



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



## SEED AND POST-HARVEST TECHNOLOGY PROVIDER FINANCIAL BOTTLENECK ANALYSIS

## THE FINANCING POTENTIAL OF THE SEED SECTOR IN SUB-SAHARAN AFRICA



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**Feed the Future Consortium Partners** in the Feed the Future Global Supporting Seed Systems for Development activity:



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## List of Acronyms

AgFinance	Opportunity International Agriculture Finance
BFS	Bureau of Food Security
ABC	Alliance of Bioversity International and International Center for Tropical Agriculture
DCA	Development Credit Authority
DFI	Development Finance Institution
ESP	Extension Service Provider
FSPs	Financial Service Providers
HFL	Horizon Farms Limited
IFDC	International Fertilizer Development Center
KYC	Know Your Customer
MFI	Microfinance Institution
NGO	Non-governmental organization
OFDA	Office of Foreign Disaster Assistance
PABRA	Pan-Africa Bean Research Alliance
PAL	Press Agriculture Limited
PASS	Private Agriculture Sector Support Trust
S34D	Supporting Seed Systems for Development
SILC	Savings and Internal Lending Club
SME	Small or medium-sized enterprise
TADB	Tanzania Agricultural Development Bank
USAID	United States Agency for International Development
USD	United States Dollar
VSLA	Village Savings and Loans Association

# Executive Summary

This report was compiled to highlight the key bottlenecks that are limiting access to financial services for seed sector actors in Malawi, Uganda, Kenya and Tanzania (the “corridor”).

This report is a concurrent assessment to the Supply-side Landscaping Report for the corridor, titled “The Financial Potential of the Seed Sector in Sub-Saharan Africa.” The supply-side report provides a comprehensive inventory of currently available financial services for seed sector actors through the corridor. This assessment identifies common demand-side challenges that are preventing seed sector actors from accessing and utilizing financial services and provides strategic recommendations for future interventions that aim to increase access to finance for seed sector actors throughout the corridor.

The information and recommendations included in this report are informed by 11 interviews with informal seed sector actors. Each of the constraints identified are caused by an imbalance of supply and demand, so this report utilizes the same principles to provide a high-level framework to better understand bottlenecks and related solutions (see Figure 1).

Below offers a summary of the key bottlenecks and related mitigation strategies:

- 1. Low profitability of agricultural loans disincentivize agricultural lending.** Solutions that reduce operating costs for financial service providers – namely loan aggregation for rural clients, digitization and process improvements, and agent banker networks – can make lending to seed systems actors more profitable.
- 2. Information asymmetries exist between potential clients’ financial needs and current offerings of financial products.** Through technical assistance and improvements in data collection and analysis, financial service providers can more capably design appropriate financial products that meet the seasonal cashflow needs of seed production and post-harvest technology provider clients.
- 3. Agricultural loans are often riskier products for financial service providers.** Effective and clear risk mitigation mechanisms, such as loan loss guarantees, can reduce the costs of agricultural lending, often for both clients and financial service providers.
- 4. Low awareness of available financial products inhibits uptake.** Encouraging financial service providers to partner with the breadth of seed systems actors can help facilitate effective trainings of potential rural client groups, improving their financial capacity to utilize loans and other products.
- 5. Poor design of financial products.** Approaches should build the capacity of system actors while reducing barriers to accessing financial services, which include the integration of appropriately designed financial products and simplified loan approval processes and requirements.

This report provides additional detail on bottlenecks and mitigation strategies to help increase access to finance for seed sector actors throughout the corridor.

# Background Information

## Activity and Report Overview

The Feed the Future Global Supporting Seed Systems for Development (S34D) activity is funded by the Feed the Future Initiative through USAID’s Bureau for Resilience and Food Security (RFS), and by USAID through the Bureau for Humanitarian Assistance (BHA) to facilitate the development of high-impact, inclusive seed systems to ultimately improve smallholder farmers’ crop production and resilience.

The funding was granted to Catholic Relief Services as a five-year Leader with Associates Cooperative Agreement award to implement the activity. Current consortium partners include the Alliance of Bioversity International and International Center for Tropical Agriculture (ABC), International Fertilizer Development Center (IFDC), Opportunity International, Pan-Africa Bean Research Alliance (PABRA), Agri Experience (AE), and Purdue University.

S34D aims to strengthen national and regional seed sectors around the world by scaling new business models to effectively expand seed inventories for a broader range of crops beyond maize while improving delivery of quality seed across formal, informal, and chronic/emergency seed systems. By strengthening linkages within and between seed systems, the activity will help services reach more customers in more remote and fragile contexts to provide more farmers with better access to higher-yielding seed varieties.

A key objective of S34D is to build the capacity of seed companies; therefore, this analysis has been conducted to better link demand-side financing bottlenecks with the supply-side financial services that were identified in a prior S34D report, “Financial Service Provider Inventory Scan.” For the purposes of this report, references and assessments on the broader terminology of “agriculture finance” and “agricultural lending” are considered to be proxies for seed sector lending, given the reasonable assumption that financial institutions lending to the agricultural sector would also lend to the seed sector using similar criteria and processes for loan approvals and portfolio management.

Data collection for this analysis was predominantly done through semi-structured interviews with value chain actors in the informal seed sector in a regional trade corridor (Kenya, Uganda, Malawi and Tanzania). A total of 11 interviews were conducted. A literature review was also conducted to explore prior interventions to bolster access to finance in the informal seed value chain. The results were combined with insights about potential partners and product design from a separate report<sup>1</sup> on available financial services to produce the key insights. The key insights identify bottlenecks in accessing finance for informal seed value chain actors, and provide both potential solutions, and Financial Institution partners to implement the solutions within each of the corridor countries.

## Supply and Demand Framework Quadrants

For the purposes of this report, Figure 1 provides a high-level framework for the following analyses of financial bottlenecks among seed systems in Africa. The four quadrants illustrate the different scenarios of supply and demand for formal agricultural financial services.

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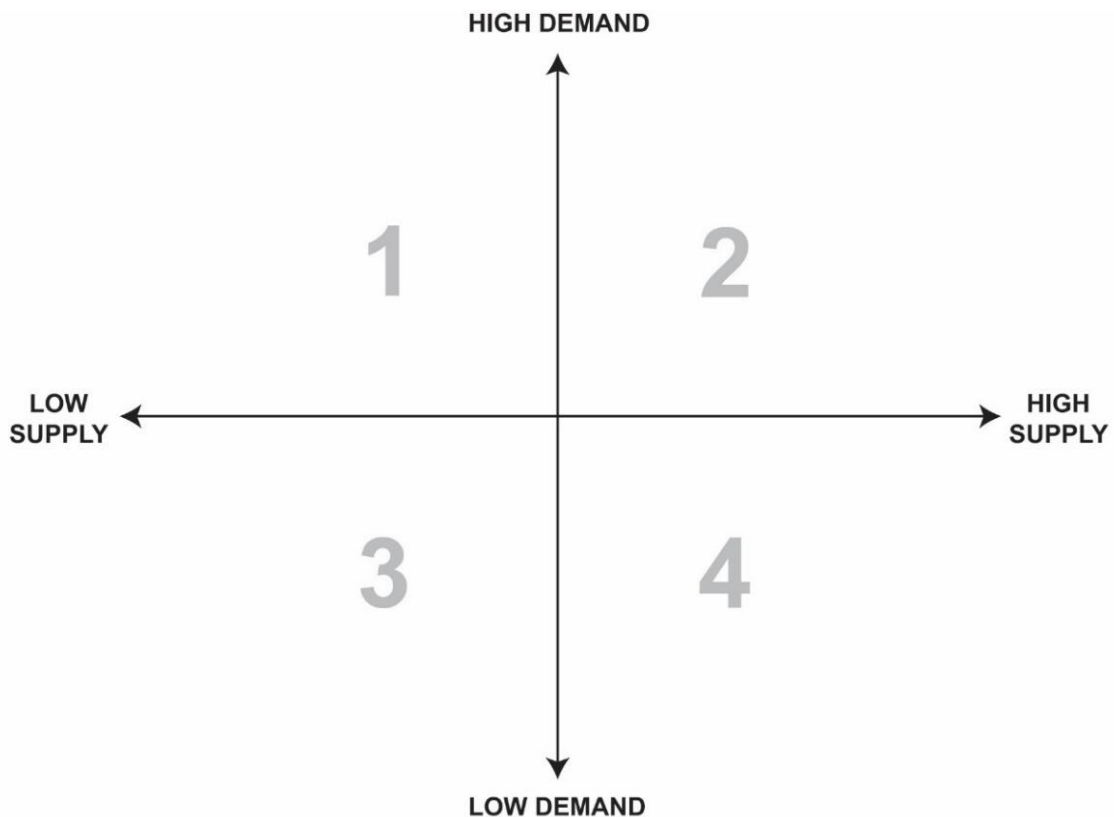
<sup>1</sup> The Financing Potential of the Seed Sector in Sub-Saharan Africa



