Data Collection Survey on Enhancement of Financial Access of Private Sector in the United Republic of Tanzania Final Report

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List of abbreviations

ABSA Amalgamated Banks of South Africa
AFD Agence Française de Développement

AfDB African Development Bank

AGF African Guarantee Fund for Small and Medium-sized Enterprises

AML/CFT Anti-Money Laundering/Combating the Financing of Terrorism

AML/KYC Anti-Money Laundering/Know Your Customer

BoT Bank of Tanzania

CAPI Computer-Aided Personal Interview

CAR Capital Adequacy Ratio

DAC Development Assistance Committee

DANIDA Danish International Development Agency

DFI Development Financing Institution

DTB Diamond Trust Bank
EIB European Investment Bank

FCDO Foreign, Commonwealth and Development Office

FDI Foreign Direct Investment

FI Financial Institution

FSDT Financial Sector Deepening Trust

GDP Gross Domestic Product
GNI Gross National Income

IATA International Air Transport Association
IFC International Finance Corporation

IFRS International Financial Reporting Standard

JETRO Japan External Trade Organisation

JICA Japan International Cooperation Agency

KCB Kenya Commercial Bank
MFI Micro-Finance Institution
MNO Mobile Network Operator
MOU Memorandum of Understanding
MSMEs Micro-, Small and Medium Enterprises
NBC National Bank of Commerce (Tanzania)

NIC National Insurance Corp.
NPL Non-Performing Loan

ODA Overseas Development Assistance
OEM Original Equipment Manufacturer
PASS Private Agricultural Sector Support
PSIF Private-Sector Investment and Finance

SA South Africa

SDG Sustainability Development Goal SMR Statutory Minimum Reserve

SSA Sub-Saharan Africa

TADB Tanzania Agricultural Development Bank

TCRA Tanzania Communications Regulatory Authority

TIC Tanzania Investment Centre

TIRA Tanzania Insurance Regulatory Authority

USAID United States Agency for International Development

USSD Unstructured Supplementary Service Data

Executive Summary

This final report provides a summary of the analysis conducted for the 'Data Collection Survey on Enhancement of Financial Access of Private Sector in the United Republic of Tanzania'.

The study's context and purpose were to examine solutions while collecting and analyzing information on bottlenecks that impede financial access for MSMEs and to identify potential solutions and recommendations for JICA's international cooperation going forward to address these bottlenecks in two key areas: private sector investment and finance support to financial institutions; and formation of private sector partnership projects that would connect Japanese companies with Tanzanian players to improve access to finance for MSMEs by capitalizing on Japanese companies' expertise.

The document has five main sections.

1. Overall survey approach

Chapter 1 describes the study's overall goals and approach, and describes findings from the analyses on Tanzania's economic situation, financial services sector overview, development partner engagements, and MSME finance needs survey results.

First, we conducted the MSME finance needs survey for micro, small, medium enterprises in Tanzania to understand the external and internal environment surrounding MSMEs, in parallel to conducting desk top research on Tanzania's economic situation, financial sector overview, and trends of the international development partners.

Then, we assessed the potential activities for overseas private sector investment and finance program and corporate partnership program. With regards to the overseas private sector investment and finance program, the screening process for potential financial institutions for private sector investment and finance included an overview of financial institutions in Tanzania which were assessed on several metrics to identify the most suitable ones for potential partnership with JICA. Screening criteria included credibility, financial performance, MSME services, and digitization. After identifying the top five potential institutions in the first round screening, we conducted follow-up interviews with each one to identify specific bottlenecks for MSMEs that could be addressed through an overseas loan in the second screening. The second screening also focused on getting a sense of the financial institutions' risk and governance and their interest in serving MSMEs. As a result, three financial institutions were identified as the highest potential candidates for overseas private sector investment and finance program. With regards to the corporate partnerships, we identified 24 potential business ideas to address issues faced by MSMEs to access to finance, and prioritized three pilot projects based on the feasibility and potential for impact in addressing the issues faced by MSMEs to access finance.

After that, we conducted desk top research. It started with the economic landscape, delving into the overall macroeconomic indicators (e.g., GDP growth, public debt), import export mix, government policies and regulation, the financial and donor landscapes, and financial-related legal systems, policies, and infrastructure. Tanzania's macroeconomic outlook is generally positive due to steady economic

growth, stable inflation, and an improving fiscal outlook. We have highlighted some of the key insights within this executive summary below:

- Tanzania's real GDP growth is expected to slow down due to COVID-19 but is expected to recover to approximately 5 percent by 2022. The overall outlook on the economy remains positive, with a stable inflation rate at approximately 3 percent and a steadily growing population (58 million people growing at 1.7 percent p.a.).
- The ratio of foreign currency denominated assets to total assets and foreign currency denominated liabilities to total liabilities stood at 27.31 percent and 30.26 percent in 2020 compared to 29.96 percent and 33.73 percent in 2018, respectively. The decrease in the ratio was partly associated with general stability in the exchange rate and reduced use of foreign currency in the domestic market.
- The ratio of non-performing loans (NPL) to gross loans was 10.8 percent at the end of June 2020, compared to 10.7 percent at the end of June 2019². A bank loan is classified as a non-performing when more than 90 days pass without the borrower paying the agreed instalments or interest³.
- Capital adequacy ratio (CAR), the ratio of a bank's capital in relation to its risk weighted assets and
 current liabilities, indicates that the core and total capital adequacy ratios stood at 17.04 percent and
 18.06 percent in 2019 compared to 16.20 percent and 18.14 percent in 2018, respectively. Both ratios
 were above the minimum legal requirements of 10 percent and 12 percent for core and total capital,
 respectively⁴.
- The economy still relies heavily on agriculture (approximately 27 percent of GDP in 2019) and could be affected by weaker private consumption and lower private investments at 4 percent of GDP in 2020 (compared to 8 percent in 2019 ~USD 5Bn) due to COVID. Unemployment and the poverty rate are on an upward trend with unemployment increasing from 2.0 percent in 2019 to 2.2 percent in 2020, and poverty rate increasing from 26.4 percent in 2017 to 27.2 percent in 2020.
- Public debt remains high at approximately 38 percent of GDP but is lower than that of Tanzania's sub-Saharan peers (approximately 29 to 65 percent) and signals low risk of external debt stress. A breakdown of public debt shows improvement, with the external debt share decreasing from 75 percent in 2015 to 72 percent in 2019.
- Tanzania exports 15 to 20 percent of its domestic output mainly gold (37 percent), tobacco (7 percent) and cashew nuts (6 percent). The increase in demand for gold amid global economic uncertainty has helped to narrow current account deficits, providing more favorable conditions for investors.
- Unpredictability in government policy remains a risk for foreign businesses entering Tanzania.
 Tanzania has historically been safe and politically stable; however, the ease of doing business has not changed significantly over the last five years. Tanzania ranks 141st out of 190 countries in this category.

¹ BoT annual report 2019-20

² BoT annual report 2019-20

https://www.ecb.europa.eu/explainers/tell-me/html/npl.en.html

⁴ BoT annual report 2019-20

- Regulation has been steadily improving as the government focuses on strengthening the MSME sector.
- The Tanzanian financial ecosystem includes 47 licensed financial institutions and more than 4,000 value chain financiers, including cooperatives and suppliers. Commercial banks account for approximately 94 percent of the financial sector, with the top four accounting for approximately 50 percent of the asset market share (the total market is about USD\$ 14.4 Bn).
- Key financial sector trends identified include: (1) banking revenue growth is expected to drop to 8 percent from its pre-COVID growth trend of 11 percent; (2) financial institutions are consolidating due to the government's regulatory push to reduce non-performing loan (NPL) ratios to 5 percent (from the current average ratio of 10.8 percent); and (3) digitization is increasing in the sector.
- Mobile money operators strongly influence the financial sector, with mobile banking penetration at approximately 52 percent of the population. In comparison, approximately 21 percent of the population have formal bank accounts.
- Global and Tanzanian Overseas Development Assistance (ODA) has plateaued since 2016; this trend
 is expected to accelerate as donors have less capacity for foreign aid due to impacts of COVID-19.
 According to data from the International Aid Transparency Initiative (IATI), bilateral commitments
 decreased by 26 percent from 2019 to 2020.
- Tanzania is the third-largest recipient of ODA in Eastern Africa, yet less than 2 percent of this aid has been spent on banking and financial services. In 2019, only USD\$ 0.6 Mn was spent on education and training in financial services.
- The US and UK are Tanzania's largest bilateral donors, accounting for over 56 percent of bilateral aid. The World Bank, the Global Fund, and the African Development Bank (AfDB) account for 79 percent of multilateral aid.
- Means to financial assistance has mainly involved the provision of loan facility and guarantee schemes to enable lending through commercial banks. However, stakeholders note, without the means to address demand-side bottlenecks, including MSME's lack of management capabilities and inconsistent regulatory policies, these measures' impact is limited.
- We conducted a survey targeting ~600 MSMEs in Tanzania to investigate potential bottlenecks and identify financing needs of MSMEs, by subcontracting to GeoPoll, a market research company. The survey showed that MSMEs contribute to 35 percent of GDP, but 72 percent of them are financially constrained. There are approximately 3.2 million MSMEs in Tanzania, though this estimate is conservative given the high number of MSMEs that are not formally registered. Moreover, only 3 percent of the country's credit facilities are channeled toward financing for them. Given the high contribution of MSMEs in the economy, improving financial access for MSMEs in Tanzania is critical to unlocking Tanzania's future growth.

- 3 -

⁵ https://www.smefinanceforum.org/data-sites/msme-country-indicators

MSMEs' contribution to the financial sector is expected to continue growing and will reach
approximately 26 percent by 2024 from 19 percent in 2013. The focus on MSME financing has been
intensifying, as MSMEs have become a priority for the government and commercial banks.

2. Analyses of bottlenecks faced by MSMEs

In Chapter 2, bottlenecks faced by MSMEs were analyzed. Key challenges on the supply side of MSME financing include collateral requirements, capacity constraints, high interest rates, and compliance fees; key bottlenecks on the demand side include access to markets and financial products, unreliable records and lack of financial management skills. Also we included existing activities around corporate partnerships such as market access, financial literacy, collateral and productivity improvement.

3. Approach to solving financial access for MSMEs

In Chapter 3, approaches to solving the challenges that MSMEs face in accessing finance were divided into two areas.

For private sector investment and finance (PSIF), we screened the five financial institutions prioritized during the first screening, and identified three as high-potential candidates. Action plans were then developed for each one. To ensure that the overseas loan would have maximum impact for MSMEs, four approaches were considered for financial partnership (i.e., direct financing, tripartite agreements, technical capability building and technical training). Overall, loan products must factor in targeted MSME support, combined with stringent monitoring and evaluation, during the loan tenor. Technical assistance to develop the financial institution's capabilities, as well as build skills development for MSMEs as part of the loan, will be crucial steps in improving financial access in the long term.

Private sector corporate partnership ideas were prioritized according to their potential impact and feasibility; this reduced the original list of 24 ideas to six high-potential ones, then to three that were both feasible and expected to have most significant impact. In-depth pilots were then developed for these three ideas: provision of agriculture insurance to mitigate risk for smallholder farmers; provision and financing of high-capital machinery; and provision of agricultural inputs to improve yield and productivity. In parallel, Japanese companies were prioritized according to their likelihood of considering entry into Tanzania, based on their current strategies. For agricultural inputs we conducted a full landscape analysis of the agri-inputs sector in Tanzania, carrying out multiple interviews with key stakeholders in this space. Further to this we identified business entry and go-to-market models for Japanese seed players. In order to fully understand Japanese company needs, we conducted an information sharing seminar and workshop with Japanese Stakeholders in September.

4. Next steps for improving MSMEs' financial access

In Chapter 4, we summarized next steps for JICA to take concrete actions and formulate cooperation projects in order to improve MSMEs' financial access.

For ODA through the PSIF team, focus would be in completing discussions with the prioritized FIs in order to determine the strongest candidate for a partnership. Following the second discussions with each of the priority financial institutions, JICA would need to conclude any aspects of due diligence not covered under preliminary first and second screening, without an NDA, in order to draft a high-level concept note for the partnership. This could then be followed by concluding an NDA with the FI before transitioning to a tangible implementation of the proposed partnership concept. JICA is currently in discussion with multiple financial institutions to identify appropriate partnership opportunities.

For Private Sector Partnerships, given the success of the information-sharing seminar on 'Seed Business Development in Tanzania', it will be critical for JICA to focus on tangible outcomes. The agency can consider providing continuous support to Japanese companies that expressed interest during the seminar. Over the next six months, JICA can proactively keep in touch with these Japanese companies and provide any information they need to develop a pilot business idea, and potentially help with set up of the business in Tanzania.

This section also covers lessons learned during the survey including ways JICA can further deepen its impact in Tanzania

5. Conclusion

In the final chapter, we conclude with lessons learned and some suggestions for the future.

Also, we have included the questionnaire we used in the MSME finance needs survey as an appendix in Chapter 6.

Chapter 1 Overall survey approach

1.1 Overall survey

1.1.1 Purpose and background

'Vision 2025', the Government of Tanzania's long-term plan for economic development, sets a goal of entering into middle-income-country status by 2025. One key component of this goal is economic growth driven by industrialization. The second phase of the government's 'Five-Year Development Plan' (FYDP), 'FYDP2' (which spans 2016/2017-2020/2021), positions manufacturing-driven industrialization as a major policy challenge, particularly the development of small and medium-sized enterprises (SMEs).

Although private sector companies in Tanzania tend to be biased towards either large companies or micro- and smaller enterprises, the development of medium and smaller-scale operators will be crucial to providing stable employment opportunities to the roughly 800,000 youth who enter the labor market every year. However, the country's private sector companies, which are primarily micro-enterprises and SMEs, have only limited access to the funding required for growth and expansion, and this limited access impedes industrial promotion.

Several factors are believed to be preventing access to funds. For example, many private sector commercial banks are biased towards lending to large companies with low credit risk to avoid high non-performing-loan ratios. Moreover, these banks tend to set interest rates at more than 20 percent when lending to MSMEs because many MSMEs lack adequate collateral and have a higher credit risk. However, more detailed analysis and solutions are needed to determine whether these factors indeed are hindering growth and expansion.

1.1.2 Objectives

In light of the background described above, the objectives of this project are to study and analyze the obstacles impeding financial access for micro-enterprises and SMEs, and to collect information that will encourage the formation of projects considered to be effective in removing impediments in Tanzania. Such projects might include private sector investment and finance support for financial institutions, and fin-tech or other private sector collaboration projects like business assistance for MSMEs and achieve progress towards Sustainable Development Goals [SDGs]. Below are the specific results expected from this project:

- 1. Analysis of the challenges and bottlenecks to corporate finance in Tanzania and evaluation of potential actions
- 2. List and selection of candidates as intermediary financial institutions in private sector investment and finance (bank loans)
- 3. For the selected financial institutions (one to two banks), collection of the detailed information required, advice regarding challenges and improvement actions, and proposals of action plans

4. Provision of basic information for the formation of private sector collaboration projects in providing business assistance to SMEs/SDGs.

1.1.3 Methodology

In this survey we collected information through research, interviews and stakeholder workshops. The survey followed an implementation structure mirroring the Terms of Reference (Figure 1).

This final report covers analysis and findings from (1) conducting a preliminary analysis of challenges and bottlenecks in corporate finance and developing approaches to solving them. We divided this activity into two workstreams: the private sector investment and finance workstream [activities (2)-(4) below], and the project formation workstream for the private sector collaboration project (SDGs Business Supporting Survey) [activity (5) below]. This final report summarizes what has been learned thus far in the study and which discussion points to focus on to produce effective output in the remaining period.

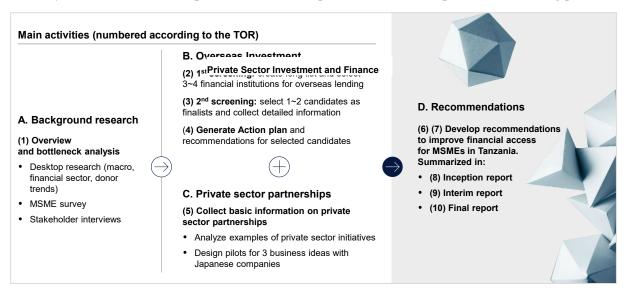


Figure 1: Project Deliverables Overview

The table below details the actions and deliverables of each phase. These actions and deliverables incorporate all of the items identified in (5). Items specified in the terms of reference are indicated with brackets.

Details and deliverables of activities in this project in the Table 1 below.

Table 1: Project deliverables and activities

Survey Items Descript		Description and Key Activities	Deliverables	
1.	Survey overview	Introduction to the survey, including:	Project logistics:	
	-	Survey context and background	 Kick-off document 	
		• Objectives	including alignment on	
		Methodology	team structure	
		• Implementation structure	 Meeting schedule 	
		Work plan	 JICA collaboration 	
		• Team structure	Project promotion system	
		Tasks are completed to facilitate activities in April:	with JICA	
		Confirm JICA team collaboration		

Sur	vey Items	Description and Key Activities	Deliverables
		 Coordinate interviews (JICA leader, Tanzania financial sector representatives, etc.) Prepare data for analysis 	 Status management meeting, interview schedule Data set
2.	Financial situation in Tanzania	The following analysis survey was conducted through research of documents and public information, analysis, and interviews with experts and local companies: 1. Macroeconomic trends and country risks Macroeconomic trends; political risk, foreign exchange convertible remittance risk; various systems for mitigating country risk 2. Financial-sector trends and related risks (A) Overview of financial markets; (a) Legal systems, policies, infrastructure systems and policies 3. Contents and trends of other donors' support in the financial sector (outline of IFC, AfDB support and other precedents) 4. Financial access to companies (A) Overview of corporate finance by sector; (a) overview of legal systems, policies; (c) understanding the financial needs and financial access conditions of enterprises in selected sectors	Understanding of basic information Understanding the fundamentals of economy and finance in Tanzania, as well as precedents for small and medium-sized enterprise financial access and improvement of other donors Selection of focus sectors Based on this basic information, selecting sectors to focus on and developing an understanding of those sectors' specific needs
3.	Bottleneck analysis in corporate finance	 Bottleneck analysis and approach to financial access (a) Challenges in corporate finance in Tanzania; (a) outline and analysis of bottlenecks; (a) hypothesis on future support measures Research on improvements in financial institutions access in other countries and private business partnerships in selected sectors (if necessary) 	Understanding of and future approaches to bottlenecks and challenges, hypothesis on support measures
4.1	Approach to solving financial access issues	Based on the analysis in the previous phase: 1. Select primary screening criteria Arrange the conditions required by the financial institutions that contribute to improving financial access and set criteria. Consider interest in Private Sector Investment and Finance and later initial due diligence. 2. Collect and analyze information on major financial institutions in Tanzania (a) Major services, outstanding loans, number of branches, lending locations, capital structure, and non-performing loans. Collect rights, lending rates, and other necessary information.	List of 3-4 financial institution candidates selected through primary screening of financial institutions
	Collection of detailed information necessary for the formation of overseas investment and loan businesses		List of candidates for financial institutions selected through second screening and business outline of overseas investment and loan business for each candidate

Sur	vey Items	Description and Key Activities	Deliverables
	Collection of basic information concerning the formation of private partnership projects for SMEs and SDGs business support projects, etc.	 (b) assessment of the credit line extended through the provision of bank clones; and (f) implementation of the process and effect of financial access improvement expected to be realized through overseas investment and loan to the financial institution 2. Select second screening criteria 3. Conduct second screening and prepare business summary (a) Select 1-2 banks as target financial institutions for Private Sector Investment and Finance. Outline Private Sector Investment and Finance business. Prepare an action plan for implementation of the business (as needed) Based on our approach to improving financial access, the following actions will be taken to promote the formation and trial of private sector partnership projects: 1. Review pilot survey proposal (a) Conduct study of business ideas, (a) perform various analyses of advancing into Japanese companies, (c) prepare pilot survey draft 2. Identification of Japanese companies (a) Formulate pilot survey policy, (a) identify local partners, (c) Definition and road map for pilot survey 3. Conduct pilot survey 4. Transmit information 5. Prepare an implementation plan (if necessary) for 	Proposals and plans
5.	Review 1-4 findings and consider assistance measures for improving financial access	supporting private business Based on the review of 1-4 findings on the direction of support, JICA will consider the best possible support plan after evaluating the proposal.	Summary of desired support measures and implementation plans based on the entire survey
6.	Recommendations for improved financial access in Tanzania	Based on the above-mentioned analysis and support measures, we will summarize the recommendations for improving corporate financial access in Tanzania in the future, including other projects	Summary of recommendations

1.1.4 Workplan

Figure 2 shows the workplan for the project.

