FEED THE FUTURE

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

Financial Service Provider Inventory Scan

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

USAID

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OPPORTUNITY International

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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
DFI	Development Finance Institution
FSPs	Financial Service Providers
MFI	Microfinance Institution
OFDA	Office of Foreign Disaster Assistance
PASS	Private Agriculture Sector Support Trust
S34D	Supporting Seed Systems for Development
SME	Small or medium-sized enterprise
TADB	Tanzania Agricultural Development Bank
USAID	United States Agency for International Development
USD	United States Dollar

EXECUTIVE SUMMARY

This report provides an East Africa regional overview as well as country-level assessments for Malawi, Uganda, Kenya, and Tanzania (the 'corridor') of the supply-side[1] financing gaps and opportunities within the agricultural financial services sector, specifically for the purpose of expanding access to financing for the seed sector.

Research and analysis in this report was conducted by Opportunity International as part of the Feed the Future Global Supporting Seed Systems for Development (S34D) activity. In total, Opportunity International conducted an initial desktop market scan, through which it identified 185 regulated financial service providers throughout the four corridor countries. Of the 185 providers, 38 (20%) were found to have agricultural lending products and operations, as was determined based on publicly available marketing and financial information published by the providers. Opportunity International conducted comprehensive financial analyses on each of the 38 financial service providers (10 in Malawi, 11 in Uganda, 11 in Kenya, and 6 in Tanzania) and invited each to participate in in-depth interviews, 11 of which agreed.

The goals of this study were to:

1. Conduct a market scan to review the supply-side state of agriculture finance markets in the corridor, focusing on capacity of financing for the seed sector actors where possible.
2. Assess results of the market scan to identify high-potential financial service providers to engage as partners under the S34D project and conduct initial due diligence on behalf of the S34D team.
3. Provide strategic recommendations for the S34D team to effectively increase access to appropriate agricultural financial services for seed system stakeholders.

Cumulatively, the active gross loan portfolio for the 38 financial service providers analyzed in the region totaled $15.2 billion.[2] Few providers published data specifically on agricultural lending, so the exact amount deployed to the agricultural sector is currently undetermined. (A small subset of financial service providers surveyed had data available on the percent of their portfolios dedicated to agricultural lending, which was around 2-5% on average.) In terms of financing potential, however, these providers could reasonably lend $1.5-$3 billion annually to the agricultural sector, assuming they allocated between 10-20% of their outstanding portfolio to agricultural lending (which is the ratio typically allocated by financial service providers operating in the corridor that have benefited from technical assistance in agricultural lending and have well-established agricultural loan portfolios). Achieving the total financing potential for the corridor, however, will likely take several years to allow time for providers to reallocate portions of their portfolio to agricultural lending.[3]

Overall, the key findings from the assessment identify common bottlenecks (many of which are interconnected) that are shared among financial service providers in the corridor:

- Many providers of agricultural loans operate with high cost-to-income ratios combined with relatively small portfolio sizes. In general, the providers serving farmers are small microfinance institutions, which are unable to expand due to the high operational costs related to serving rural clients.
- Providers have limited agricultural product offerings, and likely focus on serving small farmers or SMEs (rarely both). SMEs are more often served by providers with larger portfolios, which

[1] A demand-side study titled, "Seed and Post-Harvest Technology Provider Financial Bottleneck Analysis" was conducted concurrently with this study and is available from S34D upon request.

[2] All currencies are in USD, unless otherwise noted.

[3] This process can be expedited if appropriate external funding is available to providers to use for agricultural lending.

focus their operations in urban centers where they can disburse larger loans more cost-effectively.

- The design of agricultural loan products does not adequately meet the capital needs of seed sector actors, inhibiting utilization of demand for formal financial products from farmers and seed sector agribusinesses.
- Under-utilization and lack of adequate risk-sharing or risk-mitigation mechanisms prevent providers from testing or growing agricultural loan products, which are considered by the providers as riskier and more expensive to manage.
- Lack of data analysis and digital capabilities are inhibiting financial service providers from properly designing loan products, reducing operational costs, and serving new groups of farmers.
- Lack of sex-disaggregated and age-disaggregated data at the portfolio level and in published FSP records significantly limits the ability to assess gender and youth ratios in finance availability to under-represented clients seeking to participate in the seed sector.

Mobilizing more capital for the agricultural sector, and specifically for the seed sector, will require solutions that systemically address these bottlenecks. Key recommendations include:

- **Engage diverse financial service providers to meet disparate capital needs throughout the value chain.** Smaller microfinance institutions already operating in rural regions can provide small loans to the bottom segments of the market and larger banks can provide larger loans and capital to SMEs and bigger farmers. This segmentation becomes even more important as financing extends down to traditionally underserved clients in the seed-sector, like women and youth.
- **Engage financial service providers having the most robust and accurate data.** When vetting potential partners, assess the quality of data the financial service providers currently collect as a key criterion (alongside leadership capacity and quality, historical operations, alignment with S34D activity goals, et cetera). The quality of data will be essential in informing effective product design, particularly as granular data is needed to analyze differences in access between seed and client segments.
- **Provide technical assistance to financial service providers to digitize processes and improve data analysis capabilities.** Conduct a needs assessment with individual financial service providers to help them identify needs and tools to improve operational efficiencies in reaching and serving rural clients sustainably. These may include identifying third party services and/or building the capacities of internal staff to support digitization and data analysis efforts. Digitization and process improvements (from age and sex disaggregation, digital farmer assessments, to loan applications and disbursements, to crop monitoring) will be key in supporting viable agricultural loan portfolios and managing high operational costs.
- **Provide technical assistance to financial service providers to design agricultural loan products specific for the capital needs of seed sector actors.** Collaborate with financial service providers to identify target seed sector clients (which includes assessing demand for seed products from processors and consumers and confirming value chains are viable for supporting the sustainability of financial products), conduct a financial needs assessment on targeted client group(s), and design loan products that specifically meet targeted clients' cashflow needs. This includes repayment terms structured around seed production, sales, and harvest cycles, and appropriately sized loans informed by the financial capacity of the potential client and commodity market prices. For the S34D activity, strategic segmentation of farmers and value chain actors will be essential for implementation, particularly noting variation in access for traditionally under-representing groups; matching financial service providers and their tailored credit products with the activity's targeted farmers and seed sector actors is key.
- **Connect financial service providers to risk mitigation tools.** Many institutions are interested in agricultural lending, but the perceived risks disincentivize institutions from testing

or launching new loan products for agricultural clients. The S34D team should connect financial service providers to loan guarantee facilities on the market, help advise guarantee providers on simplifying terms for claims and expediting disbursements, and/or establish its own guarantee facility for project partners. Particularly of note is the US Development Finance Corporation/Development Credit Authority Guarantee, which in many S34D countries of operation allows for immediate coverage for women and youth finance clients.

Regarding country-specific findings, Kenya is the largest market for financing the seed sector, with two of the largest financial service providers with which to mobilize deposits for extending agricultural loans to seed companies. Malawi represents the smallest market but, alongside Uganda, has the greatest potential for growth in financing for the seed sector. Uganda specifically stands out as a high-potential market, where many of the financial service providers are experiencing robust growth and strong capital adequacy ratios.[4] In total, 18 financial service providers were identified as high-potential partners for the S34D activity, which are highlighted in each country section.

Overall, this market scan of financial service providers operating in the agricultural and seed financing sector highlights the state of the market, the best placed potential partners for S34D activities, and key recommendations for S34D financing related engagements.

[4] The Capital Adequacy Ratio (CAR) is a measure of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures. The Capital Adequacy Ratio, also known as capital-to-risk weighted assets ratio (CRAR), is used to protect depositors and promote the stability and efficiency of financial systems around the world (https://www.investopedia.com/terms/c/capitaladequacyratio.asp). National regulators track a bank's CAR to ensure that it can absorb a reasonable amount of loss and complies with statutory Capital requirements. It is a measure of a bank's capital (https://en.wikipedia.org/wiki/Capital_adequacy_ratio).

BACKGROUND INFORMATION

Activity and Report Overview

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 U.S. Office of Foreign Disaster Assistance (OFDA) 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, an inventory of existing supply-side financial services was conducted to assess the availability and quality of capital for seed companies to sustainably grow their businesses. 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 service providers lending to the agricultural sector would also lend to the seed sector using similar criteria and processes for loan approvals and portfolio management.

Opportunity International conducted in-depth assessments on 38 regulated institutions across Malawi, Uganda, Kenya, and Tanzania to gain a better understanding of existing financial services available to seed companies within the countries and the potential to increase access to capital for seed companies through partnerships with select financiers interested in increasing lending to the seed sector.

On behalf of the S34D team, Opportunity International wishes to extend its deepest gratitude to all those who participated in this market 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 the S34D activity.

Method

To compile this scan, Opportunity International conducted high-level assessments on all regulated financial service providers operating in the four countries (Malawi, Uganda, Kenya, and Tanzania). In total, 185 providers were identified, and financial statements were gathered from each institution using providers' websites or other publicly available means. Financial statements were then reviewed to determine the scope of each provider's agricultural lending operations, if any. Out of the 185 providers, 38 were found to have agricultural loan products, as was determined from product-level detail of their financial statements and/or marketing information on their websites. The basis of this report utilized financial data from these 38 providers, as well as information gathered from qualitative interviews conducted with 11 of the 38 providers. (Interview invitations were extended to staff at each of the 38 providers, 11 of whom agreed to participate.)

Background for Research Approach

To compile this report, Opportunity International's Agriculture Finance (Opportunity AgFinance) team identified key information to collect and analyze from local financial service providers.

Opportunity AgFinance began in 2008 to build the capacity and skills of smallholder farmers and agribusiness entrepreneurs. It does this primarily by:

- building the capacity of local financial service providers to establish, grow, and maintain sustainable agricultural loan portfolios to expand access to capital for farmers and rural entrepreneurs, and;

- partnering with local market actors, such as processors, off-takers, and extension service providers, to strengthen market-driven connections between rural stakeholders and deliver trainings in good agricultural practices to farmers.

Through this work, Opportunity AgFinance has developed comprehensive assessments of the breadth and depth of services that both smallholder farmers and agribusiness entrepreneurs (owners of small or medium-sized [SME] enterprises) require to effectively and sustainably grow their farms and businesses and catalyze economic development in rural communities.

Opportunity AgFinance applied its experience in this sector to identify and assess the availability of a range of financial services for different seed system stakeholders throughout the value chain, including:

- **Group & individual production loans for smallholder farmers** — Production loans are offered to smallholder farmers to provide them with up-front credit to invest in inputs such as high-quality seed, fertilizer, and equipment as well as farm labor to improve the production capacity of farms. Production loan terms are structured around crop seasons to allow farmers to access capital to purchase inputs when they need them during planting season and start repayments after the harvest and sale of agricultural goods.

- **SME loans for agrodealers and commercial producers** — SME loans expand the financial capacity of agrodealers to provide more services and better inputs to smallholder farmers. With access to capital, an agro-dealer can purchase more inputs like seed, fertilizer, and crop protection in bulk, facilitating input sales to a larger concentration of farmers in rural areas, and/or expand his/her agribusiness to also serve farmers' off-taking needs. SME finance for larger scale commercial producers enables them to grow more crops and varieties, as well as to implement improved production and marketing systems.

- **SME loans for processors** — As production capacity increases among groups of smallholder farmers (increasing the supply of agricultural goods), SME loans for processors help create and sustain the market demand for agricultural goods. With access to adequate capital, processors can expand their capacity to purchase and process larger quantities of goods from farmers, strengthening the links from farm to market.

- **Asset financing or other lending facilities for larger farmers** — With capital to purchase or lease major assets like tractors or trucks, larger farmers can improve their productivity and farm revenues, creating further demand for quality seed, fertilizer, and other inputs.

Financing entire value chains, however, is a challenge for local financial service providers. The demand for capital from smallholder farmers, larger farmers, and agribusiness SMEs can exceed a single institution's agricultural portfolio capacity, which are often subject to caps to mitigate risk. Additionally, agricultural financing requires in-depth knowledge of the local agricultural markets,

stakeholders, and crop types to anticipate market pricing, availability of value-added services, and overall repayment capacity of agricultural clients.

Given this, the assessment investigated the capacity and potential of engaging several lenders within each country as part of S34D. Data gathered for this report is used for several purposes:

1. Conduct a market scan to review the supply-side state of agriculture finance markets in the corridor, focusing on the seed sector actors where possible.
2. Assess results of the market scan to identify high-potential financial service providers to engage as partners under the S34D project and conduct initial due diligence on behalf of the S34D team.
3. Provide strategic recommendations for the S34D team to effectively increase access to appropriate agricultural financial services for seed system stakeholders.

Limitations & Considerations

All analyses, data, and other findings included in this report are based off a carefully selected sample of regulated financial service providers from each market, and as such this report is not a comprehensive scan nor does it include assessments on unregulated or informal lenders, such as Village Savings and Loans Associations, start-ups, or agribusinesses or other value chain entities that offer informal loans. A review of regulatory conditions within each market was also outside the scope of this assessment but should be considered in further analyses and with any finance-based interventions. The majority of financial service provider data and financial reports is not crop, age or sex-disaggregated, and the analysis for this report was limited by the availability of comparable data. Graphs and analyses presented here are based on available data from the 38 regulated financial service providers surveyed. Not all financial service providers are included in each graph or analysis as certain data are not available for all institutions.

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 as such were excluded from this analysis. Many of those that do have such activities offer 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.

CORRIDOR (REGIONAL) FINDINGS

Overview

Throughout the countries included in this corridor assessment (Malawi, Uganda, Kenya, and Tanzania), regulated financial service providers generally expressed interest in expanding their range of financial products for seed sector stakeholders, but currently have limited agricultural financial products and expertise.

This assessment investigated the capacity of the agricultural financial services sector and potential of engaging several lenders within each country as part of S34D. Data gathered for this report is being used for several purposes:

1. **Conduct a supply-side market scan to review the state of agriculture finance markets in the corridor, focusing on the seed sector actors where possible.** This included the identification and availability of different agricultural financial products, and highlighted the need for new products or expansion of financial products. Most often, the institutions serving smallholder farmers are smaller and provide more niche services; few institutions offer a range of loan products for both farmers and agricultural SMEs. Assessments were conducted on financial service providers in Malawi, Uganda, Kenya, and Tanzania to better understand what financing is currently available for the agricultural sector (and could be leveraged to extend financing to the seed sector) on a local and regional basis. The report also discusses insights into how regulatory policy influences the availability of finance and the type and terms of financial products.

2. **Assess results of the market scan to identify high-potential financial service providers to engage as partners under the S34D project and conduct initial due diligence on behalf of the S34D team.** Several financial service providers within each country were identified as high-potential partners with both the interest and capacity to support S34D activities, totaling 18 institutions across the corridor.

3. **Provide strategic recommendations for the S34D team to effectively increase access to appropriate agricultural financial services for seed system stakeholders.** Recommendations included in this report include both corridor-wide recommendations, and country-specific recommendations to support increased investment in the seed sector.

Summary of Corridor Recommendations

Overall, effectively expanding access to agricultural financial services within the seed sector will require dynamic partnerships and strategies that tackle the key bottlenecks within each country. Country-specific bottlenecks and recommendations will be addressed in each of the country sections; however, several themes emerged across all countries that informed key corridor-wide recommendations:

1. **Engage diverse partners to facilitate access to finance for full value chains.** Most often, the institutions serving smallholder farmers are smaller and provide more niche services; few institutions offer a range of loan products for both farmers and agricultural SMEs. Engaging microfinance institutions to provide small loans to the bottom segments of the market and larger banks to provide larger loans and capital to seed sector SMEs and bigger farmers will help serve the different capital needs throughout value chains. Aiding in the development of crop, age, and sex-disaggregated financing data will be critical in ensuring appropriate matching of supply and demand side needs.

2. **Leverage existing risk-mitigation and digital tools to reduce costs and mitigate risks.** Many institutions are interested in agricultural lending, but the perceived risks and costs

disincentivize institutions from testing or launching new loan products for agricultural clients. Many markets already have loan guarantees or other risk mitigation tools available to financial service providers, but existing offering can be convoluted, and providers may need technical support to access these local resources. Efficiency, too, will continue to be one of the biggest challenges for financial service providers serving rural regions. Connecting providers with experts and tools to support digitization and process improvements (from digital farmer-assessments for credit scoring, to loan applications and disbursements, to crop monitoring) will be key in supporting viable agricultural loan portfolios and managing high operational costs

3. **Partner with organizations having robust data to design new loan products for the seed sector.** Overall, the assessment demonstrated significant gaps exist in terms of agricultural financial services that are currently available on the market as well as robust data segmenting the availability of these services to different client groups. New products should be designed and tailored for seed companies and other S34D target client segments in partnership with financial service providers that have the most robust and accurate data to inform effective product design.

Corridor Market Size & Growth Potential

The total estimated value of deposits for the 38 institutions included in the survey is $18.4 billion, with total active gross loan portfolios amounting to $15.2 billion (see Figures 1 and 2).

Kenya is by far the largest country-level market — the value of deposits and value of loan portfolios in Kenya make up more than half of the total values throughout the corridor. However, growth among regulated financial service providers is likely to remain low, given the interest rate cap mandated by the Central Bank.[5]

Malawi represents the smallest market in terms of both deposits and lending; however, Malawi's growth trajectory indicates it has significant potential for growth among key financial service providers.

Uganda, too, has significant potential for growth. The relative stability of the financial services sector is indicated by its high median capital adequacy ratio and growth in deposits, and the recent introduction of regulations around agent banking and digital financial services is facilitating positive growth in rural regions.

Tanzania represented the second-largest market in the corridor after Kenya, but limited availability of data may have skewed the results. Overall, Tanzania is likely a strong market for further growth.

Within each market,[6] most financial service providers are allocating a small fraction (<10%) of their total portfolios to agricultural loans. If all the surveyed institutions allocated between 10-20% of their existing portfolios (typical lending caps mandated by some regulatory agencies and bank boards), between $1.5-$3 billion could be deployed by the surveyed financial service providers within the agricultural sector in the corridor. Financial service providers within the corridor with success in agricultural lending typically allocate 10% or more of their portfolio to agricultural lending, which can help encourage peers to do the same and unlock more capital for the seed sector.

[5] The Kenyan Parliament repealed the interest rate cap in November 2019, following the completion of the data collection portion of this survey; the impact of this decision will likely support increased disbursements by financial service providers. Additional analysis is recommended to investigate how this policy shift may affect agricultural lending.

[6] Apart from Uganda. Six of the 11 financial service providers surveyed in Uganda were allocating 15% or more of their portfolios to agricultural loans.

Figure 1: Total Value of Deposits, by Country

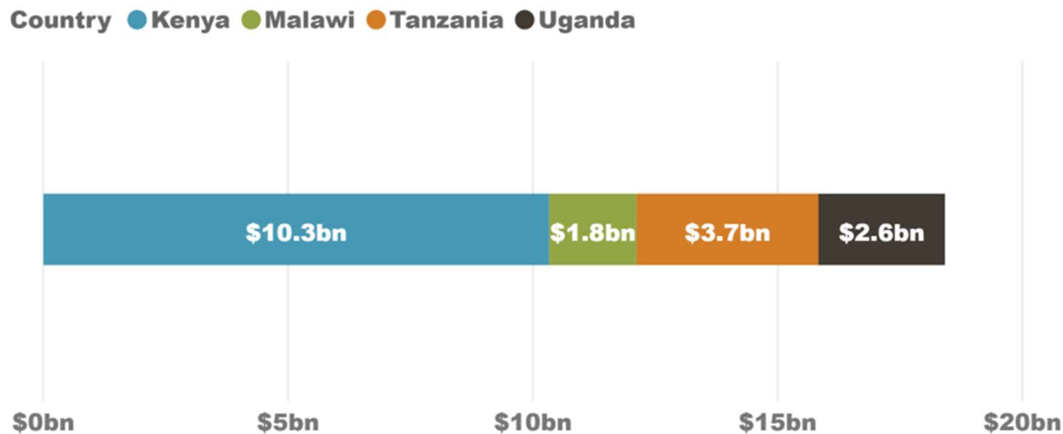


Figure 2: Total Value of Loan Portfolios, by Country

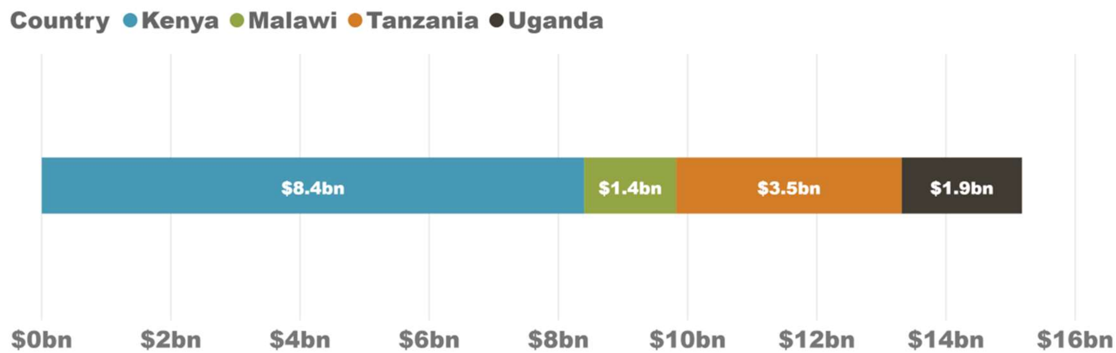


Figure 3 below illustrates the median lending and deposit growth for the 38 financial service providers, which are aggregated for each country, as well as the median capital adequacy ratios, to offer an illustrative comparison of the overall health and growth potential by country. Of all the countries in the corridor, Malawi demonstrates the largest growth trends, but given that the median capital adequacy in the country is just above the regulatory minimum of 15%, further growth may be stymied. Uganda, however, has the strongest median capital adequacy ratio among the corridor countries as well as strong growth trends — indicating significant potential for sizeable growth. Kenya's moderate capital adequacy ratio is encouraging, but the low overall growth is indicative of broader market issues, such as the interest rate cap, that is limiting its potential.