- **Quadrant 1** represents value chains with a *low supply* and *high demand* for formal financial services. Key bottlenecks in this quadrant include the lack of well-designed agricultural financial products, usually as a result of limited information and expertise on behalf of financial service providers, and perceptions around low profitability of financing the seed and post-harvest technology provider sector.
- **Quadrant 2** represents value chains with *high supply* and *high demand* for financial services. Value chains in this quadrant are considered well-functioning with few bottlenecks, and as such fall outside the scope of this report.
- **Quadrant 3** represents value chains with *low supply* and *low demand*. The challenges inherent in this quadrant are the same as those in Quadrants 1 and 4; as such, a specific analysis for Quadrant 3 has also been excluded from this report to mitigate repetition.
- **Quadrant 4** represents value chains with *high supply* and *low demand* for formal financial services. Key bottlenecks in this quadrant include the lack of awareness of formal financial services among farmers and agribusinesses, as well as the prevalence of informal finance, lack of data on rural value chain actors, and convoluted loan approval processes.

**Figure 1. Supply and Demand Framework**

Agricultural value chains fall within one of the quadrants, each of which share characteristics in financial bottlenecks and barriers to growth.



## **Framework**

The framework utilized bottlenecks identified in both supply and demand for financial services for the various actors in the informal seed value chain. In this context, demand for financial services is not just a measure of demand for formal credit – it is broader and includes any informal credit that is already in the value chain. Therefore, even when there is little access to formal credit, there can still be high demand for the credit if system actors are accessing informal finance. Low demand for finance would only be in a situation where the value chain was functioning without any finance.

## **Limitations & Considerations**

All analyses, data, and other findings included in this report are based off a selection of companies and seed sector stakeholders in the corridor. All graphs and data included are based on available data from the surveys. In some cases, data were not available and were therefore excluded from graphs or analyses. The majority of the data sets and financial reports available is not crop, sex, nor age-disaggregated, and the analysis for this report was limited by the availability of comparable data. However, recommendations are made in this report for further investigation to support gender and age-inclusive interventions.

Additionally, agriculture finance is an emerging, yet nascent aspect of the financial services sector throughout most of Africa. Most financial service providers assessed in each market have no current agricultural lending activities, and many of those that do have just one or two financial products dedicated to agricultural lending. Though the seed sector is a vital component of the agricultural sector, these market realities within the financial services sector make it impractical to limit assessments to just seed sector financing; instead, for these reports, seed sector finance is largely considered synonymous with agriculture finance unless otherwise noted.

Especially given the nature of agriculture finance, lending product terms and amounts should be tailored for the specific lending purpose; seed-related loan products, as a subset of the broader agriculture finance sector, are no different. Therefore, assessments and surveys relating to financial service providers (supply side) assumes that those interested in agriculture finance will also be interested in seed sector finance. However, assessments and surveys relating to seed sector value chain actors (demand side) do offer learnings and insights specific to the seed sector where noted.

On behalf of the S34D team, Opportunity International wishes to extend its deepest gratitude to all those who participated in this market needs assessment, and for the in-depth feedback and information provided to compile this report. Thank you for your time and collaboration, and for your interest in supporting S34D.

# Synopsis of Report Outputs

## Key Findings

A key theme that emerged from the analysis was that the informal seed value chains were very similar in structure across the corridor. Consequently, the bottlenecks identified exist across each of the corridor countries, but the recommendations are tailored to the specific financial landscape of each country. See section titled “Mitigating Financial Bottlenecks: Summary of Priority Interventions for S34D Activity” for a comprehensive summary of suggested next steps to support the activity.

Our analysis identified the following key bottlenecks:

1. **Low profitability of agricultural loans**, which disincentivizes agricultural lending.
2. **Information asymmetries exist between potential clients’ financial needs and lenders’ services:**
  - a. **On the supply side, FSPs consider agricultural loans as riskier than other products**, meaning lenders may overestimate or misprice risk in the sector.
  - b. **On the demand side, low awareness of available financial products inhibits uptake**, meaning FSPs may experience low uptake of their products even when they target the sector.
  - c. **A lack of data about borrowers’ needs, value chain, age and gender also result in poor product design, reducing demand.**

## Recommendations

Corridor Themes and Recommendations for Four Bottlenecks:

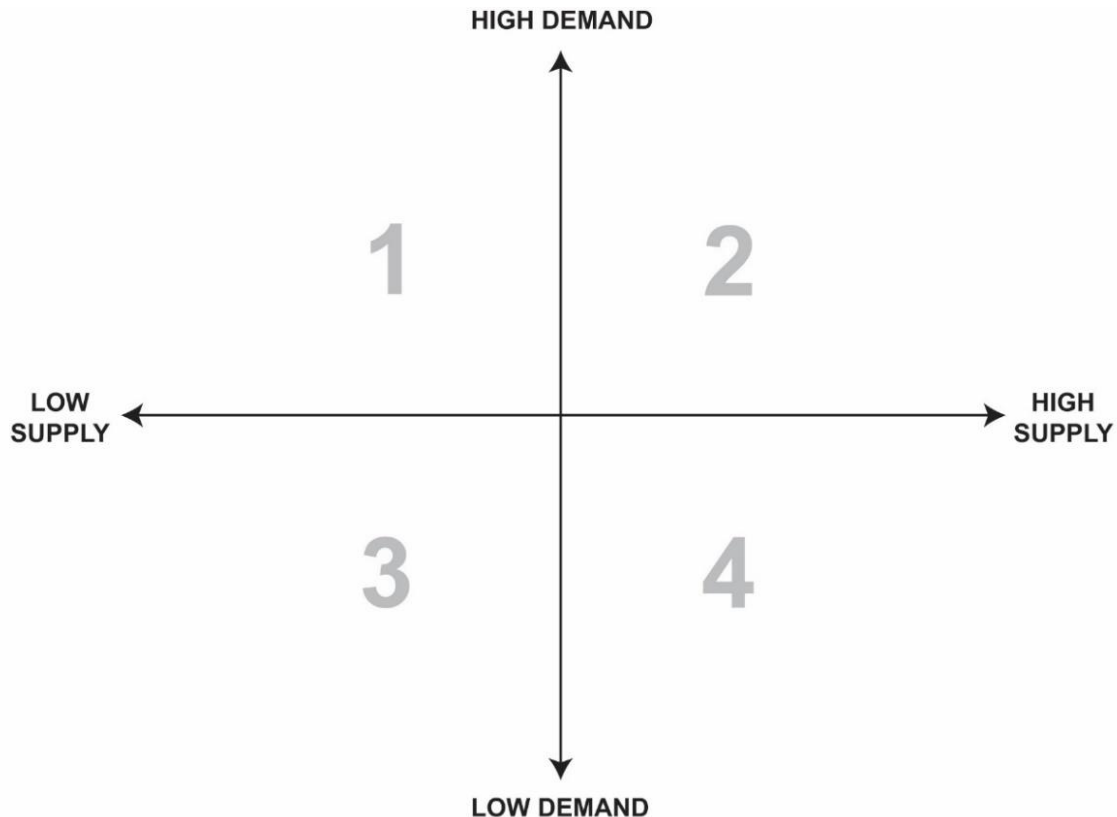
1. **Low profitability of agricultural loans disincentivize agricultural lending.** Key interventions here focus on reducing costs for lenders through grants for technical assistance to improve and/or digitize operations. The integration of age and gender-inclusive strategies to support equal uptake among traditionally underserved farmers is critical. The project should also consider concessional finance to reduce cost of funds for lenders where loans are not profitable. Experiments with agency models should also be continued (or expanded) and reviewed to see if they can aid financial institutions to aggregate demand for services in rural areas.
2. **Information asymmetries exist between potential clients’ financial needs and current offerings of financial products.**
  - a. **Supply Side:** A study of available guarantee facilities in the corridor, and a review of FIs that underutilized these would yield insights that could be used to design more effective risk reducing mechanisms to catalyze agricultural lending.
  - b. **Demand Side:** Financial literacy training both via high touch and mass media has been proven to increase awareness and demand for financial products. Small projects with specific lenders or larger national campaigns using radio and TV could be sponsored by the project. For prospective clients below the minimum threshold of regulated financial institutions, S34D could explore SILC/VSLA models

that are applicable to small seed value chain players. Targeting curricula can be tailored to traditionally underserved groups, noting that SILC/VSLA interventions specialize in promoting support for rural women groups and may serve as a valuable entry point. As the majority of SILC/VSLA group members are women, it would be an opportunity to strengthen their knowledge based on FSP products. Although, noting that members are mostly women does not imply they have full control of the financial resources.