As noted above, the study was conducted in three phases. The first phase studied (1) challenges and bottlenecks in corporate finance and action approaches. The second phase covered (2)-(4), private sector investment and finance and, in parallel, the collection of basic information for (5) the formation of private sector collaboration projects. The third phase involved developing the summaries and recommendations for Sections (6) and (7).

Four workshops were conducted as part of the overall workplan. The first 2 workshops focused on the analysis and outcomes of the FI screenings, the third workshop was on the corporate partnership pilots,

identifying the priority areas of focus. A final workshop on 16th September was held with Japanese players in the agri-inputs seed business.

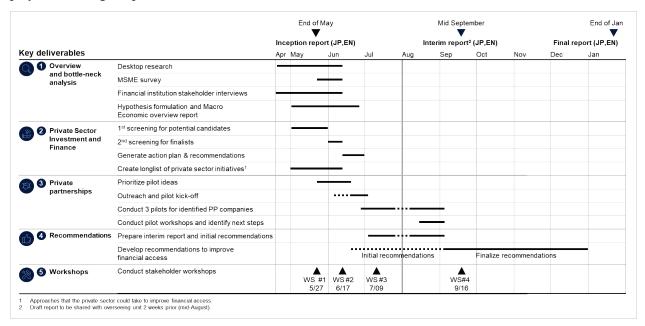


Figure 2: Project Workplan

1.2 Survey of MSME Finance Needs

1.2.1 Survey objective

GeoPoll, a sub-contractor with extensive experience in conducting surveys in Africa, conducted a survey targeting approximately 600 MSMEs in Dar es Salaam, Arusha, and Mwanza. The survey aimed to gain a better understanding of MSMEs' current status, their use of financial products and services, the bottlenecks they face, their financing needs, and the potential support that financial institutions could provide. Respondents were limited to either the business owner or general manager working for another owner. Detailed survey questions are attached in the Appendix (Chapter 6).

1.2.2 Methodology

For this survey, MSMEs were categorized by their annual revenue, and the IFC's current definition of MSMEs was applied⁶.

Table 2: MSME classification

Categorization	Annual revenue
Micro-enterprise	USD\$ <100,000
Small enterprise	USD\$ 100,000-3Mn
Medium enterprise	USD\$ 3-15Mn
Large enterprise	Above USD\$ 3Mn

International Finance Corporation, "IFC's Definitions of Targeted Sectors," 2021, https://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/priorities/ifcs+definitions+of+targeted+sectors.-

Potential survey candidates were selected according to the following criteria: size, location, and industry, with quotas as shown in Figure 3. These criteria were set with reference to the National Baseline Survey conducted in 2012⁷.

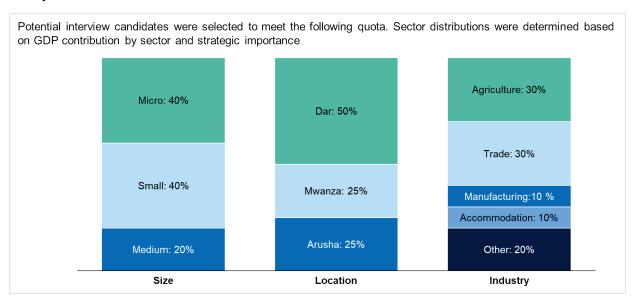


Figure 3: Quota for MSME Finance Needs Survey

The survey was categorized into four topics: current status, bottlenecks, financing needs, and support needs. Before launching the survey, the survey team received interview training to familiarize them with the survey's context and questions. The team conducted 614 computer-aided personal interviews (CAPIs) over the course of three weeks in May 2021. The GeoPoll team collected the results, and the McKinsey team analyzed them in detail.

1.3 Private sector financial institution screenings

We began with a list of 47 financial institutions – the total number of registered financial institutions in Tanzania at the time. All 47 went through the first screening, which entailed gathering basic information through desktop research (e.g., information on credibility, financial performance, MSME-focused services, and digital capabilities). Five potential financial institutions made it to a short list that went through a second screening. This assessment, which focused on potential MSME impact, current partnerships, management and governance, and general track record, identified four proposed partnerships through more detailed research and interviews. Two enablers were identified as key to enhancing the proposed financial institution partnership: an internal enabler, developing digital risk underwriting capabilities within the financial institution; and an external enabler, developing the financial institution's capabilities to deliver financial literacy and business skills training to MSMEs.

Most of the information for the second screening was obtained through interviews with candidate banks.

Financial Sector Deepening Trust, "National Baseline Survey Report – Micro, Small, and Medium Enterprises in Tanzania," Dec. 2012, https://www.fsdt.or.tz/wp-content/uploads/2016/05/MSME-National-Baseline-Survey-Report.pdf.

1.3.1 Pre-screening

Of the 47 licensed financial institutions in Tanzania in 2020, 35 were commercial banks, two were local development finance institutions (DFIs), four were micro-finance Institutions (MFIs), and six were community banks. Among these 47, commercial banks had about 94 percent of the assets in 2020⁸.

A pre-screening eliminated banks that were non-private companies or too small to absorb JICA's investment. The criteria for the pre-screening included:

- Owned by government
- Commercial banks: less than USD\$ 100Mn in assets and fewer than 10 branches
- Community banks/MFIs: less than USD\$ 20Mn in assets and fewer than 10 branches

These criteria eliminated 22 financial institutions.

1.3.2 Primary screening

The primary screening used four criteria to assess the remaining 25 financial. Each criterion was split into tangible metrics with specific weightings and scorings (Figure 4). The criteria include:

1. Size and reach:

What is the institution's asset size, geographical coverage, and customer reach? Larger financial institutions can reach more MSMEs.

2. Financial performance:

What are the institution's key financial metrics, and how stable is the financial institution? Financial institutions with strong financial performance are more stable.

3. Services and digitization:

What level of service does the institution provide for MSMEs, and what are its digital capabilities? Varied services and strong digitization indicate more desirable, stable institutions.

4. Interest in MSME development:

What is the institution's interest and experience in overseas investment? Previous DFI partnerships signal good governance and are in line with JICA's preference for co-investing.

⁸ BoT Annual report 2019-20

Crite	ria	Metric	Reason	Sources	Scoring
皛	Size and reach	Market share by assets	Relative size gauge	BoT, annual reports	Scored from 1 - 10 based on size of 0% - 15+% market share
سات	20%	Number of branches	Reach gauge	BoT, annual reports	Scored from 1 - 10 based on 0-200+ branches
		Percent of Retail (including MSMEs) loan book	MSMEs-focus gauge (MSMEs data not available, high retail percentage is a good gauge of focus on MSMEs)	Annual reports	Scored from 1 - 10 based on 0% -70%+ retail-loan book
~~	Financial	RoAE	Longer-term financial returns	Annual reports	Scored from 1 - 10 based on 0%-17.5%+ RoAE
111	per- formance	Non-performing loan ratio	Risk management/stability gauge	Annual reports	Scored from 1 - 10 based on 35%-15% NPL (Elimination of banks above 35% NPL)
	30%	Capital Adequacy Ratio	Risk management/stability gauge	Annual reports	Scored from 1 - 10 based on 0%-19%+ CAR (Elimination of banks below 10% threshold)
		Loan book growth (over 3 years)	Growth and ambition	Annual reports	Scored from 1 - 10 based on 0%-15%+ loan book CAGR
7	Services and	SME products/service offered ¹	MSMEs-focus gauge	Annual reports, websites	Scored from 1 – 5, based on level of MSMEs services offered
-	digitization	SME-focused division	MSMEs-focus gauge	Annual reports, websites	Scored from 0 - 1 based on yes or no MSMEs division
	25%	Internet and/or USSD capabilities	Digital-capabilities gauge (% of digital users/transaction data unavailable)	Annual reports, websites	Scored from 0 - 2 based on 0, 1, or 2 internet and USSD capabilities
Interest in MSMEs de-	Interest in MSMEs de-	Interest in MSMEs development	MSMEs-development focus	Annual reports, websites, interviews	Scored from 0 – 1 based on yes or no MSMEs development focus
	velopment	Number of partnerships	Interest to work with DFIs/Partner	Annual reports, websites,	Scored from 0 - 5 based on number of DFI partners
	25%	with other DFIs	gauge	press searches	

Figure 4: First Screening Criteria

Financial performance had the most weighting (30 percent) since having objective, clear metrics that portray company health is an essential criteria for JICA. Size and reach had the least weighting (20 percent) as the pre-screening criteria already captured part of this with asset size and number of branches. Services and interest in MSME development were weighted equally (25 percent) as they are both considered determinants for JICA partnership.

The five financial institutions that had the strongest scores were selected. We then examined these institutions in more detail.

1.3.3 Second screening

The second screening of these five financial institutions yielded a well-rounded view of the business, its MSME focus, and its interest in partnerships. Each institution was measured against four criteria. Second-screening interviews were also held with all five banks to glean insights into potential product releases and strategic focus.

The four criteria assessed were (Figure 5):

1. MSME impact:

We qualitatively evaluated their strategic plans to grow their MSME book as well as their programs and products currently focused on MSMEs. We evaluated the potential partnership opportunity with JICA for improving financial access for MSMEs and potential for industrialization of the economy. Strong strategic alignment with MSMEs on plans, products, and programs means the bank is more likely to deliver MSME impact.

2. Current partnerships:

We evaluated their current partnerships with donors, technical assistance programs, or DFIs. We also examined their MSME- and non-MSME-focused partnerships. Previous partnerships often indicate strong governance and demonstrate an ability to deliver projects with donors/DFIs.

3. Management and governance:

We evaluated the bank's management and governance structure (i.e., board oversight and autonomy). Strong management and governance capabilities would help the bank deliver impact.

4. General track record and growth prospects:

We evaluated their general financial and reputational records, as well as their risk appetite and capacity for underwriting. These are requirements for a successful partnership.

Criteria	Description	Rationale	Scoring	Metric	Weighting
MSME Impact (35%)	What is the strategic plan to grow MSME book and impact? What is the intentions of the bank to improve financial access for SMEs and what plans are in place to achieve this? JICA partnership potential (number of MSMEs likely to be reached)?	Strong strategic alignment to MSMEs on plan, product and programs means the bank is more likely to deliver MSME impact	A scale of 0 – 5 (where 0 is worst and 5 is best) was used for each category to evaluate each metric. Scoring was subjective and based on answers from second screening interviews.	MSME strategy focus	7.5%
				Growth plans	7.5%
				Contributing indicators for improving financial access	10%
	What products and programs does the bank provide which contribute to industrializing the economy?			Industrialization of economy	10%
Current partner- ships (15%)	What are the current partnerships with donors, technical assistance programs or DFIs. MSME and non-MSME focused partnerships	Previous partnerships indicate strong governance as previously vetted and show ability to deliver projects with donors/DFIs		Detailed partnerships with donors/DFIs	5%
				Partnerships with MFIs and MNOs	5%
				Partnerships with technical assistance programs	5%
Management and governance (25%)	Who are the top management and how capable are they to deliver projects? What is the bank's governance structure i.e., oversight of board, autonomy?	Strong management and governance capabilities more likely to succeed in delivering impact		Internal controls and management efficiency and autonomy	5%
				Influence of government on board	5%
				Executive's appetite for JICA's funding	5%
				Top management track record	5%
				Monitoring and evaluation and risk and project management capabilities	5%
General track record & growth prospects (25%)	What has the bank's track record been, financially, reputationally and with regards to values and inclusiveness What are the banks risk and digital capabilities? What has been recent growth and what are the future prospects for growth?	Strong track record is required for partnership		Financial - profit structure loan performance	5%
				Risk capabilities and appetite	10%
				Growth prospects	5%
				Digital capabilities	5%

Figure 5: Second Screening Criteria

MSME impact was considered as the most important metric accounting for the greatest weighting (35 percent) since this is a key criteria for JICA partnership. Current partnerships were already explored in the first screening and so that criteria was assigned a lower weighting (15 percent). Three financial institutions were selected based on the second screening.

1.4 Corporate partnership screening

Based on the lending bottlenecks and measures we identified, we generated a list of 24 business ideas for Japanese corporate partnerships. To prioritize this list, we graded each idea based on two criteria for potential MSME impact, and five criteria for feasibility (Figure 6). Both impact and feasibility accounted for 50 percent of the grade.

For MSME impact, the two criteria were:

• MSME financial impact (40 percent).

We prioritized business ideas that address multiple bottlenecks including market access, financial literacy, collateral, and capacity.

Scalability for expansion (10 percent).

Potential for business expansion is an important consideration for Japanese companies.

For feasibility, the five criteria were:

• Japanese company international presence (10 percent).

We preferred ideas where some Japanese companies have international or African presence vs. those where Japanese companies had only domestic experience.

• Japanese company capacity (10 percent).

The potential target company must have the capacity to sustain the business over the long run. For this reason, we de-prioritized ideas where the Japanese companies were start-ups with a history of less than one year.

• Competitive landscape (10 percent).

As high competition will reduce the likelihood of earning high profits, we de-prioritized competitive sectors for entry by Japanese companies.

• Implementation cost and effort (10 percent).

Capex-intensive business ideas pose high barriers to entry, as the Japanese company would need to invest more time and effort into realizing the business idea. We therefore de-prioritized these ideas.

Government strategy focus (10 percent).

Alignment with government strategy may help make the business environment more favorable for the Japanese company. We prioritized ideas aligned to government priorities.

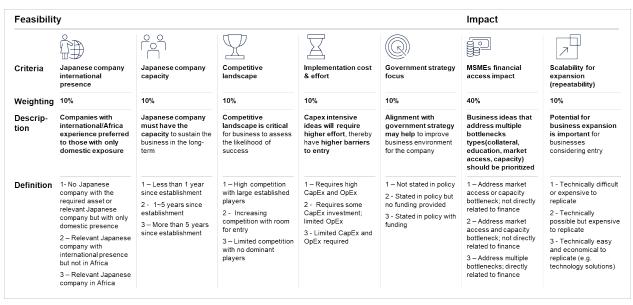


Figure 6: Evaluation Criteria to Assess Corporate Partnership Ideas

From the long list, we then selected three ideas for further pilot validation, based on the feasibility of Japanese private sector contributions and MSME impact (Figure 7). Each pilot validation involved: 1) analyzing the global and Tanzanian landscape, and 2) conducting a market analysis to determine market potential, potential business model for pilot implementation, and to identify potential local partners with whom a Japanese company could work. The three pilot ideas selected were: 1) provision of crop insurance to mitigate against risk, 2) provision and financing support for high-capital machinery, and 3) provision of agricultural inputs.

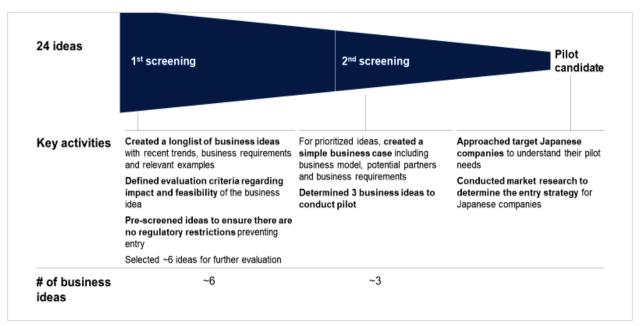


Figure 7: Two-Step Screening Process

1.5 Deviations from the original outline of the final report in the TOR

Based on discussion with JICA team, we shifted the structure of this report so that related sections are arranged more closely together. The major changes are as follows:

- Compiling all overview content into Chapter 1, which describes the overall survey, the project team
 structure, the work plan, the MSME finance needs survey, financial institution screenings, corporate
 partnership screenings, and deviations from the original proposal. In addition, we have compiled our
 analysis of financial-related legal systems, the MSME finance needs survey results, and our analysis
 of private sector partnership projects as part of the overall research.
- Focusing Chapter 2 on the bottlenecks impeding MSMEs' access to financial services and finance.
- Focusing Chapter 3 on approaches to overcoming, resolving, or otherwise mitigating these bottlenecks. Approaches and action plans are proposed for both the private sector and for publicprivate partnerships, including the top six ideas for solving bottleneck issues through such partnerships.

For the overall survey and analysis, deviations from the original TOR fall mainly in three areas:

MSME sector focus:

Due to the high impact and value of the agricultural sector on overall GDP in Tanzania and high contribution to employment, combined with the level of financial exclusion by the formal financial sector for MSMEs in agriculture, after preliminary analysis it was identified that the strongest need for support from both financial institutions and from the private sector would be within the agriculture value chain. Therefore, the survey analysis prioritized solutions within this sector with a focus on micro enterprises. However, it is to be noted that proposals for PSIF partnerships could have significant impact on MSMEs in other sectors such as manufacturing and trade.

• Private sector partnership pilot scope:

For the initial two pilot ideas prioritized – agricultural insurance and capital-machinery – the original pilot scope could not be fully implemented. For agricultural insurance, the Japanese insurance companies showed no appetite for developing their own products for the Tanzanian market, therefore the pilot focused on how Japanese companies could bring their expertise into Tanzania to strengthen the financial position of agri-MSMEs. For capital-machinery, due to internal JICA activities in Tanzania with a Japanese company, the pilot was paused after the development of the business model for country entry. We covered the original pilot scope for the third idea on agri-inputs, including organizing a seminar with Japanese seed companies interested in opportunities in Tanzania.

PSIF analysis:

There were limitations on the level of information available from the financial institutions without an NDA. The analysis for this section of the survey was primarily done through desktop research and interviews, however overall screening metrics captured the key elements of MSME impact, governance, reputation and credibility of each institution. The agency would need to conduct a more detailed due-diligence for the identified partner after moving forward with an NDA.

1.6 Overall survey of Tanzanian landscape

1.6.1 Macroeconomic analysis

Tanzania's macroeconomic outlook is positive overall, supported by steady economic growth, stable inflation, and an improving fiscal outlook.

(1) Growth outlook

Tanzania's growth outlook remains strong despite the economic impacts of COVID-19. Diverse economic activity, steady population growth, and increasing consumer spending are key drivers of its economic strength.

Pre-COVID, Tanzania's average real GDP growth between 2015-2019 ranked fifth in the sub-Saharan Africa (SSA) region, with Ethiopia (9.1 percent), Rwanda (7.4 percent) and Cote d'Ivoire (7.3 percent) leading the region (Figure 8).

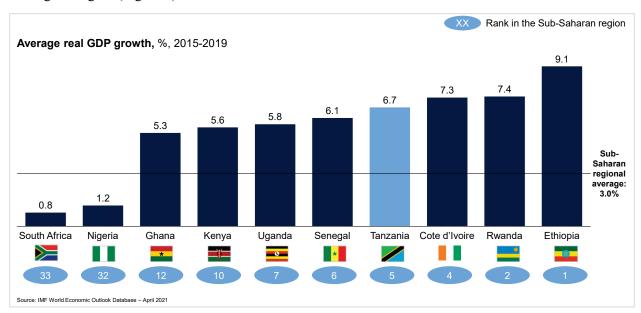


Figure 8: Real GDP Growth Rate (Sub-Saharan Africa region)

However, COVID-19 is expected to slow down economic growth dramatically, from approximately 7 percent in 2019 to approximately 1 percent in 2020 (according to the July 2021 estimates by Bank of Tanzania). This decline can be attributed to multiple factors, including a significant decline in tourism slower economic growth, weaker private consumption, lower export growth, decreased investments, and deteriorating domestic business conditions. Economic growth is expected to recover to 2.7 percent in 2021 and 4.6 percent in 2022 (Figure 9). The inflation rate is expected to remain low and stable at less than 4 percent from 2021 to 2023.

⁹ Bank of Tanzania, "Policy measures to promote credit to private sector and lower interest rates", Public Notice from the Governor Prof. Florens D.A.M Luoga on 27th July 2021

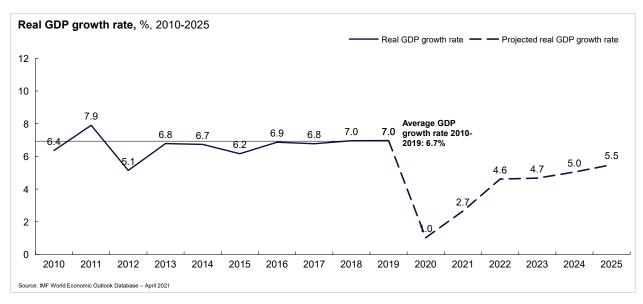


Figure 9: Tanzania's GDP Growth

Tanzania's economy is diverse. In 2019, agriculture (27 percent), construction (14 percent), and trade (9 percent) were the largest contributors to Tanzania's GDP¹⁰. The contribution to GDP by sector has not changed significantly in the last five years (Figure 10). The main growth drivers of GDP from 2018 to 2019 included construction (28 percent), agriculture (16 percent), mining and quarrying (10 percent), and transport and storage (9 percent).