Figure 3: Median Lending and Deposit Portfolio Growth over 1 Year and Current Median Capital Adequacy, by Country

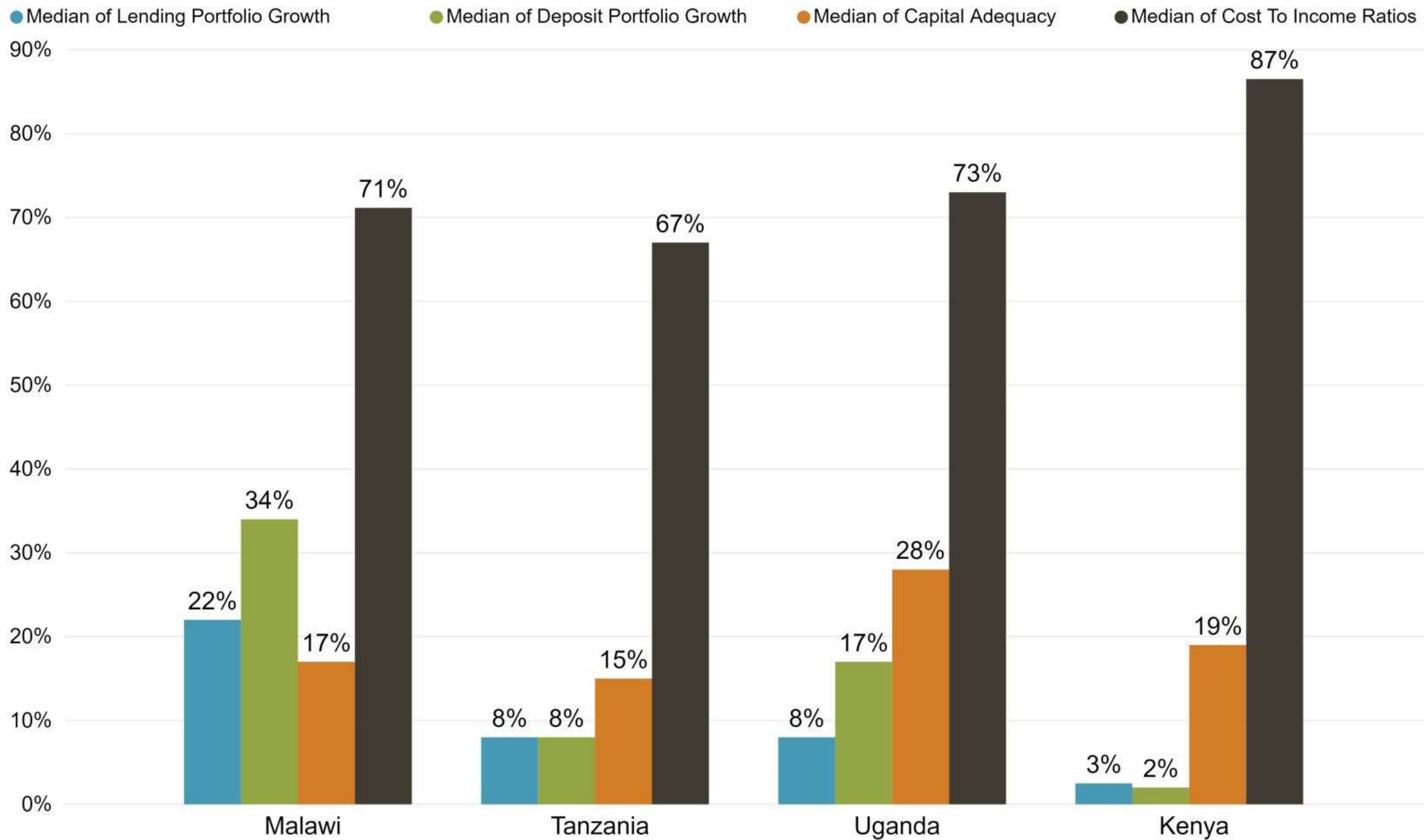
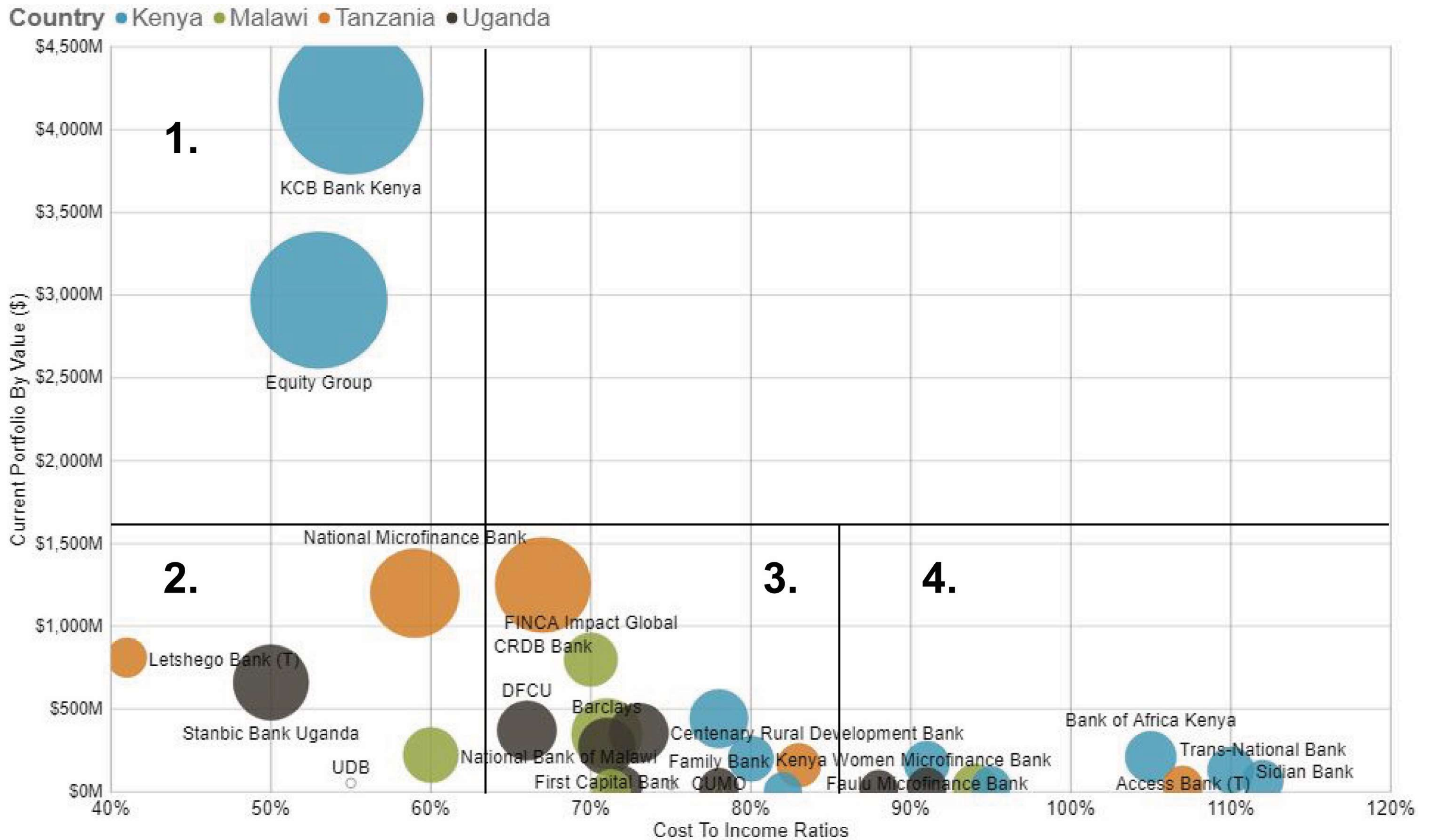


Figure 4: Landscape of Financial Service Providers throughout the Corridor

All of the financial service providers included in the corridor assessment are plotted below by current portfolio value (in USD) and cost-to-income ratio. The size of each data point is the total value of deposits at each institution. The corridor financial services market is segmented into four distinct quadrants, as discussed below.



Financial Services Market Landscape

Figure 4 demonstrates the full competitive landscape of all the agricultural financial service providers surveyed throughout the corridor, which are charted according to providers' portfolio size and cost-to-income ratios. The four quadrants offer a structured framework through which to better understand the various competitor groups for financial service providers operating in the corridor markets. Each quadrant has financial service providers with similarly sized portfolios and similar cost-to-income ratios, which result in similar operational constraints, and similarly priced products.

A provider in Quadrant 3, for example, has a limited range in which it can price its loan products, and which products it can offer. It borrows capital in proportion to its overall portfolio size, which means its costs of finance are on par with its similarly sized competitors. Its high cost-to-income ratio, too, constrains a provider's ability to invest in innovations that require up-front investment for longer-term operational efficiencies – and without investments in areas like digitization and automation of processes, providers struggle to achieve economies of scale. This results in slim parameters for providers to price their products: loan product value cannot exceed the provider's risk appetite given its portfolio size, and the price of the product cannot exceed those of its competitors without losing its customer base. The product types themselves also target similar client segments – usually those with lowest risk and those who are easiest to serve, like established urban business owners. 'Tried and true' lending products are essential for Quadrant 3 providers to maintain their operations. Achieving "cheaper" loan products than their competitors is simply not feasible given their already-thin margins, and offering "different" loan products, specifically those targeted for currently underserved client segments like seed sector actors, would require significant investment in market research, product design, marketing, and digitization – from operational funding that these providers often do not have on hand.

Overall, there is clearly a diverse set of lenders throughout the corridor with a wide range of operational efficiencies, portfolio sizes, and target client segments. Given the diversity of operations, there is also a wide range of needs and motivations, especially regarding expanding their agricultural lending operations, which are discussed in further detail below. Figure 4 also highlights the similarities among financial service providers, especially in Quadrant 3 where providers face the strongest competitions, and therefore would likely be interested in expanding agricultural lending operations to gain market advantages.

Most financial service providers lending in the corridor are smaller institutions with gross loan portfolios valued at less than $500 million, as is illustrated in Figure 4. Only four of the 38 financial service providers surveyed manage portfolios larger than $1 billion (KCB Bank Kenya, Equity Bank, NMB Bank, and FINCA), which is indicative of the structural challenges in growing institutions that can serve clients at scale in the corridor.[7]

Further details are provided below and in Figure 5 on the various characteristics, challenges, and market needs of financial service providers within each quadrant:

- **Quadrant 1 represents the largest financial service providers with the lowest cost-to-income ratios.**

  In general, these institutions are likely to have strong operations, and all four in this quadrant focus on serving clients in higher-value urban markets, achieving economies of scale. Some providers expressed willingness to explore small agriculture finance pilots for seed sector actors, but it did not represent their core business, nor have they experienced scalable interventions that would be sustainable after donor funds expire. For these institutions, expanding into the seed sector represents an advantageous market opportunity. With more

[7] Investigating ownership and funding structures of financial service providers was outside the scope of this limited analysis.

advanced systems, low cost-to-income ratios, and strong, diverse portfolios, these institutions are more resilient in terms of testing new loan products and could leverage their systems and expertise to enter new markets. Most likely, these institutions will be more interested in financing larger farmers and agribusiness entrepreneurs to achieve higher value returns. One key consideration for partnering with financial service providers in Quadrant 1 is their need for expertise and technical assistance in adapting their systems for peri-urban or more rural customers rather than their typical urban market operations.

- **Quadrant 2 represents operationally efficient financial service providers with strong capacity for growth.**

  With low cost-to-income ratios, the financial service providers that fall within Quadrant 2 have a distinct competitive advantage over their similarly-sized competitors in Quadrants 3 and 4. More efficient operations will allow these institutions more bandwidth in growing or launching innovative new agricultural loan products and testing risk reduction mechanisms. However, it may be more challenging to engage financial service providers in Quadrant 2, given they have fewer competitors and more comfortable operational margins, and would therefore be less incentivized to test new or riskier products. If engaged as partners, a mix of financial products for both agribusiness entrepreneurs and smallholder farmers will likely be possible with these institutions, which have both the operational capacity to serve lower market segments as well as capacity within their loan portfolios to serve the financial needs of larger agribusiness entrepreneurs.

- **Quadrant 3 represents financial service providers with high cost-to-income ratios and smaller portfolio sizes—the most competitive segment.**

  Most financial service providers surveyed fall within Quadrant 3 and largely operate with cost-to-income ratios between 65-85% and gross loan portfolios less than $1 billion. Most likely, given the higher cost-to-income ratios, these institutions are the ones largely reaching and serving smallholder farmers. Though their profitability is not as strong as those in Quadrants 1 and 2, most of the agricultural products identified in this analysis were from the institutions within Quadrant 3. This allowed for more detailed analysis of agriculture financing activities within this quadrant, which indicated a stronger market expertise in smallholder finance than institutions in other quadrants. Given the density in this quadrant, many of these financial service providers need opportunities to gain a competitive advantage. Most of these institutions expressed strong interest in expanding their lending operations to seed companies and smallholder farmers interested in financing for improved seed varieties, contingent on their ability to maintain reasonable cost-to-income ratios and manage portfolio at risk. The key drivers of costs include operational expenses and the cost of capital, which are both very similar among this quadrant's cohorts, as discussed at the beginning of this section, and the key driver of income is from repayment on loans.

- **Quadrant 4 represents the least healthy financial service providers, and most would likely require operational support or subsidies.**

  With the highest cost-to-income ratios and the smallest portfolios, the financial service providers in Quadrant 4 are operating with slim margins and charging the highest interest rates and are unlikely to sustainably expand lending operations without additional support. Some of these institutions, however, may be temporarily experiencing high cost-to-income ratios as they expand. If these institutions have stable funding sources to sustain them through expansion (which could be assessed through further due diligence), they could potentially be

viable partners, especially if the higher costs are incurred in reaching smaller clients that other financial service providers are unable to reach.

Figure 5: Strengths, Needs, and Opportunities for Financial Service Providers, by Quadrant

	Quadrant 1	Quadrant 2	Quadrant 3	Quadrant 4
Strengths	• Largest deposit bases to mobilize lending • Largest loan portfolios • Lowest cost-to-income ratio • Most advanced in terms of systems and processes	• Lowest cost-to-income ratios • Low competition • Strong bandwidth for portfolio growth and new product testing	• Some niche/specialized lending operations • Experience with smallholder finance • Broader rural outreach	• Some start-ups with high growth potential
Needs & Motivations	• Diversification of customer base (reaching new client segments) • Technical assistance for adapting systems for rural lending	• Innovation and market advantages • Portfolio expansion/gaining larger market share • Preservation of healthy margins	• New products to gain competitive advantages • Cost and risk reduction mechanisms to maintain operational sustainability	• Cost reduction mechanisms (digitization) • Risk mitigation mechanisms • Subsidies or temporary operational support
Proposed Sector Focus for S34D Activity	• SME loans for larger agrodealers and processors • Asset financing or other lending facilities for larger farmers	• SME loans for larger agrodealers and processors • Asset financing or other lending facilities for larger farmers • Group & Individual production loans for smallholder farmers	• Group & individual production loans for smallholder farmers • SME loans for smaller agrodealers and processors	• Group & individual production loans for smallholder farmers • Smaller, niche SME loans

Regional Product Landscape

Existing agricultural loan products[8] currently cover a range of financial needs in the corridor. Most loan products fall within the $100-$1,000 range and target the needs of smallholder farmers, but several institutions have developed specific SME loan products (valued around $10,000) for agribusiness entrepreneurs. Many financial products are focused on serving different agricultural activities and value chains; however, no seed sector-specific financial products were found, which are niche products within the already niche product line of agricultural lending. Most providers' products are designed for broader agricultural purposes, like production loans, equipment loans, or working capital loans for agribusinesses, and none were found to be tailored specifically for women. This indicates a specific opportunity for S34D to support the development and deployment of seed-specific

[8] Analyses are based on a sampling of agricultural loan products and available data.

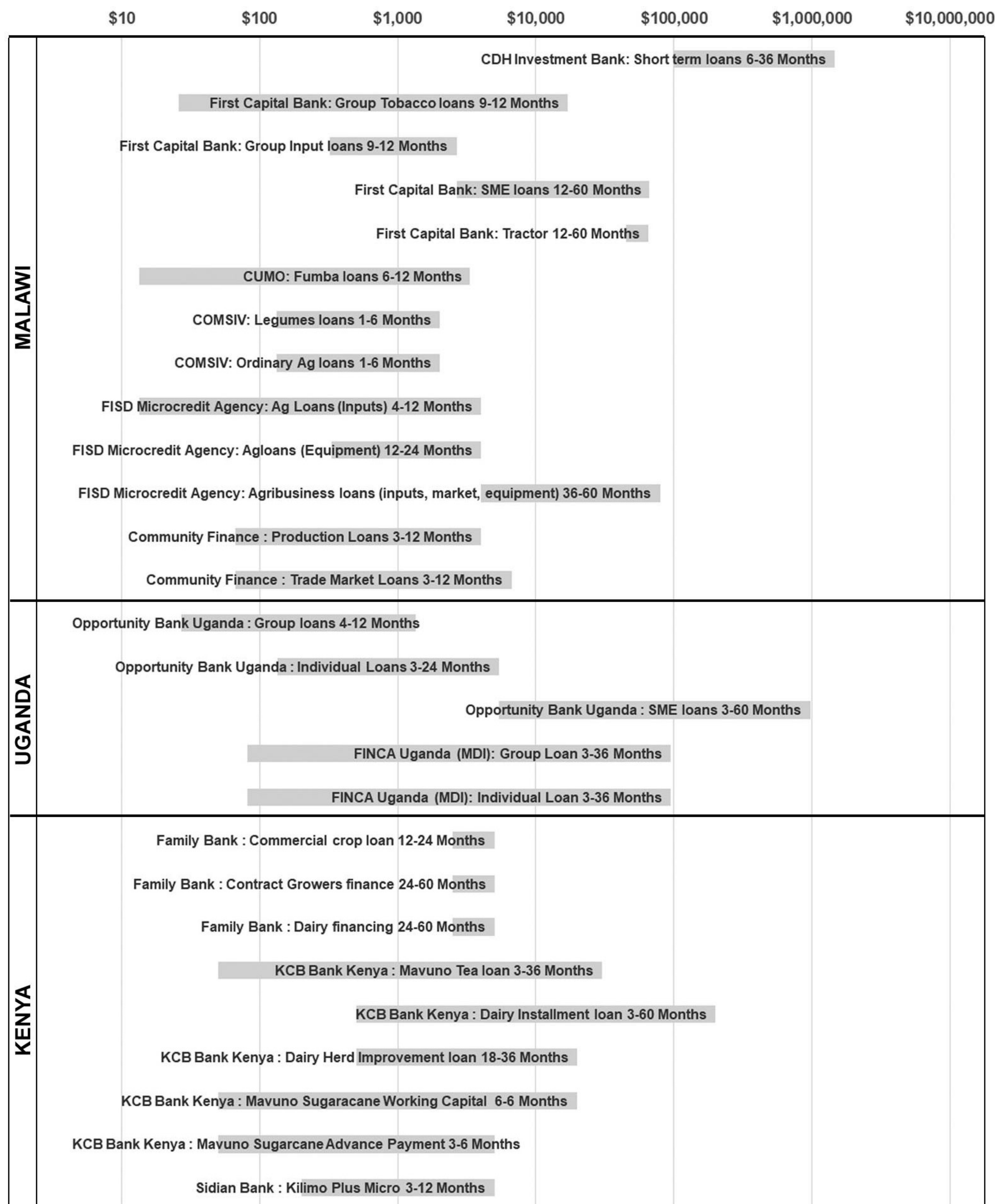
financing products, especially for women, who receive just 7% of agricultural investment.[9] Most likely, seed producers and seed value chain SMEs currently utilize financial products that align closest with their agricultural activity (i.e. seed producers may access production loans, and SMEs may access agribusiness loans).[10]

Though the range of existing products is broad on a regional level, gaps exist within each country, which are discussed in further detail in the individual country sections of the report.

[9] FAO, 2013. http://www.fao.org/resources/infographics/infographics-details/en/c/180754/

[10] A demand-side analysis for seed sector actors was beyond the scope of this report. See A study titled, "Seed and Post-Harvest Technology Provider Financial Bottleneck Analysis" was conducted concurrently with this study and is available from S34D upon request.

Figure 6: Sample of Existing Agricultural Financial Products throughout the Corridor[11]



[11] No product-level data was available from Tanzania

MALAWI

Overview of the Agriculture Sector in Malawi

In Malawi, agriculture accounts for 26% of the country's gross domestic product — a disproportionately small contribution given that 83% of the population lives in rural regions and whose primary economic activities are concentrated within the agricultural sector.[12]

For financial service providers, several factors continue to affect risk and willingness to lend. Firstly, natural disasters and extreme weather continue to negatively impact agricultural output in Malawi, where most recently severe flooding occurred in the southern region in 2019. Secondly, despite relative peace in the country over the last few years, recent civil unrest and political protests may limit immediate bank lending. Access to electricity will also continue to inhibit growth — the World Bank estimates only 13% of the population has consistent access to electricity, limiting the use of technology (with the exception of basic mobile phones).[13] Technology usage is also concentrated to men, as women are likely to have less access to cell phones, and are typically perceived as less digitally literate. Additionally, the Reserve Bank of Malawi is among the more conservative banks in terms of policies to hedge against lending risk, which is likely to encourage smaller agricultural portfolio sizes at financial service providers.