- c. **Product Design:** Linking lenders to value chain actors who have accurate information on farm economics (like extension service providers) will help to make financial products that are better suited to the target activities. Grants for specific value chain studies, especially those that incorporate sex and age-disaggregated data, and financial product design may also help. With better data, lenders can design financial products that better serve farmer needs, raising demand for the products among all rural stakeholders in seed systems.

## Corridor (Regional) Findings

Agricultural value chains fall within one of the quadrants, each of which share characteristics in financial bottlenecks and barriers to growth.



### **Quadrant I: Low Supply, High Demand for Formal Financial Services**

Value chains that fall within Quadrant I are characterized by high awareness and demand for formal financial services on behalf of agricultural businesses and farmers but limited financial product availability from formal financial service providers.

The lack of agricultural financial services was found to be largely attributed to financial service providers' perception of the low profitability of lending to the agricultural sector. In almost all interviews, representatives from financial service providers cited this as a key reason for their institution's lack of lending to seed actors and to the overall agricultural sector. In addition to low profitability, several other key bottlenecks emerged relating to information asymmetries between the needs of agricultural clients and financial service providers, as well as the perceived high risk of default with agriculture loans.

## Quadrant I Bottleneck: Low Profitability of Agricultural Loans

Most financial service providers operate in and around urban areas; operating in rural areas is typically more complex and more expensive. Lower population densities create geographic challenges for both financial service providers to reach potential clients, and for clients to reach financial service providers. Rural clients are also more likely to be less financially literate than urban clients with limited or no financial history, resulting in initial small loan values.

For financial service providers, the small loan values, combined with increased costs of loan origination and portfolio management of rural loan portfolios, reduces the profitability of agricultural lending compared to lending in urban settings. The perceived opportunity costs of allocating resources for agricultural lending in lieu of, for example, increasing their footprint in more profitable urban areas, often disincentivize the leadership of financial institutions to choose to establish or grow their agricultural loan portfolio.

### Addressing the “Low Profitability” Bottleneck

Three key mitigation strategies are suggested to help financial service providers increase the profitability of agricultural loans:

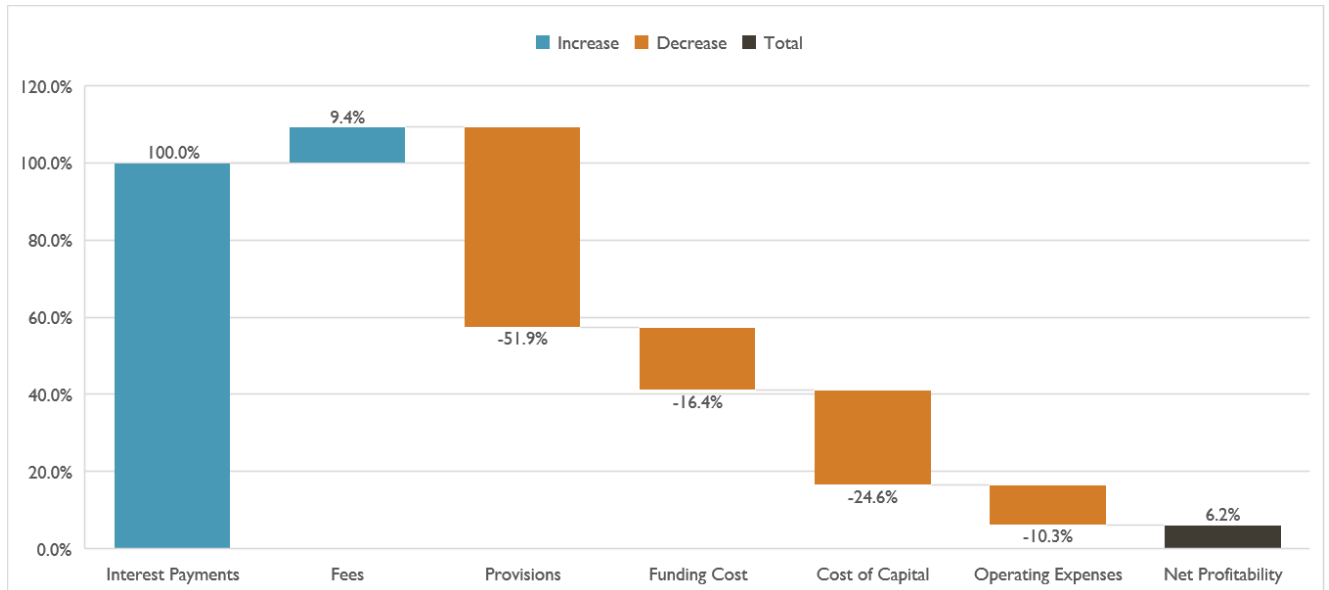
#### **A. Increase the total capital disbursed in rural areas by aggregating small loans or targeting larger agricultural business clients operating in rural areas.**

The most common loan aggregation approach involves forming groups of smallholder farmers from the same region, who together take out one larger loan from the financial service provider, and individually utilize small portions of the loan for their farms. In practice, group members co-guarantee each other’s loan portion, often in lieu of collateral, and meet regularly to make repayments. This approach is typically practiced by microfinance institutions throughout the corridor—lenders including VisionFund, Opportunity International, BRAC and Musoni have adopted this approach. Financing for smallholder seed multiplication would be a specific application of this activity for seed producers.

The benefit of the loan aggregation approach is that the financial service provider can reach a greater number of rural clients, who will then gain experience with financial services and potentially become more profitable loan clients themselves, while reducing operational costs by originating fewer individual loans. Additionally, leveraging concurrent work amongst SILC/VSLA groups may prove useful in aggregating demand from last mile end users of seed and post-harvest technologies. Disadvantages of this approach, however, are the increased costs of client acquisition in rural areas and group formation. Capital is also typically more expensive for microfinance institutions than for commercial financial service providers (unless funds are subsidized, in which case scale becomes an issue), which can disincentivize extending smaller loans with lower profit margins.

## Figure 2. Net Profitability of Agricultural SME Loans

Below figure illustrates the net profitability of an agricultural SME loan from one lender operating in the corridor. Each category represents a percentage of revenue from the loan. Provisions and operating expenses were the largest expense categories, representing 24% and 50% of the loan revenues.



Another option is for financial service providers to target lending to larger and more established rural enterprises, such as off-takers, processing facilities, transportation companies, or warehouses. Clients that operate these businesses will likely have assets to use for collateral and will be able to absorb larger loans, likely increasing the net profitability margin for the financial service provider.

In all, loan aggregation and/or targeting of rural small- and medium-sized enterprises (SMEs) may help reduce operational costs, but will not fully address the issues affecting overall loan profitability and financial service providers' willingness to lend to the sector. Local SME seed companies and post-harvest technology providers can directly access financial services through SME products, particularly if they can demonstrate linkages with both multiplication and production-oriented farmers.

### **B. Invest in process improvements and digitization to reduce costs of loan origination and portfolio management.**

Many financial service providers still rely on manual, paper-based processes for loan processing and origination. Up-front investments in streamlining and digitizing processes can help to significantly reduce operational costs long-term for financial service providers.

Throughout the corridor, lenders were increasingly integrating with mobile money providers to reduce cash handling costs and risks, and to increase outreach to rural areas. The prevalence of mobile money agents throughout the corridor also allows for convenient access points for rural

clients to make withdrawals and deposits (see section on agent banker networks). Any digital-based strategies should also include gender and age-sensitive strategies to address potential barriers faced by women in accessing and utilizing technologies.

In Kenya, Musoni developed a custom core banking system that includes a native integration with mobile money services and uses tablets for loan origination. (Typically, this type of process improvement is complex and time-intensive and would likely be cost prohibitive for many smaller financial service providers.) In Tanzania, AccessBank affirmed that digitization was an essential investment to reduce operating costs and expand their seed system and agricultural lending portfolio.