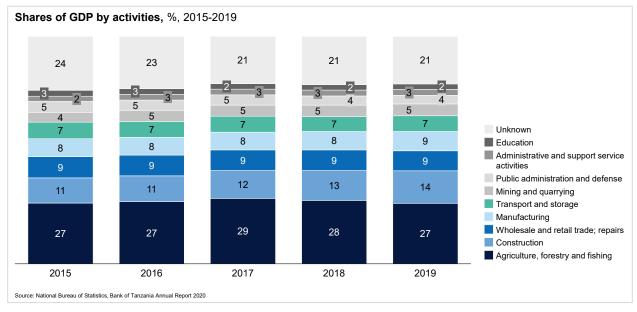


Figure 10: Tanzania's GDP Composition

Stable population growth and an increasing urban population will support Tanzania's economic growth going forward. Tanzania's population of 59.7 million in 2020 is expected to expand to 129.4 million in

Bank of Tanzania, "Annual Report 2019/20," Dec. 2020, https://www.bot.go.tz/Publications/Regular/Annual percent20Report/en/2020123112264444.pdf.

2050, and 285.7 million in 2100¹¹. Population has historically grown steadily by approximately 3 percent per year, with the growth rate expected to slow to 1.7 percent per year from 2019 to 2022. Urban population is expected to increase by 20 percentage point (p.p.) from 2020 to 2050, compared to a 18 p.p. increase in East Africa and 17 p.p. in sub-Saharan Africa. Population demographics are currently skewed towards youth, as approximately 43 percent of the population is under 15 years old. This disparity should become more balanced by 2100 due to an expected 9 p.p. increase in the working-age population from 2020 to 2100, which will help support the economy (Figure 11).

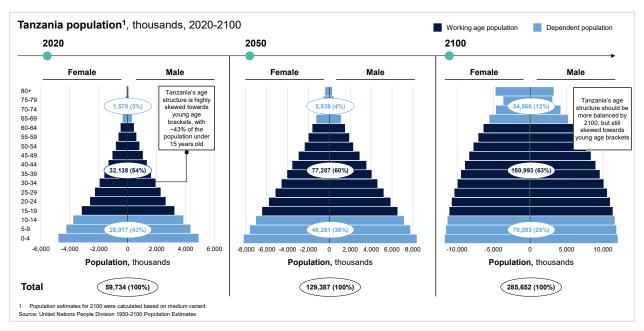


Figure 11: Tanzania's Population Pyramid

As of 2019, Tanzania's gross national income (GNI) per capita reached USD\$1,080 (with the threshold for lower-middle-income status at USD\$1,036 in 2019), which allowed the country to be officially recognized as a lower-middle-income country by the World Bank, ahead of the expected timeline¹². By 2030, 80 percent of households should have discretionary spending power, which includes households with income greater than USD\$5,000. Average household expenditures are expected to double, from USD\$3,380 in 2019 to USD\$7,077 in 2040¹³. By category, food and transport account for about 50 percent of household expenditures, indicating potentially strong future business opportunities for MSMEs operating in this space.

Despite the optimistic outlook of the economy, the impacts of COVID-19 are widespread across the country. The unemployment rate is expected to increase from 2.0 percent in 2019 to 2.2 percent in 2020¹⁴. The pandemic is also expected to increase the poverty rate from 26.4 percent in 2017 to 27.2 percent in

United Nations, Department of Economic and Social Affairs, "2019 Revision of World Population Prospects," accessed 12 May 2021, https://population.un.org/wpp/.

World Bank Group, "The World Bank in Tanzania," Last updated 23 March, 2021, https://www.worldbank.org/en/country/tanzania/overview.

Euromonitor International, "Income and Expenditure: Tanzania," Oct. 2020, https://www.euromonitor.com/income-and-expenditure-tanzania/report

World Bank Group, "Unemployment, total (% of total labor force) (modeled ILO estimate) – Tanzania," Data retrieved 15 June 2021, https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?locations=TZ.

2020¹⁵. This may push an additional 600,000 people below the poverty line, according to the World Bank. Key business challenges caused by COVID-19 include the following 16:

- Slower economic growth. Tanzania's economic growth is expected to drop from 7 percent in 2019 to approximately 1 percent in 2020 due to the pandemic's economic impact.
- Weaker private consumption. Growth in private consumption, which accounts for roughly two thirds of GDP, will slow due to heightened risk aversion among consumers, higher precautionary savings rates, and loss of disposable income due to unemployment or fewer hours worked.
- **Declining tourism receipts.** International travel bans have almost stopped the flow of tourism in Zanzibar and Kilimanjaro, causing a severe decline in the tourism sector, which had been one of the fastest-growing sectors in the economy. Tour operators expect revenue to decline by more than 80 p.p.
- **Declining export growth.** Export growth is predicted to decline due to border closures, global supply chain disruptions, and weaker external demand, as the country's main export markets of South Africa, UAE, and India are all facing significant economic slowdowns. Major exporters of fruits and agricultural products anticipate a loss of approximately 40 percent.
- **Decreased investments.** Growth in private investment will fall severely from 8 percent in 2019 to 4 percent in 2020 – due to global uncertainty, reduced capital inflows to the region, and heightened risk aversion among investors across all sectors of the economy.
- **Deteriorating domestic business conditions.** Local business conditions may deteriorate if the virus is widespread, causing delayed investment projects and a loss of investor confidence.

(2) Fiscal outlook

Tanzania's fiscal outlook has shown modest improvement over the last decade, due to the previous administration's efforts to reduce government spending and tighten tax collection from the private sector.

Public debt has seen a moderate increase in the last decade and remains high at 38 percent in 2019 (Figure 12)¹⁷. Compared with peers in sub-Saharan Africa, however, Tanzania's public debt as a percentage of GDP is relatively low. Upon closer examination, mild improvements can be seen in public debt trends, as domestic debt has increased from 25 percent of total public debt in 2015 to 28 percent in 2019¹⁸; the higher proportion of domestic debt implies that Tanzania is better protected against foreign exchange risks. As of December 2019, external debt has been denominated in USD\$ (56 percent), euro (21 percent), CNY (9 percent), JPY (9 percent) and GBP (5 percent)¹⁹. External debt-to-GNI ratio is at par with peers and does not indicate risks of external debt stress²⁰.

World Bank Group, "The World Bank in Tanzania." https://www.worldbank.org/en/country/tanzania/overview World Bank Group, "Tanzania Economic Update: Addressing the Impact of COVID-19 (English)," No. 14, 7 June 2020, http://documents.worldbank.org/curated/en/850721591546081246/Tanzania-Economic-Update-Addressing-the-Impact-of-COVID-19.

International Monetary Fund, "World Economic Outlook Database," 2021.

StartLink Africa (2021): Market Update – Africa (Nigeria, Zambia, Kenya, Rwanda)

Bank of Tanzania, "Annual Report 2019/20."

International Monetary Fund, "World Economic Outlook Database," 2021.

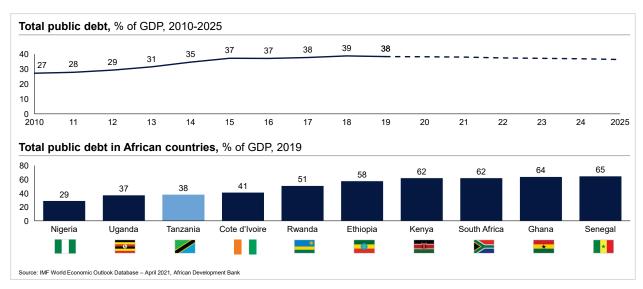


Figure 12: Tanzania's Public Debt (2010-2025) and Public Debt among African Countries (2019)

Tax is an important source of government revenue, as it currently accounts for approximately 80 percent of total revenue; income taxes account for 30 percent, taxes on imports for 28 percent, taxes on local goods for 18 percent, and other taxes for 5 percent. Income tax growth has steadily improved from 18.6 percent in 2010 to 26.3 percent in 2018²¹. The government has recently focused on formalizing the informal economy by implementing digital ID technology. In the long term, formalization of small businesses is expected to increase the tax base, further improving the fiscal stability of the economy.

It is important to note that the cost of borrowing in Tanzania remains high, with the lending interest rate at 17 percent in 2019 – an increase from 14.5 percent in 2010 (Figure 13)²². The main drivers of high lending interest rates include high operation costs, non-performing loans, and the cost of funds²³. As a result of high borrowing costs, the Tanzanian private sector's credit-to-GDP ratio was at 12 percent in 2019, compared to the regional average of approximately 18 percent²⁴. The high cost of borrowing means that MSMEs are unable to afford access to financing.

World Bank Group, "Databank: World Development Indicators," 2021, https://databank.worldbank.org/source/world-development-indicators.

World Bank Group, "Databank: World Development Indicators," 2021, https://databank.worldbank.org/source/world-development-indicators

Bank of Tanzania, "Annual Report 2019/20."

²⁴ StartLink Africa (2021): Market Update – Africa (Nigeria, Zambia, Kenya, Rwanda)

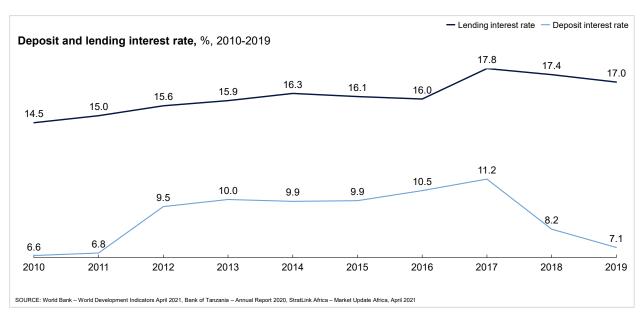


Figure 13: Tanzania's Lending and Deposit Interest Rates (2010-2019)

(3) Foreign trade

Tanzania's foreign trade balance has shown healthy improvements, with diverse exports that include gold, raw tobacco, and cashews.

Tanzania exports 15 to 20 percent of its total domestic output²⁵. Its export-to-GDP ratio is higher than that of most East Africa peers, including Ethiopia and Kenya, at 8 percent and 12 percent respectively. Ghana and South Africa lead the sub-Saharan region at 36 percent and 30 percent, respectively.

Tanzania's export value increased from USD\$ 5.2Bn in 2013 to USD\$ 5.9Bn in 2019²⁶. Tanzania's main exports are gold (37 percent), raw tobacco (7 percent), and fruits and nuts – mainly cashews (6 percent)²⁷. Its top five exporter country destinations include South Africa (19 percent), India (17 percent), United Arab Emirates (8 percent), Switzerland (7 percent), and Vietnam (6 percent)²⁸.

Tanzania's import value has decreased from USD\$ 11.3Bn in 2013 to USD\$ 8.1Bn in 2019²⁹. Tanzania's main imports are mineral fuels (14 percent), machinery and appliances (9 percent), and vehicles (9 percent)³⁰. From 2013 to 2019, the decline in oil prices has decreased Tanzania's import share. Its top five importer countries include China (22 percent), India (14 percent), United Arab Emirates (11 percent), Japan (5 percent), and South Africa (5 percent)³¹.

Historically, Tanzania has experienced a current account deficit; however, the current account deficit as a percentage of GDP has decreased by 5 p.p., from -7 percent in 2010 to -2 percent in 2019, enabling a

World Bank Group, (2021), "Databank: World Development Indicators," 2021.

Bank of Tanzania, "Annual Report 2019/20."

Observatory of Economic Complexity, "Tanzania Profile," accessed June 2021 https://oec.world/en/profile/country/tza.

Bank of Tanzania, "Annual Report 2019/20."

Bank of Tanzania, "Annual Report 2019/20."

Observatory of Economic Complexity, "Tanzania Profile."

Bank of Tanzania, "Annual Report 2019/20."

more favorable outlook for debt financing (Figure 14)³². The current account deficit has most likely narrowed due to increasing exports of goods and services and higher demand for tourism and gold. COVID-19 is expected to increase the current account deficit, but as a percentage of GDP, the deficit is expected to remain relatively stable, at less than 4 percent until 2025.

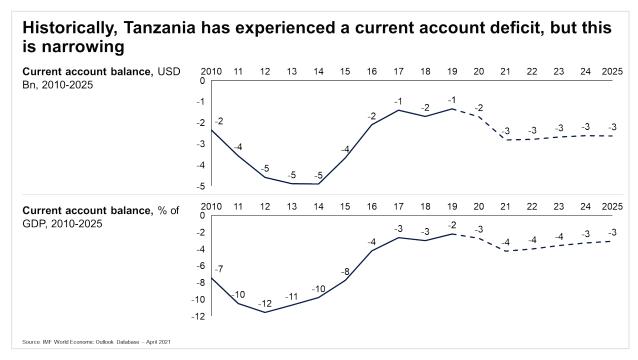


Figure 14: Tanzania's Current Account Balance (2010-2025)

While foreign direct investment (FDI) inflow is expected to decline significantly across the African region due to COVID-19, the impact to Tanzania's FDI inflow has been limited. In East Africa, the FDI inflow fell to USD\$ 6.5Bn, a decrease of 16 p.p. from 2019 to 2020. But Tanzania's FDI inflow remained largely unchanged, at USD\$ 1.0Bn in 2020, a growth of 2 p.p. In Tanzania, the mining, oil and gas, and primary agricultural sectors are the main attractions for FDI.

(4) Country risk

Tanzania has been politically stable, and the new administration may take advantage of opportunities for improvement. Corruption and an unfavorable business environment are challenges to be addressed.

Impact of change in administration

In March 2021, Samia Suluhu Hassan became the first female president of Tanzania and in the East Africa region. President Hassan replaced President John Magufuli, who had served the government since 2015 and was recently re-elected in 2020. At this stage, the political implications of the change in administration have yet to be fully determined. Some actions have taken place, including:

• Changes in the COVID-19 response. The new administration is adopting a more aggressive approach to COVID-19 in hopes of guiding the country to a faster recovery. President Hassan set up a

³² International Monetary Fund, "World Economic Outlook Database," 2021.

committee of experts to advise her government on anti-virus measures, signed up Tanzania to WHO-led Covax Vaccine program and publicly got vaccinated to launch the vaccine in the country. Additionally, she re-instated publishing Covid-19 data in June 2021, and has been instrumental in gaining goodwill with the citizens. As of the writing of this final report, Tanzania had announced 32,920 cases and 778 deaths within the country, after a long period of reporting 509 cases and 21 deaths from April 2020.

- **Greater transparency.** The Statistics Act of 2015 forbade publications that have not been approved by the state. The new administration may allow more freedom of expression and may improve transparency for external government partners and investors³³.
- Potential for increased regional collaboration. The 'Coalition of the Willing (CoW)' and the rest of
 East Africa may work more closely together. This goal was clearly articulated during President
 Hassan's visit to Kenya, which focused on strengthening trade relations between the two countries.
 During the visit, the president committed to support Kenya's efforts to facilitate border crossings and
 controls³⁴ for trade purposes.

Doing business in Tanzania

Tanzania ranks 141st out of 190 countries in the World Bank's 'Doing Business' rankings (Figure 15)³⁵. The Tanzanian government has worked continuously to improve the country's business environment – most notably on the digital front, where online methods and platforms have been established for government administration tasks.

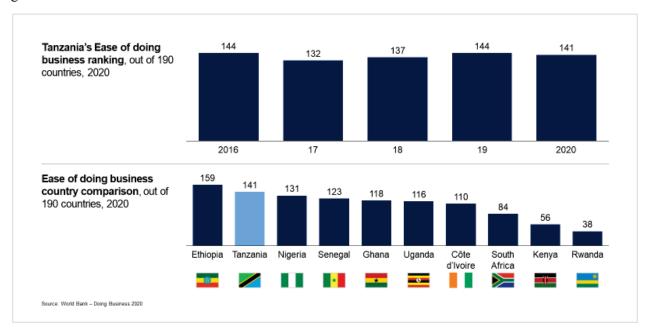


Figure 15: Ease of Doing Business Ranking (2020)

Parliament of Tanzania, "The Statistics Act, 2015," No. 9, Passed in the National Assembly on 26 March 2015, http://parliament.go.tz/polis/uploads/bills/acts/1452062087-ActNo-9-2015-Book-1-10.pdf.

Kizzi Asala and Africa News with ASP, "Tanzania's President visits Kenya to renew ties and promote trade," Africanews.com, 4 May 4, 2021, https://www.africanews.com/2021/05/04/tanzania-s-president-visits-kenya-to-renew-ties-and-promote-trade/.

World Bank Group, "Doing Business 2020: Measuring Business Regulation," 24 October 2019, https://www.doingbusiness.org/en/doingbusiness.

Despite these efforts, the ease of doing business in Tanzania has not markedly changed over the last five years. In 2020, Tanzania placed in the bottom quartile in most activities related to doing business, including starting a business, dealing with construction permits, registering property, paying taxes, and trading across borders. (Figure 16).

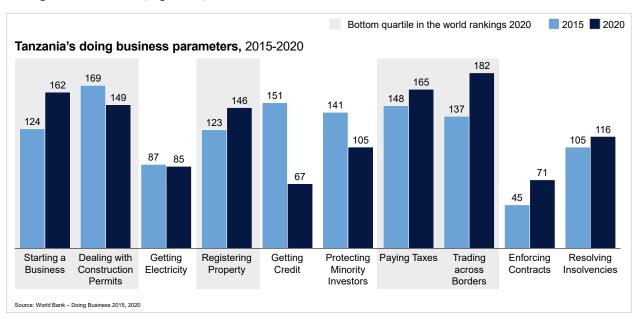


Figure 16: Tanzania's Ease of Doing Business Ranking by Parameter

Corruption risk

In 2020, Tanzania scored 38 on Transparency International's 'Corruption Perceptions Index' (CPI)³⁶, in which countries are ranked from zero to one hundred as 'most' (0) to 'least' (100) corrupt. Calculated annually by Transparency International, an NGO, the CPI measures the perceived level of public-sector corruption based on multiple expert evaluations and surveys. While this score marks an improvement since 2015, the country is still perceived to be more corrupt than its East African peers, including Ethiopia, Kenya, and Uganda (Figure 17).

³⁶ Transparency International, "Corruption Perceptions Index," 2020, https://www.transparency.org/en/cpi/2020/index/tza.

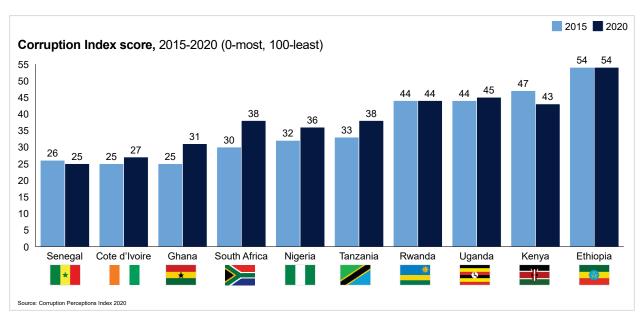


Figure 17: Corruption Perceptions Index Score for African Countries

Foreign exchange risk

Exchange rate

Tanzania's exchange rate is determined by a free-floating exchange rate and has doubled over the last decade (Figure 20). The Bank of Tanzania (BoT) has closely monitored currency exchange bureaus to limit currency speculation and money laundering³⁷. Due to an enhanced money control policy enacted in 2019, approximately 100 exchange bureaus (90 percent of all exchange bureaus in the country) were shut down. This move drove up the volume exchanged by commercial banks, which has in turn improved overall transparency in the market. Furthermore, the BoT has expressed a willingness to intervene in the market to offset volatility when necessary, thus mitigating the risk of foreign exchange shocks. However, businesses still need to remain cautious due to the unpredictability of government policy. In August 2020, Moody's downgraded Tanzania's foreign and local currency issuer rating from B1 to B2, mainly citing weak governance and policy unpredictability for the change (Figure 18)³⁸.

³⁷ Reuters. "Tanzania Issues New Rules to Tighten Foreign Currency Exchange Controls". 25 June 2019 https://www.reuters.com/article/tanzania-currency-idUSL4N23W2KT

Ephraim Bie, "Moody's Downgrades Tanzania's Rating to B2 on Policy Unpredictability," 22 Aug. 2020, https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/moody-s-downgrades-tanzania-s-rating-to-b2-on-policy-unpredictability-60042820.