The main crops produced in Malawi for both cash and consumption include cassava, potatoes, and maize. Soya, legumes, sugar, tea, and tobacco comprise the main commercial exports. Tobacco alone accounts for an estimated 60% of Malawi's total exports, which will be increasingly problematic for Malawians and the Malawian economy given the declining global demand for tobacco products. Major development projects are currently underway in Malawi to help farmers effectively diversify their production and incomes in the coming years,[14] including USAID supported efforts such as the Malawi Agricultural Diversification Activity (AgDiv) that partners with many market actors and initiatives, including Opportunity International.

Recommendations: Malawi

1. **Engage rural extension service providers and/or cooperatives to provide last-mile financing to hard-to-reach smallholder farmers requiring smaller loans.** With technical assistance, financial service providers like First Capital Bank (which is already using farmer support agents to gather data on clients prior to lending) can develop loan products and deputize rural extension service providers to offer small, short-term loans to farmers. Gender inclusion strategies will be paramount in engaging and educating rural extension service providers to ensure women farmers can access services on an equal basis to men.

2. **Collect and leverage digital farmer profiles to connect farmers to SMEs and financial service providers.** A coordinated effort to collect data on farmers' crops, anticipated yields, and location can improve efficiencies for service providers, reducing costs in reaching larger groups of farmers with loans to purchase quality inputs like improved seed. Sex and age-disaggregated data on households will also be helpful in targeting interventions to traditionally under-financed client segments. For seed producers, digital farmer profiles are essential for gathering data to organize and streamline demand for seed varieties.

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[12] World Bank, 2017. *Agriculture Forestry, and Fishing, value added (% GDP) - Malawi*. World Development Indicators Database.

[13] World Bank, 2017. *Access to Electricity (% of population) - Malawi*. World Development Indicators Database.

[14] FAO, 2015. Country Fact Sheet: Malawi

3. **Provide access to risk reduction mechanisms.** Interventions should focus on solutions that help financial service providers reduce their overall lending risk to the agricultural sector, such as loan guarantees, including guarantees that target youth and women-owned businesses, remote monitoring tools and sensors, gender-sensitive staff trainings, and digital semi-automated credit scoring.

4. **Consider CDH Bank, First Capital Bank, and NBS Bank for partnership.** After reviewing available financial data from financial service providers in Malawi, this assessment recommends conducting further due diligence with these three providers as potential partners specifically for the S34D activity. All three institutions demonstrate the potential for growth and expressed interest in extending financing to various types of stakeholders throughout the seed sector. Due diligence should also include assessing each provider's ability to collect sex and age-disaggregated data and integrate gender and age-inclusive policies that promote financial inclusion across the breath of seed sector stakeholders.

Capacity of Financial Service Providers in Malawi

In Malawi, First Capital Bank[15] is likely the best positioned to expand lending to the seed sector. First Capital Bank's total deposit base is one of the largest in the country with which to leverage for portfolio expansion and has maintained a reasonable cost-to-income ratio (see Figure 7). In 2017, First Capital Bank purchased Opportunity International Bank of Malawi, which at the time was the leading lender of agricultural financial services in the country. First Capital Bank has largely maintained the agricultural portfolio, which is supported by a strong balance sheet and the bank's steady growth throughout the region.

NBS Bank, though sizable, will need to significantly reduce its cost-to-income ratio if it were to expand its lending to the agricultural sector. NBS Bank historically lent to the tobacco sector but stopped its agricultural lending after incurring heavy portfolio losses. NBS Bank is now interested in restarting its agricultural lending operations and recently set up a new business unit to establish lending for mechanization, leasing, SMEs, and specific smallholder farmer projects. However, NBS recognizes its need for technical assistance support in designing sustainable loan products and processes before moving forward.

CDH Investment Bank is a relatively small bank compared to its competitors in terms of overall portfolio size and value of deposits. However, as a newer bank, CDH Bank has potential for continued growth. CDH Bank specifically expressed interest in expanding lending for SMEs in the agricultural sector, likely for agribusinesses in urban and peri-urban regions given the limited geographic footprint of CDH Bank.

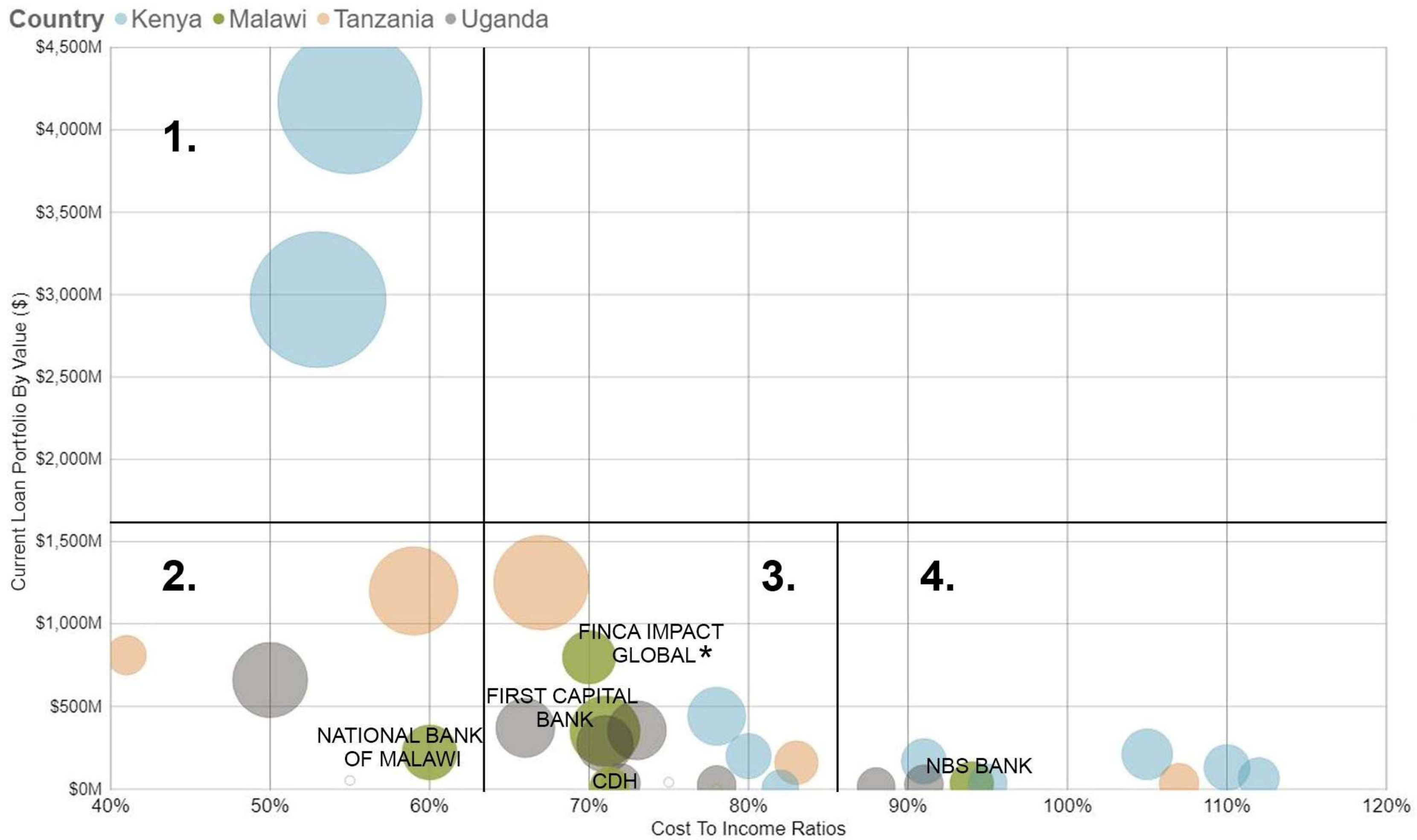
National Bank of Malawi does lend to the agricultural sector but is focused largely on tobacco. The sizable value of deposits and low cost-to-income ratio indicate that National Bank of Malawi does have some capacity to expand its agricultural portfolio. Given its experience in the agricultural sector, National Bank of Malawi could be a valuable partner if they can be incentivized to diversify their current agricultural product line from the profitable (albeit declining production market share) tobacco value chain to financing crops in other vale chains.

FINCA's lending to the agricultural sector in Malawi is limited given the national institutional leadership's perception that agricultural lending is riskier than its other product lines in Malawi. (Below in Figure 7, the data for FINCA include its global portfolio, which was the only data available. FINCA's portfolio in Malawi is much smaller.)

[15] Note Opportunity International is actively engaged with First Capital Bank, which is an implementing partner for grant programs operated and managed by Opportunity International.

Figure 7: Landscape of Malawian Financial Service Providers

Financial service providers below are shown by current loan portfolio value (in USD) and cost-to-income ratio. The size of each data point is the total value of deposits at each institution.



*Size depicted represents global loan portfolio

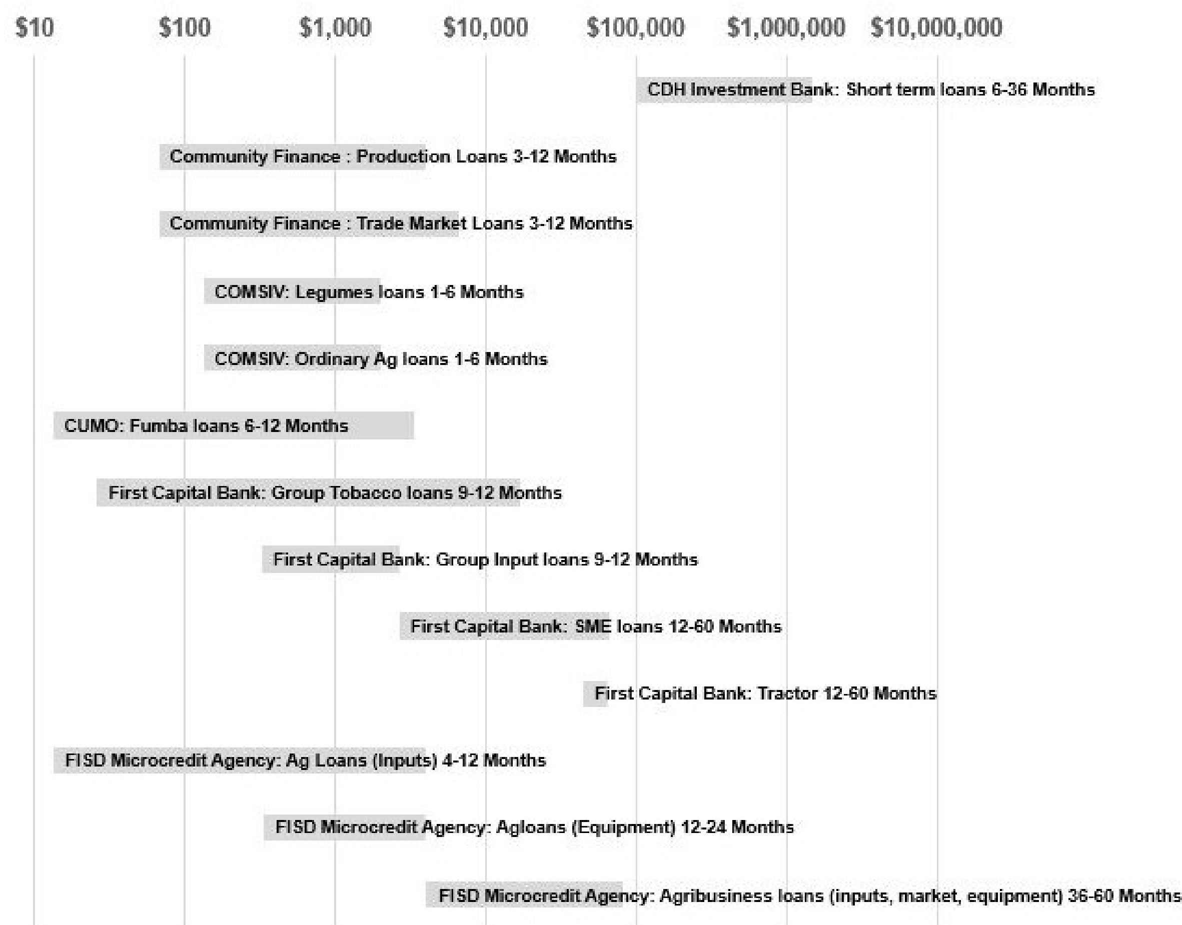
Availability of Agricultural Financial Services in Malawi

In Malawi, a mix of microfinance institutions, cooperatives, extension service providers, and banks offer a range of formal and informal agricultural financial services. Figure 8 illustrates the agricultural financial products offered by regulated financial service providers, based on available data.

Currently, the greatest variety of financial products available from financial service providers are production loans ($1,000 or less) for smallholder farmers. Fewer financial service providers offer SME loans for agribusinesses, likely attributed to the perceived riskiness of the sector, limited client access to collateral, and lack of available capital for larger agricultural loans. As Figure 8 indicates, most lending is also shorter term (up to 12 months), which is associated with the smaller overall loan sizes.

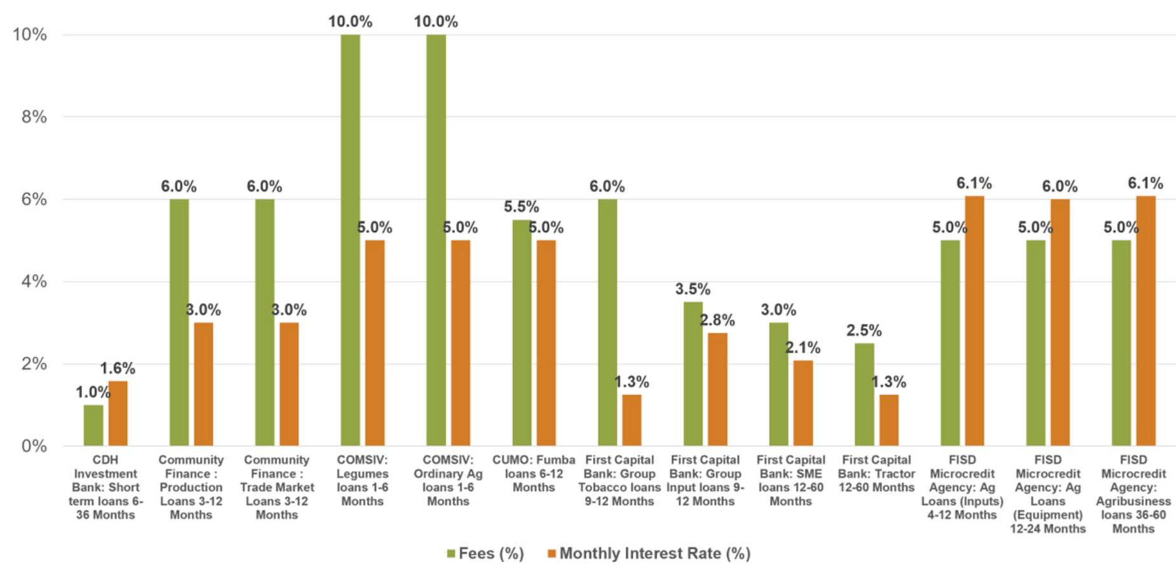
Among all the financial service providers, First Capital Bank is the provider with the widest range of agricultural financial services available, which include group loans for smallholder farmers, SME loans for agribusiness entrepreneurs and larger farmers, as well as SME mechanization loans. FISD Microcredit Agency also serves both smallholder farmers and agribusinesses with its loan product offerings. Other financial service providers tend to specialize its agricultural lending to a specific segment — i.e. loan products for either farmers or SMEs.

Figure 8: Sample of Existing Agricultural Financial Products in Malawi



In terms of the costs of finance, fees and interest rates do vary according to the type of loan product. Unsurprisingly, small loan values are associated with larger fees. For example, COMSIV loans have the highest fees and represent some of the smallest loan amounts (around USD$100-$1,000). With interest rates, the largest variations are between loans made in USD and non-USD loans largely due to local currency inflation.

Figure 9: Sample Malawi Fees and Interest Rates, by Loan Type and Provider



Overall Financial Health of Financial Service Providers in Malawi

Figure 10 (below) illustrates the one-year growth trends with each financial institution and capital adequacy ratios, which the latter should be maintained at a 15% minimum for Tier 1 banks. As illustrated, First Capital Bank experienced significantly more growth compared to its competitors. Though the growth may be partly attributed to its recent acquisitions, First Capital Bank does show healthy capital adequacy and capacity to grow.

CDH Investment Bank is also well-capitalized and experienced incremental growth. Though the overall loan portfolio is still comparatively small, the health of the institution positions it well to be a partner for specific, niche lending to SMEs in the agricultural sector. National Bank of Malawi, too, is well capitalized but its growth in lending is outpacing growth in deposits, which may become an issue if lending activities start eroding the institution's capital reserves. No data were available for year over year growth for NBS Bank, but reserves indicate that capital adequacy is at the regulatory minimum of 15%. (Given that microfinance institutions are not required to publish financials, no year on year data were available for COMSIV or CUMO.)

Figure 10 also demonstrates the strength of First Capital Bank compared to its competitors, given its high portfolio growth year over year and moderate cost-to-income ratio. However, this may also be skewed from the recent acquisitions. In addition to First Capital Bank, CDH Investment Bank also demonstrated robust portfolio growth while maintaining a moderate cost-to-income ratio. With both First Capital Bank and CDH Bank, risk reduction mechanisms could be important components to help incentivize increased lending to the agricultural sector given that they are operating near the regulatory minimum capital adequacy ratio in Malawi and will not have much capacity for risk.

Figure 10: Average Portfolio Growth over 1 Year and Capital Adequacy, Malawi

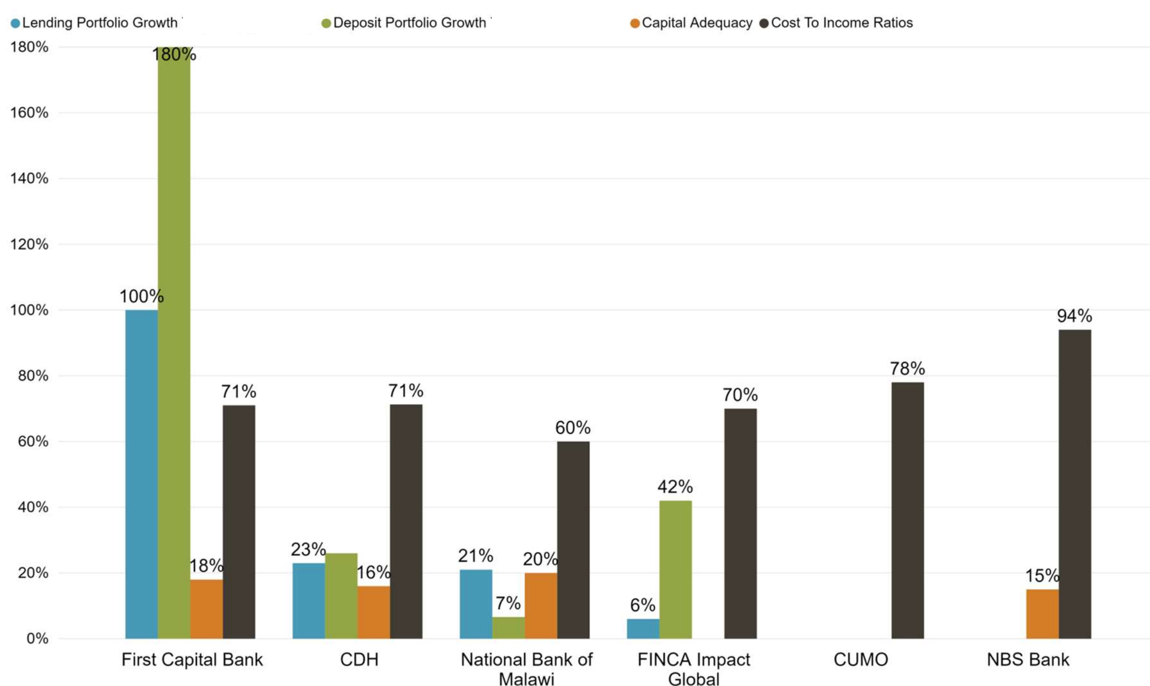


Figure 10 demonstrates portfolio growth and deposit growth in relation to providers' capital adequacy. In general, higher capital adequacy combined with high growth in lending and deposits is an indication of the financial health of the institution.

National Bank of Malawi has the lowest cost-to-income ratio, which represents a strong foundation for further expansion, if capital reserves allow. Though National Bank of Malawi does have the highest capital adequacy ratio at 20%, it is still relatively low compared Ugandan institutions. FINCA's low portfolio growth, on the other hand, likely indicates it would require more financial resources and support than other institutions in Malawi to support agricultural lending activities under S34D. NBS Bank, along with CUMO, would require significant cost reduction mechanisms to reduce cost-to-income ratios according to each countries' Central Bank recommendations in order to sustainably manage an agricultural loan portfolio.

Summary

Overall, Malawi is a relatively small market in the corridor for agriculture finance (total gross loan portfolio value in Malawi is $1.4 billion out of the total $15.3 billion portfolio value of the FSPs included in this survey). However, the mix of agricultural financial services offered by banks and microfinance institutions has created an environment where no one financial institution has cornered the agriculture finance market. Interviews suggest that given the right risk reduction incentives, several financial service providers (namely First Capital Bank for general agriculture lending and CDH Investment Bank for SME lending) are well-positioned to expand lending to the seed sector, which will be increasingly important as global demand for tobacco, the country's main export crop, diminishes.

