, it is important to know the aggregators' clients and their financial reputation. Furthermore, the financial institution should verify that the use of financing adequately reflects the market demand for the farmer's production. When the off-taker/aggregator is the leading player in the value chain, as indicated

in the previous chapter, this can provide an additional degree of confidence for the financial institution in offering these financial products.

When the aggregator acts as the conduit for credit to producers, including as a commission agent, typically the financial institution will put a risk-sharing structure in place. This usually requires the aggregator to provide a first-loss guarantee.

As mentioned, it is important that a large number of farmers are participating in the value chain when structuring the financial product. This has the effect of limiting the risks from a default of an individual or small groups of producers. At the farm level, supervision plays a key role in risk mitigation, by ensuring that good farming practices are employed. These include sustainability practices, which are being included in credit evaluation criteria.

## 2. Receivables Financing

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These products are largely used as a means of providing working capital to aggregators, marketing companies and processors. They include bill discounting, factoring, and forfaiting. Although all three products revolve around the conversion of receivables, they differ in their means of managing risk and collection payments. Receivables can also be structured as collateral.

In the case of bill discounting, the financial institution will advance (i.e. essentially lend) to the client a percentage of the value of the receivables. In this case, the client has the collection risk, which means that the financial institution's repayment risk remains with the client. As such, the financial institution will use similar criteria as with a "typical" credit loan.

For **factoring**, the financial institution will purchase the receivable and be responsible for collection. The financial institution will typically purchase the receivable at a discount, and may also charge an up-front fee. Types of factoring vary with the either client assuming the risk of losses from non-payment or the financial institution taking the repayment risk without holding the client responsible. The discount is larger in the latter case than in the former. If there is any follow-up legal action for collection, it becomes solely the responsibility of the financial institution.

**Forfaiting** can be considered as a form of factoring used largely in international trade, and/or when repayment is expected over an extended period of time (often six months or longer). Typically the forfaiting company will undertake the collection and assume the repayment risk.

For the client, the advantage is not necessarily that the process is more agile than the normal credit process. The advantage lies in that the "all-in" cost may be lower than an actual credit line for working capital. Given that receivables financing is not a debt, it does not impact the client's borrowing capacity, as opposed to working capital credit. It has the advantage of partially eliminating business risk for the client, depending on the particular receivables financing product. When that is the case, the financial institution will have to evaluate the repayment risk and will often adjust the discount accordingly. Many financial institutions require that the legal system provide for strict payment enforcement mechanisms as a precondition for offering receivables financing products.

One variation of receivables financing uses receivables as loan collateral. The financial institution will create a fiduciary-type account. The account is pledged to the financial institution, with the buyer paying directly into the account. This type of structure can be used to manage aggregator risk by ensuring that the financial institution will be paid first.

This is also an attractive structure to balance risk mitigation with the client's need for working capital. As products are sold with payment going into the fiduciary-type account, the financial institution will withhold funds according to the amortization schedule, with the remaining difference going to the client for working capital.

This type of structure can be adapted to input-supply financing. In this case, the input supplier, the producer, and the aggregator would agree to the fiduciary-type account pledged to the financial institution. The input supplier would provide inputs to the producers. In this arrangement the aggregator would not typically retain payment, rather the proceeds from the sales of the product would go into

the fiduciary account pledged to the financial institution. The financial institution would retain loan repayment and pay the input suppliers; the remaining proceeds would go to the aggregator. The advantage for the financial institution is that both the input supplier and aggregator potentially share in the risk.

Interestingly, the financial institution may actually find it more appealing to take the repayment risk than the original client risk. This could be the case when the receivable is from a highly reputable company with strong financial credibility. Where there is a secondary market, the financial institution has the option of selling the receivable, thereby offloading risk and making the receivable financing potentially more attractive.

### 3. Physical Asset Collateralization

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These financial products center on the use of a physical asset as a guarantee, or collateral. The two most common products – warehouse receipts and repurchase agreements – are largely used for working capital. Financial leasing, by contrast, involves the use of an asset over a fixed period of time, after which the client may or may not eventually take ownership.

As with the other value chain products, the legal system has to recognize the rights and obligations inherent in the control of the assets as a precondition for the development and use of these products. Additionally, there should be a known market for pricing the assets (mark-to-market), as well as a fairly liquid resale market for the assets. For agricultural commodities and foods, the markets should also reflect the types and grades commercially used for the assets under control.