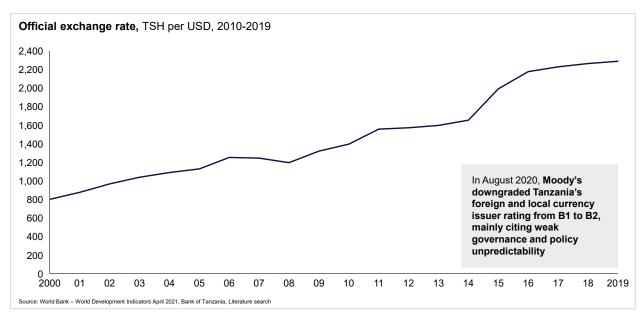


Figure 18: Exchange Rate (TSH per USD)

Remittance risk

International money transfers are closely regulated in the global market due to the potential for financial crimes, including money laundering and terrorism financing. Under the Anti-Money Laundering Act of 2006, banks and other financial institutions are required to conduct due diligence of their customers before transactions³⁹. Currently, Tanzanian investment regulations, mainly outlined by the Tanzania Investment Act of 1997, allow for unconditional international transfers through any authorized bank. This applies to net profits, repayment of foreign loans, royalties, fees charged for foreign technology, and remittance of proceeds⁴⁰. As stated above, remittance risk is considered low, and changes in existing policies for investment remittances are not anticipated. The only limitation is that Tanzanian individuals travelling abroad cannot carry cash exceeding USD\$ 10,000 over a period of 40 days.

Nationalization

In general, Tanzania's constitution and investment regulations require the government to avoid nationalization where possible. In the case of expropriation, the Tanzanian Investment Act requires payment of adequate compensation, access to the court for determining compensation, and prompt repatriation in convertible currency. For foreign investors to quality for protection under the Tanzanian Investment Act, investors must provide at least USD\$ 500,000 in capital. In the past, the government has expropriated dormant businesses that failed to present revitalization plans; in 2019, the government expropriated 16 operational factories and issued warning notices to 30 businesses. While direct expropriation has been rare, foreign investors must remain aware of the potential for indirect expropriation, most notably through unfavorable tax policies that cap potential profits.

³⁹ Breakthrough Attorneys. "Transfer of Foreign Currency from Tanzania; The Governing Law and Procedure". June 9, 2017. http://breakthroughattorneys.co.tz/transfer-foreign-currency-tanzania-governing-law-procedure/

⁴⁰ State.gov. "2020 Investment Climate Statements; Tanzania. 2020. https://www.state.gov/reports/2020-investment-climate-statements/tanzania/

As of April 2020, Tanzania's country risk ranking is B, according to the Economic Intelligence Unit's Country Risk Model (Figure 19)⁴¹. To attract more investors, the government has taken various measures to mitigate the risks that affect overall country risk, as described below.

- Sovereign risk (B). The government is pushing to tighten tax collection. The National Identification Authority (NIDA) has implemented mass national ID registrations across the country; currently 15.2 million are registered⁴².
- **Political risk (B).** Regional relationships are improving. In 2021, President Hassan made a state visit to Kenya to build a stronger relationship between the two countries. Tanzania and Kenya pledged to remove restrictions on investors and to enhance their collaboration on trade and cross-border infrastructure.
- Economic structure risk (B). Economic infrastructure is under further development. The most recent Five-Year Development Plan (FYDP3), launched in June 2021 for the period between 2021/22 and 2025/26, focuses on infrastructure development. Key projects include the establishment of a railway to neighboring countries and the development of ports to improve trade⁴³.
- Banking sector risk (B). Strict regulations have been imposed on financial institutions. The BoT has insisted that financial institutions must maintain their cost-to-income ratio below 55 percent and non-performing loans below 5 percent, resulting in the mergers of three banks in 2018 alone⁴⁴.
- Currency risk (BB). The currency rate has shown signs of stabilization. As mentioned above, in 2019 the BoT revoked licenses from approximately 100 foreign exchange bureaus that failed to meet its capital requirement, with the aim of stabilizing the currency market⁴⁵.

The Economist Intelligence Unit, "Tanzania: Risk: Credit Risk," 28 June 2021,

http://country.eiu.com/article.aspx?articleid=491243232&Country=Tanzania&topic=Risk&subtopic=Credit+risk&subsubtopic=Overview.

Alphonce Malibiche, "Tanzania's Digital ID Ecosystem Roadmap: A vision for integration and enhanced service delivery," National Institute on Drug Abuse, 24-26 April 2018, https://www.id4africa.com/2018_event/Presentations/PS2/1-2-2 Tanzania Alphonce Malibiche.pdf.

⁴³ Ministry of Finance and Planning, United Republic of Tanzania, "National Five-year Development Plan 2021/22 – 2025/26: Realising Competitiveness and Industrialisation for Human Development," June 2021, https://mof.go.tz/docs/news/FYDP percent20III percent20English.pdf.

Samuel Kamndaya, "Bank of Tanzania moves to rein in operating costs, NPLs," *The Citizen*, 27 Jan. 2021, https://www.thecitizen.co.tz/tanzania/news/business/bank-of-tanzania-moves-to-rein-in-operating-costs-npls-3270756.

Reuters Staff, "Tanzania issues new rules to tighten foreign currency exchange controls," 25 June 2019, https://jp.reuters.com/article/tanzania-currency/tanzania-issues-new-rules-to-tighten-foreign-currency-exchange-controls-idINL4N23W2KT.

	EIL	J Rating ¹	Government measures to mitigate country risk
Sovereign risk	В	Domestic and foreign debt obligation risks are very susceptible to changes in economic climate	Government is pushing to tighten tax collection. National Identification Authority (NIDA) has implemented mass national ID registrations across country - currently 15.2M are registered
Political risk	В	Political stability and effectiveness are very susceptible to changes in economic climate	 In 2021, Hassan made a stat-visit to Kenya to improve previously hostile relationship under the Magafuli administration. Two countries pledged to remove restrictions on investors and improve collaboration on trade/cross-border infrastructure
Economic structure risk	В	Structural macroeconomic risks are very susceptible to changes in economic climate	A new Five-Year Development Plan, which was proposed in April for the period 2021-2016, focuses on infrastructure developmen Key projects include establishment of railway to neighboring countries, as well as development of ports to improve trade
Banking sector risk	В	Systematic risks of insolvency are very susceptible to changes in economic climate	 BoT has insisted financial institutions must maintain their cost to income ratio below 55% and NPLs below 5%, resulting in mergers of 3 banks in 2018 alone
Currency risk	ВВ	Risks of devaluation against the reference currency (USD) exist and are susceptible to changes in economic climate	 In 2019, the BoT revoked licenses from over 100 credit bureaus that failed to meet its capital requirement While the exchange rate is mainly determined by the market, the BoT has previously expressed willingness to intervene to address market volatility, if needed
Country risk	В		

Figure 19: Tanzania's Country Risk and Mitigation Measures

(5) Going forward: FYDP3

As mentioned above, in June 2021, the Ministry of Finance and Planning released the FYDP3 for the period between 2021/22 and 2025/26. Each development plan focuses on a different theme. The FYDP3 aims to:

- 1. Build on the achievements already made towards realizing the Tanzanian Development Vision of 2025, which seeks to make Tanzania a semi-industrialized, middle-income country by 2025.
- 2. Strengthen capacity in science, technology, and innovation to enhance competitiveness and productivity in all sectors especially the production, manufacturing, and services sectors so that Tanzanians may benefit from the opportunities available within the country.
- 3. Strengthen the industrial economy as a basis for export-driven growth. Efforts towards this end will include investing in new products and markets as well as increasing Tanzania's contribution to international trade by enabling the country to become a production hub in the countries of the East, Central, and Southern Africa.
- 4. Enhance Tanzania's benefits from strategic geographical opportunities by improving business environments and strengthening the country's regional position as a hub for production, trade, supply, and transportation.
- 5. Encourage business start-ups and increase private sector involvement to promote growth in the MSME sector in tandem with job creation, while also making the sector a strong, reliable partner in development.
- 6. Promote the export of services, including tourism, banking services, insurance, and entertainment.
- 7. Strengthen the implementation of FYDP3, including prioritization, planning, integration, and alignment of implementation interventions.

- 8. Accelerate inclusive economic growth by developing strategies for poverty reduction and social development and increasing productive capacity among youth, women, and people with disabilities.
- 9. Ensure that regional and global agreements and commitments are fully integrated into national development for the benefit of the country.
- 10. Strengthen the relationship between sectors endowed with natural wealth and resources and other economic and social sectors.
- 11. Strengthen the role of local government authorities (LGAs) in bringing about development and increasing income at the community level.
- 12. Enhancing the country's capacity to finance development by ensuring access to domestic revenue and effective management of public expenditures.

1.6.2 Financial sector overview and trends

Tanzania's financial sector has been relatively stable, in part due to stronger financial policies and regulation.

The ratios of foreign currency-denominated assets to total assets and foreign currency-denominated liabilities to total liabilities stood at 27.31 percent and 30.26 percent, respectively, in 2020, compared to 29.96 percent and 33.73 percent in 2018⁴⁶. The decrease in these ratios can be partly attributed to a generally stable exchange rate and to less use of foreign currency in the domestic market.

The ratio of non-performing loans to gross loans was 10.8 percent at the end of June 2020, compared to 10.7 percent at the end of June 2019⁴⁷. A bank loan is classified as non-performing when more than 90 days pass without the borrower paying the agreed instalments or interest⁴⁸.

Capital adequacy ratio (CAR) is the ratio of a bank's capital to its risk-weighted assets and current liabilities. The core and total CAR stood at 17.04 percent and 18.06 percent, respectively, in 2019, compared to 16.20 percent and 18.14 percent in 2018. Both ratios were above the minimum legal requirements of 10 percent and 12 percent for core and total capital, respectively⁴⁹.

Five key trends are shaping Tanzania's financial sector:

(1) Stable Growth

The financial sector is expected to grow at 8 percent p.a. (as opposed to the pre-COVID forecast of 11 percent annually), driven mainly by the consumer segment (Figure 20). Among business segments, MSMEs are currently projected to see the least compression due to COVID. The decline in banking revenues can be attributed mainly to slower growth in loans and deposits. Loan volumes are expected to drop as banks adjust their appetite for the most affected sectors, investments are delayed, and

⁴⁶ BoT annual report 2019-20

⁴⁷ BoT annual report 2019-20

https://www.ecb.europa.eu/explainers/tell-me/html/npl.en.html

⁴⁹ BoT annual report 2019-20

consumption falls, especially for non-essential goods. Margins are expected to be lower than pre-COVID levels despite decreased statutory minimum reserves, discount rates, competition, and digitization.

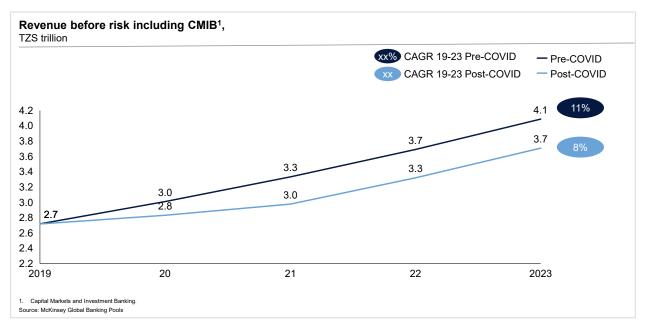


Figure 20: Tanzania's Banking Sector Growth Projection

The consumer segment is expected to grow the fastest post-COVID due to increased urbanization, GNI, and financial awareness (Figure 21). MSMEs will experience the least compression compared to growth rates estimated pre-COVID, at 3 percentage points slower. By contrast, COVID has caused growth to slow by 4 percentage points in the wholesale and consumer segments of MSMEs relative resilience is likely due to their importance to the economy and the focused support given to this segment.

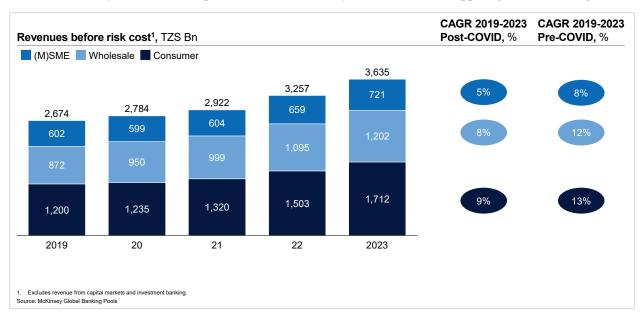


Figure 21: Revenues before Risk Cost by Customer Segment

McKinsey & Co., Inc., "Panorama Global Banking Pools," https://www.mckinsey.com/industries/financial-services/how-we-help-clients/panorama/our-offerings/global-banking-pools.

Loan volumes are expected to grow more slowly, at 9 percent rather than the 14 percent forecasted pre-COVID. The decline can be attributed to a slowdown in lending in 2020, which in turn can be ascribed to declines in fixed investments and consumption (-3 percent and -5 percent, respectively) in 2020. Deposit volumes were almost stagnant compared to pre-COVID estimates; they are expected to remain 'sticky' and to move within, but not out of, the banking sector (Figure 22).

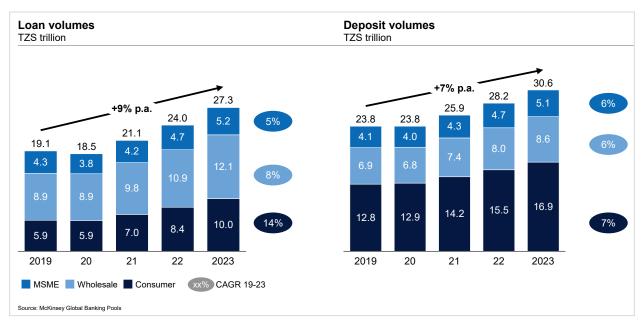


Figure 22: Loan and Deposit Volumes by Customer Segment

(2) Consolidation of Commercial Banks

Recently, capital liquidity issues have spurred more consolidation, with eight banks in the process of merging⁵¹. Consolidation of the industry is likely to continue as banks endeavor to comply with regulatory measures, such as the NPL ratio limit of 5 percent; the financial industry ratio was at 10.8 percent in December 2020.

From a peak in 2017, the number of financial institutions in the Tanzanian market has fallen by 9 banks. The decline in community banks from 2017 to 2018 sprang from the BoT's revocation of five community banks' licenses as they grappled with capital and liquidity issues. Although mergers and acquisitions have taken place among commercial banks, the overall number of players has remained largely unchanged (Figure 23).

⁵¹ The Guardian, "Eight banks to merge to meet liquidity threshold," 5 Mar. 2021, https://www.ippmedia.com/en/news/eight-banks-merge-meet-liquidity-threshold.

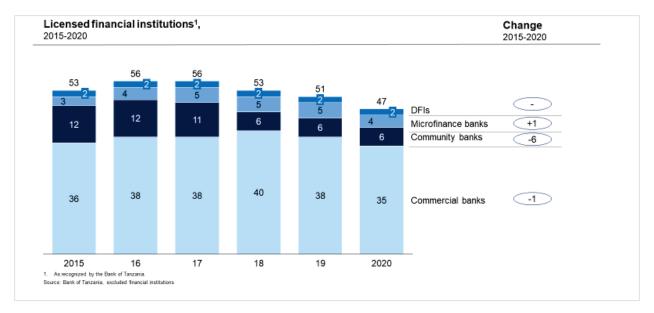


Figure 23: Licensed Financial Institutions in Tanzania

Recent consolidations in the industry can be attributed to stringent regulatory requirements on NPL limits and capital ratios. Current banks in the process of consolidation include NMB, which is acquiring the assets of China Commercial Bank Ltd., and KCB, which is acquiring 100 percent shares of BancABC. Other recent consolidations include NIC Bank's acquisition of Commercial Bank of Africa from NCBA (June 2020), Exim Bank's acquisition of UBL Bank of Tanzania (November 2019), Azania Bank's acquisition of Bank M (January 2019), and Twiga Bank's merger with Tanzania Women's Bank (August 2018).

Over the last five years, the BoT has taken various measures to address the high NPL ratio, yet at most banks the ratio remains above the target level, keeping lending rates high. In January 2021, the Bank of Tanzania released a regulation requiring the NPL ratio to stay below 5 percent; banks that fail to meet this bar by December 2022 will face sanctions (Figure 24).

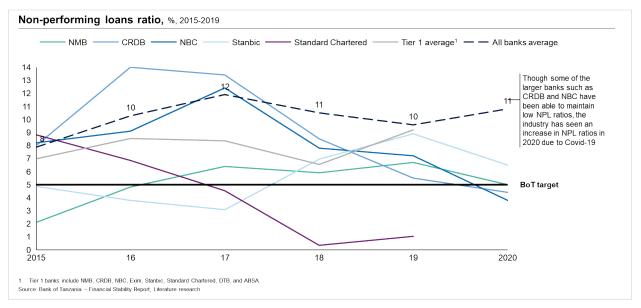


Figure 24: NPL Ratios

(3) Acceleration of Digitalization

Most large banks offer online and USSD (Unstructured Supplementary Service Data, a global system for mobile communications) services, but there is room for improvement in digitizing operations and risk practices. Banks in Tanzania offer a wide variety of financial services through digital channels and are close to leading global players, though they lag in internet banking capabilities. Non-smartphone users can access services through USSD, which allows for mobile transfers, bill payments, and other basic services. (Figure 25).

		Mobil	e bank	king a	pps			Intern	et ban	king				USSD	,		Offered	1	Not Offer
		Tanzar	nian bar	nks				Tanzar	nian bar	ıks				Tanzar	ian bar	ıks			
	Feature	CXV6	NMB	NRC	Standard Standard Chartered	Stanbic Bank	ксв	= BANK	NMB	Ž NEC	Standard \$ Chartered \$	Stanbic Bank	XC8	= CXVB = BANK	NMB	NBC	Standard \$	Stanbic Bank	₹ KCB
2	Inter-bank transactions																		
Transfers	International funds transfer																		
	Mobile wallet transactions																		
	Update profile information																		
	Block and report lost/stolen card																		
	Request a new card																		
_	Find branches & ATMs																		
Ac	View & request statement																		
	Contact us/customer feedback																		
	Open a new current account																		
	Open a savings account																		
	Apply for a loan/credit card																		
Payment	Bill Payment																		
Pa∡	Airtime recharge																		

Figure 25: Mobile, Internet, and USSD Banking Capabilities in Tanzania

Internet banking transactions accounted for more than 50 percent of digital transaction value in 2019, in comparison to approximately 73 percent in 2016⁵². Though volumes of internet banking transactions have been growing by about 15 percent year on year, average transaction volumes have been decreasing by approximately 10 percent per year since 2016.

Mobile phone penetration was at 85 percent at the end of 2019 – an increase from 58 percent in 2011. Mobile banking transaction volumes tripled from 2018 to 2019, with a 22 percent increase in value over the same period. The increase in mobile banking is largely driven by rising transaction volumes and mobile penetration rates (Figure 26).

Overall, digital transactions in Tanzania have doubled from 2015 to 2019. Internet banking accounts for 50 percent of the value of digital transactions, though only 2 percent of volume. Mobile banking accounts for 9 percent of value and 25 percent of volume of digital transactions. ATMs account for 10 percent of value and 33 percent of volume, and point-of-sale (POS) transactions account for 29 percent of value and 39 percent of volume.

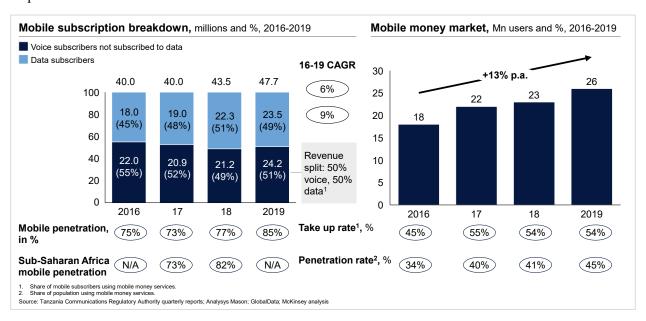


Figure 26: Tanzania's Mobile Penetration

(4) Expansion of mobile money

Mobile money operators strongly influence the financial sector. Mobile banking penetration has reached approximately 52 percent of the population, while only about 21 percent of the population has formal bank accounts. Approximately USD\$ 3.5Bn in transactions (around 700 million transactions) currently occur over mobile banking platforms each month. Mobile money is increasingly being used for business transactions, as over 70 percent of electricity bills were paid through mobile money services in

Bank of Tanzania, "Financial Sector Supervision Annual Report," 2019, https://www.bot.go.tz/Publications/Filter/41.

Bank of Tanzania – Financial sector supervision report 2019 - https://www.bot.go.tz/Publications/Regular/Annual percent20Report/en/2020123112264444.pdf

2017⁵⁴. These transactions do not currently fall under the stringent governance requirements that apply to financial institutions⁵⁵.