Currently, the economic outlook for Malawi remains unclear. Despite recent turmoil, the relatively stable political environment helps protect against volatility in agricultural outputs, but the limited financial and operational capacity of smallholder farmers and agribusiness SMEs like agrodealers, off-takers, and processors will continue to inhibit growth throughout the agricultural sector. Interventions aimed at increasing the availability of agricultural financial services will need to consider ways in which to mitigate risk without significant costs to the financial institution, especially given the Reserve Bank of Malawi's more conservative regulations[16] around risk.

[16] The Reserve Bank of Malawi has fully adopted and adheres to all Basel III regulations, as opposed to using Basel regulations as guidelines, which is more common among other Central Banks in the corridor countries.

UGANDA

Overview of the Agricultural Sector in Uganda

In Uganda, the agricultural sector accounts for 24% of the country's gross domestic product. Similar to most countries in sub-Saharan Africa, smallholder farming is the most common economic activity for rural households.[17] Interestingly, the rural population is steadily declining (however, it still remains at more than 75% of the population), which contrasts the overall population growth in the country. Uganda's population is one of the youngest and fastest growing in the world, with nearly half of the total population under the age of 15.[18] For the agriculture sector in particular, the increasing availability of human capital can help fill gaps within rural value chains, such as the need for more agribusiness SMEs to connect farmers to markets and agricultural services. The agricultural sector, specifically agribusinesses, will also help fill the need for viable employment for youth as more come of age and are unable to find employment in increasingly saturated urban markets.

For financial service providers, low agricultural productivity and the high costs of serving rural clients are key factors affecting willingness to lend. The availability of diverse agricultural financial products is relatively low in Uganda, but among private sector lending, agriculture has seen the strongest growth in in recent years according to the Bank of Uganda (see Annex 6).

In general, the economic climate in Uganda is increasingly favorable for expanding agricultural lending, and by extension, lending for seed sector actors. Several financial service providers, as discussed in the following pages, have strong financial foundations to launch or grow agricultural loan portfolios, particularly for SMEs. The imminent development of an oil refinery and the oil export pipeline is also driving significant investment in the western region of Uganda, which will likely result in peripheral economic benefits for other industries, including agriculture, in the same region. Additionally, the Central Bank recently approved the usage of digital signatures and instated regulations for agency banking networks, which is working to encourage greater digitization and rural investment. However, several factors are restricting growth within agricultural lending, including the depreciation of the Ugandan shilling and recent political unrest.

The main agricultural goods produced in Uganda are plantains, cassava, sugar, and local meat (mostly beef), with coffee, sugar, and tea comprising the highest value commercial exports.[19] Malnutrition is a major issue throughout Uganda, which has increased the government's focus on infrastructure development (facilitating market access and linkages) and diversifying agricultural production to support nutrient-rich value chains such as livestock (beef, dairy cattle, and poultry), rice, and horticulture.

Recommendations: Uganda

1. **Engage a diversity of financial service providers to serve the financial needs of entire value chains.** Based on findings from the market assessment, larger institutions like Stanbic Bank, DFCU, and UDB are well-positioned to increase lending for larger agribusinesses, like seed producers and distributors, while smaller institutions with rural footprints, like Opportunity Bank, FINCA, and BRAC, are well-positioned to serve the financial needs of male and female farmers in purchasing improved seed and other inputs.

2. **Focus on testing innovative, digitally-enabled solutions to reduce the costs of reaching and serving rural clients.** Digital solutions, such as digital loan originations, will be especially advantageous in this market given the new regulatory guidelines. Additionally, innovative

[17] World Bank, 2018. *Agriculture Forestry, and Fishing, value added (% GDP) - Uganda*. World Development Indicators Database.
[18] World Bank, 2018. *Rural Population (% of total population) - Uganda*. World Development Indicators Database.
[19] FAO, 2015. Country Fact Sheet: Uganda

partnerships, such as with extension service providers and/or NGOs to gather sex and age-disaggregated farmer data on behalf of financial service providers and value chain stakeholders, will help improve market intelligence, predictability, and stability, as well as inclusivity of lending portfolios. For seed producers, the data these types of partners can collect will be essential for understanding demand for improved seed varieties and streamlining distribution to farmer groups.

3. **Design specific lending products for seed sector.** Tailored loan products, combined with risk reduction mechanisms like loan guarantees, can help accelerate lending to seed companies at minimal risk for financial service providers.

4. **Facilitate iterative testing of agricultural loan guarantees and other risk reducing mechanisms.** Creating loan guarantee funds that directly incentivize financial service providers to lend to S34D's target market (i.e. guaranteed loans for seed companies or distributors) and testing them across different markets with different financial service providers, will help inform strategies for scale. Loan guarantee fund structures should emphasize good underwriting practices by directly engaging financial service providers as stakeholders.

Capacity of Financial Service Providers in Uganda

In Uganda, Stanbic Bank appears to hold the strongest position in terms of deposit base, overall portfolio value, and cost-to-income ratio. There is also clear market segmentation between Stanbic Bank, the only bank with portfolio value greater than $600 million, and the middle financial services market segment represented by DFCU Bank, Centenary Bank, and Barclays Bank of Uganda, which all have portfolios ranging between $200-$500 million. The smallest market segment is comprised of small banks and microfinance institutions with portfolios of $100 million or less.

Within the middle market segment, the three banks' deposit bases are all comparable, but DFCU demonstrates a strong cost-to-income ratio; however, Centenary Bank has a stronger focus on rural lending and is likely better positioned to develop products to expand lending to the agricultural sector. (Further analysis will be needed to better understand internal processes, quality of data, and technical assistance needs of potential activity partners.) Given the overall similarities between the middle market competitors, agricultural lending may represent an important market advantage for one or more of the institutions interested in gaining new customer segments.

For the market segment with the smallest value portfolios, FINCA and PRIDE are healthier in terms of their cost-to-income ratio and have roughly equivalent deposit bases to their competitors. (No data were yet available on BRAC's deposits given its recent transition to a deposit-taking institution.) UDB, as a development finance institution (DFI), is an exception in the category given it also does not take deposits, nor does it directly compete with microfinance institutions.

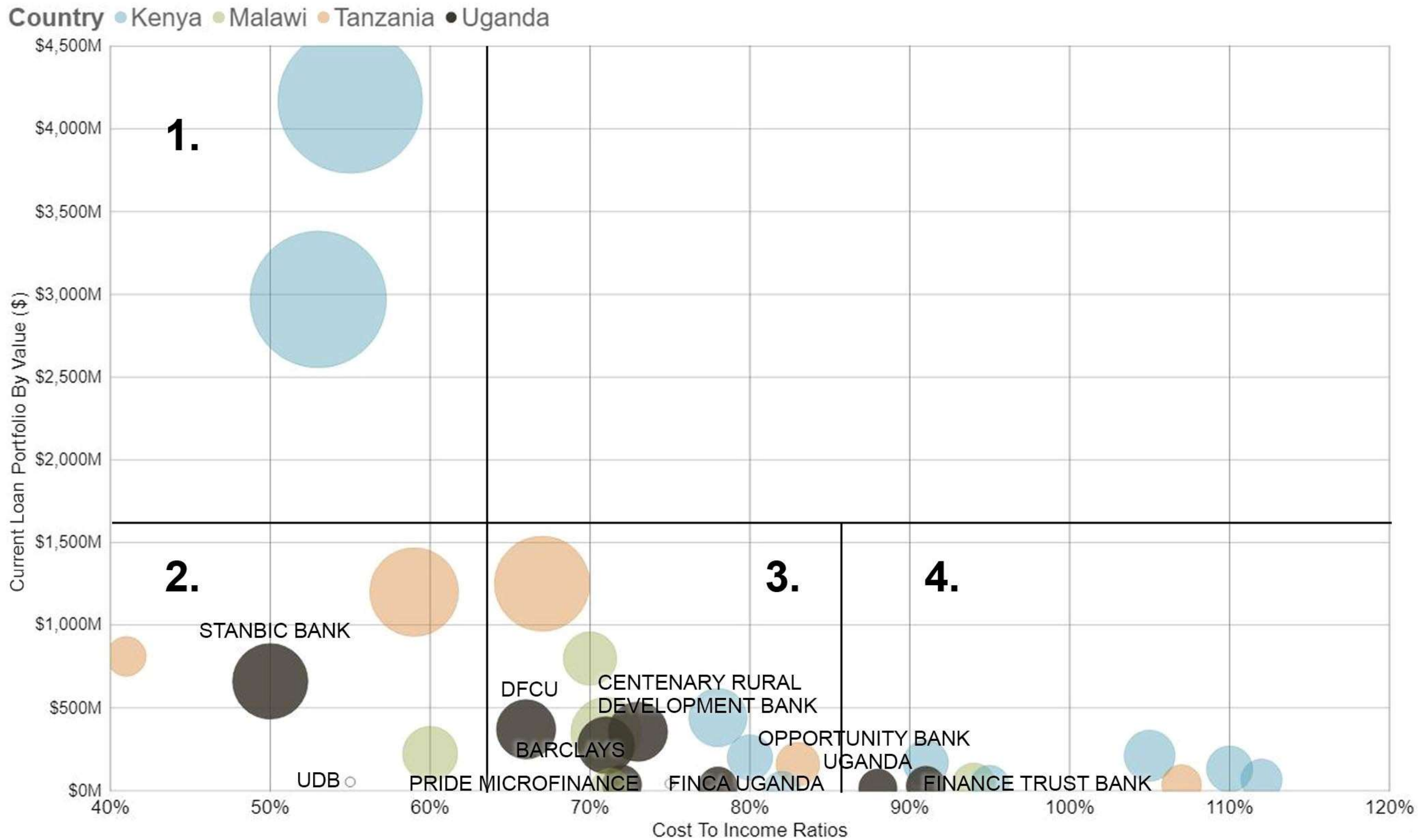
Availability of Agricultural Financial Services in Uganda

Limited data were available for assessing the full scope of agricultural financial services available in Uganda. From the data that were available, it is clear Opportunity Bank Uganda[20] and FINCA are the most active within the sector (Opportunity Bank Uganda, for example, has grown its agricultural portfolio by more than 50% since 2018), which are likely underlying drivers of each institutions' higher cost-to-income ratio (see Figure 13). Both institutions offer group and individual loans for smallholder farmers (data are not available on loan recipients' gender or age), tailored according to agricultural seasons (terms range from 3-4 months, up to 2-3 years). Opportunity Bank of Uganda also offers

[20] Opportunity International, Inc. is a partial owner of Opportunity Bank of Uganda, which is also a current implementing partner of Opportunity International for its grant programs in Uganda.

Figure 111: Landscape of Ugandan Financial Service Providers

Financial service providers below are shown by current loan portfolio value (in USD) and cost-to-income ratio. The size of each data point is the total value of deposits at each institution.



larger agribusiness SME loans, and is piloting a new loan guarantee mechanism for SMEs in the coffee value chain. If successful, it may help spur additional agricultural SME lending and can serve as a model for financing agribusinesses within the seed sector.

Though data were not specifically available, Stanbic Bank also offers some agricultural loans but focuses on serving more structured value chains with identified off-takers to minimize risks. Serving the larger financing needs of seed companies, commercial farmers, and other larger entities in the seed value chain would likely be of more interest to Stanbic Bank (rather than smallholder production loans), as well as for DFCU Bank and Centenary Bank. Barclays is undergoing rebranding and a shift in ownership; as such, Barclay's strategic priorities are currently unclear. Of the larger institutions, Stanbic Bank and UDB, as a development finance institution focused on agricultural lending, hold the greatest potential for partnership in facilitating significant expansion of financial services for larger farms and agribusinesses.

The recent regulations issued by the Bank of Uganda on agency banking are likely to open up new and more cost-effective delivery channels for rural financing, ultimately reducing costs for financial service providers and paving the way for more innovative solutions for deploying agricultural financial services. This will make it more attractive for larger financial service providers like DFCU Bank and Centenary Bank to serve more remote clients alongside smaller institutions like Opportunity Bank of Uganda and FINCA. However, the costs associated with establishing and managing agent bank networks are not yet fully established for rural contexts in Uganda.

In terms of financing costs, the pricing of agricultural loan products in Uganda is fairly consistent, which is an indication of a more mature and competitive market; however, limited data were available. In general, financial service providers charge 2-3% interest rate per month for smaller production loans disbursed in Ugandan shillings.

Overall Financial Health of Financial Service Providers in Uganda

The health of existing agricultural lenders looks promising in Uganda. As shown in Figure 14, DFCU and Opportunity Bank Uganda experienced the largest year-over-year growth in both their lending portfolios and deposit base and maintained strong capital adequacy. This is particularly notable for Opportunity Bank Uganda as one of the leading lenders of agricultural financial services in Uganda, which demonstrates that the integration of agricultural lending within existing business operations can be done sustainably and profitably. Stanbic Bank also shows strong capital adequacy and growth; given its sizable portfolio (USD$660 million), year over year growth trends will be lower than those of institutions with smaller portfolio sizes like Opportunity Bank Uganda (USD$15 million). BRAC does not yet accept deposits, and so does not have a capital adequacy ratio included in this analysis.

The overall health of the financial service providers in Uganda seems to be stronger than in Kenya and Malawi, providing a supportive economic environment in which to expand agricultural lending for seed companies through S34D. Additionally, Opportunity Bank Uganda and Pride Microfinance, given their strong capital adequacy ratios, may strive to advance to higher regulatory tiers, which would attract new investors and capital to further expand access to agriculture finance.[21]

Figure 12: Sample of Existing Agricultural Financial Products in Uganda

[21] Opportunity Bank Uganda received its Tier 1 banking license in September 2019, following the completion of the data collection period for this report.

Figure 213: Sample Uganda Fees and Interest Rates, by Loan Type and Provider

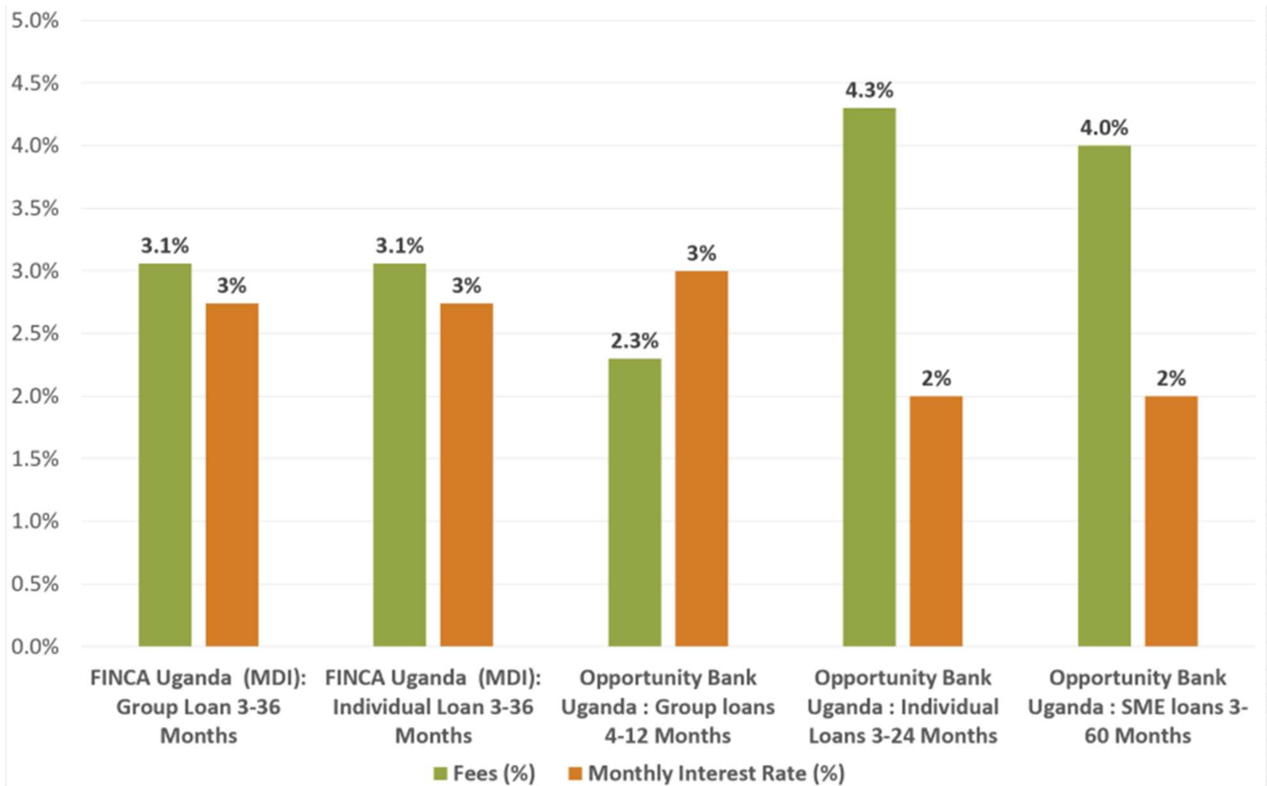
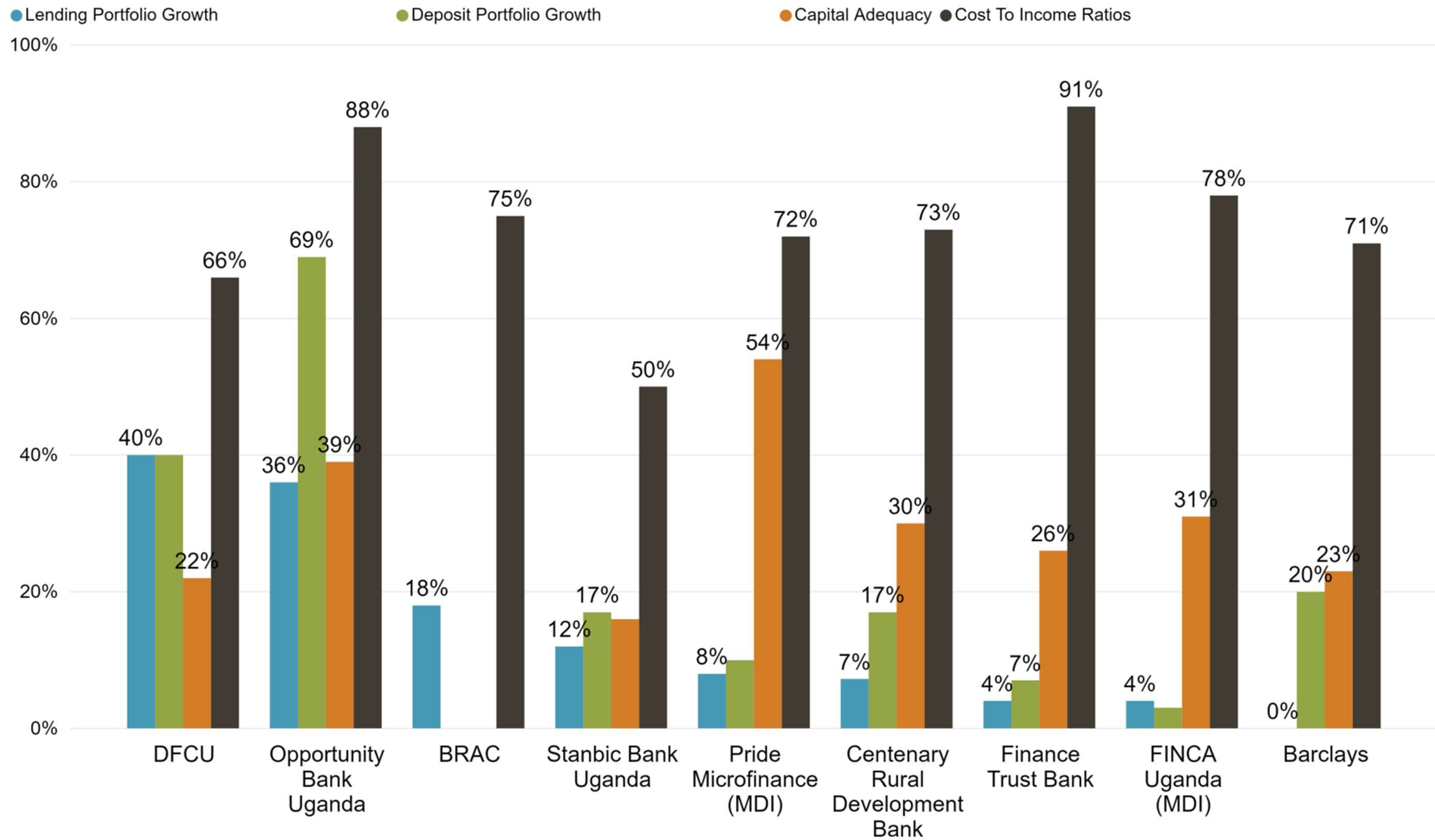


Figure 14: Average Portfolio Growth over 1 Year and Capital Adequacy, Uganda



DFCU, Opportunity Bank Uganda, and UDB[22] are likely strong potential partners. Opportunity Bank Uganda's significant growth trend for its deposit portfolio may help offset its larger cost-to-income ratio. Stanbic, too, shows strong growth for its portfolio size and one of the most efficient cost-to-income ratios. Finance Trust Bank has one of the highest cost-to-income ratios, which combined with its low portfolio growth, indicating it would need significantly more support in building its capacity for expanding its lending to the agricultural sector. Barclays' low growth is likely attributed to its change in ownership and rebranding — the transition will likely be its largest priority over the next year or two and would therefore not be a strong partner.

One institution of note is BRAC, which recently was approved to become a Tier II financial institution in Uganda and will begin accepting deposits. It is also notable that BRAC has a long history of developing products and services that support women's financial inclusion. Its moderate lending growth, combined with its rural focus, could make for a strong partner, especially in expanding access to smaller production loans for smallholder farmers.