Leveraging data and analytics are also key elements to invest in for process improvements. Credit scoring, for example, can be used to segment potential clients and identify those with higher scores (i.e. lower risk clients). Financial service providers can then eliminate unnecessary due diligence requirements for lower-risk clients, and more quickly and cost-effectively issue loans that are most likely to be repaid. Lenders like Opportunity Bank Uganda have experimented with credit scoring algorithms; however, the technology remains nascent and relatively underutilized in the sector. Availability of rural data, and data quality, are inherent challenges in utilizing tools like credit scoring to assess agricultural value chain actors and will, at least initially, limit the predictive ability of any rural credit scorecard.

Fortunately, as a starting point, financial service providers can utilize their own data on existing clients to prequalify high performing clients for additional credit, or to sell the clients other credit products. Currently, several service providers exist to help financial service providers with this kind of analysis. Rubyx, for example, analyzes a lender's records and charges a small percentage of the revenue generated from the analysis.

Digitization, however, can be expensive and have an extended ROI, especially for microfinance institutions that operate on lean margins. Technical expertise in banking data and technologies is also vitally important to ensure digitization initiatives are integrated and launched adequately. Incorrect specifications, vague directives from leadership, or poor interpretations of business requirements can often result in failed or cumbersome digital integrations that do not effectively improve or automate processes and may even result in duplicate or redundant work for staff. As such, any seed systems or post-harvest technology provider support activities that can aggregate high-quality digital data will help attract financial service provider investments.

### **C. Launch or grow agent banker networks for rural regions.**

Increasing the profitability of agricultural lending could also be achieved through agent bankers. Typically, through the agent banker model, financial service providers train and equip agents—usually local entrepreneurs or existing mobile money agents with established businesses in rural communities—to provide cash deposit or withdrawal services on the bank's behalf; some agents are also equipped to originate loans or provide other direct banking services. Through agents, financial service providers are able to establish a convenient access point for clients in rural communities without incurring the full costs of a small branch or service center. Agents are typically not employed by the lenders, but instead earn a small fee per transaction or service provided. For financial service providers, this fee-for-service model means ongoing operational



costs are contingent on revenue-generating services being rendered.

Similar to digitization and process improvements (and agent banking is often intertwined with these initiatives), the up-front costs and technical expertise required for recruiting, training, and equipping agents, as well as setting up an effective agent management process and/or department, can be extensive. Emerging solutions like shared agent networks (in which several financial service providers share the same agents) may help reduce costs and barriers to entry.

In all four corridor countries, the governments have passed regulations that allow for agent banking. A significant presence of agent bankers was noted for Equity Bank and KCB in Kenya and CRDB in Tanzania. Opportunity Bank Uganda and FCB in Malawi have developed agent banking models that specifically target and serve the agricultural sector. In these cases, the agents also provide agricultural and financial education to farmers, collect data on farmers to provide to the lenders, and help mobilize customers for the lenders. In Uganda, agents have also begun to originate SME loans on behalf of Opportunity Bank Uganda to issue to aggregators and other businesses in the targeted value chains.

Key challenges in utilizing agent bankers are in their accuracy and credibility. Agents, by nature, are customer-facing entities of the financial service provider's business, yet by using agents, the financial service provider ultimately relinquishes control over client experience. Agent training helps ensure agents remain "on message," but there is still a risk of misinformation or poor communication of product features. This is also a risk of mishandling or inadequate protection of sensitive customer data. As such, target customers may not be willing to share sensitive information with agents given that they are not employees of the lender, limiting agents' ability to originate loans. Establishing clear and effective agent management processes are essential to help mitigate concerns around accuracy and credibility.

Financial service providers need to also consider the specific barriers women and youth face when developing and managing agent networks. They should specifically train agents in gender and age sensitivity, and perhaps also work to specifically engage both women and youth as agents, which may help traditionally under-served clients feel more comfortable when conducting transactions with agents.

Last mile seed system actors and post-harvest technology providers are strategically linked with large populations of potential rural clients for financial service providers. As such, S34D and other seed systems strengthening interventions should explore possibilities to leverage last mile actors as complimentary financial institution agents.

#### Quadrant I Bottleneck: Information asymmetries between potential clients' financial needs and current offerings of financial products

A key deterrent for financial service providers that contributes to the low supply of financial services in Quadrant I is the anticipation of needing to cover provision expenses for when overdue loans lapse past a duration mandated by the regulator (typically 90 days). Overdue loans are typically caused by poor credit origination (such as lending the wrong amount, or to the wrong entities), or poor credit design (such as when repayment terms do not match up with cashflows of seed systems actors). Both causes are due to information asymmetries between lenders and clients. Without adequate data on rural agricultural activities, lenders are unable to

design credit products that adequately meet the financial needs of value chain actors. S34D and other seed system support interventions are well positioned to reduce information asymmetries.

Information asymmetries are also due to the informality of agricultural value chains. Informal businesses often lack thorough or credible records, which make it more difficult for financial service providers to assess creditworthiness of informal businesses. Information asymmetries also increase customer acquisition costs, given that staff must spend more time investigating and validating data about businesses and potential clients before they can lend to them. Information asymmetries are also common challenges for value chains in Quadrant 4, which are discussed in more detail later in the report. S34D and other seed system support interventions have opportunities embedded within their activities to increase access to validated business records, both formal and informal.

#### Addressing the “Information Asymmetry” Bottleneck

Several strategies are suggested to help financial service providers overcome challenges with information asymmetries.

#### **A. Improve data gathering and analysis.**

Comprehensive data on seed systems lending activities is essential for financial service providers to understand and develop products that adequately meet the financial needs of their potential clients. Financial service providers should partner with seed system support activities in an effort to share data on actors and capture a comprehensive data portrait of seed systems. Implementing partners and value chain actors are also likely interested in formalizing rural businesses to improve the quality of data gathered – financial service providers can play an important role in co-designing data capture tools and training content to ensure adequate data is gathered that can inform credit decisions and reduce loan approval timelines.

For financial service providers, value chain partners are important assets to support data analysis. Oftentimes, financial service providers lack the means or expertise to effectively leverage and operationalize data to improve decision making. Identifying value chain actors or other technology companies with these capabilities can be important for supporting future interventions. S34D plans to build out a pilot to test this approach in Western Kenya with ABC-PABRA seed producers during FY20.

#### **B. Provide technical assistance to financial service providers to improve credit origination and design.**

With limited internal agricultural expertise, financial service providers may require third parties to help identify where information asymmetries exist within their credit origination processes and/or the design of their financial products. Once financial products are adapted to better serve the financial needs among target value chains, technical assistance providers can also facilitate connections for financial service providers to SMEs and smallholder farmer groups operating within the same value chains. Extending finance to multiple actors within the same value chain (or partnering with other financial service providers to finance different components of value chains) can effectively expand the capacity of the value chain while mitigating market volatility risks. S34D and other seed system support interventions can play a critical role in unlocking finance by

advising financial service providers to better align their credit origination and design with the specific needs of seed system actors.

### Quadrant I Bottleneck: High Risk of Default for Agricultural Loans

In low- and middle-income countries, farm yields can be severely affected by factors such as extreme weather and harmful pests, but insurance is often cost-prohibitive or unavailable for smallholder farmers, which increases the risk for lenders. Additionally, risk mitigation options for financial service providers, like loan loss guarantees, may not be widely available; if they are available, convoluted claims processes may discourage financial service providers to rely on them due to the uncertainty around if claims will be paid out or not. The lack of clear risk mitigation tools, combined with the already high risks and costs of agricultural lending, can further dissuade financial service providers to invest time, effort, and capital to serving clients in the agricultural sector.

### Addressing the “High Risk” Bottleneck

Two strategies are suggested to help financial service providers mitigate risks in lending to the agricultural sector:

#### **C. Expand access to guarantee mechanisms to help financial service providers mitigate losses.**

Guarantees, which can be managed by for-profit, non-profit and/or government entities, offer a financial cushion for financial service providers that choose to lend to riskier, underbanked market segments, such as farmers. One typical guarantee model is from the Private Agricultural Support Sector (PASS), a Tanzanian trust that offers a variety of guarantees that cover individual loans, loan portfolios (for lenders), and institutional loans, which encourage larger banks to lend to smaller banks that want to serve agricultural value chains. By guaranteeing some or all of a portfolio, PASS enables a financial service provider to expand lending to customers in the agricultural sector who may lack the collateral or the credit history to qualify for loans on their own. Guarantees can also be used to reduce the interest rate charged by financial service providers, which can make the loan product more affordable for clients. With regards to seed system actors and post-harvest technology providers, any specific clarifications within the terms sheets of various guarantee mechanisms has the potential to encourage qualifying financial service providers to expand lending into the sector. S34D may consider coordination with the newly formed U.S. International Development Finance Corporation to recommend the inclusion of seed systems financing within new Development Credit Authority guarantees.