Of the five mobile network operators (MNOs), the top two, Vodacom and Tigo, have approximately 18 million users and provide short-term credit through USSD platforms (Figure 27).

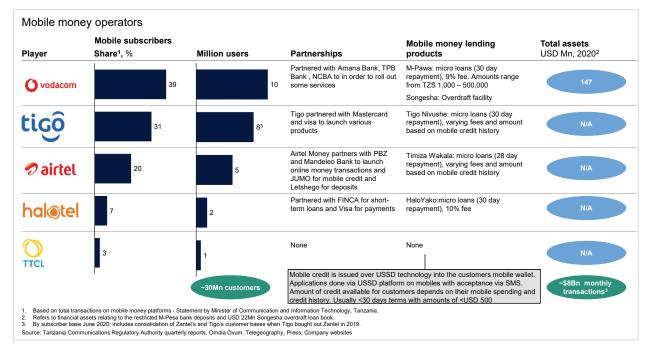


Figure 27: Tanzania's Mobile Money Operators

The total value of mobile money transactions has grown by approximately 20 percent p.a. between 2016 and 2019, driven by increases in both penetration and in transaction value per user per year. Mobile money transactions tend to be of low value, with average amounts of about USD\$ 16 and average yearly transactions per user of less than USD\$ 2,000 (Figure 28).

While unclear the level of disbursements made to MSMEs on these mobile money platforms due to lack of disclosure at the telco level, individuals who own micro and small businesses are known to use these platforms to get short-term unsecured loans, which they then use to fund their businesses based on expert interviews.

⁵⁴ https://www.tanzaniainvest.com/mobile-money

⁵⁵ Tanzanian Communications Regulatory Authority, quarterly reports

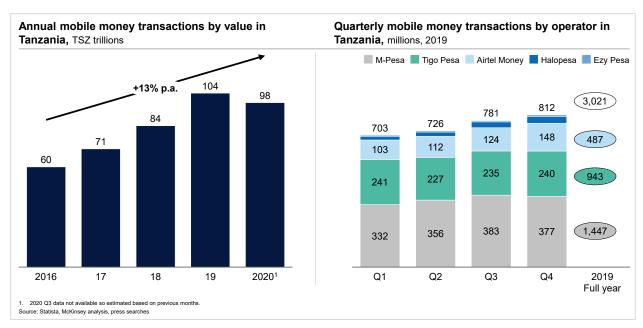


Figure 28: Mobile Money Transactions in Tanzania

Other financiers include three leasing companies (with approximately USD\$ 47Mn in assets) and approximately 4,100 cooperatives (with around USD\$ 296Mn in assets) that provide unsecured lending on a smaller scale and have different regulatory requirements to banks⁵⁶.

(5) Growth of MSME segment

MSMEs' contribution to the financial sector will continue to grow and is expected to reach approximately 20 percent by 2024⁵⁷ (Figure 29).

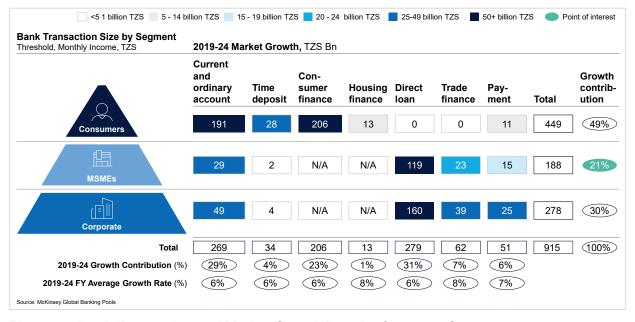


Figure 29: Bank Transaction and Market Growth Rate by Customer Segment

Tanzania Cooperative Development Commission, The United Republic of Tanzania, "Administration – Financial Cooperatives Regulatory," 2021, https://www.ushirika.go.tz/statistics/category/registered-saccos.

McKinsey & Co., Inc., "Panorama Global Banking Pools."

MSME financing has become a high priority for the government and for commercial banks. From 19 percent of total loans in 2013, MSMEs are now expected to make up 26 percent of the formal loan sector by 2024. Corporate loans as a percentage of gross loans decreased from 63 percent in 2013 to 47 percent in 2019, with a further decrease to 42 percent expected by 2024. The heightened focus on MSMEs and retail lending aligns with banks' strategic changes from 2018 to date and the government's emphasis on MSMEs in Vision 2025 (Figure 30).

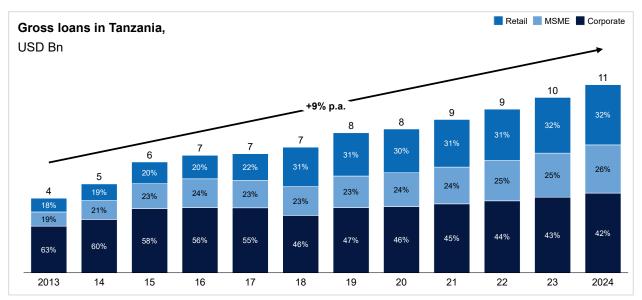


Figure 30: Gross Loans in Tanzania

Tanzania's formal financial sector consists of a mix of commercial banks, development financing institutions, micro-finance institutions, and community banks. Other financiers include over 4,000 savings and credit cooperative societies (SACCOs), three registered leasing companies, and two mortgage financing companies. Informal financiers include value chain financiers and loans from family, friends, colleagues, or illegal lenders.

Tanzania has 35 commercial banks, which account for 94 percent of the financial sector. The top four of these banks account for approximately 60 percent of asset market share (total market: approximately USD\$ 14.4 Bn)⁵⁸ (Figure 31).

⁵⁸ BOT annual report 2019-20 and individual Financial Institution 2019 annual reports

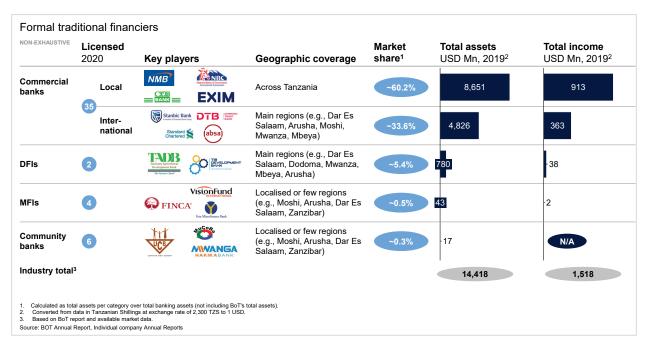


Figure 31: Asset Share by Category

1.6.3 Donor landscape overview

In 2019, Tanzania's ODA inflow was USD\$ 2.3Bn⁵⁹. Tanzania is the third-largest recipient of ODA in Eastern Africa, receiving on average USD\$ 2.6Bn p.a. from donors between 2015 and 2019. Relative to other countries in the region, stable economic growth and political stability have been key drivers of the inflow of assistance to the country (Figure 32).

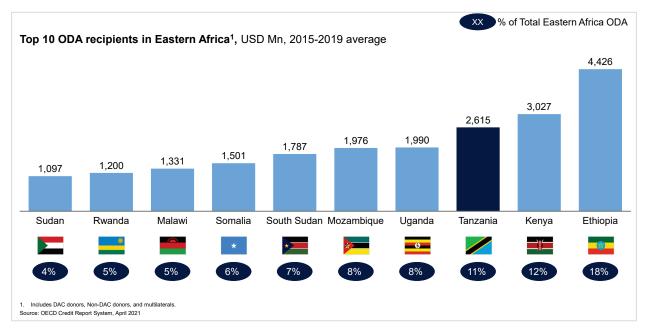


Figure 32: Top 10 recipients of ODA in Eastern Africa

⁵⁹ Organization for Economic Co-operation and Development, "Creditor Reporting System (CRS)," OECD.Stat, 11 Aug. 2021: https://stats.oecd.org/Index.aspx?DataSetCode=crs1

Global and Tanzanian ODA has plateaued since 2016. This trend is estimated to accelerate, as COVID-19 has reduced donors' capacity for foreign aid. According to data from the International Aid Transparency Initiative (IATI), bilateral commitments have decreased by 26 percent from 2019 to 2020, while multilateral agencies have largely increased their commitments to cover potential gaps (Figure 33)60.

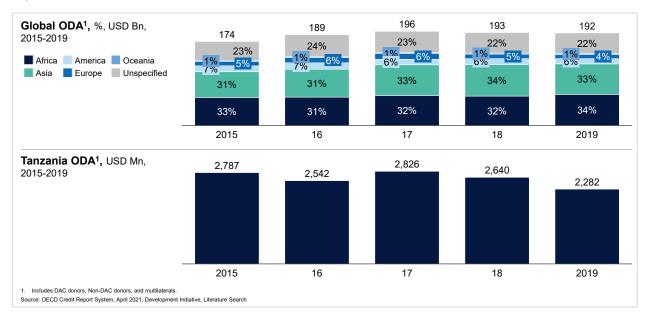


Figure 33: Global and Tanzania ODA Amount

Less than 2 percent of ODA has been dedicated to supporting banking and financial services. In 2019, only USD\$ 0.6Mn was spent on education and training in financial services. The majority of Tanzania's ODA focuses on social infrastructure and services related to population policies and reproductive health (19 percent), health (16 percent), and education (8 percent) (Figure 34).

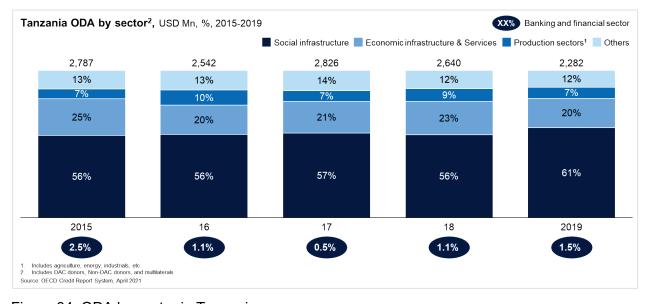


Figure 34: ODA by sector in Tanzania

Development Initiatives, "Aid data 2019-2010: Analysis of trends before and during Covid". 8 February 2021." Last updated 28 July 2021, https://devinit.org/resources/aid-data-2019-2020-analysis-trends-before-during-covid/

An analysis of Tanzania's ODA shows that bilateral Development Assistance Committee (DAC) donors represent approximately 51 percent of ODA, while multilateral agencies account for the rest. The US and UK are Tanzania's largest bilateral donors, accounting for over 56 percent of bilateral aid. The World Bank, the Global Fund, and the African Development Bank (AfDB) are the largest multilateral donors, accounting for 79 percent of multilateral aid. The composition of bilateral and multilateral aid has been consistent over the last five years.

The largest donors to banking and financial services are the World Bank and Sweden, which committed 4 percent and 10 percent, respectively, of their total commitments in 2019 (Figure 36). Sweden has focused on providing loans to local financial institutions, including CRDB and NMB, to enhance MSMEs' financial access through their 'Poverty Reduction by Sustainable Business Program'61. Previous investments in the industry in Tanzania include investments in NMB to increase lending to the SME segment with focus on the agro-industry in 2015, Platcorp Holdings to provide credit to MSMEs in 2018, and Bayport, a leading credit provider to government employees and employees of approved private companies.

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	Region	Banking & Financial Services ¹	Health and population policy			Transport & Storage	Education	Energy	Agriculture, Forestry, Fishing	Water Supply & Sanitation	Industrial	Trade and Services	Other	
Fls	World Bank	4%	8%	6%	0%	36%	11%	4%	1%	18%	0%	0%	12%	
	Global Fund	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	African Development Bank	0%	1%	7%	0%	24%	5%	23%	38%	3%	0%	0%	0%	
	EU institutions	1%	0%	52%	10%	22%	0%	5%	1%	0%	0%	1%	8%	
donors	United States	0%	72%	2%	5%	0%	4%	0%	8%	3%	0%	0%	6%	
	United Kingdom	0%	14%	11%	11%	3%	16%	0%	3%	21%	0%	5%	16%	
	Canada	2%	68%	2%	2%	0%	14%	0%	1%	0%	4%	0%	8%	
	Sweden	10%	2%	25%	1%	0%	34%	2%	3%	0%	0%	0%	33%	
	Japan	1%	5%	6%	1%	18%	4%	42%	16%	0%	3%	0%	4%	

Figure 35: ODA by Donor and Sector

Donor efforts have largely consisted of providing financial and technical assistance to MSMEs. Financial assistance has mainly involved providing loan facility and guarantee schemes to enable lending through commercial banks⁶². However, stakeholders note that these measures have been limited, because they lack the means to address demand-side bottlenecks, such as MSMEs' insufficient management capabilities and lack of financial literacy (Figure 36).

⁶¹ D-portal.org, accessed 18 August 2021, https://d-portal.org/ctrack.html?country_code=TZ§or_group=240&/participating-org@ref=SE-0#view=list_activities

⁶² Development-portal (D-portal), "United Republic of Tanzania," accessed 3 May 2021 (data is updated nightly), https://d-portal.org/ctrack.html?country code=TZ#view=main.

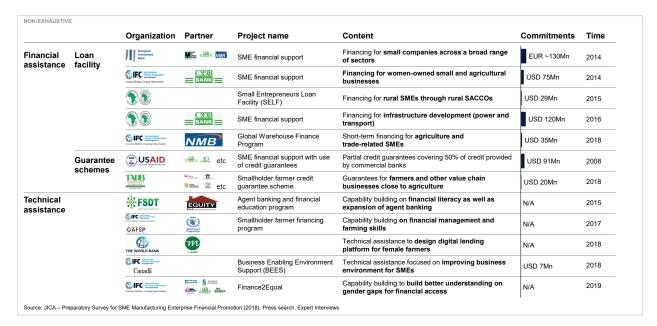


Figure 36: Donor Support in Tanzania

In donors' financial assistance to MSMEs, four key trends have been identified:

- Improving the business environment. Many programs have encouraged private sector growth by improving MSMEs' business environment, which will help to attract foreign investment in the long term.
- Collaboration with private sector partners. Bilateral and multilateral donors have provided credit through local, private sector banks that have access and relationships with MSMEs.
- Focus on women entrepreneurs. Some programs have encouraged lending to women-owned small businesses that have limited access to finance. For example, the IFC provides an interest rate rebate if CRDB Bank can meet its quota for women borrowers⁶³.
- Investing in digital capabilities. Many institutions view digital technology as a key catalyst for financial inclusion. Private donors such as the Bill and Melinda Gates Foundation have invested in projects to boost the penetration of mobile money.

1.6.4 Financial-related legal systems, policies, and infrastructure

The Tanzanian financial landscape comprises of multiple players, including 47 licensed financial institutions and over 4,000 value chain financiers, such as cooperatives and suppliers (Figure 37).

International Finance Corporation and World Bank Group, "IFC and CRDB Bank commit to support SME and agribusiness sectors in Tanzania," 11 April 11, 2014, https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=24835.

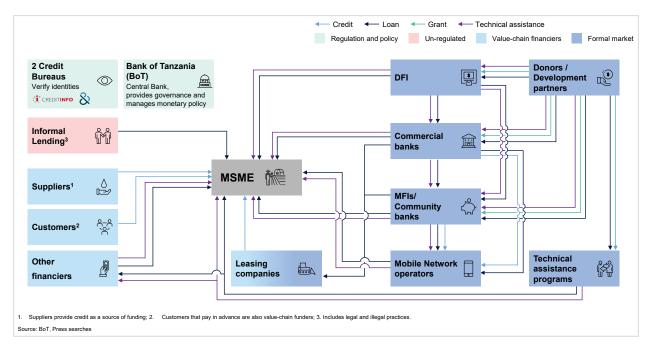


Figure 37: Tanzania's Financial Ecosystem

The main regulator of financial institutions is the Bank of Tanzania, which is responsible for:

- Domestic price stability
- Regulation and supervision of the financial sector, which includes any institution that holds deposits
 or provides credit, credit reference bureaus, and bureaus de change
- Regulation of mobile money, including deposits and lending
- Regulation of payment instruments for any form of lending, with the first lending license required to come from the BoT.

Key acts and regulations relevant to financial institutions include:

- The Banking and Financial Institutions Act, 2006 and The Banking and Financial Institution Regulations (which set regulations for financial leasing in 2011 and for micro-finance activities in 2014) are the main regulations for banks and financial institutions in Tanzania.
- The National Payment Systems Act, 2015 and Payment Systems Licensing and Approval Regulations, 2015 regulate the activities of providers of payment initiation services and aggregators.
 The regulations also define risk-proportionate, minimum initial capital requirements to allow unregulated banks and micro-finance institutions to participate in payment services.
- The Anti-Money Laundering Regulations, 2019 prohibit banks from engaging in transactions which involve the proceeds of crime, or from assisting others to do so.

The National Payments System department is responsible for mobile money regulation and approval. Financial-Sector Supervision department is responsible for checking bank credit controls. Limits for mobile lending are assigned by the Governor of the BoT and issued by the BoT.

Legal requirements	Financial institutions	MNOs	Leasing companies
Regulator	Bank of Tanzania (BoT)	BoT for mobile money transactions, deposits and credit and	ВоТ
	Licensing done under financial sector supervision department	Tanzania Communications Regulatory Authority (TCRA) for communications. Approval from BoT needed for payment function and risk mitigation processes. Approval from BoT and TCRA would be under one letter	
Requirements for deposits and credit	Holding of deposits and issuing of credit can only be done by a financial institution (FI) licensed by BoT	Deposits need to be held by a licensed FI and credit risk needs to be held by a licensed bank. MNO needs to create a separate legal entity to hold the mobile money business	Leasing companies are licensed by BoT for the purpose of extending credit through a lease agreement
Collateral requirements	BoT not prescriptive on kind or value of collateral. Bank to decide on split but guidelines from BoT - secured needs to be worth 125% of outstanding loan amount and individual borrower cannot borrow more than 25% of core capital, for unsecured loans, individual borrower cannot borrow more than 5% of core capital	Based on partnering bank conditions, usually MNO loans are unsecured but need to comply with partner bank's credit policy	Collateral is usually the asset being leased. Asset needs to be reported on leasing company's balance shee in line with IFRS standards
NPL ratio	5%	Partner banks total portfolio has to have an NPL of 5% or less	5%
Statutory minimum reserve	8%	8% for partner bank	8%
Daily transaction limits	N/A	TZS 3-5Mn, increased to TZS 5-10Mn at start of COVID-19 to encourage paperless transactions – BoT limits ¹	N/A
Reporting requirements	Quarterly results	Partner banks to report quarterly results	Required to meet international

Figure 38: Legal Requirements related to Financial Sector

Deposits can only be held by licensed financial institutions regulated by the BoT (Figure 38). This means that for mobile network operators offering mobile money services, a partner bank needs to hold the relevant deposits. The Tanzania Communications Regulatory Authority (TCRA) controls mobile moneylending communications and back-end infrastructure.

As in Kenya, the TCRA regulates the communication and broadcasting sectors, including MNOs. The main act governing MNO transactions is the Electronic Transactions Act, 2015, which regulates the use and legality of digital technology for transactions.

In relation to mobile money, the TCRA manages the approvals of communication channels (such as USSD codes). Once the BoT has approved mobile money products, the TCRA typically signs off on the product and provides a joint letter of approval.

New policy measures from BoT to counter stagnant credit growth due to COVID-19 went into effect on 27 July 2021. These measures are meant to hasten economic recovery by increasing credit to the private sector (agriculture in particular) and lowering interest rates. Tanzania has experienced slow GDP growth of just 4.8 percent in 2020, down from 7 percent in 2019. Private sector credit growth has ranged from 2.3 percent to 9.1 percent, and banks' interest rates on loans remain high at approximately 17 percent, despite monetary expansion and other measures adopted.

The main policy measures taken are summarized below64:

• Reduction of statutory minimum reserve (SMR). A bank that extends credit to agriculture is eligible for a reduction in SMR equivalent to the amount of the loan extended. Banks are required to submit evidence of lending to the agriculture sector at interest rates not exceeding 10 percent p.a.

⁶⁴ Bank of Tanzania Policy measures to promote credit to private sector and lower interest rates – Circular released on 27th July 2021

- Relaxation of agent-banking eligibility criteria. The BoT has removed the regulatory requirement of at least 18 months of business experience for applicants of agent banking business. Instead, applicants for agent banking business are required to have a national ID card or national ID number.
- Limitation of interest rate paid on mobile money trust accounts. Mobile money trust account balances held with banks are eligible for an interest rate not exceeding the rate offered on savings deposit accounts by the respective bank.
- Introduction of a special loan amounting to TZS 1Tn to financial institutions for on-lending to the private sector. The BoT will provide a special loan to banks and other financial institutions at 3 percent p.a. for pre-financing or re-financing of new loans to the private sector. A bank wishing to access the special loan facility is required to charge interest rates not exceeding 10 percent p.a. on loans extended to the private sector.
- **Reduction of risk weight on loans.** The BoT will reduce the risk weight on different categories of loans when computing the regulatory capital requirement of banks.