**Warehouse receipt products** are fairly common around the world. The farmer or other participant in the value chain will receive a receipt for the products upon placing them in a warehouse. The receipts are then used as collateral for a loan. The loan, in turn, is often used to pay off an existing debt (e.g., a production loan) or for working capital (Figure C.2). The size of the loan is related to the value of the products, with the financial institutions requiring that value of the product under guarantee be a specific percentage above the amount of the credit. Part of the loan supervision is the ongoing valuation of the product stored. Typically, the loan agreement will contain a provision for changes in the amount warehoused in relation to changes in the price of the product. For example, the loan agreement may stipulate that if the price of the product increases by

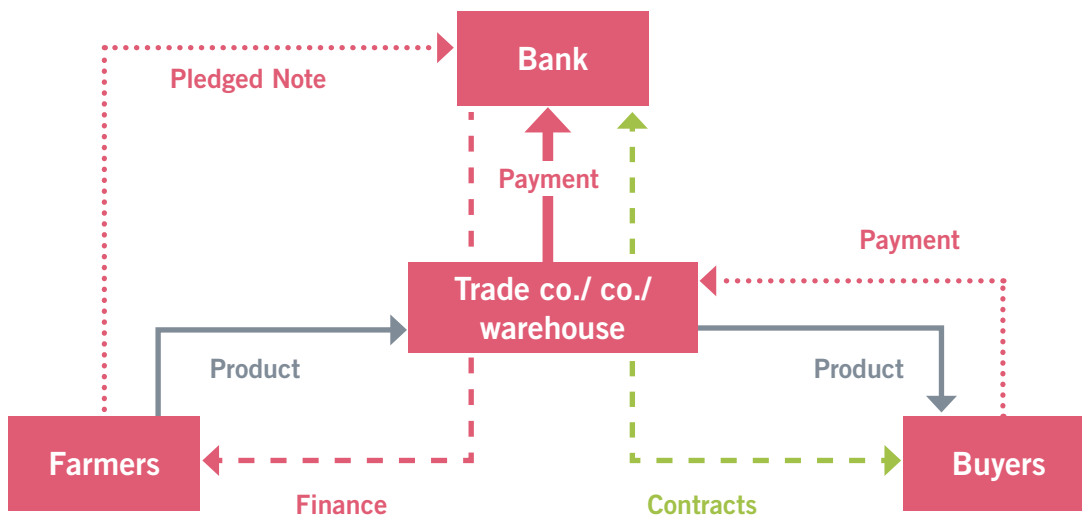
five percent over one week then the value of the product used as a guarantee has to be adjusted accordingly.

The warehouses are generally bonded or certified; nevertheless, the financial institution making the loan on the certificate will often indicate in which warehouse the asset should be placed. Working with a known warehouse company provides an additional layer of confidence for the financial institution. Where the legal system allows, a particular advantage of warehouse receipts is the flexibility in defining what is a "warehouse". It may be a fenced-in field where grain is stored under a tarpaulin, or even a corral in a feedlot. Whether it is a formal warehouse building, or one of these ad hoc type structures, the risk is associated with the performance of the warehouse company.

Where the warehouse is an ad hoc structure, periodic inspections should be built into the loan document. Typically, the client absorbs the costs of inspections. It should be recognized that even the use of a trusted warehouse company does not mean that the financial institution need not perform inspections of the existence and quality of the product.

**Repurchase agreements** tend to be more frequently used by traders and processors in the value chain. The product is sold to a third party, with the agreement that the seller will buy back the product after a given period of time. The third party may be a company created by the financial institution to take possession. The product will typically be stored in a bonded warehouse during the course of time that the third party owns the product. Here again the financial institution has to take into

**Figure C.2: Warehouse receipts**



Source: Miller and Jones, 2010.

consideration the performance of the storage company. For the seller (client), the advantage of a repurchase is that it often results in a lower cost of money than a bank loan. The sale of the product, however, may result in the seller incurring a tax obligation in the short run. For the financial institution, the fact that the client does not own the collateralized asset facilitates the disposal of the asset in case of non-payment.

**Financial leasing** is a product that the financial institution can tailor to the needs of all the participants along the value chain. As indicated above, leasing involves the use of an asset without ownership, akin to renting. Where there is a purchase agreement at the end of the agreed-upon period, the net result is equivalent to the asset having been purchased on credit. For the

client, in many countries, the payment for the leased asset is considered as a deductible business expense. It also has a favorable balance sheet effect, since the client does not incur debt, as would have been the case if the asset had been purchased. Since the financial institution maintains ownership of the asset, there is no collateral issue.

Generally, leased assets are likely to be machinery or vehicles, yet practically anything can be leased to participants in the value chain (e.g., factories and feedlots). This creates interesting business opportunities for financial institutions. However, as these become more esoteric, the financial institution's risk increases in case of default.

## 4. Risk Mitigation Products

These are financial products used to reduce risk by transferring it to a third party. This is achieved through the use of insurance, futures, and forward contracts. For the financial institution, risk mitigation products are a particularly attractive business proposition since they can be offered to participants throughout the entire value chain. The role that financial institutions play varies depending on both institutional structure and the regulations in the country in which the institution

operates. As a result, financial institutions may acquire the risk directly, through a subsidiary, or alternatively sell part of the risk to a specialized company or broker. In some cases or products, the financial institution's role will be limited to providing financing for the operation.