It is also recommended that the S34D team conduct further research on the possibility of integrating gender and age requirements in loan guarantee facilities used under the activity. This would further encourage financial service providers to engage and lend to women and youth-led or owned businesses and farms.

#### **D. Leverage concessional finance to help reduce costs of agricultural loan products.**

One example of concessional finance is practiced by the Bank of Uganda’s Agricultural Credit Facility, which offers concessional finance to lenders for loans that target the country’s priority areas within the agricultural sector. Concessional finance, though not a guarantee, reduces the

costs of funds and allows lenders to incorporate the full price of risk within their loan product, while still maintaining a competitively priced product.

In Figure 2, concessional finance from the Agricultural Credit Facility would have eliminated or significantly reduced the 17% funding cost, which in turn would have allowed the lender more of a margin to price in higher risk without creating an unfeasibly expensive loan product for the end client.

High borrowing costs may also be caused by broader macroeconomic factors. For example, countries with high inflation rates of their local currency will inevitably have a higher interest rate with their loans. Similarly, lenders may face higher costs of funds if their lenders view the countries they operate in as high risk.

**Figure 3: Potential Solutions for Value Chains in Quadrant I**

<b>Bottlenecks</b>	<b>Mitigation Strategies</b>	<b>Corridor Examples</b>	<b>Disadvantages</b>
<b>Low Profitability of Agricultural Loans</b>	Aggregate loans, or target lending to rural SMEs	Vision Fund, Opportunity International, BRAC, Musoni	High cost of forming and coordinating groups
	Process improvements and digitization	Musoni AccessBank OBUL, Rubyx	High upfront costs; poorly implemented digitization can actually cause inefficiencies
			Institutions may not be configured to use data outputs; data may be inaccurate
Agent bankers	Equity Bank, KCB, CRDB, FCB, OBUL	Credibility of agents; accuracy of messaging	
<b>Information asymmetries between potential clients' financial needs and current offerings of financial products</b>	Data gathering and analysis	OBUL, Rubyx	Institutions may not be configured to use data outputs; data may be inaccurate
	Technical assistance		Allocation of staff time and resources on behalf of financial service providers
<b>High risk of default for agricultural loans</b>	Guarantee mechanisms	PASS, DCA	Complexity of claiming, time taken to disburse
	Concessional finance	BOU ACF	Limited scale; complexity and cost of claiming

For both guarantees and concessional finance, financial service providers throughout the corridor expressed concerns about the processing times and clarity around accessing the risk reduction mechanisms. The USAID Development Credit Authority (DCA), for example, has offered guarantees to lenders in agricultural value chains, but in interviews, respondents have cited the long processing times and complex reporting requirements as key reasons for under-utilizing the facility to grow their portfolios.

Similar to USAID's DCA, guarantees that only pay out after a lender has had to set aside provisions for the loans will be limited in their effectiveness, given that lenders will still have to incur the opportunity cost of sitting on the provision funds. This cost may be passed on to the consumer or serve as a disincentive to disburse riskier loans. Similarly, if claims against the guarantees or the processes to access concessional finance are complex, and especially if the outcome is uncertain, financial service providers will be less likely to take the risk in relying on the facility to subsidize a portion of their losses.

## **Quadrant 4: High Supply, Low Demand for Formal Financial Services**

Value chains in Quadrant 4 are characterized by a high supply of agricultural financial services, but low demand for formal finance on behalf of seed systems or post-harvest technology provider actors.

The lack of demand for agricultural financial services was largely attributed to lack of awareness from value chain actors about the availability of formal financial services or, if seed systems or post-harvest technology provider actors were aware, the inability of potential clients to access formal financial services, most often due to the poor design of financial products. Often, financial products are incorrectly priced, and/or not appropriate for the activity they are intended for (for example, scheduling repayments before farmers can earn cash from their harvest or availability of short term debt facilities when clients require long term debt financing).

Throughout the corridor, actors operating in Quadrant 4 value chains also often found formal financial services prohibitively expensive. Many value chain actors struggle with low productivity and operate with thin margins, and are therefore unable to afford the costs of finance; market volatility was also a significant deterrent to utilizing financial services, given that value chain actors are unlikely to risk borrowing against uncertain future revenues.

### Quadrant 4 Bottleneck: 4. Low Awareness of Available Financial Products

Low awareness of financial products is typically due to low levels of financial literacy among target client groups, most often low-income smallholder farmers who have limited formal education. Without adequate financial literacy skills, farmers often lack the means to effectively understand and evaluate the role of formal finance in growing their farm or agricultural businesses. Even for clients with adequate knowledge of financial literacy, the lack of experience with formal financial services can be daunting.

Some interviewees also mentioned that value chain actors may assume that financial service providers do not want to lend to them or are not interested in financing agricultural activities, and therefore they do not consider reviewing or researching financial products that may already be available to them.

Ineffective marketing and promotion of financial products may also cause low demand, especially if the financial service provider is using the wrong communication channels (website advertisements

versus radio), language (English versus local language), implicitly targeting men (such as not making it clear women or youth are encouraged to apply), or poor or unclear messaging in their advertising and awareness campaigns, which can result in a turbid understanding of product features.

### Addressing the “Low Awareness” Bottleneck

Two strategies are suggested to help financial service providers increase the awareness of financial services among targeted agricultural client groups:

#### **A. Partner with value chain actors to co-develop financial training content.**

Value chain partners can play a crucial role in the financial education of rural clients. However, unlike agricultural trainings, financial service providers can work closely with value chain actors, such as extension service providers, cooperatives, and off-takers to co-develop financial literacy training content, ensuring potential customers can build financial literacy skills and understand the financial service provider’s product offerings. S34D plans to test this approach in FY2020 in Uganda to augment training services offered to seed companies.

When targeting smallholder farmers, value chain actors like Viamo can also assist in adapting financial literacy training content to digital media and other formats suited for adult education in remote, low-resource environments. Digitization of training services can also deepen the amount of data gathered on rural clients and should consider gender and age-specific barriers to ensure under-served clients can equally benefit. For financial service providers, more comprehensive data on seed systems and post-harvest technology providers can help ensure the features of their financial products adequately meet the financial needs of their targeted male, female, and younger clients.

#### **B. Improve marketing strategy for financial products.**

Financial service providers with well-designed products will need to understand the best ways in which to reach their target male, female, and younger clients and educate them about their product features. A simple way of assessing effective marketing strategies is to survey new clients about how they heard about the lender, and review which strategies are most effective for client acquisition. However, a key consideration should include clients that have not yet been reached, especially more marginalized groups like women and youth. Financial service providers can also conduct market research assessments on their targeted regions to better understand the communication technologies commonly used among target client groups, which languages most value chain actors are most fluent in (verbal and written), and the level of financial education common among targeted client groups, to ensure products are marketed and described in ways that foster client understanding rather than confusion.

### Quadrant 4 Bottleneck: 5. Poor Design of Financial Products

The poor design of financial products is often due to information asymmetries between financial service providers’ understanding of agricultural clients’ financial needs, and their actual financial needs. When lenders lack comprehensive information about a value chain activity and its actors,

risk can be overestimated, and therefore overpriced, in interest rates for agricultural financial products and unnecessarily driving up the costs of finance.

Lack of data and information may also lead to mismatches between repayment schedules and the cash flow of the value chain activities, such as when repayments are due before farmers are able to harvest and sell their crops. Without appropriately timed repayment schedules, many smallholder farmers and value chain actors are unable to utilize available financial services. Mismatches may also occur between the financial capacity of clients and the actual value of the loan issued, which can lead financial service providers to over-lend to agricultural clients. If clients become over-indebted, they may default on their loans and become ineligible to access finance in the future.

Additionally, stringent loan requirements relating to collateral and documentation may also act as deterrents for informal value chain actors. Value chain actors often are unable to meet the collateral requirements for loans. Lenders can require 120-150% of the loan value as collateral, even in cases where they can meet collateral requirements. Many lack the formal documentation for their land or other assets, particularly women and youth. Other documentation requirements, such as Know Your Customer (KYC) requirements, can be burdensome for seed systems and post-harvest technology provider actors, particularly women and youth who may not have formal identification, or a formal proof of address. Collateral requirements, combined with KYC requirements, can deter value chain actors and potential customers from seeking formal financial services. Also of note is that there are often disparities between minimum requirements mandated from Central Banks, and minimum requirements mandated from financial service providers themselves, where lenders require more documentation than the regulatory minimum, meaning that lender policies (not regulations) sometimes deter potential customers.