Summary

Uganda represents one of the strongest markets for agriculture finance, given the relative health of the financial service providers assessed and their existing rural and agricultural lending operations. The Bank of Uganda is particularly active as a regulator, which is fostering a robust and diverse banking sector while promoting financial inclusion and rural development.

The broad range of healthy financial service providers — from Stanbic Bank ($660 million portfolio value) to DFCU ($370 million portfolio value) and Opportunity Bank of Uganda ($15 million portfolio value) — indicate there are several viable partners to target and serve the different financial needs throughout agricultural value chains. Mid-market lenders like Centenary Bank are well-suited for expanding access to individual loans and smaller SMEs, while larger lenders, like Stanbic Bank, DFCU, and UDB, primarily focus on offering larger loans to big seed companies or large, commercial farmers. Smaller lenders like BRAC, Opportunity Bank of Uganda and Pride should focus on offering smaller and medium-sized loans to smallholder farmers and smaller agribusinesses, especially women and youth-led farms and businesses.

For these institutions, reducing the costs of serving rural clients will be paramount to incentivize increased agricultural lending. Fortunately, recent regulations and advancements with agent banking in Uganda is opening up new, lower-cost delivery channels to reach and serve more rural clients. The coming years will undoubtedly see innovations in digital loan processing and disbursements, facilitated by agent networks.

For the smaller financial service providers, one key challenge will be the availability of capital to lend to the agricultural sector. Agricultural portfolios at several institutions (BRAC, FINCA, Opportunity Bank of Uganda) are currently exceeding 20% of their total portfolios. To limit risk to the entire portfolio, most lenders with experience in the agricultural sector will cap their agricultural loan portfolio to 20% of their total portfolio — which means further growth of the portfolio is contingent on the growth of the entire portfolio. Engaging a diversity of lenders, particularly among the lower market segment, will be key in meaningfully expanding access to financial services for smallholder farmers and small agribusinesses. Increasing lending to larger middle market SMEs, like agrodealers, extension service providers and processors, can also help fill down-market financing gaps.

[22] UDB is a development bank, financed by the Ugandan government and various aid agencies. It exists to lend to specific development-oriented projects that fit the national agenda. It does not take deposits.

KENYA

Overview of the Agricultural Sector in Kenya

In Kenya, the agricultural sector accounts for 34% of the country's gross domestic product, which is the highest rate among the four countries included in this report.[23] Despite the prevalence of smallholder farmers and the size of the agricultural sector, Kenya still is largely dependent on food imports to feed its growing population due to its low production of staple crops like maize, wheat and rice.[24]

For financial service providers, several structural challenges constrain further growth in agricultural lending. Primarily, the interest rate cap[25] set by the Central Bank has had negative implications for Kenyan institutions' overall sustainability and growth. Due to the interest rate cap, banks are disincentivized to lend to each other given that costs of finance often exceed the cap, reducing the liquidity of the banking sector overall. The interest rate cap also inhibits banks from increasing their lending to higher risk sectors like agriculture. One direct implication is the emergence of non-regulated lenders like financial technology companies or start-ups that are working to meet the demand for credit but are charging higher interest rates that ultimately negatively impact rural clients by overburdening their financial capacity for repayment. Additionally, the high price of inputs, combined with inadequate off-taking and value-added services in rural communities, has resulted in slim margins for smallholder farmers, disincentivizing lending to farmers.

However, the overall economic climate in Kenya is one of the strongest and fastest growing in Africa. Kenya's gross domestic product growth reached 5.7% in 2019 and is expected to maintain similar growth rate for 2020 and 2021.[26] Despite the structural challenges, consumers have a broader range of financial service providers and non-bank lenders through which to access finance; agricultural loan products are especially varied compared to those available in other countries. Kenya also has one of the highest rates of mobile money penetration in Africa — 73% of adults have a mobile money account in Kenya, but women still lag behind men in uptake.[27]

The main agricultural goods produced in Kenya are sugar cane, dairy, and maize; tea, barley, coffee, beans, and sorghum comprise the highest value commercial exports.[28] The government is increasingly focused on the development and formalization of key value chains, especially for nutrient-rich varieties of crops like maize and rice to support food security and reduce Kenya's reliance on imports. Integration and delivery of high-quality seed varieties and other inputs in farming communities will be a crucial strategic initiative in the coming years as Kenya continues to make important strides in economic and social development.

[23] World Bank, 2018. *Agriculture Forestry, and Fishing, value added (% GDP) - Kenya*. World Development Indicators Database.

[24] FAO, 2015. Country Fact Sheet: Kenya.

[25] Since the completion of the data collection period for this report, the Kenyan government repealed the interest rate cap. This will likely stimulate lending long-term – additional analysis is recommended to understand the implications of this policy shift, and how quickly financial service providers will update their products in response. This analysis, however, still provides an important overview of the current lending environment; a brief scan indicated no notable changes in lending activities have yet been identified as of early 2020.

[26] World Bank, 2019. The World Bank in Kenya.

[27] World Bank, 2017. *Mobile Money Account (% age 15+) – Kenya.* Global Financial Inclusion Database.

[28] FAO, 2015. Country Fact Sheet: Kenya.

Recommendations: Kenya

1. **Engage a diversity of financial service providers to serve the financial needs of entire value chains.** Larger institutions like KCB Bank and Equity Bank should be engaged to lend to larger seed businesses and commercial farms, while smaller institutions like U&I Microfinance and Sidian Bank could be engaged (following further due diligence) to facilitate lending for smallholder farmers.

2. **Provide access to risk reduction mechanisms.** In Kenya specifically, high operational costs are the main constraints for many of the smaller institutions, which would require support in the form of loan guarantees or subsidies to launch or grow lending to the seed sector. The S34D team should also further explore opportunities to leverage risk reduction mechanisms that are specifically tailored for increasing lending to women and youth in the seed sector.

3. **Explore non-bank partnerships.** Private companies or non-regulated lenders may have viable operational capacity to serve rural segments of farmers, which can build upon or complement the outreach of regulated institutions.

Capacity of Financial Service Providers in Kenya

Among the four countries surveyed, Kenyan financial service providers held more than half (around 55%) of region's share of deposits and loans. Specifically, two financial service providers dominated the Kenyan market: KCB Bank and Equity Bank. KCB Bank and Equity Bank had the most favorable cost-to-income ratios, as well as the largest deposit bases with which to extend loans.

A large market disparity exists between the two large banks and smaller financial service providers, which have much smaller deposit bases and lending portfolios, and relatively higher cost-to-income ratios. In fact, Kenya has the largest share of financial service providers operating at 90%-120% cost-to-income ratios in the corridor. Many of these smaller institutions showed low or negative growth in their lending activities and deposits, which may be due in large part to the Central Bank's interest rate cap. The limitations of smaller financial service providers may lead to the growth of non-regulated lending (such as the mobile lending start-up FarmDrive or the microfinance lender Juhudi Kilimo); however, data on these entities were not widely available and were therefore excluded from the analysis (microfinance institutions are also not required to publish financials).

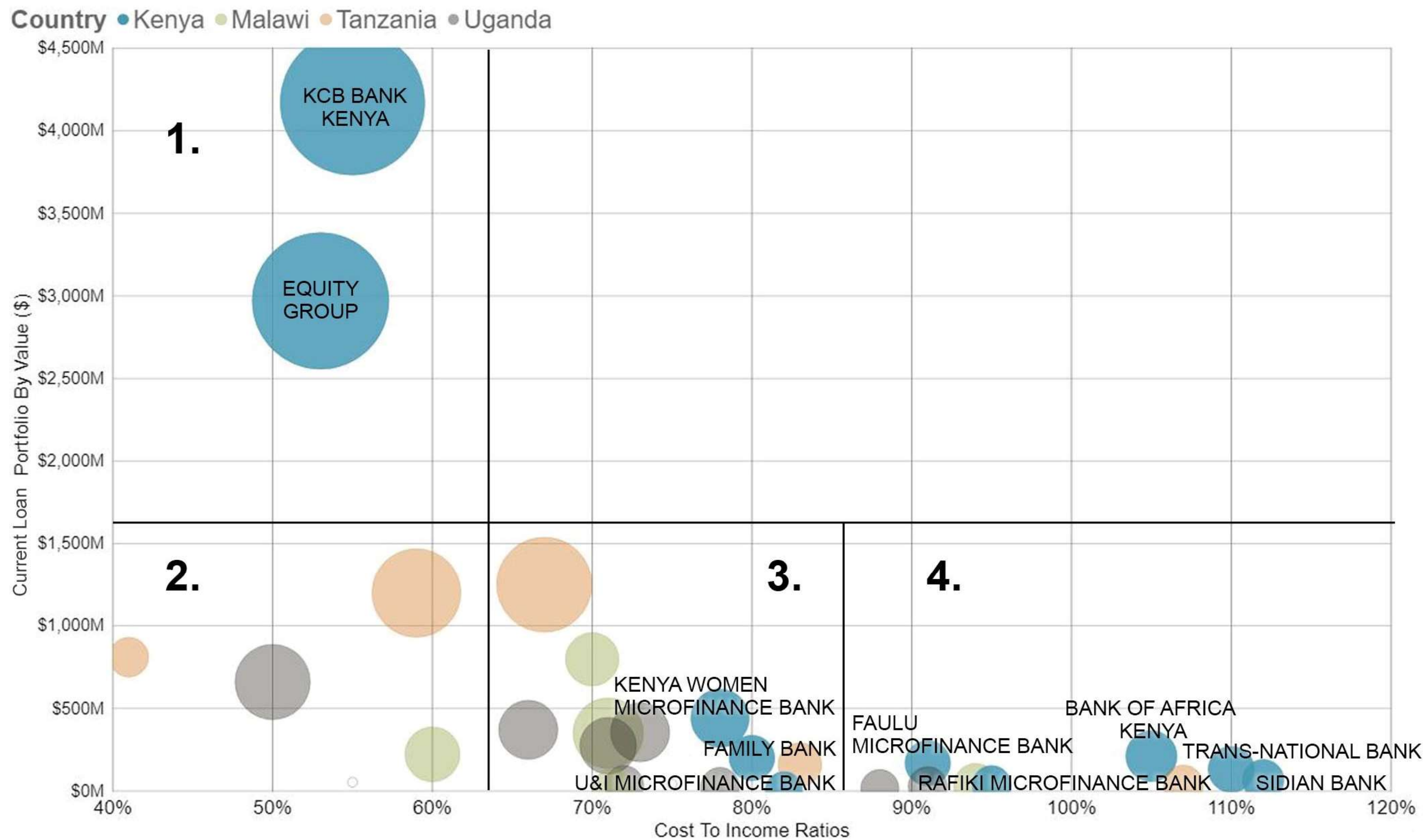
In Kenya, the most likely project partners are the larger banks — KCB Bank and Equity Bank — given their relative financial health and established lending activities and outreach. Reaching a broader customer base, however, will likely require partnerships with private companies or start-ups, at least initially, to serve farmers in more rural communities.

Availability of Agricultural Financial Services in Kenya

Within the region, Kenya appears to have the most mature market for agricultural lending. Many of the agricultural loan products available were value-chain specific, rather than generic production loans for farmers (as is seen in less mature markets). For S34D, this may be a limitation as agricultural lending activities appear to be structured around very specific parameters, for specific client groups. Encouraging financial service providers to extend beyond their established agricultural lending activities will likely require incentives, especially considering how the high cost-to-income ratios of the smaller financial service providers will discourage testing new, and largely unproven, loan products.

Figure 15: Landscape of Kenyan Financial Service Providers

Financial service providers below are shown by current loan portfolio value (in USD) and cost-to-income ratio. The size of each data point is the total value of deposits at each institution.



KCB Bank's offerings of smaller production loans in the range of $100-$1,000 (currently mostly for tea growers and sugar cane farmers) is reassuring. It is likely, with the right incentives for KCB Bank, these loan products can be adapted for the seed sector. The existing outreach of KCB Bank indicates its ability to serve both smallholder farmers and seed companies; however, its relative comfort (few competitors, larger margins) within the market may mean KCB Bank will be less willing to test or roll out new products. This will be a challenge in engaging both KCB Bank and Equity Bank. Emphasizing the potential longer-term loan portfolio growth and reduced competition in rural markets will be key in incentivizing engagement.

Overall, the diversity of loan products available is a good indication of the market's appetite in agricultural lending. Figure 16 illustrates the range of products based on available data, but the full scope of loan products available is likely much larger. Figure 17 shows the costs and fees associated with lending. The relative uniformity of fees is further indication of a more mature lending market.

Figure 316: Sample of Existing Agricultural Financial Products in Kenya

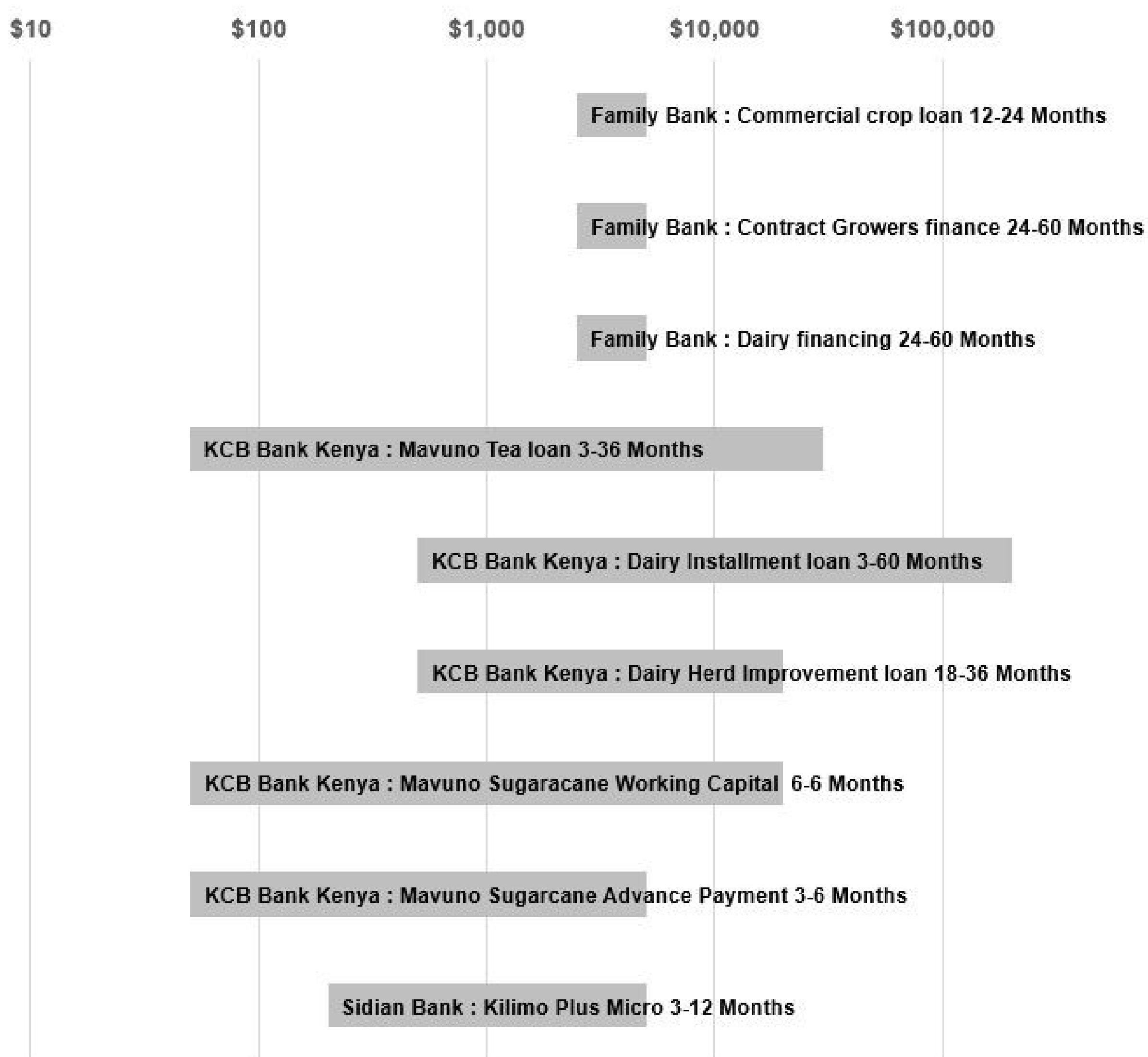
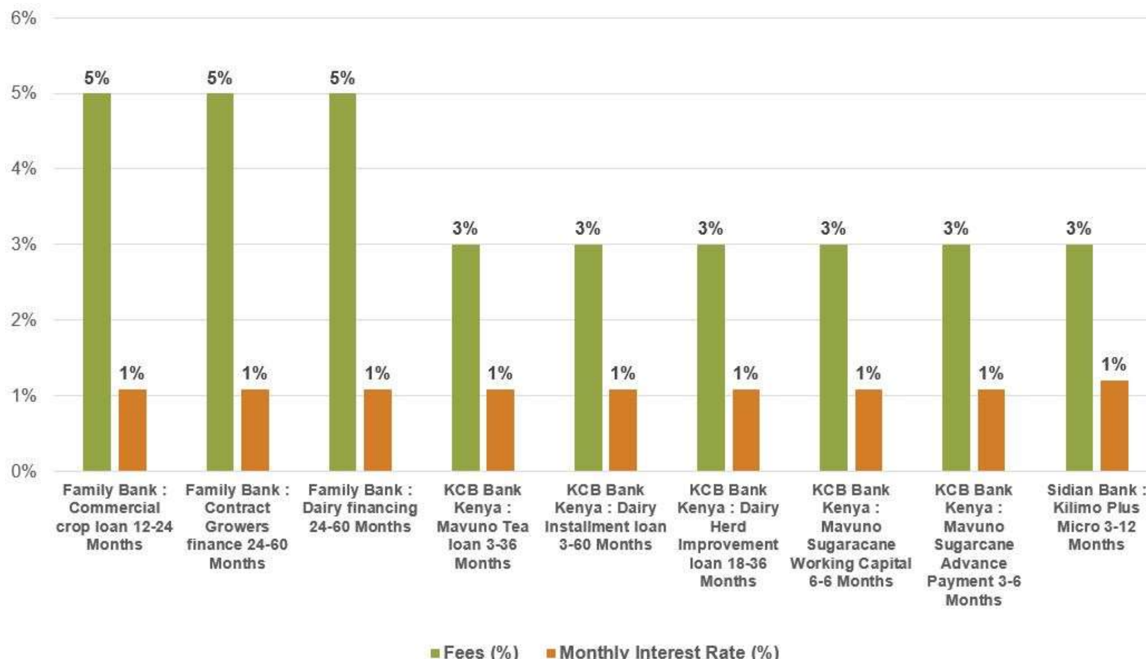


Figure 17: Sample Kenya Fees and Interest Rates, by Loan Type and Provider



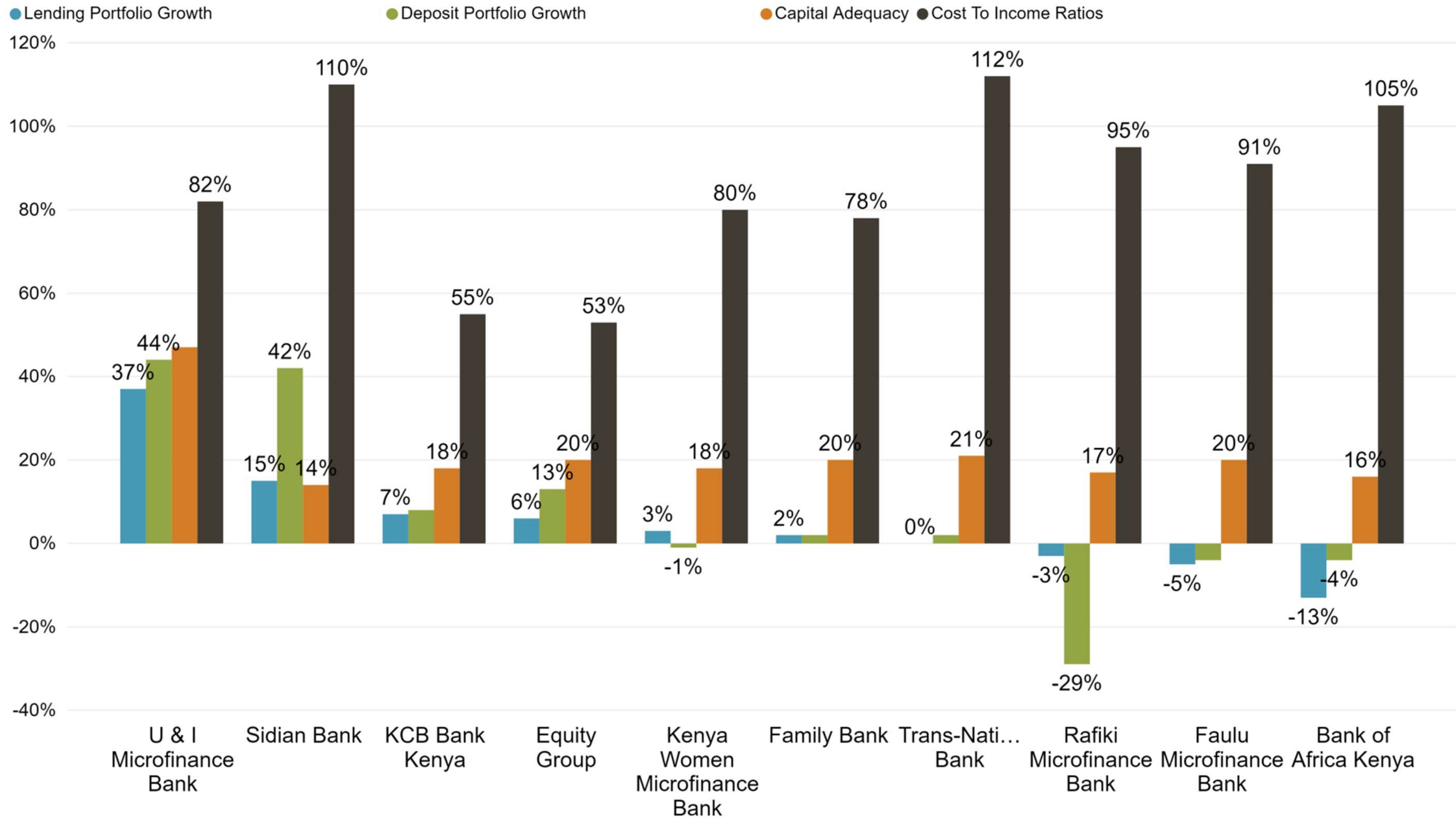
Overall Financial Health of Financial Service Providers in Kenya

Most financial service providers surveyed have not experienced significant year over year growth in their loan book or deposits. U&I Microfinance Bank stands out in this regard, as well as Sidian Bank, with the former achieving 37% growth in its lending portfolio and the latter achieving 15% growth. Contrasted with the rest of Kenyan providers, which demonstrated single digit growth or negative growth, this indicates favorable operations and potential for further growth. The high capital adequacy ratio (see Figure 18) and low cost-to-income ratio of U&I Microfinance further demonstrates its potential as a strong, high-growth partner. Sidian Bank, despite its recent growth, still struggles with a high (>100%) cost-to-income ratio, which would be a note of caution in potential partnership.