Tanzania's government has strengthened its regulatory regime for the financial sector (Figure 39). Since 2002, the Tanzanian government has taken various initiatives to improve governance, enhance consumer protection, and reduce high non-performing loan ratios. But challenges remain, such as onerous KYC requirements and limited supervision and oversight⁶⁵.

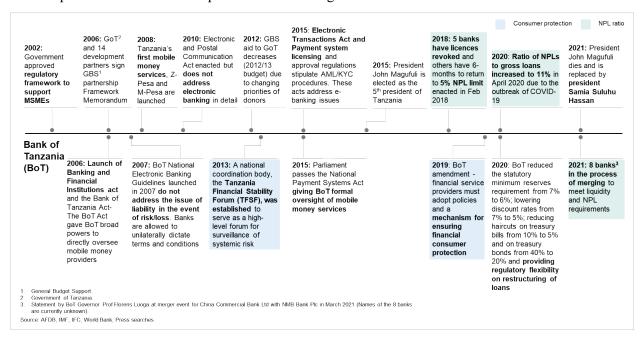


Figure 39: Tanzania's Financial Regulations

Some measures are being taken to consolidate the industry and reduce the non-performing loans ratio, but further provisioning and stronger buffers are still needed to manage liquidity, credit, and concentration risk.

⁶⁵ PwC report - https://www.pwc.com/ug/en/assets/pdf/east-africa-banking-survey-2019.pdf

The financial sector has undergone several recent changes arising from government policy and regulation:

- The launch of the Tanzania Instant Payment System (TIPS). In 2019, BoT launched TIPS, a shared platform for payments, to allow card transactions through mobile banking, electronic money schemes, and internet banking to take place on one platform. The platform will bridge the gap between the non-banking system and the banking system by enabling cross-platform transactions and providing immediate confirmation of payment receipt, which is often a concern among users of banking services in Tanzania.
- Regulations to promote the activities of non-bank financial providers. BoT has proactively supported the growth of financial technology in Tanzania and intends to increase formal financial inclusion to 75 percent by 2022 (up from 65 percent in 2017). Tanzania's Electronic Money Issuer (EMI) Guidelines allow nonbank providers to receive a license as a separate legal entity for issuance of electronic money.

1.7 Overall findings from the MSME survey

1.7.1 MSME landscape and background

Globally, there is no universal definition of MSMEs. The Tanzanian government defines MSMEs based on the number of employees and the amount of capital investment. Micro-enterprises have up to four employees or capital investment up to TSH 5Mn, small enterprises have 49-50 employees or capital investment between TSH 5-200Mn, and medium enterprises have 50-99 employees or capital investment between TSH 200-800Mn⁶⁶. When the classification differs between the two metrics, the capital-based definition takes precedence.

Given MSMEs' significant contribution to the Tanzanian economy, improving financial access is critical to facilitating the country's economic growth. This is especially true for the agricultural sector, where support is limited, even though the sector accounts for 27 percent of GDP⁶⁷.

There are approximately 3.2 million formally registered MSMEs in Tanzania, of which 82 percent are micro-enterprises with fewer than 10 employees (Figure 40)⁶⁸. When smallholder farmers are included, Tanzania's largest MSME sectors are agriculture (56 percent), wholesale and retail trade (24 percent), and hotels and restaurants (12 percent)⁶⁹.

⁶⁶ United Republic of Tanzania, Small and Medium Enterprises (SME) Development Policy (2003), http://www.tzdpg.or.tz/fileadmin/ migrated/content uploads/sme.policy.2002.pdf

Bank of Tanzania, "Annual Report 2019/20."

International Finance Corporation, SME Finance Forum, "MSME Finance Gap," 2021, https://www.smefinanceforum.org/data-sites/msmefinance.gap

George Rapsomanikis, "The economic lives of smallholder farmers – An analysis based on household data from nine countries," Food and Agriculture Organization of the United Nations, 2015, http://www.fao.org/3/i5251e/i5251e.pdf.

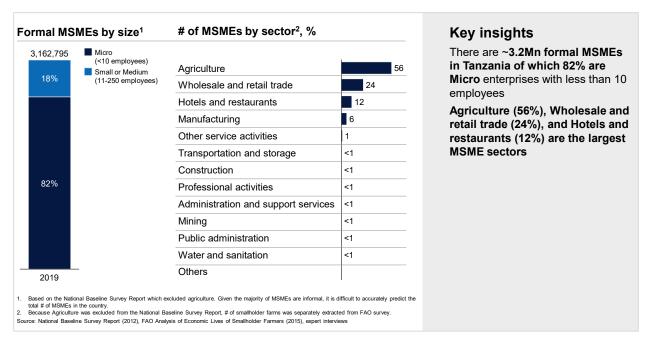


Figure 40: Breakdown of Registered MSMEs

1.7.2 Current status of access to finance

Only 20 percent of MSMEs use bank accounts for their financial transactions, reflecting their heavy reliance on cash transactions in their operations (Figure 41). Agricultural and trade MSMEs rely most on cash transactions, since their transaction sizes tend to be smaller than those in manufacturing.

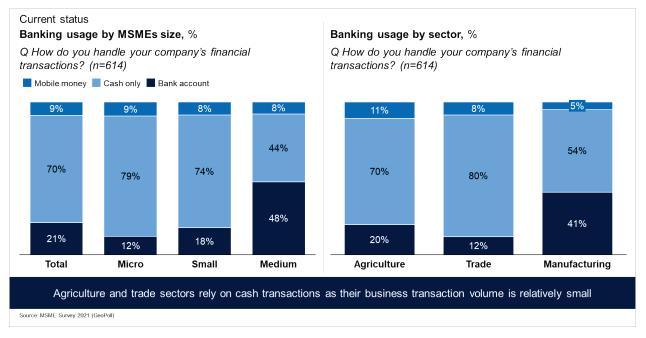


Figure 41: Banking Usage by Size and Sector

Among the 20 percent of MSMEs with bank accounts, CRDB and NMB account for over 80 percent of market share, with some regional variations; for example, CRDB has a 46 percent share in Dar Es Salaam and 66 percent in Mwanza, while NMB has a 48 percent presence in Arusha (Figure 42).

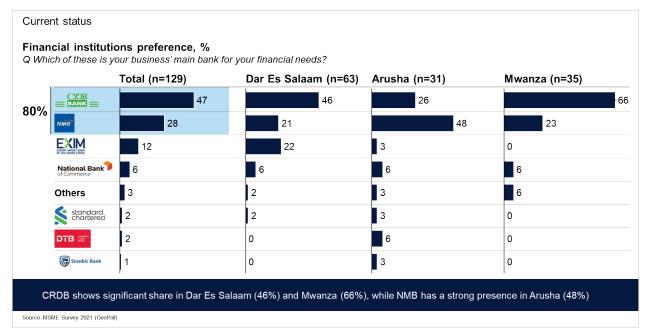


Figure 42: Ranking of Financial Institutions Preference

MSMEs mostly use banks for transaction banking, including payroll services (50 percent of MSMEs) and cash pickup and delivery (40 percent). Their use of financing products is limited, as at most 30 percent of MSMEs use these products highlight below (Figure 43). Overdraft facility is the most oftenused financing product, and agriculture MSMEs are more likely to use this product than other sectors (with 27 percent use in agriculture versus 19 percent in trade and 20 percent in manufacturing). Usage percentages are calculated by dividing the number of respondents who selected the particular product or service by the number of respondents for each group category (represented by 'n'); for example, in the Figure below of 129 respondents, approximately 64 respondents cited payroll services as a preferred product.

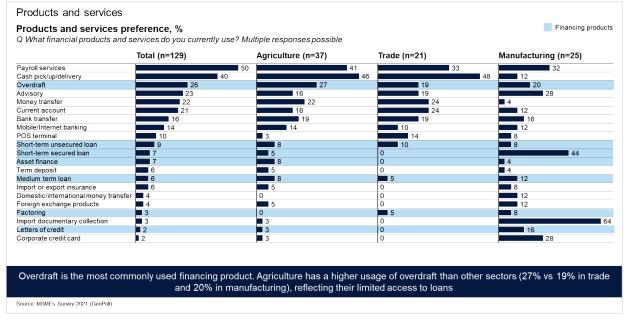


Figure 43: Products and Services MSME Prefers (Usage)

Despite their limited use of financing products, approximately 20 percent of MSMEs view short-term loans as important products, highlighting the fact that their financing needs are currently unmet (Figure 44). Agriculture MSMEs in particular view short-term secured loans as important products; 22 percent of agriculture MSMEs view these loans as important, while just 16 percent of trade MSMEs and 15 percent of manufacturing MSMEs say the same. In addition, more agricultural MSMEs believe asset financing to be important, as 13 percent of agriculture MSMEs consider this financing important, while only 8 percent of trade MSMEs and 3 percent of manufacturing MSMEs believe the same.

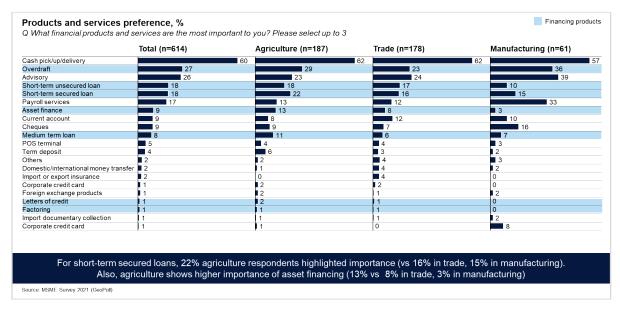


Figure 44: Products and Services MSME Prefers (Most Important)

MSMEs primarily borrow from commercial banks (42 percent) and family members (29 percent). Agriculture MSMEs' use of MFIs, SACCOs, and other money lenders is high compared to other sectors, perhaps reflecting the difficulty they have in meeting their financing needs through commercial banks (Figure 45).

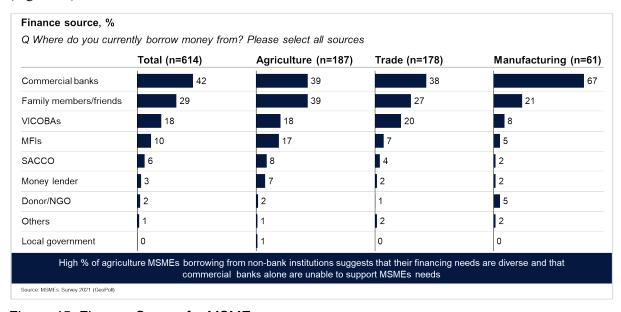


Figure 45: Finance Source for MSMEs

MSMEs across all sectors emphasize the importance of low interest rates and trust when selecting their source of finances (62 percent and 42 percent, respectively). The majority of agriculture MSMEs view low interest rates as the most important factor in this decision (74 percent of agriculture MSMEs, compared to 58 percent of trade MSMEs and 52 percent of manufacturing MSMEs). Agricultural MSMEs consider flexible collateral to be another important factor (40 percent of agriculture MSMEs versus 19 percent of trade and 19 percent of manufacturing MSMEs) (Figure 46).

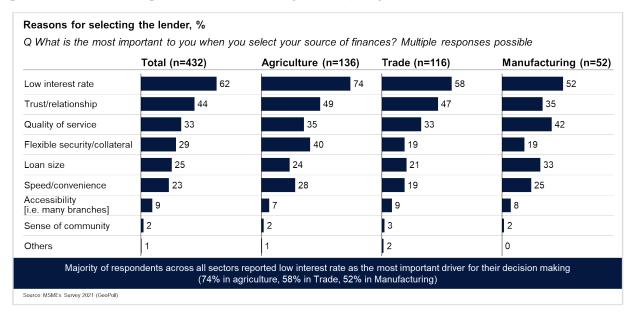


Figure 46: Reasons for Selecting the Lender for MSMEs

MSMEs primarily borrow to expand their businesses (67 percent of MSMEs), while some borrow to finance CAPEX spending (12 percent) and working capital (9 percent) (Figure 47). Manufacturing MSMEs report a higher need for CAPEX than other sectors do (21 percent of manufacturing MSMEs, compared to 12 percent of MSMEs overall), while trade and agriculture MSMEs say they have a greater need to finance working capital (12 percent of trade MSMEs and 10 percent of agriculture MSMEs, compared to 8 percent of manufacturing MSMEs).

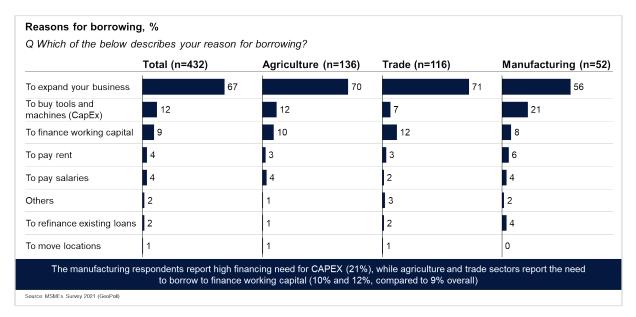


Figure 47: Reasons for Borrowing for MSMEs

In manufacturing, micro-enterprises report a higher demand for CAPEX financing (45 percent of micro-enterprises versus 13 percent of small enterprises and 21 percent of medium enterprises). Small and medium enterprises have more varied needs, including financing to pay rent, salaries, and existing loans (Figure 48).

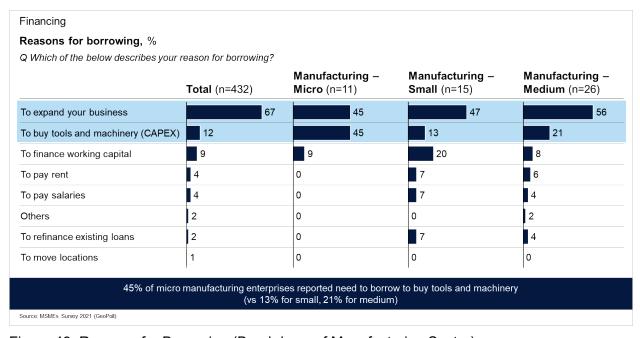


Figure 48: Reasons for Borrowing (Breakdown of Manufacturing Sector)

1.7.3 Bottlenecks for access to finance

The survey aimed to uncover bottlenecks on both the demand and supply sides. The supply-side bottlenecks are related to the current state of financial institutions' support for MSMEs, while the demand-side bottlenecks are general issues that MSMEs face, including market access, financial literacy, collateral, and capacity. These bottlenecks are discussed in further detail in Chapter 2.

On the demand side, across all sectors, high competition and insufficient working capital are the biggest challenges for MSMEs (affecting 68 percent and 53 percent of MSMEs, respectively). The high cost of inputs is evidently a unique challenge in agriculture, as 48 percent of agriculture MSMEs grapple with this problem, while only 10 percent of trade MSMEs and 10 percent of manufacturing MSMEs do. This disparity is likely due to agriculture MSMEs' reliance on foreign seeds and fertilizers (Figure 49). Providing financial support for affordable inputs, therefore, is critical and would help to address MSMEs' financial access overall.

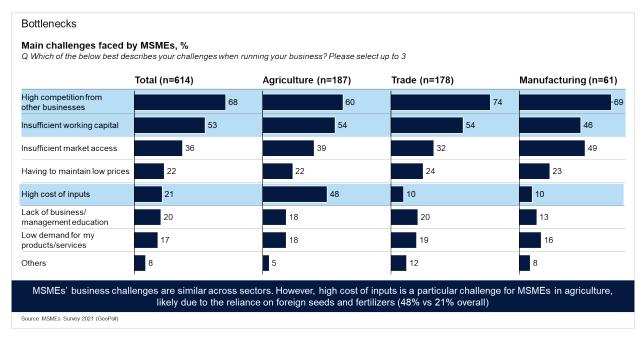


Figure 49: Main Challenges Faced by MSMEs

On the supply side, the most challenging issues that MSMEs face when they want to borrow are high interest rates and long processing times for loan applications (affecting 64 percent and 50 percent of MSMEs, respectively) (Figure 50). Seventy-two percent of agriculture MSMEs cite high interest rates as a challenge (compared to 62 percent of trade MSMEs and 62 percent of manufacturing MSMEs), possibly reflecting the high interest rates that tend to be imposed on MSMEs.

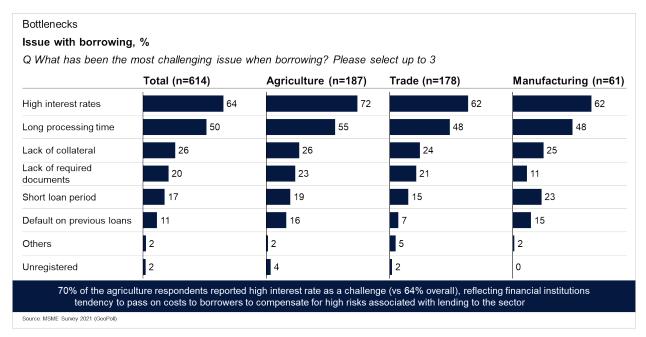


Figure 50: Issue with Borrowing for MSMEs

1.7.4 Financing needs

Overall, 70 percent of MSMEs show interest in borrowing money, suggesting that there is unmet demand to be captured by financial institutions. Borrowing needs are consistent across the agriculture, trade, and manufacturing sectors (Figure 51).

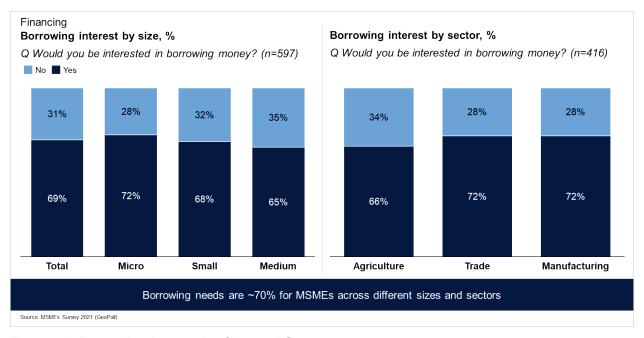


Figure 51: Borrowing Interest by Size and Sector

MSMEs are most interested in small loans between TZS 2-20Mn (USD\$ 872-8,718)⁷⁰ (Figure 52). Manufacturing MSMEs show higher demand for larger loans.

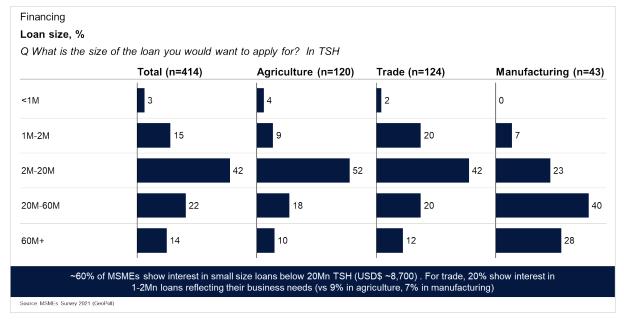


Figure 52: Loan Size for MSMEs

Seventy-six percent of MSMEs look for loans with repayment periods of less than three years. Manufacturing MSMEs show the most variance in this area, with required repayment periods ranging from less than a month to up to five years (Figure 53). This wide range can be attributed to the fact that, when seeking financing for business expansion and CAPEX, manufacturers look for long-term loans, but when they need loans for operating expenses and debt repayment, they seek out short-term loans with repayment periods of less than two years.

Conversion rate 1USD=2,294TSH (2020), World Bank, accessed 18 August 2021, https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=TZ

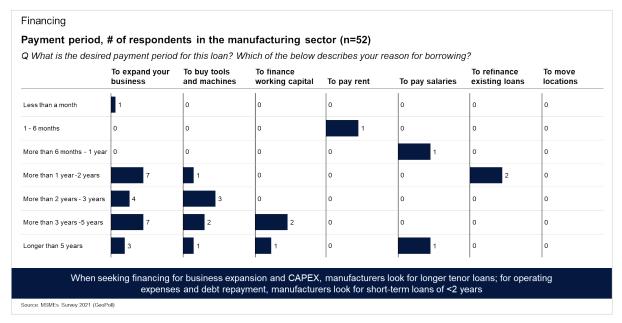


Figure 53: Payment Period in the Manufacturing Sector

1.7.5 Support needs

Lower interest rates, better information, and simpler requirements are critical to encouraging and supporting MSMEs to use financial services (Figure 54). These features need to be carefully considered when designing programs for financial institutions as part of the private sector investment and finance workstream of this project.