#### Addressing the “Poor Design” Bottleneck

Several strategies are recommended for S34D to help financial service providers improve the design of their financial products to increase lending to targeted agricultural clients:

#### **A. Strengthen the financial capacity of agricultural value chain actors through partnerships.**

Among most seed systems or post-harvest technology providers, farmers and agribusiness entrepreneurs often operate with thin margins, limiting their ability to afford the costs of financial services. Financial products should be designed to minimize the costs for clients; however, even if financial service providers reduce the costs of their products, the demand for these products will remain low if the seed systems or post-harvest technology provider commercial activities result in low productivity and profitability.

Financial service providers do not have much influence over the profitability of informal seed value chains, but financial service providers can partner with value chain actors like Extension Service Providers (ESPs), S34D, and other seed system support activities. Through ESPs, farmers can receive training in improved agricultural best practices, and drive adoption of practices that will increase yields. Through ESPs, financial service providers can help groups of farmers learn about using finance to increase their yields, alongside improving their agronomic practices.



Market volatility also inhibits value chain actors from seeking out formal financial services. In addition to partnerships with ESPs, financial service providers should also partner with market access providers, which help reduce price volatility.

Financial service providers are essential stakeholders in expanding access to actors throughout whole value chains. When value chains function more profitably, and when value chain actors can access the financial services they need to grow their enterprises, links throughout the value chain are strengthened — off-takers and processors increase their capacity to handle more seed from producers, and producers can invest more in increasing their production, knowing that there will be a market for their product. All entities are much more likely to seek out financial services when the value chain functions more profitably.

### **B. Improve data gathering and analysis.**

As discussed with Quadrant I bottlenecks, gathering comprehensive data on agricultural lending activities is essential to help inform financial service providers on important design components including appropriate repayment terms and loan values. When financial service providers invest time and resources to gather more comprehensive data on targeted agricultural activity (or activities), they will better understand the viability of financing the agricultural activity and its value chain actors, and ensure product features are well-suited to support the financial needs within value chains. S34D can play a critical role in facilitating sex and age-disaggregated data gathering and analysis for financial service providers.

For financial service providers, value chain partners are important assets to support data gathering and analysis. Often, financial service providers lack the means or expertise to collect the data themselves, so partnering with a value chain stakeholder with experience in data collection for the targeted agricultural activity can ensure the financial service provider gathers the right information to adequately design effective financial products.

### **C. Simplify and minimize loan requirements.**

Financial service providers should undertake a comprehensive effort to rationalize loan requirements, ensuring all the information requested from potential clients is necessary for loan approvals beyond what is required by regulators. By identifying which information is required and removing redundant or excessive requirements, including literacy requirements where possible, clients will be less deterred when applying for loans. Financial service providers should particularly review their requirements through gender and age lenses to see if their processes implicitly or explicitly exclude or deter women and youth from accessing products.

Rationalizing information requirements is also particularly useful if a financial service provider is digitizing loan origination processes (a recommendation for Quadrant I). Typically, financial service providers find that they are able to reduce the amount of information required of a potential customer, improving efficiencies for the staff and while removing potential barriers for clients. This process can also be paired with analytics services or projects (also discussed in Quadrant I), to assess client data and develop data-based tools that help predict repayment behaviors.

#### D. Minimize collateral requirements or offer alternative methods to secure loans.

In the informal sector, collateral is a convoluted issue given the lack of formal documentation. Without formal documentation of their collateral, seed systems and post-harvest technology provider actors are often unable to use their land or assets as collateral to secure loans.

To help mitigate this challenge, financial service providers can transition toward financing cashflows in lieu of collateral, where regulations permit. Cashflows could offer a viable alternative to physical collateral, especially in value chains where more data are available on target customers and their specific functions in the value chain. Designing products that leverage this data, in lieu of using collateral to compensate for lack of data, could help unlock more financing for informal actors. However, a note of caution with this approach is that the financial service provider should understand gender and age dynamics in households: specifically, who is in control of the household cashflow and assets. Women often will give their earnings to males in their household, and therefore lose control of how to use it, which could be problematic if the woman is the loan recipient and responsible for repayment.

Financial service providers should also pursue partnerships with funds and trusts that buy down collateral requirements for sector-specific lending. Multinational actors like the World Bank and the World Food Programme, and country-specific actors, like ABI Trust in Uganda<sup>2</sup> and PASS<sup>3</sup> in Tanzania currently offer guarantee facilities for this purpose. When all or a portion of a loan or loan portfolio is guaranteed by an external actor, financial service providers should seek to reduce collateral requirements given the lower amount of capital at risk.

**Figure 4. Potential Solutions for Value Chains in Quadrant 4**

Bottlenecks	Mitigation Strategies	Corridor Examples	Disadvantages
<b>Low awareness of available financial products</b>	Co-develop financial training content	OBUL video Fin. Curriculum.	Costs of coordination and development
	Improve marketing strategy	Viamo	Higher upfront costs of research; internal expertise needed for understanding target clients
<b>Poor design of financial products</b>	Value chain partnerships	CEDO Uganda	Managing partnerships, up-front costs of training rural clients
	Data gathering and analysis	Horizon Farms/FCB FSA model Malawi	Institutions may not be configured to use data outputs; data may be inaccurate

<sup>2</sup> <https://www.abi.co.ug/>

<sup>3</sup> <https://www.pass.or.tz/>

	Simplify loan requirements	Accessbank, FINCA loan application digitization	Allocating staff time to review processes; ensuring enough data is still gathered for credit scoring decisions
	Minimize collateral requirements	OBUL Guarantee fund, PASS Tanzania, BOU ACF	Investment in developing alternative strategies to secure loans

# Country-Specific Recommendations

## Malawi

In Malawi, several key bottlenecks were identified by informal seed sector actors and post-harvest technology providers. The first was the lack of government support for the informal agricultural sector, which is seen by interviewees as one of the primary bottlenecks inhibiting growth. In Malawi, interview respondents discussed that the government's position appears to be that the informal and formal seed sectors exist in a zero-sum environment — that any progress on behalf of the informal sector comes at the detriment of the formal sectors. One example highlighted how seed fairs have been stopped in Malawi due to their engagement with informal value chain actors.

The second issue identified was market volatility, which stems in large part from weak market structures. Like in many other value chains, commodity provides are often volatile, and demand can be difficult to predict. Here, information asymmetries exist throughout the value chain — there is little or no coordination between farmers and traders before planting decisions are made, so farmers often will grow crops that are then not in demand at harvest time, which can

### Case Study: Horizon Farms Limited

Horizon Farms Limited (HFL), based in Mitundu, Lilongwe is contracted to various seed companies as a multiplier. Additionally, HFL is a youth-owned agribusiness, a certified maize seed producer for SeedCo and works with ABC-PABRA to multiply several bean seed varieties. HFL's Lisungwi Estate is also the only formal employer within an 8-kilometer radius. Established in 2003, HFL manages 265 hectares of land, with 10 hectares under irrigation, primarily for seed production. However, expansion of HFL's seed multiplication business line is severely constrained by a lack of financing opportunities.

HFL seeks to expand its irrigation capacity to improve its production of certified seed. Noting the increases in soil temperatures in advance of the rainy season, HFL would like to expand year-round multiplication. However, the majority of financing that HFL pursues is direct from the seed companies in the form of forward payments once crops pass inspection, which does not suffice to cover infrastructure expansion costs. Furthermore, this value chain financing has reduced in recent years as both SeedCo and Museco have reduced production lines, due to limited end-user farmer demand and the need to cover the costs of seed inspection and certification. Margins on seed multiplication have also steadily reduced to 384 MWK/kg in 2019 from 503 MWK/kg in 2015, at the farmgate. As a result, the management of HFL is price sensitive to commercial financing as their margins may not be able to justify the interest rates.

In this example, HFL recognized their need for financial service to expand their seed multiplication, but value chain financing could not meet the demand from their business. Moreover, poorly designed financial products and lack of awareness of current financial offerings limited HFL's desire to pursue commercial products. The HFL case study demonstrates the challenges inherent in Quadrant 3 (low supply, low demand).

significantly affect their margins or result in net losses for farmers. Given their uncertainty over their future revenues, farmers are unlikely to seek formal financial services in fear of being unable to make repayments.

## Case Study: Press Agriculture Limited

Agricultural company Press Agriculture Limited (PAL), based in Kasungu, Malawi, owns a large plot of land and has developed a partnership with the People's supermarket chain to purchase their crops. PAL was interested in growing biofortified beans to meet a market niche and sell to People's supermarket, so it set up a contract-based business model with in-growers to produce biofortified beans on their land. PAL, however, was unable to offer finance to meet the in-growers' needs to purchase the right inputs, and in the absence of a financial service provider to lend to the farmers instead, the program collapsed.