High growth rates for KCB Bank and Equity Bank were not expected given their large portfolio sizes. Overall, their growth trends and moderately strong capital adequacy ratios further underscore their financial health and ability to serve as partners with S34D.

Otherwise, most microfinance institutions surveyed are experiencing stagnant or declining portfolios. Outside of U&I Microfinance Bank, those with growth trends have some potential for partnership, like Family Bank, which has historically lent to the tea sector. Family Bank's experience in the agricultural sector would be beneficial but diversifying outside of the tea sector with its slimmer margins will likely require significant incentives.

Figure 18: Average Portfolio Growth over 1 Year and Capital Adequacy, Kenya



Summary

Kenya represents the largest and most mature market for agricultural finance in the regional corridor, but structural challenges will inhibit growth. Specifically, the mandated interest rate cap from the Central Bank is limiting financial service providers' ability to lend profitably, and as a result, a large number of institutions are struggling against high cost-to-income ratios and stagnant or negative growth in their portfolios.

The largest banks — KCB Bank and Equity Bank — are both currently lending to the agricultural sector and potentially interested in partnership with S34D. The institutions also have operations in Uganda and Tanzania, which represents opportunities for broader corridor-wide partnerships. In Kenya specifically, these institutions will likely need risk mitigation incentives, such as loan guarantees, to incentivize them to establish new agricultural loan products and expand lending to new customers within the seed sector. Establishing and emphasizing the business case for lending to the seed sector — specifically the potential to expand their customer base and gain a market advantage — will be essential in engaging these partners.

Given the challenges in Kenya, additional resources should be dedicated to investigating potential partnership with non-bank (non-regulated) lenders in Kenya,[29] which may have more flexibility to reach rural customers, especially those outside of the existing operations of KCB Bank and Equity Bank.

[29] Research on non-bank lenders was outside of the scope of this report. Data on private companies and non-bank lenders are currently limited and protected by non-disclosure agreements. Specific information may be acquired during due diligence for potential partners.

TANZANIA

Overview of the Agricultural Sector in Tanzania

In Tanzania, the agricultural sector accounts for nearly one-third of the country's gross domestic product.[30] Like the other countries included in the assessment, agriculture is a significant contributor to the country's economic health and a main source of income for approximately three-quarters of the workforce. Smallholder farmers throughout Tanzania struggle to attain quality inputs, which continues to inhibit overall production levels. Except for rice, Tanzania relies on imports for its staple crops in order to feed its population.[31]

Limited data are available on financial service providers in Tanzania. Overall, for financial service providers, agricultural lending seems to represent a small fraction of all lending.[32] Personal loans make up the largest segment of lending (20%), which has negative implications in terms of risk for the overall financial services sector given that consumption and other personal loans are not often used to directly facilitate productive, income-generating activities (limiting repayment capacity for customers).

In terms of the general economic climate, Tanzania's gross domestic product is expected to maintain steady growth per year for the next few years, but private sector credit growth is predicted to remain slow.

The main agricultural goods produced in Tanzania are cassava, maize, and sweet potatoes, with coffee, tobacco, and cashew nuts representing the highest value exports. Overall, the government of Tanzania remains focused on increasing production of grains through improved access to inputs and commercialization of agriculture — replicating its recent success in improving rice production — to improve food security and nutrition.

Recommendations: Tanzania

1. **Engage a diversity of financial service providers to serve the financial needs of entire value chains.** CRDB Bank and NMB Bank would be the highest potential banks to explore for partnership in financing larger commercial farms and agribusiness SMEs. For smallholder farmers, exploring the potential of local community banks may be a viable option for fulfilling the smaller financing needs of farmers. Comprehensive due diligence would be recommended with community banks prior to engaging as partners.

2. **Partner with Tanzania Agriculture Development Bank to facilitate the commercial viability of seed sector.** Improving the overall infrastructure and commercialization of the seed sector in Tanzania will require significant investment and business development of all seed sector entities to ensure long-term sustainability.

Capacity of Financial Service Providers in Tanzania

In Tanzania, CRDB Bank and NMB Bank are the largest and strongest lenders in the agriculture finance market. (Data on Letshego were only available for the parent group and is therefore not representative of the Tanzanian market specifically.) Like other markets, the data indicate significant segmentation in terms of lending operations, with CRDB Bank and NMB Bank representing the largest market share and smaller financial service providers serving small or niche segments.

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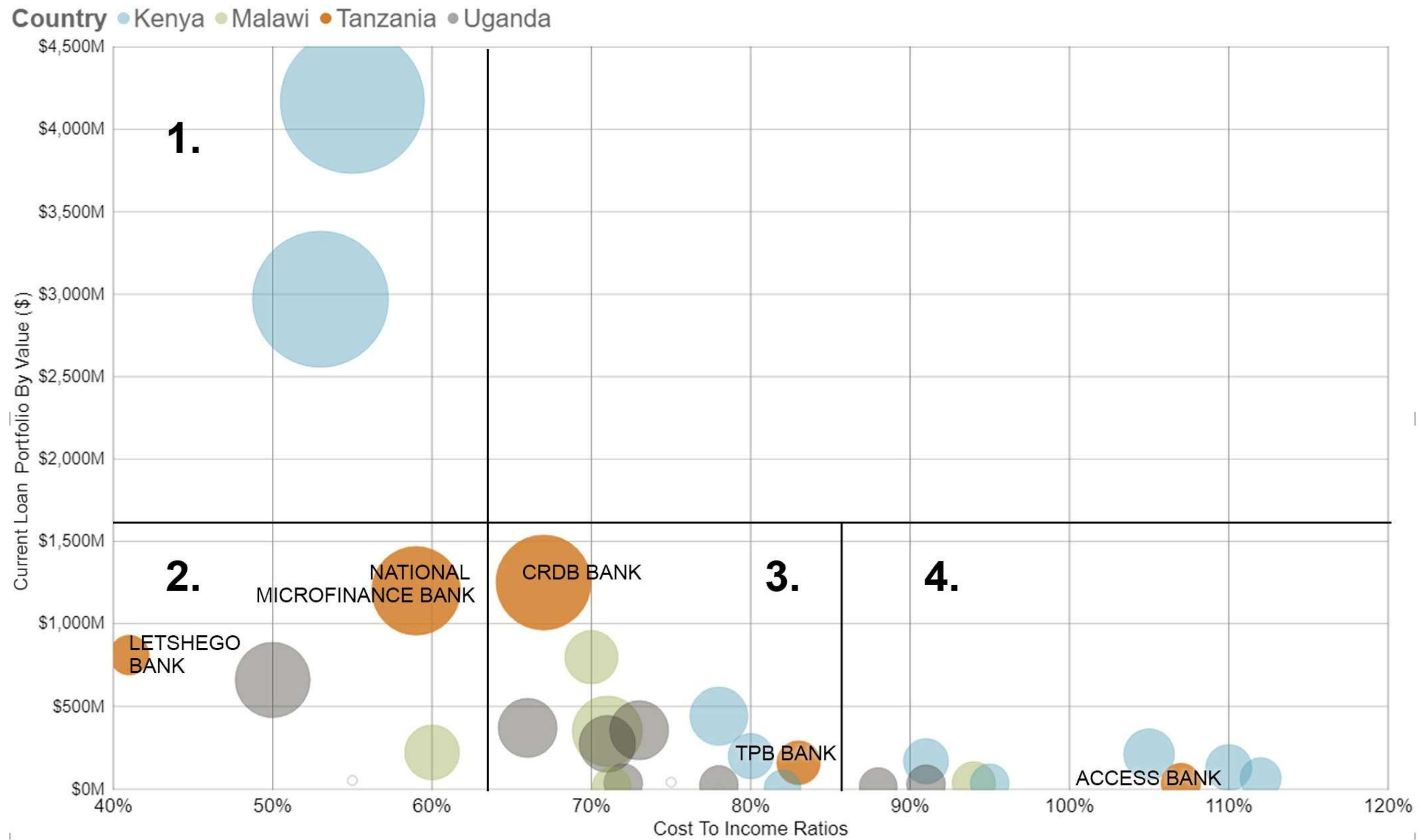
[30] World Bank, 2017. *Agriculture Forestry, and Fishing, value added (% GDP) - Tanzania*. World Development Indicators Database.

[31] FAO, 2015. Country Fact Sheet: Tanzania.

[32] Based off latest data available from 2017.

Figure 19: Landscape of Tanzanian Financial Service Providers

Financial service providers below are shown by current loan portfolio value (in USD) and cost-to-income ratio. The size of each data point is the total value of deposits at each institution.



Interestingly, there is a significant presence of community banks throughout rural regions, which is unique within the corridor. Small, region-specific banks could help serve farmer groups, and perhaps even specialize lending products within certain value chains, to meet the need for production loans in rural communities. However, several community banks have recently closed due to operational challenges. Exploring the possibility of community bank partnerships in Tanzania will require further due diligence to ensure operational sustainability and/or identify technical assistance needs to improve banks' operations.

Availability of Agricultural Financial Services in Tanzania

Limited data were available to assess existing agricultural financial services. In general, CRDB Bank and NMB Bank have done some agricultural lending, but largely for agribusinesses and more established agricultural companies rather than to smallholder farmers. CRDB Bank, however, does work closely with Private Agricultural Sector Support (PASS) Trust, which is a development institution that focuses on connecting agribusiness entrepreneurs to credit. This partnership would be an important one to leverage for expanding access to finance for seed companies, and merits further exploration.

Access Bank is also interested in agricultural lending but has had significant difficulties lending to the sector sustainably. For Access Bank, given its cost-to-income ratio, risk reduction mechanisms and operational support, at least initially, would be required to move forward with a partnership.

Additionally, the state-owned Tanzania Agricultural Development Bank (TADB) recently began lending operations to the agricultural sector and is negotiating with the Agricultural Seed Agency to help finance the overhaul of government-owned seed farms. The financing arrangement would likely include capital for investing in irrigation, working capital, storage, and other needs to advance the seed sector. Engaging with TADB would be highly beneficial in facilitating the effective deployment of capital for strengthening seed systems in Tanzania.

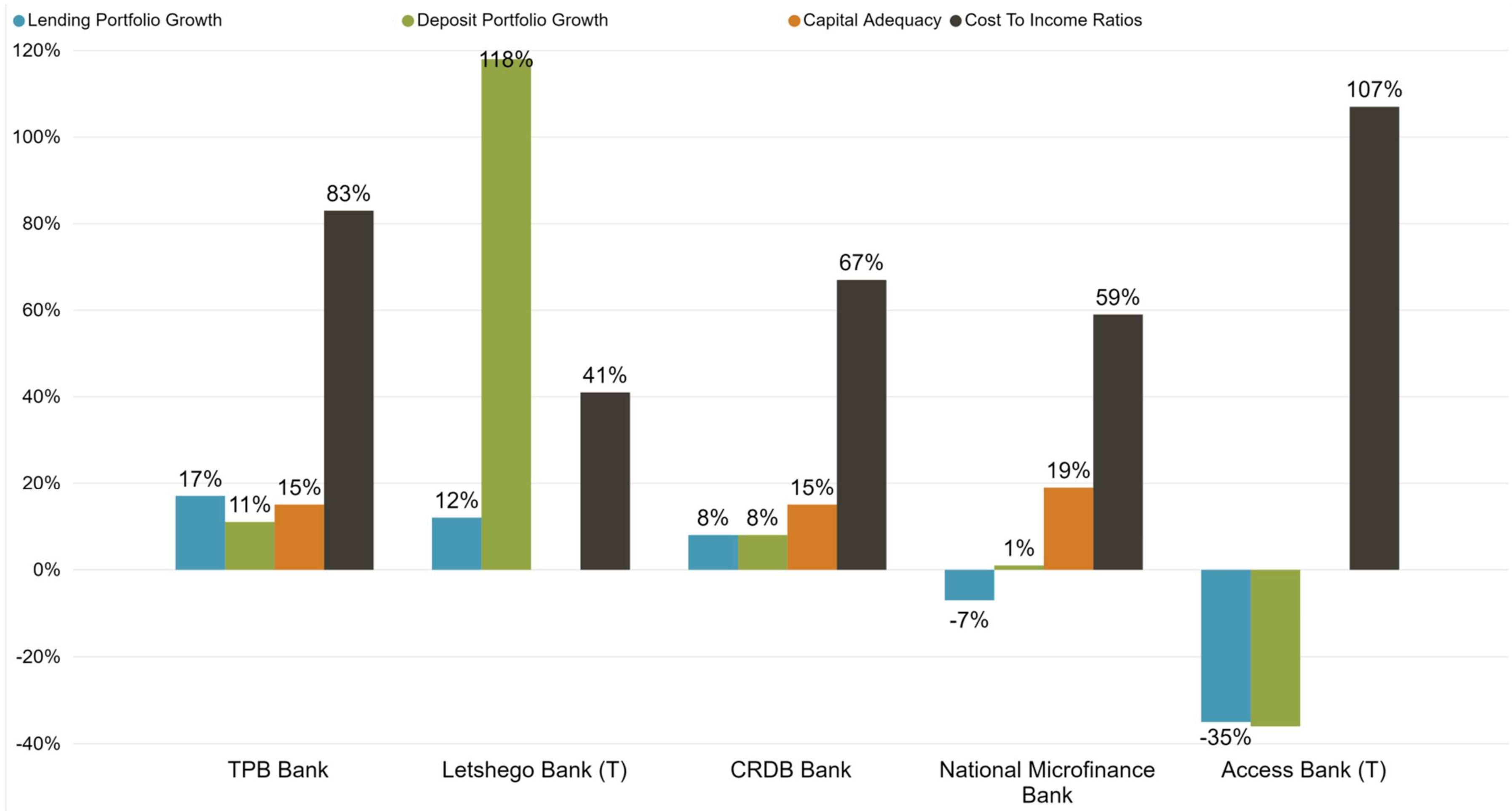
Overall Financial Health of Financial Service Providers in Tanzania

Among the financial service providers analyzed, TPB Bank[33] is seemingly one of the strongest in terms of annual growth, its relatively stable capital adequacy ratio, and its moderate cost-to-income ratio. Otherwise, CRDB Bank and NMB Bank are among the healthier institutions and have some of the lower cost-to-income ratios. The data in Figure 20 indicate CRDB Bank is healthier than NMB Bank, and experienced growth in its lending portfolio over the last year. Given the similarities between CRDB Bank and NMB Bank, both may be interested in partnership as a way to grow their lending operations and gain a potential market advantage within the agricultural sector. Risk reduction mechanisms will be a key selling point for CRDB Bank and NMB Bank.

Access Bank expressed interest in partnership, but the bank appears to face operational challenges. The loan portfolio and deposit base reduced significantly over the last year, and it is currently operating with a cost-to-income ratio in excess of 100% (see Figure 20 below). Given the Access Bank's interest in serving smallholder farmers, it may be worthwhile to explore potential partnership alongside cost reduction mechanisms, such as digitization of loan processes. Letshego may also be a worthwhile partner to further investigate given its operations throughout Africa, and its potential to support the S34D project in multiple markets.

[33]Note TPB Bank is associated with the government

Figure 20: Average Portfolio Growth over 1 Year and Capital Adequacy, Tanzania



Summary

Among the four countries assessed, Tanzania has the fewest agricultural lenders, based on available data. However, there are significant opportunities in the nascent agriculture finance market to create new loan products that specifically and adequately meet the financial needs of stakeholders throughout the seed sector. CRDB Bank, NMB Bank, and Access Bank have expressed interest in expanding their operations within the agricultural sector, which would provide each a potentially significant customer pipeline and market advantage. Additionally, given the prevalence of personal loans among lending operations, agricultural lending may offer financial service providers a more viable path toward reducing risk, assuming agricultural loans can be disbursed on a timely basis with viable terms and rates for repayment.

Another significant opportunity is the Tanzania Agricultural Development Bank's interest in financing the Agricultural Seed Agency to improve its infrastructure and operations. Exploration of partnership opportunities with the Tanzania Agricultural Development Bank would undoubtedly be beneficial for S34D activities in Tanzania and catalyzing investment throughout the seed sector.

CONCLUSIONS

This assessment reviewed the availability of agricultural financial services throughout Malawi, Uganda, Kenya, and Tanzania to offer recommendations to sustainably expand access to capital for stakeholders, especially women and youth, throughout the seed sector in the corridor. Overall, despite existing gaps in the agricultural financial services market, regulated financial service providers are motivated to expand their operations to serve more agricultural clients, which has the potential to become a market advantage for many of the financial service providers surveyed.

Cumulatively, the active gross loan portfolios for the 38 financial service providers analyzed in the region total approximately USD $15.2 billion. If a moderate proportion of these portfolios (10-20%) were allocated specifically to agriculture, the total available capital for the agriculture sector would amount to $1.5-$3 billion. (Though size of the current total agricultural loan portfolio could not be determined, given that data is not available for all surveyed providers on agriculture-specific lending, a small subset of providers surveyed had data available on the percent of their portfolios dedicated to agricultural lending, which was around 2-5% on average.) To mobilize a portion of this capital for the seed sector, financial service providers will require a combination of support services, including technical assistance in loan product design, digitization, gender and age awareness, and improving operational efficiencies, as well as access to risk reduction mechanisms like loan guarantees or innovative monitoring tools.

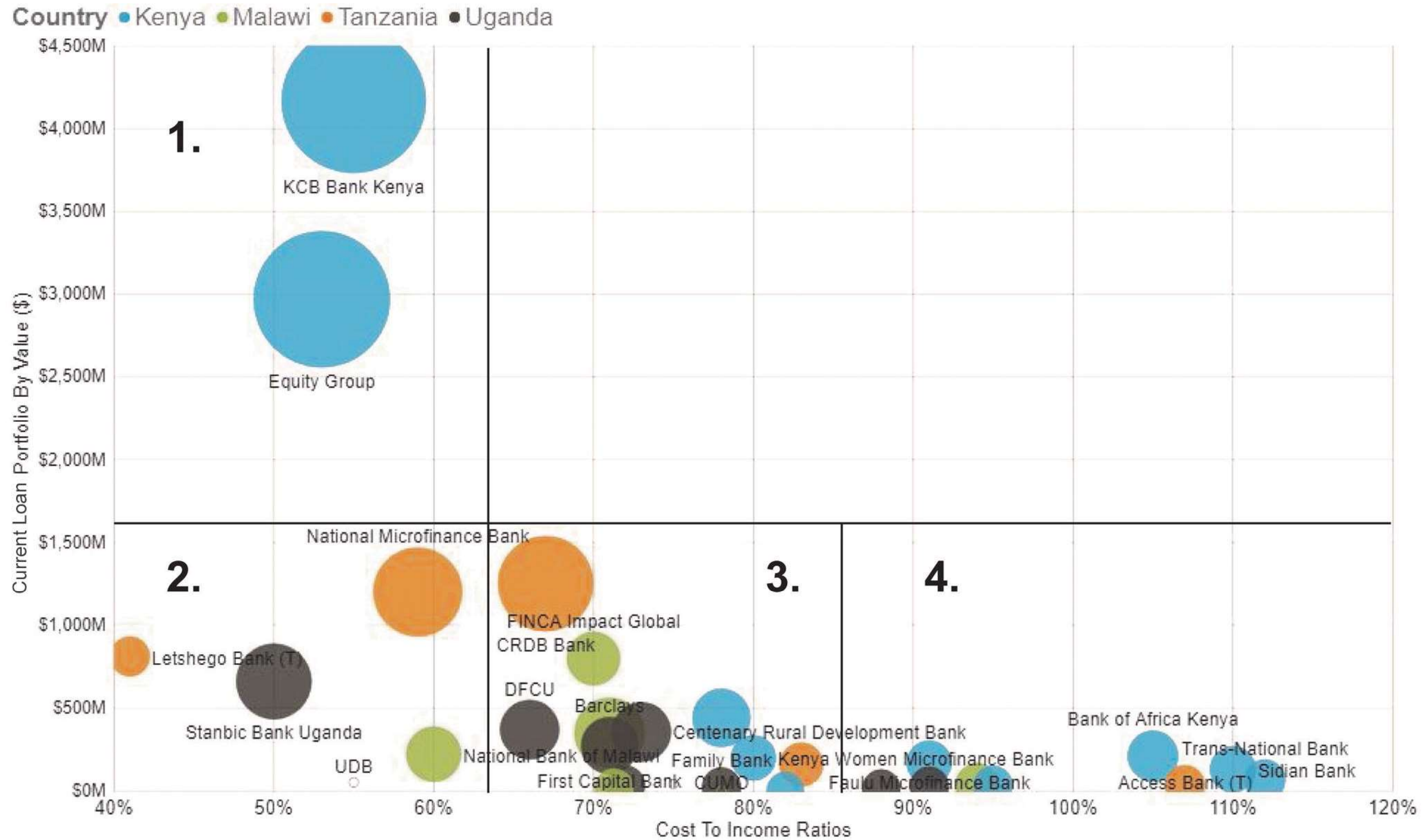
Several financial service providers within each country were identified as high-potential partners with both the interest and capacity to support S34D activities, totaling 18 institutions across the corridor.