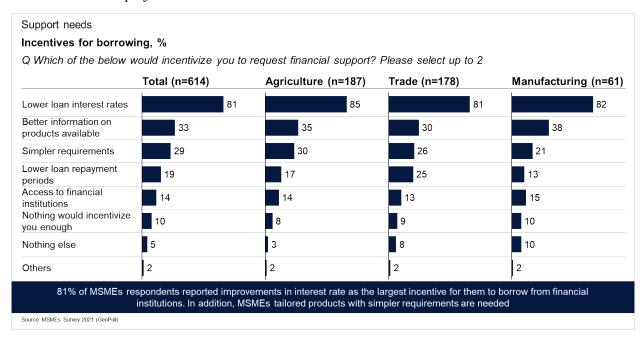


Figure 54: Incentives for Borrowing for MSMEs

Lastly, MSMEs say that receiving advice on how to interact with financial institutions would help them to approach financial institutions for finance (Figure 55). Providing financial education to MSMEs will be critical to improving their financial capability in the long term.

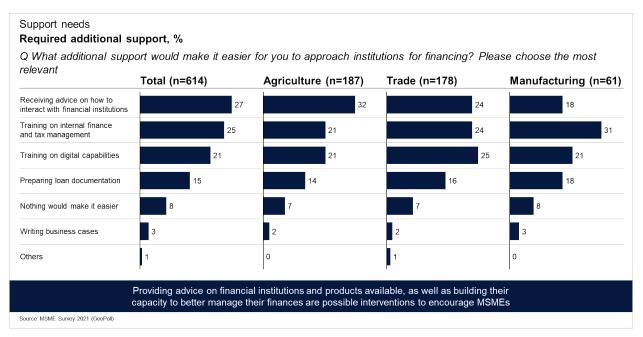


Figure 55: Required Additional Support for MSMEs

Under the framework outlined in its MSME Development Policy 2003, the Tanzanian government has implemented several measures to improve the business environment for MSMEs. MSMEs have been unable take full advantage of the policies, however, as efforts have not been closely coordinated among the different ministries of the government. (Figure 56).



Figure 56: Government Measures to Improve the MSME Business Environment

Today's financing gap for MSMEs is estimated to be USD\$ 5.8Bn, while current loans provided to micro-enterprises and SMEs is USD\$ 38Mn and 1.3Bn, respectively⁷¹. In the IFC's SME Financing Gap survey, approximately 72 percent of MSMEs reported experiencing financial constraints, in which those

International Finance Corporation, SME Finance Forum, "MSME Finance Gap," 2021

who applied for loans were either rejected or discouraged from applying. Approximately 60 percent of micro-enterprises reported facing financial constraints, while approximately 12 percent of SMEs experienced similar challenges (Figure 57).

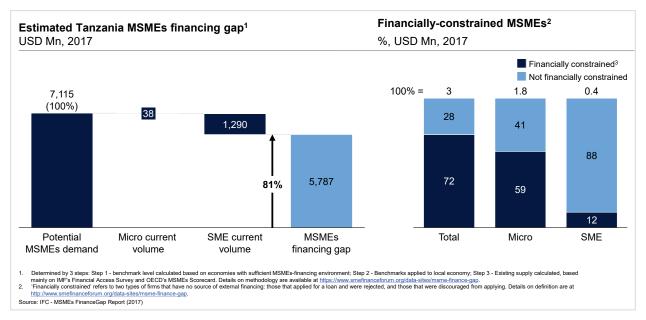


Figure 57: Tanzania MSMEs' Estimated Financing Gap

Our analysis identified agriculture, related trade, and manufacturing as the sectors that most need to be prioritized for corporate partnership, especially given the low level of current support. While 67 percent of the population are employed in the agricultural sector, the sector receives only 10 percent of commercial loans because of demand- and supply-side bottlenecks⁷². Key stakeholders have emphasized the difficulty of reaching MSMEs in rural areas, the unpredictability of revenues, and a lack of capabilities as major barriers to providing financing to them through traditional banking (Figure 58).

International Labor Organization, "United Republic of Tanzania – Integrated Labor Force Survey, last updated 25 July, 2017, https://www.ilo.org/dyn/lfsurvey/lfsurvey.list?p_lang=en&p_country=TZ.

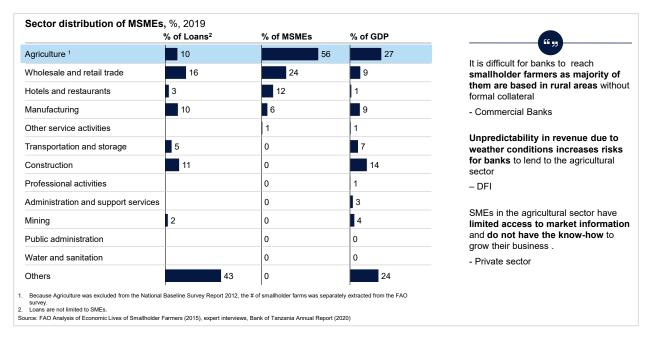


Figure 58: Sector Distribution of MSMEs

Chapter 2 Analyses of bottlenecks faced by MSMEs

Chapter 2 provides a detailed overview of the bottlenecks facing MSMEs in terms of both supply (Chapter 2.1.) and demand (Chapter 2.2). The section on supply looks at the current state of financial institutions' support for MSMEs and the challenges that MSMEs confront when attempting to obtain financing from the formal financial sector. Also included is an overview of the key reasons for these challenges. The section on demand describes the general issues that MSMEs must deal with when attempting to access financing and working capital to meet their needs. In addition, each section provides an overview of approaches to removing or mitigating the challenges that MSMEs face and identifies potential solutions to key challenges.

2.1 Current state of supply side of corporate finance

As of 2019, Tanzania had approximately 3.2 million MSMEs⁷³ – the largest number of registered MSMEs in the region, and more than double the number of MSMEs in Kenya (Figure 59). Sixty percent of MSMEs in Tanzania, however, are still unregistered. Tanzania's increase in registered MSMEs can be attributed to favorable governmental policies, such as the Block Management System of geographically-focused registration, a simplified taxation schedule for MSMEs, and the easing of compliance requirements. However, MSME credit in Tanzania, at 3 percent of GDP, is only half of Kenya's 6 percent, largely due to financial constraints in Tanzania.

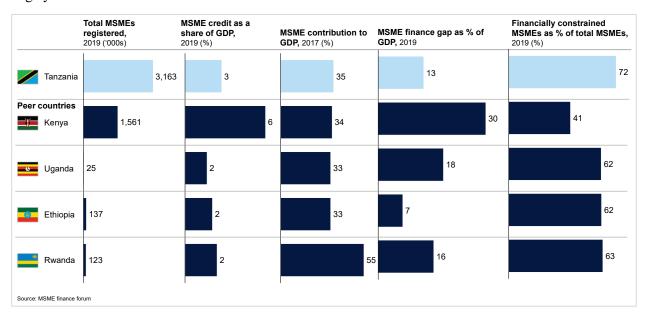


Figure 59: Comparison of MSMEs across Countries

Supply-side bottlenecks occur in various parts of the Tanzanian financial system, including the Bank of Tanzania, credit bureaus, commercial banks, MFIs, and informal lenders.

Key supply-side bottlenecks were identified through stakeholder interviews and the MSME finance needs survey. These include limited capacity and capabilities at financial institutions, an inability to

MSME finance forum - https://www.smefinanceforum.org/data-sites/msme-country-indicators

underwrite and accommodate high-risk clients, stringent government and internal requirements, inaccessibility, and a dearth of reliable information from credit bureaus. These deficiencies are described in detail below.

2.1.1 Financial Institutions' capabilities and capacity

- Financial institutions' understanding of MSMEs is limited. Their employees cannot adequately evaluate risk or monitor loans, as they do not understand MSMEs' business models, leading to high interest rates and incompatible tenors.
- Products are not specific enough to address MSMEs' financing gaps.
- Financial institutions do not fully prioritize MSMEs. MSME loans make up 5 to 20 percent of banks' lending portfolios; MSMEs' access to services is thus limited, as they are not a high priority and require a significant time investment to serve.
- Financial institutions have inadequate monitoring of MSME loans. Poor monitoring process increases default rates and raises interest rates for future borrowing.

2.1.2 Risk

- Due to unpredictability in both the weather and the economy, loan tenors need to be tailored to MSMEs' particular needs (especially for seasonal harvests in agriculture). But financial institutions seldom take this unpredictability into account in loan terms, increasing the chances of default.
- Data is often unreliable, and internal Know Your Customer (KYC) and anti-money-laundering
 (AML) procedures can be overly stringent. Financial institutions lack reliable, traditional information
 on MSMEs' history and credit-worthiness, increasing the chances that their loan applications will be
 rejected, or that the terms will be unfavorable.
- Financial institutions often lack the proper technology to underwrite MSME loans and have
 insufficient monitoring capabilities. Risk underwriting tends to be outdated, incomplete, and paperbased, leading to inaccurate underwriting and thus high interest rates and unacceptable tenors. (Banks
 and MFIs provide short-term loans with effective rates for MSMEs ranging from 15 to 20 percent
 APR.)

2.1.3 Government and financial institutions' requirements

- Non-performing loan requirements can be a barrier to loan access for MSMEs. MSMEs are often seen as the riskiest segment and thus MSME loans are more difficult to obtain when NPL rates are high.
- The government maintains stringent loan requirements. Many MSMEs do not have acceptable collateral or even the ability to fill out loan applications due to limited financial literacy, causing rejections or unfavorable terms.

2.1.4 Accessibility

• Financial institutions' reach is limited in rural areas. Branches are mostly located in cities, hindering many MSMEs' access to financial services.

2.1.5 Government regulations

- Government policies have previously had frequent changes. Changes in trade and tax policies can adversely affect MSMEs; for example, recent issues between Tanzania and Kenya triggered a regional export ban on agricultural trade, which harmed the agricultural sector.
- A lack of coordinated effort among multiple ministry stakeholders has dampened the impact of political measures intended to help MSMEs⁷⁴. MSMEs have reported difficulty in navigating the required processes and therefore cannot reap the full benefits of favorable policies.
- Loan requirements are relatively strict; for example, unsecured loans must be lower than 5 percent of core capital, and collateral cover must be 125 percent of outstanding secured loans leading to high capital adequacy ratios (largest 20 banks have CARs of over 10 percent. Basel III only requires a minimum capital adequacy ratio of 8 percent). Many MSMEs do not have acceptable collateral and cannot meet loan requirements or afford the associated costs.
- Regulations require banks to report leases as assets. Banks often do not want to increase lease assets on their balance sheets and so avoid this type of financing⁷⁵.

2.1.6 Credit bureaus

 Credit bureau information and multiple identification forms are not centralized, which raises AML and KYC risks, increases loan-application rejections, and leads to higher interest rates.

The government of Tanzania has taken several measures to improve MSME financing. These include:

- Introducing geographically-focused business registrations. This measure resulted in a ten-fold increase in registrations from 2003 to 2012.
- **Formalizing targeted assets**. Authorities are mobilizing small traders by providing permanent trading sites and infrastructure to facilitate identification and registration.
- **Simplifying the tax design**. The government has introduced a new, simplified taxation schedule for small business taxpayers as part of a drive to make compliance easier.
- Leveraging IT. The Tanzania Revenue Authority uses tax audits and systematic cross-checking of electronic databases to identify unregistered taxpayers and to discover unreported incomes.

Financial institutions have also partnered with donors and DFIs to mitigate the challenges related to collateral requirements. As part of this effort, they have introduced credit guarantees and provided relevant training through capacity-building programs.

2.2 Current state of demand side of corporate finance

On the demand side of corporate finance, four main types of bottlenecks have been identified: market access, financial literacy, collateral, and capacity (Figure 60). For each bottleneck, possible mitigation

⁷⁴ Interviews and MSME survey indicating multiple government offices with disparate systems

⁷⁵ Based on interviews with various banks and key financial sector stakeholders

measures were identified. While these potential mitigation measures are non-exhaustive, they provide a broad set of options for tackling the challenges MSMEs face in accessing finance.

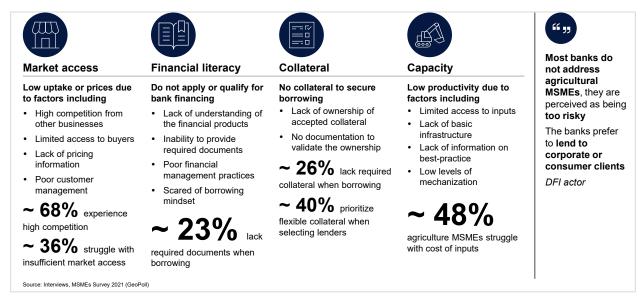


Figure 60: Main Bottlenecks for Demand Side Corporate Finance

2.2.1 Market access

MSMEs often find it difficult to access or gain share in highly competitive markets. Their knowledge of markets is often limited, and they lack the tools and ability to price competitively. Factors hindering their success are included below, along with potential business solutions:

- Strong competition from other businesses. Limited product differentiation intensifies competition among businesses selling similar products, thereby reducing the bargaining power for farmers to sell their products at higher prices.
 - Potential Solution: Implementation of traceability systems. Introducing systems that would allow off-takers and consumers to trace the production process will enable farmers to demand higher prices for their final products, thereby increasing their revenue potential. An increasing number of consumers care about the production process and are willing to pay more for products from specific origins.
- Limited access to potential buyers and markets. Since smallholder farmers are dispersed in rural areas with less access to transportation, they often lack market information and connections with large distributors. Farmers are thus restricted to selling within their local markets, where they may face high competition and low prices. In addition, their access to export markets is constrained, as their products may fail to meet the export quality standards or lack certifications required by off-takers.
 - Potential Solution: Implementation of an e-marketplace to match farmers with potential buyers.
 Providing an e-commerce platform that connects farmers to consumers will allow farmers to expand beyond their own local markets and possibly avoid high price pressures.

- Potential Solution: Support for export trade partnerships. The government and donors can offer
 financial and technical assistance to connect MSMEs to potential export partners, and they can
 help farmers obtain the required quality certificates for exporting.
- Potential Solution: Provision of vehicle financing for distribution. Original equipment
 manufacturers (OEMs) can partner with financial institutions and MSME aggregators to provide
 vehicles designed for a specific use and offered under favorable terms, giving farmers access to a
 larger market by increasing their distribution radius.
- Poor customer management. Most MSMEs do not keep track of customers because they lack
 business management skills and access to digital tools that would allow them to easily track their
 daily business transactions. This lack of transparency dampens financial institutions' confidence in
 lending to MSME owners.
 - Potential Solution: Implementation of digital tools for customer management. Implementing
 digital tools to better track customer information and orders can improve not only operational
 efficiency but also transparency for future loan applications.
 - Potential Solution: Provision of business skills training. Offering business skills training is
 critical to help MSMEs advance their management capability. Commercial banks often provide
 business training to the consumers who take out their loans.
- Lack of market pricing information. Insufficient data on market prices hinders businesses' ability to set profit-maximizing prices for their products.
 - Potential Solution: Provision of real-time market information. Providing farmers with real-time crop information on nearby markets can help them adjust their prices to meet market demand and supply.

2.2.2 Financial literacy

Weak financial literacy prevents MSMEs from fully understanding product availability and from meeting formal documentation requirements. This shortcoming is further exacerbated by fears of borrowing. Specifically, many MSMEs have:

- **Difficulty understanding financial products.** Financial institutions do not view MSMEs as profitable customer segments and allocate few resources to promoting their products to MSMEs. As a result, MSMEs are unaware of the products available and how to apply for them.
 - Potential Solution: Provision of financial education to improve product understanding. Providing
 financial education on available products will help MSMEs select optimal products that meet
 their working capital needs.
- Inadequate business skills to fill out documents. Lack of business education hinders MSMEs' ability to complete required documents, including documents pertaining to their business model. Commercial bank stakeholders say that MSMEs are typically overly ambitious in their business plans; MSMEs need to understand that many businesses fail within the first three years.

- Potential Solution: Provision of business support for required documentation. Helping MSMEs
 to fill out required documents can improve the likelihood of approval. Stakeholders report that
 MSMEs are often unable to develop viable business plans.
- A limited business track record. Many MSMEs are poor business managers and do not maintain a habit of bookkeeping. Without bookkeeping information, financial institutions cannot properly evaluate a business's risk when reviewing its loan application.
 - Potential Solution: Implementation of digital bookkeeping tools. Implementing digital
 bookkeeping tools will allow MSMEs to develop better business management practices and will
 increase transparency for financial institutions.
- **Fear of borrowing.** Some MSMEs avoid approaching financial institutions because they have a negative attitude towards borrowing.
 - Potential Solution: Provision of financial education to clarify financing benefits. Providing education on the benefits and risks of borrowing often at the community level rather than the individual level can help to promote the use of financial products within a community.

2.2.3 Collateral.

MSMEs often lack the accepted forms of collateral or fail to present documentation validating ownership of an asset.

- Lack of accepted collateral. The Bank of Tanzania requires all borrowers to have security that would cover 125 percent of the loan⁷⁶. Most MSMEs lack sufficient assets to meet this requirement and are thus forced to rely on un-secured or informal lending. Such 'money sharks' often demand extortionate interest rates.
 - Potential Solution: Acceptance of alternative collateral. Some financial institutions, such as the Equity Bank, have started to accept luxury items (such as wedding rings) as alternate forms of collateral.
 - Potential Solution: Provision of unsecured lending
 - > *P2P lending*. Developing platforms that allow for person-to-person lending will eliminate the need for collateral. Moreover, MSMEs often prefer P2P lending over borrowing from financial institutions, as approval processes are much faster and more convenient.
 - > Alternative credit scoring. Non-secured lending is made possible by leveraging credit scoring based on mobile transaction data and other business data. Alternative credit scoring technology has allowed MSMEs to borrow without having a previous credit history.
- Lack of documentation for collateral. Limited land titling and registration can cause MSMEs' loan applications to be rejected, even when they own sufficient collateral.

The United Republic of Tanzania, "The Banking and Financial Institutions Act [CAP 342], Regulations, Made under Section 71," Jan. 2012, https://www.bot.go.tz/Publications/Acts, percent20Regulations, percent20Girculars, <a hre

⁷⁷ Interview conducted with Equity Bank

Potential Solution: Technical support for collateral verification. Instead of physically visiting the land, financial institutions can leverage mobile and other technology to conduct the verification process online. In some developing countries, block chain technology has been used to keep track of land ownership⁷⁸.

2.2.4 Capacity building

Many MSMEs' productivity is low due to factors such as inadequate knowledge, limited mechanization, and lack of access to relevant technology. Capacity challenges are especially pervasive in the agricultural sector, where limited financial access has prevented farmers from investing in high-quality inputs or equipment that could increase their overall productivity. Hence, we focused our analysis on the capacity bottlenecks in this sector. Across the agricultural value chain, key stakeholders (Figure 61) and business challenges were identified to uncover the obstacles hindering MSMEs from accessing finance (Figure 62.



Figure 61: Agriculture Value Chain

⁷⁸ Sebastian Kriticos, "Keeping it clean: Can blockchain change nature and land registry in developing countries?" *World Bank..Blogs*, 29 March 2019, https://blogs.worldbank.org/developmenttalk/keeping-it-clean-can-blockchain-change-nature-land-registry-developing-countries

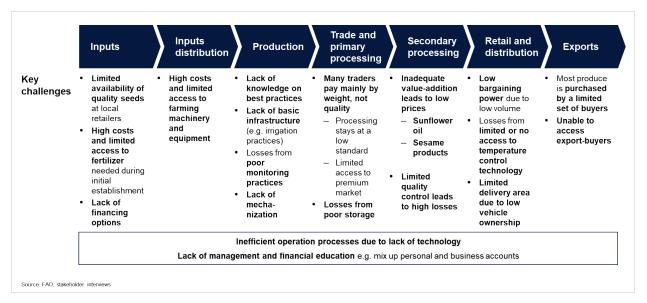


Figure 62: Key Challenges across Agricultural Value Chain

- Limited knowledge and access to inputs. As indicated by the survey, MSMEs have limited knowledge of how to find and access affordable inputs, mainly due to a weak agri-dealer network and the high cost of imported products. This challenge hampers productivity and causes low yields, impeding MSMEs' earning potential.
 - Potential Solution: Provision and financing support for inputs. Input providers can partner with
 financial institutions to provide targeted loans for farmers to purchase input, including seeds and
 fertilizers. The farmers' future outputs can be used as collateral for the loan.
- Low levels of mechanization. Agricultural MSMEs cannot afford the high cost of capital machinery without access to financial loans. Manual farming methods result in low production for farmers, who often miss optimal planting and harvesting windows as a result.
 - Potential Solution: Financing support for high-capital machinery. High-capital machinery OEMs
 can work with aggregators to arrange flexible financing terms or to offer leasing or rental
 services, which are more affordable options for farmers.
- Need for basic infrastructure. A dearth of technical knowledge and of adequate financing means that many farms still lack basic infrastructure. Currently, only 2.7 percent of arable land is equipped for irrigation; the rest still relies on rain-fed farming⁷⁹. From a financial institutions perspective, high dependency on weather outcomes increases the risk of lending to agricultural MSMEs.
 - Potential Solution: Support implementation of basic infrastructure. The government and public sector can support the development of infrastructure that will enable a longer-term increase in yield (through improved irrigation practices, for example).
- Insufficient information on agronomic best practices. The government has not had the capacity to provide needed extension services to farmers. Outdated production methods can increase the overall cost of production, making final products more expensive and less competitive in the market.