In this example, the farmers recognized their need for financial services to purchase the inputs for biofortified beans, but no financial service provider or value chain actor could meet the demand for finance. The PAL case study demonstrates the challenges inherent in Quadrant I (low supply, high demand), and specifically highlights the "information asymmetries" bottleneck in which the financial needs of farmers were not adequately aligned with or communicated to financial service providers. If so, a financial product could have been developed for the in-growers or for PAL, and the contract with People's supermarket could have been used to demonstrate capacity for repayment.

### Addressing Financial Bottlenecks in Malawi

This report recommends addressing the financial bottlenecks in Malawi by implementing multiple, small pilot projects. Larger interventions may cause conflicts, given the lack of government support for the informal seed sector.

Another recommendation is for interventions to consider a system-wide approach as information asymmetries are a noted bottleneck. Financial service providers like FCB, CUMO or COMSIV can help meet the needs of smallholder farmers, while larger lenders like NBS or CDH can finance processors and larger agricultural companies. Interventions should also consider guarantee mechanisms, especially gender and age-sensitive guarantee mechanisms, to help make agricultural financial services more affordable for clients and less risky for financial service providers. Learnings from small scale pilots can also help identify and address specific interventions for other financial service providers to further reduce the costs of financing the informal seed sector.

In the PAL scenario, a whole value chain approach would have identified the need for finance in addition to the market connection to People's supermarket. Partnering with financial service providers to offer working capital finance to PAL as well as production loans to the smallholder farmers could have helped support the goal of the project by increasing the supply of biofortified beans to the local market. The presence of a viable, well-functioning market would have also increased demand for quality seed and other inputs, further strengthening the sector.

## Tanzania

The seed sector in Tanzania is growing, but still largely reliant on the informal sector. The Tanzanian National Bureau of Statistics reports that only 44% of households use improved seed.<sup>4</sup> Unexpectedly, however, and unlike in Uganda, access to foundation seed is not seen as a major constraint by informal seed sector actors.

The lack of formalization within value chains means that many in Tanzania fall between Quadrant 3 and Quadrant 1. The supply of formal financial services is usually limited, while the demand from value chain actors spans the spectrum between high and low, depending on the characteristics of the value chain.

### Addressing Financial Bottlenecks in Tanzania

To address the characteristically low supply of agricultural financial services in Tanzania, interventions should focus on working with lenders like AccessBank and CRDB to create specific financial products that meet the needs of male and female seed sector actors. Additionally, given that the demand for finance can vary widely, interventions should also partner with value chain actors to help formalize smallholder farming activities. By improving the operations and financial capacity of farmers, lenders like AccessBank and CRDB will have more consistently viable agricultural actors to target for lending.

Interventions should also consider the government's input subsidy program, which offers input vouchers to some smallholder farmers. Usually, subsidies can negatively affect the demand for finance for inputs and make finance less effective if farmers assume loans are included in the input subsidy.

Guarantee facilities, like in other markets, will be important to take advantage of to increase the supply of finance to the agricultural sector. The PASS facility would likely be a strong partner for an intervention, which would offer guarantees, training for value chain actors, and lease financing. PASS is currently affiliated with CRDB, one of the largest lenders in the country, which would position CRDB as a viable partner. As discussed in the Landscaping Report, "The Financing Potential of the Seed Sector in Sub-Saharan Africa," CRDB and NMB are both suited for SME finance to provide larger loans for off-takers and processors in the sector.

AccessBank is likely the strongest partner to extend production loans to smallholder farmers and last mile agrodealers, especially given that it is testing technology-based integrations to reduce the costs of serving rural clients. However, the high cost to income ratios and poor repayment rates among other smallholder farming activities indicate that AccessBank will likely require a guarantee mechanism, and possibly technical assistance or grant funding to subsidize (at least initially) some of the costs in reaching and serving smallholder farmers, as well as technical assistance in adapting some processes to more effectively reach women and youth.

An initiative that engages CRDB or NMB to provide SME finance to a larger off-taker and AccessBank to provide production loans to out-growers for the off-taker, combined with a PASS

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<sup>4</sup> Tanzania National Bureau of Statistics, M. of F. and P. (2017) Tanzania; National Panel Survey Wave 4, 2014 – 2015 [http://www.nbs.go.tz/nbs/takwimu/nps/NPS\\_Wave\\_4\\_2017.pdf](http://www.nbs.go.tz/nbs/takwimu/nps/NPS_Wave_4_2017.pdf)

guarantee, could be a viable anchor project to begin expanding access to finance within the agricultural sector in Tanzania.

## Kenya

Kenya will likely see growth in the seed sector, due in large part to favorable changes to the regulatory environment. Since the publication of the Landscaping Report, the interest rate cap instated by Kenya's Central Bank has been lifted, which will allow regulated financial service providers to lend at higher rates. Without the cap, financial service providers have gained more control over pricing higher risk products in their portfolio and will allow them more flexibility in targeting sectors that are perceived to be higher risk without compromising their bottom line. Most likely, this report expects that the supply of finance to the whole rural sector will increase, with some value chains moving toward Quadrant 4 in the model (high supply, low demand).

Kenya also benefits from broad government support for the informal sector, unlike Malawi, which makes larger-scale interventions possible. Existing and past initiatives, such as "Strengthening bean seed systems with focus on biofortified bean varieties to respond to bean farmers and market demand in Burundi, Kenya and Rwanda," provide a strong foundation for further work in reducing financial bottlenecks in the informal seed sector.

### Addressing Financial Bottlenecks in Kenya

Given the elimination of the interest rate cap, the supply of finance will likely increase, which means interventions should focus on increasing the demand for finance by helping value chain actors formalize their farms and businesses (and therefore improving their financial capacity), as long as formalization does not harm or disempower females or youth working the farm (such as securing land using the name of the male head of household, instead of the female who is the primary worker and farm manager). Similar to Malawi, crop varieties with desirable traits, such as biofortification or reduced cooking time, will likely boost demand for these crops within local markets, strengthening the viability of the value chain and the interest of value chain actors in accessing finance.

Kenya is also one of the largest agricultural markets in the corridor, which means that product differentiation will be important for financial service providers. Tailoring financial products for specific value chains, and partnering with ESPs operating in the value chains, will be essential components in increasing the capabilities of value chain actors and increasing demand for financial services.

It is also important to highlight the emerging role of unregulated financial technology (fintech) companies meeting the demand for finance while the interest rate cap limited financial service providers from serving the riskier rural market segments. With the elimination of the cap, it is likely that regulated institutions will now become viable partners in the sector. Large, regulated lenders like KCB and Equity Bank will be important partners for larger interventions but will also likely need support in tailoring and designing appropriate products for the informal seed sector. These lenders can be engaged to finance upstream value chain actors like processors and off-takers, as well as larger producers. Fintech's, however, still have an important role to play in

servicing smallholder farmers. Small pilots can complement larger interventions to test strategies for engaging fintech's like FarmDrive and Apollo in supporting down-market lending. As is the case with all unregulated lenders, integrating responsible lending practices will be essential in these pilot projects. It is also important to ensure that the development of automatic credit scoring models should not rely on excessively high failure rates to train the algorithms. The emergence of credit bureaus and centralized data on borrowers in Kenya will mean that high failure rates could blacklist many first-time borrowers, which would be detrimental to the goals of the project.

## Uganda

The informal seed sector supplies an estimated 80% of the demand for seed in Uganda, representing an urgent need for formalization and capacity-building of value chains. Some government incentives have increased the demand for high-quality seed, but systemic challenges remain that inhibit the flow of finance to the sector.

Similar to other seed value chains in other parts of the corridor, weak market linkages and poor access to inputs can inhibit producers from investing in their farmers to improve their productivity. Price volatility, too, is a significant factor that can deter value chain actors from seeking formal financial services and financial service providers from perceiving potential rural clients as creditworthy.

Due to the informality of the sector, access to foundation seed is limited — the high prevalence of counterfeit seed was cited as a key challenge in Uganda. An overall shortage of foundation seed is further inhibiting farmers from accessing improved seed. In general, seed producers are struggling to meet the growing demand for improved seed, which has been heightened by government policies. Strengthening and formalizing seed sector producers will be paramount to improving agricultural production and stimulating higher demand for financial services.