	Quadrant 1	Quadrant 2	Quadrant 3	Quadrant 4
Potential Partners				
Malawi	-	National Bank of Malawi	First Capital Bank, CDH Bank	NBS Bank
Uganda	-	Stanbic Bank; UDB; DFCU; Centenary Bank	Opportunity Bank of Uganda; FINCA; BRAC	-
Kenya	KCB Bank; Equity Group	-	U&I Microfinance	Sidian Bank
Tanzania	-	National Microfinance Bank	CRDB Bank	Access Bank

Common challenges for financial service providers throughout the sector were high cost-to-income ratios and relatively small portfolio sizes. In general, small microfinance institutions are those serving the financing needs of farmers, but they struggle the most with managing the high costs of serving rural clients and are therefore limited in their capacity to effectively launch new loan products. Digital innovations and risk-mitigation mechanisms will be essential in reducing the costs of reaching and serving new groups of farmers.

Despite the common challenges throughout the sector, further differentiation was needed to identify appropriate incentivization models to unlock finance for the seed sector. Financial service providers were placed in four different quadrants (Figure 21) to identify a portfolio of financing capacities:

Figure 21: Quadrants, Portfolio of Financing Capacities



Country-specific differentiation indicates that:

1. Kenya is the largest market for financing the seed sector, with two of the largest financial service providers with which to mobilize deposits for extending agricultural loans to seed companies.

Strategic S34D Recommendations: Kenya

1. **Engage a diversity of financial service providers to serve the financial needs of entire value chains.** Larger institutions like KCB Bank and Equity Bank should be engaged to lend to larger seed businesses and commercial farms, while smaller institutions like U&I Microfinance and Sidian Bank can be engaged (following further due diligence) to facilitate lending for smallholder farmers.

2. **Provide access to risk reduction mechanisms.** In Kenya specifically, high operational costs are the main constraints for many of the smaller institutions, which would require support in the form of loan guarantees or subsidies to launch or grow lending to the seed sector. The S34D team should also further explore opportunities to leverage risk reduction mechanisms that are specifically tailored for increasing lending to women and youth.

3. **Explore non-bank partnerships.** Private companies or non-regulated lenders may have viable operational capacity to serve rural segments of farmers, which can build upon or complement the outreach of regulated institutions.

2. Malawi represented the smallest market, but alongside Uganda, has the greatest potential for growth in financing for the seed sector.

Strategic S34D Recommendations: Malawi

1. **Engage rural extension service providers and/or cooperatives to provide last-mile financing to hard-to-reach smallholder farmers requiring smaller loans.** With technical assistance, financial service providers like First Capital Bank (which is already using farmer support agents to gather data on clients prior to lending) can develop loan products for rural extension service providers to access capital for offering small, short-term loans to farmers. Gender inclusion strategies will be paramount in engaging and educating rural extension service providers to ensure women farmers can access services on an equal basis to men.

2. **Collect and leverage digital farmer profiles to connect farmers to SMEs and financial service providers.** A coordinated effort to collect data on farmers' crops, anticipated yields, and location can improve efficiencies for service providers, reducing costs in reaching larger groups of farmers with loans to purchase quality inputs like improved seed. Sex and Age-disaggregated data on households will also be helpful in targeting interventions to women and youth. For seed producers, digital farmer assessments are essential for gathering data to organize and streamline demand for seed varieties.

3. **Provide access to risk reduction mechanisms.** Interventions should focus on solutions that help financial service providers reduce their overall lending risk to the agricultural sector, such as loan guarantees, including guarantees that target women-owned businesses, remote monitoring tools and sensors, gender and age-sensitive staff trainings, and digital semi-automated credit scoring.

4. **Consider CDH Bank, First Capital Bank, and NBS Bank for partnership.** After reviewing available financial data from financial service providers in Malawi, this assessment recommends conducting further due diligence with these three providers as potential partners specifically for the S34D activity. All three institutions demonstrate the potential for growth and expressed interest in extending financing to various types of stakeholders throughout the seed sector. Due diligence should also include assessing each provider's ability to collect sex and age-disaggregated data and integrate gender and age-inclusive policies that promote financial inclusion for underserved farmers.

3. Uganda specifically stood out as a high-potential market, where many of the financial service providers are experiencing robust growth and strong capital adequacy ratios. Uganda has a robust and mature market for testing innovations and launching new financial products targeted for the seed sector.

Strategic S34D Recommendations: Uganda

1. **Engage a diversity of financial service providers to serve the financial needs of entire value chains.** Based on findings from the market assessment, larger institutions like Stanbic Bank, DFCU, and UDB are well-positioned to increase lending for larger agribusinesses, like seed producers and distributors, while smaller institutions with rural footprints, like Opportunity Bank, FINCA, and BRAC, are well-positioned to serve the financial needs of male and female farmers in purchasing improved seed and other inputs.

2. **Focus on testing innovative digitally enabled solutions to reduce the costs of reaching and serving rural clients.** Digital solutions, like digital loan originations, will be especially advantageous in this market given the new regulatory guidelines. Innovative partnerships, too, such as with extension service providers and/or NGOs to aggregate gender-disaggregated farmer data on behalf of financial service providers and value chain stakeholders, will help improve market intelligence, predictability, and stability, as well as gender-inclusiveness, of lending portfolios. For seed producers, the data these types of partners can collect will be essential for understanding demand for improved seed varieties and streamlining distribution to farmer groups.

3. **Design specific lending products for seed sector.** Tailored loan products, combined with risk reduction mechanisms like loan guarantees, can help accelerate lending to seed companies at minimal risk for financial service providers.

4. **Facilitate iterative testing of ring-fenced loan guarantees and other risk reducing mechanisms.** Creating loan guarantee funds that directly incentivize financial service providers to lend to S34D's target market (i.e. guaranteed loans for seed companies or distributors) and testing them across different markets with different financial service providers, will help inform strategies for scale. Loan guarantee fund structures should emphasize good underwriting practices by directly engaging financial service providers as stakeholders.

4. Limited data were available for Tanzania, but the recent interest of the Tanzania Agricultural Development Bank in improving the infrastructure of the seed sector is encouraging for the future of the S34D activity.

Strategic S34D Recommendations: Tanzania

1. **Engage a diversity of financial service providers to serve the financial needs of entire value chains.** CRDB Bank and NMB Bank would be the highest potential banks to explore for partnership in financing larger commercial farms and agribusiness SMEs. For smallholder farmers, exploring the potential of local community banks may be a viable option for fulfilling the smaller financing needs of farmers. Comprehensive due diligence would be recommended with community banks prior to engaging as partners.

2. **Partner with Tanzania Agriculture Development Bank to facilitate the commercial viability of seed sector.** Improving the overall infrastructure and commercialization of the seed sector in Tanzania will require significant investment and business development of all seed sector entities to ensure long-term sustainability.

NEXT STEPS

Strategic S34D Recommendations

Engage diverse partners to facilitate access to finance for full value chains. Most often, the institutions serving smallholder farmers are smaller and provide more niche services; few institutions offer a range of loan products for both farmers and agricultural SMEs, and few specifically target women or youth. Engaging microfinance institutions to provide small loans to the bottom segments of the market and larger banks to provide larger loans and capital to seed sector SMEs and bigger farmers will help serve the different capital needs throughout value chains.

Leverage existing risk-mitigation and digital tools to reduce costs and mitigate risks. Many institutions are interested in agricultural lending, but the perceived risks and costs disincentivize institutions from testing or launching new loan products for agricultural clients, leading to poor investment in farms and agricultural businesses, especially women and youth-led or owned enterprises. Many markets already have loan guarantees or other risk mitigation tools available to financial service providers, but existing offering can be convoluted, and providers may need technical support to access these local resources. Efficiency, too, will continue to be one of the biggest challenges for financial service providers serving rural regions. Connecting providers with experts and tools to support digitization, inclusion, and process improvements (digital farmer assessments, gender-inclusive policies and processes, digital loan applications and disbursements, crop monitoring) will be key in supporting viable, inclusive agricultural loan portfolios and managing high operational costs.

Partner with organizations with robust data to design new loan products for the seed sector. Overall, the assessment demonstrated significant gaps exist in terms of agricultural financial services that are currently available on the market, as well as the availability of sex-disaggregated data. New products should be designed and tailored for seed companies and other S34D target client segments in partnership with financial service providers that have the most robust and accurate data to inform effective product design.

As S34D seeks to launch Mission-supported projects, it is also recommended for the activity to take into consideration the following approaches in vetting and partnering with financial service providers in order to effectively unlock capital for the seed sector:

1. Quadrant 1 financial service providers described their need for expertise and technical assistance in adapting their systems for peri-urban or more rural customers, rather than their typical urban market operations. Clearly documented client needs' appraisals, value chain assessments and agreed upon credit processes are critical. Blended financial instruments, subsidies, and grants will be less effective than short-term technical assistance or long-term technical assistance arrangements. Expected lending arrangements and partnerships should focus on SME clients in the seed sector. Assistance in developing seed sector specific financial products is critical for these financial service providers.

2. If Quadrant 2 financial service providers are engaged as partners, a mix of financial products for both agribusiness entrepreneurs and smallholder farmers will likely be possible with these institutions, which have both the operational capacity to serve lower market segments as well

as capacity within their loan portfolios to serve the financial needs of larger agribusiness entrepreneurs. However, it may be more challenging to engage financial service providers in Quadrant 2, given they have fewer competitors and more comfortable operational margins, and would therefore be less incentivized to test new or riskier products. Blended financial instruments, subsidies, and grants should be leveraged together with short-term technical assistance/long-term technical assistance arrangements to assist Quadrant 2 financial service providers in developing, testing, and piloting seed sector products. These institutions may also need support in calculating disaggregated portfolio yield calculations to approve the rollout of successfully piloted products. Staff in Quadrant 2 and 3 are optimally placed to join as attendees in seed sector trainings and will benefit from engagements with prospective seed system stakeholders. Assistance in developing seed sector specific financial products is critical for these financial service providers.

3. Though their profitability is not as strong as those in Quadrants 1 and 2, Quadrant 3 institutions likely have a distinct market expertise in smallholder finance that is critical in the overall success of value chains and strengthening seed systems. Given the crowdedness of this market segment, many of these financial service providers need opportunities to gain a competitive advantage. National level interventions led by DFI's and Central Banks are one of the most effective tools to unlocking capital in this Quadrant. Policy engagement, such as the AEHE Nigeria Risk-Sharing Agricultural Lending Program or the Ugandan Mechanization Finance Interest-Rate Reduction program administered through the Bank of Uganda. Beyond this, special technical assistance programming should be promoted by S34D to support staff capacity, specifically for the Quadrant 3 institutions. As with Quadrant 1 and 2 financial service providers, assistance in developing seed sector specific financial products is critical for these financial service providers. Although staff turnover in this Quadrant is quite high, well-trained staff tend to stay within the sector and are able to take learnings to other financial service providers. Quadrant 3 institution staff should be targeted for learning exchanges, but most likely will need operational expense support in attending S34D activity engagements.

4. Financial service providers in Quadrant 4 are operating with slim margins and would be unlikely to be able to sustainably expand lending operations without additional support. If they have stable funding sources to sustain them through expansion, they could potentially be viable partners, especially if the higher costs are incurred in reaching smaller clients. Similarly, to Quadrant 3, Quadrant 4 institution staff should be targeted for learning exchanges, but most likely will need operational expense support in attending S34D activity engagements.

ANNEXES

Annex 1: S34D Overview Matrix

All sources are from published financial records, websites, and/or private interviews unless otherwise noted.

Country	FSP Name
Uganda	Centenary Rural Development Bank Limited
Uganda	Equity Bank Uganda Ltd[34]
Uganda	Finance Trust Bank Ltd
Uganda	Stanbic Bank Uganda Ltd
Uganda	Opportunity Bank Uganda Ltd
Uganda	FINCA Uganda Ltd (MDI)
Uganda	Pride Microfinance Ltd (MDI)
Uganda	BRAC
Uganda	UDB
Uganda	DFCU
Uganda	Barclays
Tanzania	Access Bank (Tanzania) Limited
Tanzania	CRDB Bank Plc.
Tanzania	Letshego Bank (T) Limited
Tanzania	Mkombozi Commercial Bank Plc.
Tanzania	National Microfinance Bank Plc.
Tanzania	TPB Bank Limited
Kenya	Bank of Africa Kenya Limited
Kenya	DIB Bank Kenya Limited
Kenya	Equity Bank Kenya Ltd *Group Not KE Entity*[36]
Kenya	Family Bank Limited
Kenya	Faulu Microfinance Bank Limited
Kenya	KCB Bank Kenya Limited
Kenya	Kenya Women Microfinance Bank Limited
Kenya	Rafiki Microfinance Bank Limited
Kenya	Sidian Bank Limited
Kenya	Trans-National Bank Limited
Kenya	U & I Microfinance Bank Limited

Country	FSP Name
Malawi	CDH
Malawi	First Capital Bank
Malawi	FINCA Malawi[35]
Malawi	CUMO
Malawi	National Bank of Malawi
Malawi	COMSIV
Malawi	FISD Microcredit Agency
Malawi	One Acre Fund
Malawi	NBS Bank
Malawi	Community Finance Ltd

[34] Data is representative of the group, not Uganda-specific
[35] Data is representative of the group, not Malawi-specific
[36] Listed in Uganda under group level

Annex 2: S34D Financial Service Provider Regulatory Frameworks and Deposit Bases

Country	FSP Name	Banking Licenses	Regulatory Tier	Published Financials	Deposit Base
Uganda	FSP 1	Commercial Bank	1	Yes	$508,245,000
Uganda	FSP 2	Commercial Bank	1	Yes	$4,200,000,000
Uganda	FSP 3	Microfinance Deposit Taking Institution	2	Yes	$27,450,000
Uganda	FSP 4	Commercial Bank	1	Yes	$1,030,000,000
Uganda	FSP 5	Credit Institution	2	Yes	$11,700,000
Uganda	FSP 6	Microfinance Deposit Taking Institution	3	Yes	$21,000,000
Uganda	FSP 7	Microfinance Deposit Taking Institution	2	Yes	$28,000,000
Uganda	FSP 8	Microfinance Deposit Taking Institution	2	Yes	-
Uganda	FSP 9	Development Bank	DFI	Yes	-
Uganda	FSP 10	Commercial Bank	1	Yes	$510,000,000
Uganda	FSP 11	Commercial Bank	1	Yes	$448,000,000
Tanzania	FSP 1	Commercial Bank	1	Yes	$38,000,000
Tanzania	FSP 2	Commercial Bank	1	Yes	$1,870,000,000
Tanzania	FSP 3	Microfinance Deposit Taking Institution	2	Yes	$47,400,000
Tanzania	FSP 4	Commercial Bank	1	Yes	$40,000,000
Tanzania	FSP 5	Microfinance Deposit Taking Institution	2	Yes	$1,600,000,000
Tanzania	FSP 6	Commercial Bank	1	Yes	$120,000,000
Kenya	FSP 1	Commercial Bank	1	Yes	$301,000,000
Kenya	FSP 2	Commercial Bank	1	Yes	$31,000,000
Kenya	FSP 3	Commercial Bank	1	Yes	$4,200,000,000
Kenya	FSP 4	Microfinance Deposit Taking Institution	2	Yes	$485,000,000
Kenya	FSP 5	Microfinance Deposit Taking Institution	2	Yes	$156,000,000
Kenya	FSP 6	Commercial Bank	1	Yes	$4,750,000,000
Kenya	FSP 7	Microfinance Deposit Taking Institution	2	Yes	$161,000,000
Kenya	FSP 8	Microfinance Deposit Taking Institution	2	Yes	$ 28,000,000
Kenya	FSP 9	Commercial Bank	1	Yes	$170,000,000
Kenya	FSP 10	Commercial Bank			$80,000,000
Kenya	FSP 11	Microfinance Bank			$2,800,000
Malawi	FSP 1	Commercial Bank License and Investment Banking	1	Yes	$34,928,639
Malawi	FSP 2	Commercial Bank License	1	Yes	$874,000,000

Malawi	FSP 3	Deposit Taking MFI	2	Yes	$361,300,000
Malawi	FSP 4	Non-deposit taking MFI	3	No	
Malawi	FSP 5	Commercial Bank	1	Yes	$392,000,000
Malawi	FSP 6	Registered as a Non-deposit taking MFI	Micro-Credit	No	
Malawi	FSP 7	No	Micro-Credit	No	
Malawi	FSP 8	No	NGO	No	
Malawi	FSP 9	Yes	1	Yes	$122,000,000
Malawi	FSP 10	N/A	Micro-Credit	No	

Annex 3: S34D Financial Service Provider Capital Adequacy, Portfolio Emphasis, Cost-to-Income Ratios and Shareholders

Country	FSP Name	Capital Adequacy	Portfolio Emphasis (Investment vs. Retail, etc.)	Cost-to-Income Ratios	Shareholder Composition
Uganda	FSP 1	30%	19% Construction, 16% Ag, 15% trade	73%	UG Episcopal Conference 31.3%, Triodos 18.3%
Uganda	FSP 2	20%	SME, LE	53%	UG 100% owned by Equity Group
Uganda	FSP 3	26%		91%	20.1% UG Women Trust, 19.6% Oiko Credit
Uganda	FSP 4	16%	Personal, Trade, Ag	50%	100% SB Africa Holdings
Uganda	FSP 5	39%	Microfinance, SME	88%	
Uganda	FSP 6	31%		78%	FINCA Microfinance Cooperative A ("COOP") 99% and FINCA International (USA) 1%
Uganda	FSP 7	54%		72%	100% UG Gov.
Uganda	FSP 8			75%	
Uganda	FSP 9	90%	Ag + Manufacturing = >80%	55%	Owned by UG Gov.
Uganda	FSP 10	22%	21% Ag 17% trade	66%	58.7% Arise BV, 9.97% SCB Mauritius
Uganda	FSP 11	23%		71%	
Tanzania	FSP 1			107%	
Tanzania	FSP 2	15%	Personal, Ag, Mining	67%	DANIDA, IFC, CDC, AfCap
Tanzania	FSP 3			41%	
Tanzania	FSP 4				
Tanzania	FSP 5	19%		59%	Rabobank + Treasury Registrar ~66%
Tanzania	FSP 6	15%	36% Personal	83%	TZ Gov 83.4%
Kenya	FSP 1	16%		105%	
Kenya	FSP 2	30%		747%	
Kenya	FSP 3	20%	SME, LE	53%	UG 100% owned by Equity Group
Kenya	FSP 4	20%		78%	KE Tea Development Agency, Muya Family, Daykio Plantations
Kenya	FSP 5	20%	61.4% consumer 38.6% trade	91%	67% Old Mutual Trust
Kenya	FSP 6	18%		55%	
Kenya	FSP 7	18%		80%	
Kenya	FSP 8	17%		95%	
Kenya	FSP 9	14%		110%	
Kenya	FSP 10	21%		112%	Archers and Wilcock Ltd,Sovereign Trust Ltd Duggan Ltd

Kenya	FSP 11	47%		82%	
Malawi	FSP 1	16%	Investment, Manufacturing, Wholesale, Retail	cost to income ratios	74.45% Continental Holdings
Malawi	FSP 2	18%	Consumer, Retail	71%	Premier Capital (32%), Anadkat (14%), Prime Bank (11.24%)
Malawi	FSP 3			70%	
Malawi	FSP 4			78%	Limited by Guarantee Company, has no share capital but has sponsoring members to Memorandum & Articles of Association known as United Purpose (K10,000) and Mrs. Kathryn Llewellyn (K1000)
Malawi	FSP 5	20%	Retail, Manufacturing	60%	51% Press crop (LSE listed), 25% Old Mutual, 23% Public
Malawi	FSP 6				100% owned by the COMSIP
Malawi	FSP 7				Arthur Mpama 22%, Moses Chirambo 19%, Kondwani Nanchukwa 17% and Frank Mwenefumbo 30% - remaining 12% is in the process of being reallocated to the current Shareholders
Malawi	FSP 8				Registered as NGO
Malawi	FSP 9	15%		94%	NICO Holdings Plc 54.63%, Continental Holdings Limited 27.25%, National Investment Trust Limited 1.31% and Public 16.71%
Malawi	FSP 10				100% wholly owned by Tradeline Corporation Group Ltd

Annex 4: S34D Financial Service Provider Geographies, Growth Trajectories, Agriculture Exposures, and Portfolio Values