**Insurance** tends to be more widely used and accepted by downstream participants. This reflects the fact that most insurance products are designed to insure fixed

assets as well as other goods, which can be priced in the market and damage or loss can be accurately quantified. Likewise, downstream participants are better able to quantify the relationship of the cost of insurance to the impact that loss or damage would have on their businesses. At the farm level, besides insurance for fixed assets (e.g., barns, tractors), producers can be insured for crop or animal loss. These specific agricultural insurance products tend to be somewhat costly since the pool of insured farmers may be quite limited and losses due to weather or disease impact a large number of farms in a given area, which may make up a large percentage of the insured pool. Increasingly, though, banks will require that crops or animals be insured as a precondition for production loans, with the bank as the beneficiary up to the amount of the credit. Likewise, as a precondition for insurance products to be successful, the legal structure has to be in place to support the claims adjustment process.

**Futures and options.** Whereas insurance products provide the ability to reduce risks related to the loss of a physical product, hedging through futures and options allow for price risk mitigation. These products do not involve delivery, although in some markets with forward contracts, delivery may be an alternative but not an obligation. The major difference between the two is that futures involve the buying and selling of forward contracts at a price for the agricultural product set by the market. Options, by contrast, are the right but not the obligation to buy or sell a futures contract. Options price the specific forward contract through a range of prices related to the perception of risk. Options have recently become popular as they allow for greater flexibility and do not tie up working capital for margin calls. Since hedging products are priced using specific – and frequently foreign – markets, a strong correlation between prices in the local market and the market where the futures contracts are priced is a precondition for their effective use.

**Swaps** are financial products that can be offered as a standalone, risk-mitigating product or as part of a cross-sell strategy. Generally, these products

are offered to larger clients in the form of two types of swaps, focused on interest rates or currency. The interest rate swap allows for switching (or swapping) the variable interest rate on a loan for a fixed rate, or a fixed rate for a variable rate. The decision to enter into an interest rate swap is based on the perception of future costs and the client's risk profile. The other type of swap is a cross-currency swap. This involves a contract to exchange one currency for another at a specific point in time. This is frequently used as a part of export trade finance. This approach is particularly attractive when a loan is in a currency different from that of the country where the client operates. In effect, the use of cross-currency swaps eliminates the foreign exchange risk. For swaps to be an effective risk management tool there has to be a strong legal and regulatory environment in the markets in which the swaps take place to ensure commitment by the involved parties.

**Forward contracts** involve the actual transaction of a food or agricultural product at a set price for delivery in the future. In some cases, the contract will allow for a degree of flexibility according to market conditions at the time of delivery. Likewise, there may be some flexibility in the delivery date in order to account for growing conditions. The use of forward contracts essentially eliminates the market risk for the seller, transferring it to the buyer. However, when the contract includes product specifications, some risk does remain with the seller. Because the forward contract involves delivery, contract delivery mechanisms have to be in place as a precondition for this to be an effective risk mitigation strategy. Although financial institutions are not typically involved in forward contracts, significant business opportunities exist. For example, the buyer may wish to offload some of the future price risk through futures or options products. Likewise, the seller may wish to use the contract as collateral for working capital.

Market-based research, produced internally by financial institutions and sold to clients, also representative a third risk mitigation product that does not shift risk to a third party.



## 5. Structured Financing

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These are specialized products that facilitate and deepen financial availability, which frequently involve third parties outside the value chain. Of these products, the most common for primary producers are loan guarantees. In this case, a third party will provide a guarantee to the lender, shifting the risk (either partially or wholly) from the primary producer to the third party. The assumption is that the third party guarantor represents less of a risk than that of the primary producer. The third party will charge the producer a fee for the guarantee. The producer is willing to pay the fee when it is required in order for banks to grant them a loan. Paying the fee is also attractive when this results in a lower cost of credit. The third party can be a private firm or even a government institution. In fact, governments, such as Mexico, have used this as a policy instrument to entice financial institutions to lend to agriculture.

Another structured financing product involves pooling and packaging financial assets that are in turn sold to investors. What makes these attractive to investors is that the financial assets typically produce a cash flow. Theoretically, the risk associated with the repackaged product is reduced through the pooling of assets, conceptually. This type of structure is particularly advantageous for facilitating financing to large

numbers of small farmers. The financial institution may actually do the lending and packaging, selling all or part of the new security to investors. Likewise, the financial institution may be a buyer of the loan package from either another financial institution or an agent specializing in lending and packaging. The underlying risk, as was seen in the housing crisis in the last decade, resides in adequately identifying the true quality of the packaged asset.

More often than not, opportunities for joint ventures occur in the value chain. The joint ventures may be between existing participants or a participant and a third party that will use this as a means for joining the value chain. For the companies involved, there are many objectives that may make a joint venture attractive. These include enhancing economies of scale, bringing in expertise, injections of capital, improving competitive position by expanding up or down stream in the value chain, among others. For the financial institution, this is an especially attractive option since it can generate income by charging an advisory fee. The financial institution may cross sell by also providing financing to one of the parties in the joint venture.