### Case Study: CEDO

CEDO is an NGO that was formed in partnership with the Irish Foundation for Co-operative Development to support the growth of agricultural enterprises in Uganda. In the bean value chain, CEDO works to boost the capacity of supplier farmers to produce more bean seed, and to improve the processing and marketing of improved seed varieties. Currently, CEDO works with an estimated 3,000 farmers per season and offers contracts to some suppliers to produce in-demand seed varieties which are most often marketed and sold in the informal seed sector.

For the farmers partnering with CEDO to produce seed, access to viable markets offers a sense of confidence for the producers, who know they will be able to sell their seed. In turn, farmers are incentivized to seek out financial services to grow their enterprises. The lack of foundation seed, however, is cited as CEDO's main barrier to growth. Currently, the demand for foundation seed from CEDO's producers outpaces the supply. Expanding their pipeline of foundation seed, however, is contingent on its availability — a factor outside of CEDO's direct influence. Until the supply of foundation seed can increase, growth within the value chain will be minimal.



### Addressing Financial Bottlenecks in Uganda

To address the financial bottlenecks in Uganda, interventions should explore partnering with larger financial service providers like Stanbic or UDB to extend capital to larger foundation seed producers, which would enable them to increase their capacity and meet the demand for foundation seed. This may include longer-term finance options for larger producers to invest in assets like machinery to scale up their production, as well as working capital to ensure producers can access adequate inputs.

Technical assistance is also likely an important provision for financial service providers to effectively modify their existing products to better suit the financial needs of foundation seed producers. Financial service providers may also require assistance in identifying larger, creditworthy foundation seed producers, which can then be linked with organizations like CEDO to ensure linkages are streamlined between seed suppliers and seed producers.

At the same time, interventions should also focus on providing technical assistance to smaller financial services providers like Opportunity Bank Uganda and BRAC, which would provide production loans to smallholder farmers, like the 3,000 farmers that partner with CEDO. Additionally, value chain partners like CEDO can serve as off-takers, which would reduce much of the risk attributed to financing smallholder male, female, and youth farmers and encourage financial service providers to extend more loans for working capital and inputs for seed production.

# Mitigating Financial Bottlenecks: Summary of Priority Interventions for S34D

This report offers a comprehensive analysis of financial bottlenecks that exist within seed systems among corridor countries, as well as details on associated mitigation strategies that can help sustainably increase access to capital for seed system actors. Based on the findings from this report, several priority interventions were identified to serve as strategic next steps for the Feed the Future Global Supporting Seed Systems for Development activity.

The identified interventions highlight strategies to:

- **increase supply** of agricultural financial services from local financial service providers
- **increase demand** for agricultural financial services from male, female, and youth smallholder farmers and rural SMEs
- **strengthen linkages** among seed system value chain actors to reduce costs and risks associated with rural financing and service delivery

The six priority interventions identified are:

- 1. Provision of technical assistance to financial institutions –** Allocating grant funds for providing technical assistance to financial institutions is essential to build the capacity of financial institutions to help: ensure the design of agricultural financial products meets the cashflow needs of rural male, female, and youth clients without overburdening them with collateral requirements and other costs, especially those that may disadvantage women and youth; processes for expedient loan approvals and portfolio management are streamlined and effectively digitized to reduce burdens on staff and clients; credit algorithms can be developed to support process improvements and loan turnaround times; agent banker networks can be adequately and cost-effectively set up and managed; and, the marketing strategies for financial products are adequately reaching and informing male, female, and youth target clients.
- 2. Provision and/or utilization of loan guarantees or other concessional finance –** The activity should also thoroughly research available concessional financing mechanisms within each market, influencing process improvements and transparency where possible, and educate financial institution staff on how concessional finance could be utilized to reduce risks and collateral requirements. Funds should also be allocated to establish loan guarantees, perhaps with gender and age requirements, for financial institution partners to leverage to manage risks and incentivize lending.
- 3. Leverage last-mile seed system actors to experiment with agency models –** Establishing several partnerships with last-mile seed system actors, such as seed suppliers or other agrodealers, to also provide agent banking services can test different approaches for rural service delivery for financial service providers. Serving as rural bank agents, in addition to selling inputs and providing extensions services, can generate extra income for

rural entrepreneurs while aggregating data for financial service providers on potential rural clients, as well serving as a low-cost, gender and age-inclusive access point for bank clients to make repayments, deposit savings, and conduct other basic transactions locally.

- 4. Partner with technology companies to support data gathering and analysis** – It is highly recommended to research value chain actors in each country that have accurate data and information on farm economics, as well as technology companies, to serve as partners to help with low-cost sex and age-disaggregated data collection and analysis. Establishing reliable methods for ongoing data collection will be essential for iteratively improving financial products and building the case for financial service providers to develop and maintain agricultural loan portfolios that are sustainable and gender or youth inclusive. Linking lenders to value chain actors and/or technology companies will also be key to ensure that the data collected will be relevant and reliable to use for informing credit decisions and financial product design.
- 5. Partner with value chain actors to build the capacity of informal agribusiness** – Co-creating training programs and support services to help agribusinesses improve and formalize their financial and business planning will help reduce risks for financial service providers in rural SME lending, while strengthening the capacity of rural agribusinesses to support farmers' needs.
- 6. Co-design financial literacy and financial awareness curriculum for digital & mass media delivery** – The activity should allocate grant funding toward co-designing financial literacy curriculum for farmers with financial service providers. After identifying core financial service provider partners within each country, small projects can be designed with specific lenders to produce relevant, contextualized, gender and age-inclusive awareness campaigns for specific agricultural loan products using radio, TV, or other media. Look to incorporate parallel initiatives for clients below the minimum threshold of regulated FSPs leveraging SILCs/VSLAs. Financial literacy training should also be developed for digital platforms to help educate rural groups in basic financial principles, which will help increase knowledge of – and therefore demand for – financial products.

**Figure 5: Summary of Priority S34D Activity Interventions**

<b>For Financial Service Providers</b> Priority interventions to increase supply of quality agricultural financial services		
Intervention	Key Focus Areas	Bottleneck Addressed
<b>Provision of technical assistance to financial institutions</b>	<ul style="list-style-type: none"> <li>• Product Design<sup>5,6</sup></li> <li>• Digitization &amp; Process Improvements<sup>5</sup></li> <li>• Credit Scoring Algorithm<sup>5</sup></li> <li>• Agent Banking<sup>5</sup></li> <li>• Marketing Strategy<sup>6</sup></li> </ul>	Low Profitability of Agricultural Loans  Poor Design of Financial Products
<b>Provision and/or utilization of loan guarantees or other concessional finance</b>	<ul style="list-style-type: none"> <li>• Establish loan guarantees<sup>5</sup></li> <li>• Assess available guarantees/concessional finance within each market<sup>5</sup></li> <li>• Train FSP staff in utilization of guarantees<sup>6</sup></li> </ul>	High risk of default for agricultural loans
<b>For Seed System Actors and Post-harvest Technology Providers</b> Priority interventions to strengthen value chain linkages		
Intervention	Key Focus Areas	Bottleneck Addressed
<b>Leverage last-mile seed system actors to experiment with agency models</b>	<ul style="list-style-type: none"> <li>• Test partnership models with FSPs<sup>5</sup></li> <li>• Establish processes for agent banking management<sup>1</sup></li> </ul>	Low Profitability of Agricultural Loans
<b>Partner with technology companies to support data gathering and analysis</b>	<ul style="list-style-type: none"> <li>• Research value chain actors and technology companies<sup>5,6</sup></li> <li>• Test partnership models with FSPs to inform data collection<sup>5,6</sup></li> </ul>	Information asymmetries between potential clients' financial needs and current offerings of financial products
<b>Partner with value chain actors to build the capacity of informal agribusiness</b>	<ul style="list-style-type: none"> <li>• Training for agribusinesses in financial and business planning<sup>5,6</sup></li> <li>• Test partnership models for data gathering<sup>5,6</sup></li> </ul>	Information asymmetries between potential clients' financial needs and current offerings of financial products  Low Profitability of Agricultural Loans
<b>For Smallholder Farmers</b> Priority interventions to strengthen the production capacity of farmers and increase demand for agricultural financial services		
Intervention	Key Focus Areas	Bottleneck Addressed
<b>Co-design financial literacy curriculum for digital &amp; mass media delivery</b>	<ul style="list-style-type: none"> <li>• Partner with value chain actors and FSPs to create awareness campaigns with local media<sup>6</sup></li> <li>• Partner with technology companies to create digital financial literacy trainings<sup>6</sup></li> </ul>	Low awareness of available financial products

<sup>5</sup> Quadrant 1 Focus Areas

<sup>6</sup> Quadrant 4 Focus Areas