Country	FSP Name	Number Branches/ Geographic Footprint	Deposit Portfolio Growth (3-year trend)	Lending Portfolio Growth (3-year trend)	Agriculture Exposure	Current Portfolio by Value (USD)
Uganda	FSP 1	>60 Branches. Wide national coverage	17%	7%	17%	$356,000,000
Uganda	FSP 2		13%	6%	2%	$2,970,000,000
Uganda	FSP 3	36	7%	4%		$29,400,000
Uganda	FSP 4	79	17%	12%	15%	$660,000,000
Uganda	FSP 5	20	69%	36%	22%	$15,200,000
Uganda	FSP 6	27	3%	4%	25%	$25,200,000
Uganda	FSP 7	34	10%	8%		$36,000,000
Uganda	FSP 8	66		18%	22%	$42,000,000
Uganda	FSP 9			29%	41%	$53,000,000
Uganda	FSP 10		40%	40%	0%	$370,000,000
Uganda	FSP 11		20%	0%	0%	$274,000,000
Tanzania	FSP 1	13	-36%	-35%		$36,500,000
Tanzania	FSP 2	166	8%	8%		$1,250,000,000
Tanzania	FSP 3	5	118%	12%		$810,000,000
Tanzania	FSP 4	6				$36,000,000
Tanzania	FSP 5	223	1%	-7%	2%	$1,200,000,000
Tanzania	FSP 6	75	11%	17%	3%	$160,000,000
Kenya	FSP 1		-4%	-13%		$211,000,000
Kenya	FSP 2		170%	635%		$21,300,000
Kenya	FSP 3		13%	6%	2%	$2,970,000,000
Kenya	FSP 4		2%	2%	6%	$441,000,000
Kenya	FSP 5	41	-4%	-5%	0%	$169,000,000
Kenya	FSP 6		8%	7%		$4,170,000,000
Kenya	FSP 7		-1%	3%		$200,000,000
Kenya	FSP 8		-29%	-3%		$36,000,000
Kenya	FSP 9		42%	15%		$131,000,000
Kenya	FSP 10		2%	0%		$66,000,000
Kenya	FSP 11		44%	37%		$4,400,000
Malawi	FSP 1	4	26% YOY (Not 3Y)	23% YOY (Not 3Y)	5%	$17,149,547
Malawi	FSP 2	6	+180% (YOY not 3Y)	+100% YOY (Not 3Y)	8%	$350,000,000

Malawi	FSP 3	23	+42% (YOY not 3Y)	+6% YOY (Not 3Y)		$797,500,000
Malawi	FSP 4	Physical Branches 2 (Dedza & Zomba) plus 17 Branchless presence				$1,312,290
Malawi	FSP 5	32	6.6% YOY (not 3Y)	21% YOY (not 3Y)	17%	$222,133
Malawi	FSP 6	3 Physical Branches but also delivers services in other areas using branchless			80%	$106,667
Malawi	FSP 7	2				$353,333
Malawi	FSP 8	4 Districts (Zomba, BT, Mulanje & Chiradzulu)			80%	$1,300,000
Malawi	FSP 9	26				$34,666,667
Malawi	FSP 10					$312,000

Annex 5: Current Scan of Loan Products, by Country

Country	Bank	Product Name	Min. Amount (USD)	Max Amount (USD)	Min Term (Months)	Max Term (Months)	Fees (%)	Monthly Interest Rate (%)	Flat Rate or Declining Balance?	Uses/ Target	Category	Currency
MW	CDH Investment Bank	Short term loans	$100,000	$1,466,667	6	36	1%	19%	Flat	Corporate Clients	SME	
MW	First Capital Bank	Group Tobacco loans	$26	$17,000	9	12	6%	1%	Flat	Tobacco Farmers	Production	Loans in US$
MW	First Capital Bank	Group Input loans	$324	$2,667	9	12	4%	3%	Flat	Smallholder Farmers under TLC	Production	
MW	First Capital Bank	SME loans	$2,667	$66,667	12	60	3%	2%	Declining balance	Estate owners	Production	
MW	First Capital Bank	Tractor	$45,000	$65,000	12	60	3%	15%	Declining balance	Estate owners	Production	Loans in US$
MW	CUMO	Fumba loans	$13	$3,333	6	12	6%	5%	Declining balance	Smallholder Farmers	Production	
MW	COMSIV	Legumes loans	$133	$2,000	1	6	10%	5%	Declining balance	Smallholder Farmers	Production	
MW	COMSIV	Ordinary Ag loans	$133	$2,000	1	6	10%	5%	Declining balance	Smallholder Farmers	Production	
MW	FISD Microcredit Agency	Ag Loans (Inputs)	$13	$4,000	4	12	5%	6%	Declining balance	SME & Smallholder Farmers	SME	
MW	FISD Microcredit Agency	Agloans (Equipment)	$333	$4,000	12	24	5%	6%	Declining balance	SME & Smallholder Farmers	SME	
MW	FISD Microcredit Agency	Agribusiness loans (inputs, market, equipment)	$4,000	$80,000	36	60	5%	6%	Declining balance	SME & Smallholder Farmers	SME	

MW	One Acre Fund	Ag product (packages based on acreage)							Flat amount	Smallholder Farmers		Interest not calculated as a margin; loans are a full package (inputs plus charges)
MW	NBS Bank						5%	2%	Declining balance	SME, Corporations & Smallholder Farmers		
MW	Community Finance	Production Loans	$67	$4,000	3	12	6%	3%	Declining balance	Maximum loan for an individual in a group is MK 3 million	Production	
MW	Community Finance	Trade Market Loans	$67	$6,667	3	12	6%	3%	Declining balance		SME	
UG	Opportunity Bank Uganda	Group loans	$27	$1,351	4	12	2%	3%	Flat	Smallholder Farmers	Production	
UG	Opportunity Bank Uganda	Individual Loans	$135	$5,405	3	24	4%	2%	Declining Balance	Smallholder farmers & SME	Production	
UG	Opportunity Bank Uganda	SME loans	$5,405	$972,973	3	60	4%	2%	Declining Balance	SME & Corporations	SME	
UG	Pride Microfinance (MDI)	Pride Agriculture Loan	$54	$8,108	3	24					Production	
UG	UGAFODE Microfinance (MDI)	Group loans	$27	1% of core capital	3	36					Production	
UG	UGAFODE	Individual Loans	$27	1% of core capital	3	36						

	Microfinance (MDI)											
UG	UDB	Short term loans			1	18	2% max UGX 100mn	1.1% plus risk premium		Productive inputs		
UG	UDB	Medium term loans			24	60	2% max UGX 100mn	1.16% plus risk premium		Financing of assets or capital		
UG	UDB	Long term loans			60	120	2% max UGX 100mn	1% pus risk premium		Projects		
UG	UDB	Equity Investment		$25,000		120		Between 0.8% to 1%		Registered farmer groups doing ag investments		
UG	FINCA Uganda (MDI)	Group Loan	$81	$94,595	3	36	3%	3%	Declining balance	Smallholder farmers	Production	
UG	FINCA Uganda (MDI)	Individual Loan	$81	$94,595	3	36	3%	3%	Declining balance	Smallholder farmers & SME	SME	
UG	aBi Trust	Individual Guarantee		$135,135						Agribusiness focused on SMEs		
UG	aBi Trust	Portfolio Guarantee		$135,135						Agribusiness focused on SMEs		
UG	aBi Trust	Portable Guarantee		$135,135						Agribusiness focused on SMEs		

KE	Bank of Africa Kenya	Agribusiness loans for equipment & machinery	$1,000	Based on ability to pay	3	36			Both	Farm machinery & equipment	Equipment	
KE	Bank of Africa Kenya	Agribusiness loans for production	$1,000	Based on ability to pay	3	12			Both	Inputs, livestock, land purchase & marketing	Production	
KE	DIB Bank Kenya	Agribusiness value chain										
KE	Equity Bank Kenya											
KE	Family Bank	Wheat Burley & Steers fattening		$194,175		10 for wheat & 12 for steers	5%	1%	Declining balance	Working capital for production of wheat & purchasing of steers		
KE	Family Bank	Commercial crop loan	$2,500	$5,000	12	24	5%	1%	Declining balance	Production & post-harvesting	Production	
KE	Family Bank	Contract growers finance	$2,500	$5,000	24	60	5%	1%	Declining balance	Production & post-harvesting	Production	
KE	Family Bank	Dairy financing	$2,500	$5,000	24	60	5%	1%	Declining balance	Temporary cash advance against raw milk sales	SME	
KE	Family Bank	Grain Trading Finance		$4,854		6	5%	1%	Declining balance	Production & post-harvesting		
KE	Family Bank	Kilimo Biashara				36	5%	1%	Declining balance	Working capital to improve productivity		
KE	KCB Bank Kenya	Mavuno Tea loan	$50	$30,000	3	36	3%	1%		Seasonal credits for inputs for tea farmers	Production	

KE	KCB Bank Kenya	Dairy Installment loan	$500	$200,000	3	60	3%	1%		Individual & Cooperative dairy farmers	SME	
KE	KCB Bank Kenya	Dairy Herd Improvement loan	$500	$20,000	18	36	3%	1%		Production loans to dairy farmers	Production	
KE	KCB Bank Kenya	Mavuno Sugaracane Working Capital	$50	$20,000	6	6	3%	1%		Contracted farmers whose cane is between 10-14 months	Production	
KE	KCB Bank Kenya	Mavuno Sugarcane Advance Payment	$50	$5,000	3	6	3%	1%		Contracted farmers for working capital	Production	
KE	Sidian Bank	Kilimo Plus Micro	$200	$5,000	3	12	3%	1%		Smallholder & medium scale farmers for commercial purposes	SME	
KE	Sidian Bank	Chai loans						1%		Bridging finance for tea farmers		
KE	Trans-National Bank	Fertilizer loan	$100	$3,000	3	36				Purchasing of fertilizer	Production	
KE	Trans-National Bank	Crop loan	$100	$10,000	3	12				Farm inputs loan	Production	
KE	Trans-National Bank	Tractor loan		$29,126		24		1%	Flat rate	Purchasing of tractors		
KE	Trans-National Bank	Other farming activities	$100	$3,000	3	12				Bee keeping, poultry & animal husbandry	Production	

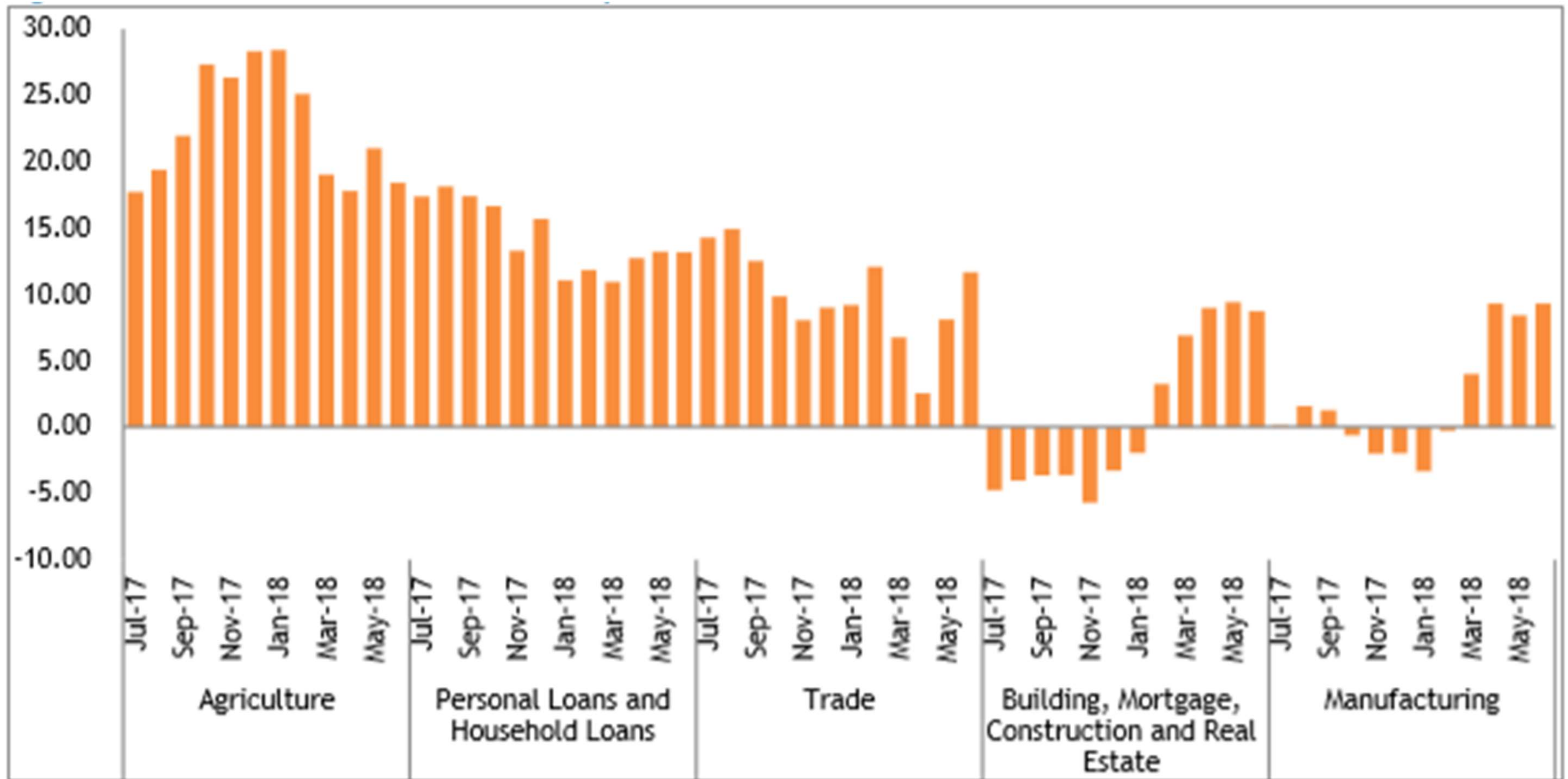
KE	Trans-National Bank	Warehouse receipt								To curb cash shortages for the grain value chain players		
KE	Agricultural Finance Corporation (AFC)	Agribusiness loans				36		1%		For individual & group agribusiness traders		
KE	Agricultural Finance Corporation (AFC)	Livestock & Fisheries Development			24	60				Targeting individual & group for livestock and fisheries production		
KE	Agricultural Finance Corporation (AFC)	Cash crop loan			24	60				Credit facility for production of cash crops & its equipment		
KE	Agricultural Finance Corporation (AFC)	Horticulture & floriculture development loan			24	60				Financing individual & group farmers producing vegetables & flowers		
KE	Agricultural Finance Corporation (AFC)	Stawisha group loan	$50	$10,000	12	36				Group trading in produce & inputs	SME	
KE	Agricultural Finance Corporation (AFC)	Seasonal Crop credit				12				Productions loans for both group & individual farmers		

KE	Century Microfinance Bank	Mazao loan	$50	$10,000	3	12				For farm inputs & Dairy production	Production	
KE	Century Microfinance Bank	Mazao Factor			30 days	45 days	3%		Flat rate	Up to 80% upfront payment to farmers upon delivery of produce to an exporter, bulker, processor, etc.		
KE	Choice Microfinance Bank	Lima Group loan		$971		12				Production loan for SHF		
KE	Faulu Microfinance Bank	Nafaka loan	$50	$30,000	3	12				Production loans to farmers	Production	
KE	Faulu Microfinance Bank	Maziwa loan		$29,126		36				Production loan for dairy farmers		
KE	Faulu Microfinance Bank	Green Gold		$4,854		12				Bridging finance for tea farmers		
KE	Kenya Women Microfinance Bank	Dairy Farming loan								For diary production		
KE	Kenya Women Microfinance Bank	Green House Loan								Financing farmer kits for modern farming		
KE	Kenya Women Microfinance Bank	Fish Farming loan								Financing fish production & capital		

KE	Kenya Women Microfinance Bank	Mzinga loan								Financing bee/ honey production		
KE	Kenya Women Microfinance Bank	Agro dealer financing								Financing agro dealers as working capital		
KE	Kenya Women Microfinance Bank	Input Financing								Production loans for inputs		
KE	Rafiki Microfinance Bank											
KE	Remu Microfinance Bank	Agribusiness loan								Targeting farmers in need of working capital		
KE	SMEP Microfinance Bank	Dairy Farming loan								Production & working capital for dairy farmers		
KE	SMEP Microfinance Bank	Input Financing								Production loans for inputs		
KE	SMEP Microfinance Bank	Agribusiness /Agro dealer loan								Working capital for agro dealers and farmer traders		
KE	SMEP Microfinance Bank	Livestock financing								For purchase of livestock and production		
KE	SMEP Microfinance Bank	Agriculture asset financing								For purchase of farm machinery & equipment		

KE	SMEP Microfinance Bank	Green House Financing								For purchase of greenhouse structures & irrigation kits		
KE	Sumac Microfinance Bank	Kilimo Biashara loan	$50	$3,000	3	12				Production loans for inputs and livestock	Production	
KE	Sumac Microfinance Bank	Nafaka Biashara loan	$50	$5,000	3	12				Warehouse receipt loan & all other agriculture activities	Production	
KE	U & I Microfinance Bank											
KE	Juhudi Kilimo	Farm animal loan								For acquisition of farm animals		
KE	Juhudi Kilimo	Crop farming loan								Production loans for farmers		
KE	Juhudi Kilimo	Farm equipment loan								For purchase of farm equipment & machinery		
KE	Juhudi Kilimo	Working capital loan								For boosting farmer businesses		
KE	Tulaa	Inputs on credits								Input loans for farmers		
KE	Farmdrive	Credit scoring										
KE	Musoni Microfinance	Cloud based core banking system										

Annex 6: Annual Private Sector Credit Growth in Uganda, by Sector



Source: Bank of Uganda

Annex 7: Common Banking Terms and Meanings[37]

Basel Accords (Basel I, II, and II): A series of banking regulations set by the Basel Committee on Bank Supervision. The committee provides recommendations on banking regulations regarding capital risk, market risk and operational risk. The accords ensure financial institutions have enough capital on account to meet obligations and absorb unexpected losses. Basel I was introduced in 1988, and Basel II provided a more comprehensive update to evaluate institutions' risk against additional criteria. Basel III was introduced after the global financial crisis of 2008 to update and strengthen the accords. High-income countries typically use Basel III to govern regulations in their banking sector, as well as some low- and medium-income countries. Basel II is still typically used in many developing countries, given that the banking sector is also less developed and less capable of meeting Basel III regulations. As countries and financial sectors develop, banking regulations typically become more stringent to align with the highest standards (Basel III).

Capital Adequacy Ratio: The capital adequacy ratio (CAR) is a measurement of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures. The capital adequacy ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world. It is risk-weighted according to the different tiers of capital, and the portfolio value of loans is adjusted depending on the financial service provider's riskiness. Assets included in the ratio calculation also include T-bills and deposits at the Central Bank. Note that capital reserved are also tiered, with different tiers weighted differently, typically with some measure of liquidity for deposits. Typically, there may be 2-3 ratios of risk-weighted assets to capital reserves. (This report's ratio accounted for total risk weighted assets to Tier 1 and Tier 2 capital.)

Commercial Bank: A financial service provider that accepts deposits, offers checking account services, makes various loans, and offers basic financial products like certificates of deposit (CDs) and savings accounts to individuals and small businesses. A commercial bank is where most people do their banking in developed countries. Commercial banks make money by providing and earning interest from loans such as mortgages, auto loans, business loans, and personal loans. Customer deposits provide banks with the capital to make these loans.

Cost-to-income Ratio: The cost-to-income ratio is a key financial measure, particularly important in valuing banks. It shows a company's costs in relation to its income. To get the ratio, divide the operating costs (administrative and fixed costs, such as salaries and property expenses, but not bad debts that have been written off) by operating income.

Development Finance Institution (DFI): A development finance institution (DFI) also known as a development bank or development finance company is a financial service provider that provides risk capital for economic development projects on non-commercial basis. They are often established and owned by governments or charitable institutions to provide funds for projects that would otherwise not be able to get funds from commercial lenders. Some development banks include socially responsible investing and impact investing criteria into their mandates. Governments often use development banks to form part of their development aid or economic development initiatives.

Microfinance: Microfinance, also called microcredit, is a type of banking service provided to unemployed or low-income individuals or groups who otherwise would have no other access to financial services. While institutions participating in the area of microfinance (microfinance institutions, or MFIs) most often provide lending—microloans can range from as small as $100 to as large as $25,000—many banks offer additional services such as savings accounts as well as micro-insurance products, and some even provide financial and business education. The goal of microfinance is to ultimately give impoverished people an opportunity to become self-sufficient. Given lower loan sizes, microfinance institutions typically have much smaller loan portfolios than commercial banks combined with proportionally high operational costs (given the social mission of many MFIs, they pursue lower-income clients, which generates lower revenue and requires more effort on behalf of the institution to onboard them). Many MFIs can operate sustainably, albeit with thin margins, while (an increasingly small) portion rely on charitable donations to maintain operations.

[37] Definitions sourced from Domestic Central Banks and Investopedia

Tier 1, Tier 2 Capital: A bank's capital consists of tier 1 capital and tier 2 capital, and these two primary types of capital reserves are qualitatively different in several respects. Tier 1 capital is a bank's core capital and includes disclosed reserves—that appears on the bank's financial statements—and equity capital.3 This money is the funds a bank uses to function on a regular basis and forms the basis of a financial institution's strength. Tier 2 capital is a bank's supplementary capital. Undisclosed reserves, subordinated term debts, hybrid financial products, and other items make up these funds. A bank's total capital is calculated by adding its tier 1 and tier 2 capital together. Regulators use the capital ratio to determine and rank a bank's capital adequacy.

Tier I, II, III (financial service provider categorization)**:** Each country's Central Bank maintains criteria that classifies financial service providers according to Tiers. Typically, Tier 1 financial institutions are commercial banks authorized to provide the broadest range of financial services, including holding checking and savings accounts, buy and sell foreign exchange, issue letters of credits, and make loans. Tier II institutions typically include credit and finance companies, and Tier III institutions are typically microfinance institutions, which offer limited financial services.