⁷⁹ Knoema – World Data Atlas, "United Republic of Tanzania – Stability: Percent of arable land equipped for irrigation in 2018," accessed June 2021., https://knoema.com/FAOFSD2020/fao-food-security-data?tsId=1014740.

- Potential Solution: Provision of e-extension on agronomic best practices. Offering agronomic
 education online will allow farmers to access information more conveniently. Agronomic
 education can also be provided through agri-dealers or agri-vets who have direct access to
 smallholder farmers.
- Limited value addition in processing. Domestic produce has yet to gain value from secondary processing technology; for example, in Tanzania, only 4 percent of fruits and vegetables, 10 percent of cashew nuts, and 10 percent of cotton are processed domestically⁸⁰. This means that most farmers sell raw materials at a lower price point driven by market forces.
 - Potential Solution: Establishment of end-to-end processing facilities. Attracting foreign investors
 to set up processing facilities will increase products' final value, thereby boosting farmers'
 potential income. Processing facilities can also provide direct support to farmer networks through
 credit, education, and technical skills.
- Inability to monitor risk during production. Without needed technology and digital access, farmers are often unable to prepare for potential weather risks. When adverse weather events occur, farmers may lose their harvest, which then prevents them from purchasing inputs (such as seeds and fertilizers) for the upcoming season.
 - Potential Solution: Implementation of risk-monitoring digital tools. Implementing digital tools
 that will provide early warnings on potential weather risks will allow farmers to minimize harvest
 losses.
- Failure to mitigate the risk of production losses. Farmers' limited understanding of insurance, along with a lack of available insurance policies to meet their needs, has kept them from insuring their outputs against risks. When farmers have insurance, they not only mitigate risk but can more easily obtain loans, as financial institutions feel more confident about lending to them when they are partly protected from the risk of default.
 - Potential Solution: Provision of agricultural insurance. Providing agricultural insurance will allow governments, agribusinesses, and farmers to protect their interests against weather risks. In addition, farmers with input insurance will be more likely to invest in buying high-quality inputs, which can help to increase yield in the long run.
- Inadequate storage technology in warehouses. Poor storage facilities cause high losses among perishable products, including fruits, vegetables, meats, and dairy products. Across sub-Saharan Africa, annual food losses among fruits and vegetables reach approximately 40 percent⁸¹. Without storage options, farmers cannot choose when to sell their products, making them vulnerable to market forces.
 - Potential Solution: Provision of storage facilities or equipment. Providing access to cold storage
 will significantly reduce losses among perishable products. Storage options allow farmers to hold
 products and sell them at higher price points when market demand increases.

⁸⁰ International Trade Administration, "Tanzania – Country Commercial Guide: Agriculture and Agricultural Processing," last published 9 March 2021, https://www.trade.gov/country-commercial-guides/tanzania-agriculture-and-agricultural-processing.

Cold Chain Africa (2020), Why Cold Chain Africa?, accessed 18 August 2021, http://www.coldchainafrica.com/

- Lack of cold-chain technology for distribution. Temperature-controlled transport is not widely
 available, preventing farmers from reaching larger markets over longer time periods.
 - Potential Solution: Implementation of cold chain technology or vehicles. Providing refrigerated transport options for chilled and frozen food will improve MSMEs' reach to customers, as well as reduce losses from farm to fork.

2.3 Private sector efforts

Donors have undertaken several initiatives to improve the value chain in Tanzania (Figure 63), but to date few initiatives have involved the private sector. Instead, the government has been expected to provide support. However, the growing maturity of the private sector in Tanzania presents opportunities for donors to consider public-private sector opportunities.

	Main sponsor (s)	Time	Key objectives	Impact (non-exhaustive)
Southern Agriculture Growth		2010-2030	Improve agricultural productivity Improve food security	~300K smallholder farmers reached across Tanzania
Corridor for Tanzania (SAGCOT)			Reduce poverty Ensure environmental sustainability	~\$0.8Bn private investments facilitated
Agricultural Sector Development Program (ASDP)	jica)	2006-2013	Improve productivity and profitability Promotion of private investment based on improved regulatory environment	Established ARDS (Agricultural Routine Data System) to support M&E procedures
Agro-dealer program	AGRA Crowing Micros Agriculum	2008-2011	Strengthen agro-dealer network Facilitate smallholder farmers' access to inputs, knowledge and finance	80% reduction in distance to input shops from 50 to 9.9km
Marketing Infrastructure, Value Addition, and Rural Finance (MIVARF)	IFAD MANAGEMENT AND	2010-2020	Increase rural financing Increase value-added agricultural production Improve market infrastructure	78% acknowledged increase in household income from 95K TSH in 2012 to 307K TSH in 2017
Rural Micro, Small, and Medium Enterprise Support Program (MUVI)	IFAD INTERVOORAL ANGEST MA	2007-2016	Improve awareness of rural entrepreneurs Improve the cohesion of value chains Strengthen private sector support	Introduced voucher subsidy scheme to improve the sunflower value chain
Source: FAO, IFAD				

Figure 63: Support for Agricultural Value Chain

We also summarized potential measures for corporate partnerships with Japanese companies, based on the demand side and supply side analyses of the financial access bottlenecks. The below list are derived from the interviews with the financial institutions, MSME financial needs survey, expert interviews, and discussions with the development partners who are focused on MSME support.

2.3.1 Market access

- Implementation of traceability systems
- Implementation of e-marketplace to match farmers with potential buyers
- Support for export trade partnerships
- Provision of vehicle financing for distribution
- Implementation of digital tools for customer management
- Provision of business skills training

Provision of real-time market information

2.3.2 Financial literacy

- Provision of financial education to improve product understanding
- Provision of business support for required documentation
- Provision of financial education to clarify financing benefits

2.3.3 Collateral

- Acceptance of alternative collateral
- Provision of non-secured lending
- Technical support for collateral verification

2.3.4 Capacity building

- Provision and financing support for inputs
- Financing support for high-capital machinery
- Support implementation of basic infrastructure
- Provision of e-extension on agronomic best practices
- Establishment of end-to-end processing facilities
- Implementation of risk-monitoring digital tools
- Provision of agricultural insurance
- Implementation of storage facility or equipment
- Implementation of cold chain technology or vehicles

These measures have been identified through interviews with financial institutions, MSME surveys, expert interviews, and conversations with development organizations that focus on MSME support. While these potential measures are non-exhaustive, they provide a broad set of options for tackling the challenges MSMEs face.

Chapter 3 Approach to solving financial access issues

Chapter 3 covers the details of how JICA might resolve MSMEs' financial access challenges from both the supply and demand sides. It explores ways to increase supply through private sector investment from financial institutions and to work with the private sector to address demand challenges.

- 3.1. focuses on Tanzania's financial institutions and how they could help address MSMEs' challenges through overseas private sector investment and finance. It highlights several potential partnership models that could directly support MSMEs.
- 3.2. assesses possible approaches private sector partners can adopt so their investments in Tanzania improve MSMEs' financial access. It identifies a long list of potential corporate partnership ideas and describes the top six ideas and pilots that address three of them.

3.1 Private sector investment and finance

Our assessment of potential financial-institution partners yielded three potential partnership models, with one overall enabler normally incorporated with the other solutions. These models laid out requirements, timelines, and potential loan conditions. We then developed action plans for some of the resulting financing ideas.

3.1.1 General proposals for financing

First, we developed a list of financing ideas which JICA could partner with financial institutions based on solutions for direct financing, financing through tripartite agreements, financing of technical capability building and technical training. We evaluated each financing idea by its potential impact and feasibility. (Figure 64).

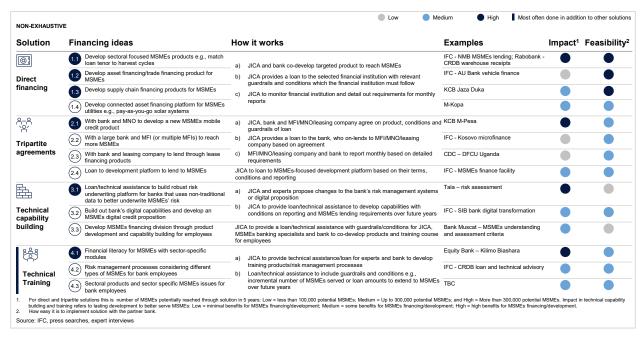


Figure 64: Potential Ideas for Private Sector Investment and Finance

Using the identified bottlenecks for MSMEs' financing, we then assessed each financing option's ability to address key bottlenecks (Figure 65).

NON-EXHAUSTIV	=	Collateral	MSMEs	Accessibility	Specific	Underwriting	Information	MSMEs	Monitoring
Solution	Financing ideas Develop sectoral focused MSMEs products e.g.,	requirements	capabilities	Accessibility	products	Capabilities	uncertainty ¹	understanding	×
© :	match loan tenor to harvest cycles								
financing	Develop asset financing/trade financing product for MSMEs	\bigcirc	\otimes	\bigcirc	\bigcirc	\otimes	\otimes	\otimes	\otimes
	Develop supply chain financing products for MSMEs	\bigcirc	\otimes	\odot	\bigcirc	\otimes	\otimes	\otimes	\otimes
	Develop connected asset financing platform for MSMEs utilities e.g., pay-as-you-go solar	\bigcirc	\otimes	\bigcirc	\bigcirc	\otimes	\otimes	\otimes	\otimes
₹-A `A´	systems With bank and MNO to develop a new MSMEs mobile credit product	\bigcirc	\otimes	\bigcirc	\bigcirc	\otimes	\bigcirc	\otimes	\otimes
agreements (With a large bank and MFI (or multiple MFIs) to reach more MSMEs	\bigcirc	\otimes	\bigcirc	\bigcirc	\otimes	\otimes	\otimes	\otimes
	(2.3) With bank and leasing company to lend through lease financing products	\bigcirc	\otimes	\bigcirc	\bigcirc	\otimes	\otimes	\otimes	\otimes
	2.4 Loan to development platform to lend to MSMEs	\oslash	\otimes	\odot	\oslash	\otimes	\otimes	\otimes	\otimes
Technical capability building	3.1 Loan/technical assistance to build robust risk underwriting platform for banks that uses non-traditional data to better underwrite MSMEs' risk	0	\otimes	0	\otimes	\bigcirc	\bigcirc	\bigcirc	0
	Build out bank's digital capabilities and develop an MSMEs digital credit proposition	\otimes	\otimes	0	\otimes	\otimes	\bigcirc	\otimes	\bigcirc
	(3.3) Develop MSMEs financing division through product development and capability building for employees	0	\otimes	0	\bigcirc	\otimes	\otimes	\bigcirc	\otimes
Technical 4.	Financial literacy for MSMEs with sector-specific modules	\otimes	\bigcirc	0	\otimes	\otimes	0	\bigcirc	\otimes
	Risk management processes considering different types of MSMEs for bank employees	0	\otimes	0	\otimes	Ø	\otimes	\bigcirc	0
	4.3 Sectoral products and sector specific MSMEs issues for bank employees	\otimes	\otimes	0	\bigcirc	\otimes	\otimes	\bigcirc	\otimes

Figure 65: Assessment of Each Idea's Ability to Address Main Bottlenecks

(1) Overview of proposed ideas for financing

Through multiple conversations with financial institutions in Tanzania and experts on MSME financing, we developed four ideas for financing where JICA could work with partner banks (Figure 66), along with two enablers to strengthen any partnerships. The ideas and enablers were prioritized based on their potential for impact (number of MSMEs likely to be reached due to the proposal) and feasibility (how easy it would be to implement the solution with the partner bank).

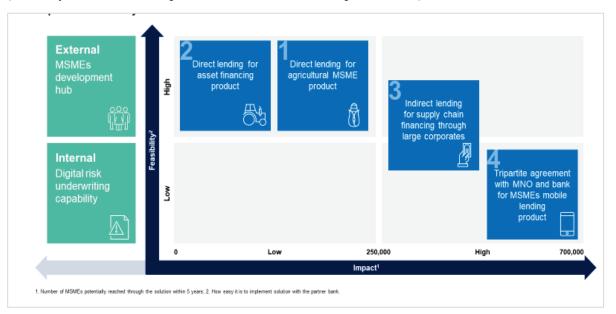


Figure 66: Framework for Potential Ideas to Improve MSMEs' Financial Access

We drew up the business model and potential benefits for each financing idea and enabler, and described loan conditions and monitoring considerations, product development team requirements, a high-level view of costs, expected development time frames, and potential regulatory and business risks.

The relevant products and enablers are summarized below, we have used an estimation of USD\$50-100mn as the total loan amount, which is a more typical size of loan for JICA in Africa. If we wanted to reach more MSMEs, the loan size could be larger⁸².

Regulatory requirements for all proposals would include a no-objection letter and license from the Bank of Tanzania (BoT). These are usually obtained by submitting an MOU and product paper to BoT. Products would need to adhere to BoT's collateral definitions of secured, partially secured, or unsecured lending. Each bank's total loan book would need to have an NPL of 5 percent or less.

Business considerations for all proposals and enablers include: JICA and the bank would need to have clearly-defined roles and responsibilities and agree to all associated costs. To keep NPLs low, the bank may need to invest in digital risk-underwriting capabilities which use advanced analytics to better assess and price risk. The bank and JICA would also need to negotiate detailed expectations of the target segments, amounts, interest rates, and tenors. Careful monitoring and evaluation metrics would also be necessary and would clearly define the role of JICA's technical assistance.

(2) Potential financing proposals

1. An agri-specific financing product for MSMEs (Figure 67)

The product would be agri-specific (e.g., for purchase of inputs) and would have repayment terms that match the harvesting cycle (e.g., bullet repayment of loan at harvest). Sectoral focused products that match MSME needs and ease MSME-specific barriers on collateral and high interest rates would greatly benefit agri-MSMEs. This product proposal would be easy to implement and could reach 125,000-250,000 MSMEs over five years. A lean team, headed by a program lead, could develop the product with JICA's technical assistance. High-level estimates suggest a development time frame of about nine months.

For all products, estimated development costs can only be determined following a more detailed review of the FI's capabilities, technology and product maturity level.

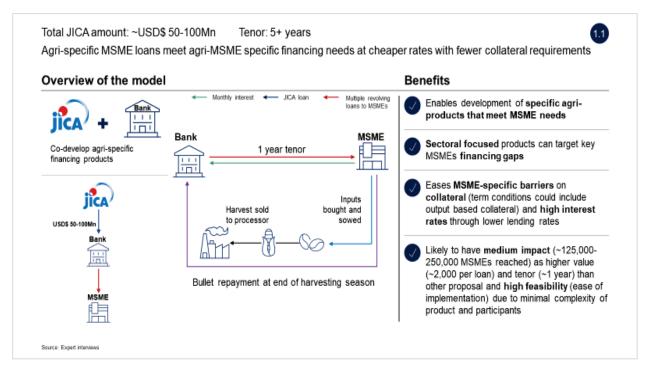


Figure 67: Agri-specific Financing Overview

2. An asset financing product (Figure 68)

Asset financing provides MSMEs with loans using the asset being financed as collateral. For example an MSME could purchase a tractor using 25 percent of the tractor value as down payment, with 75 percent financed by the bank. The tenor of these loans would usually be between 3 to 5 years and require monthly payments of principal and interest. Asset financing allows the MSME to provide minimal if any external collateral which was identified as a key bottleneck for MSMEs, while also enabling MSMEs to invest in machinery. Like the agri-product, this would be easy to implement with the bank and would have a similar development time of about eight months. However, it would likely reach fewer MSMEs (about 25,000 to 50,000), because it would have longer-tenor loans of higher values which would mean less roll-over of the JICA loan. A lean team including external expert support could be required to develop the product. High-level estimates suggest a development time frame of about eight months.

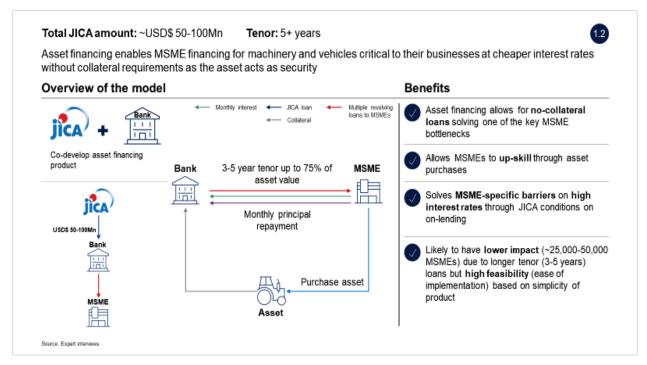


Figure 68: Asset Financing Overview

Additional regulatory considerations include needing to adhere to the BoT's collateral definition of secured lending, which could require 125 percent of asset value (the asset could be the security).

Business considerations: the bank would need to make sure the asset is insured and could consider offering mandatory insurance services with each loan. It could consider offering technical training with each loan to build MSMEs' capabilities.

3. A supply chain financing product (Figure 69)

A supply chain financing product would work where an MSME supplier supplies goods to a large corporate (who would usually pay after 60-90 days), the large corporate would provide a receipt to the bank who in turn pays the MSME supplier on behalf of the large corporate. Buyer-led supply chain finance (SCF) enables MSME-financing quickly, cheaply and efficiently by transferring the banks' exposure from supplier (MSME) credit risk to buyer (large corporate) payment risk. This financing product enables MSME suppliers to access financing backed by the credit worthiness of the large corporates that they supply which increases financial inclusion. Supply chain financing reduces the MSME suppliers' cost of borrowing by reducing the risk cost to banks and allowing suppliers to build a credit history with banks, making it a more sustainable funding mechanism This would be more difficult to implement, but has the potential to reach **250,000-500,000** MSMEs. A lean team including external experts and digital specialists could be required to develop the product. High-level estimates suggest about **nine months** of development time.

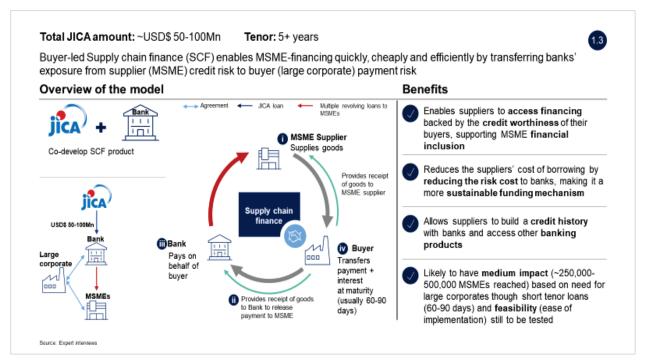


Figure 69: 3. Supply Chain Finance (SCF) Overview

Regulatory considerations: the bank may also need BoT's specific approval, which is based on a partnership agreement between the bank, MSME suppliers', and large corporates.

Business considerations: partnerships between the bank and large corporates would need to be clearly defined and the bank would need to ensure that large corporates have effective risk management capabilities. These organizations would also need to build out a digital-monitoring platform for the MSMEs' loans outstanding. To increase the number of MSME suppliers that can be financed, relationship managers would have to work with multiple corporates.

4. An MNO short-term lending product (Figure 70)

This is a product where MNO (mobile network operator) would disburse financing for instant, unsecured micro-financing for MSMEs providing various options for short-term financing of working capital. The product would need to be jointly developed with a bank and MNO, and the bank would hold the funds but the MNO would be the platform for disbursement. Repayment would be through direct debits from their mobile money accounts. This type of financing would likely have the furthest reach due to MNO penetration (54 percent) far exceeding formal financial institution penetration (21 percent) in Tanzania. The loans would likely be short-tenor (1 to 6 months) small value loans that fund working capital. This kind of financing would allow MSMEs build a credit history while not having a formal bank account. This would be the most difficult to implement, but has the potential to reach **500,000-750,000** MSMEs. High-level estimates indicate **about 12 months** development time. The program lead would be responsible for developing the product, with internal and external support. The partnership would need an accompanying digital risk underwriting capability.

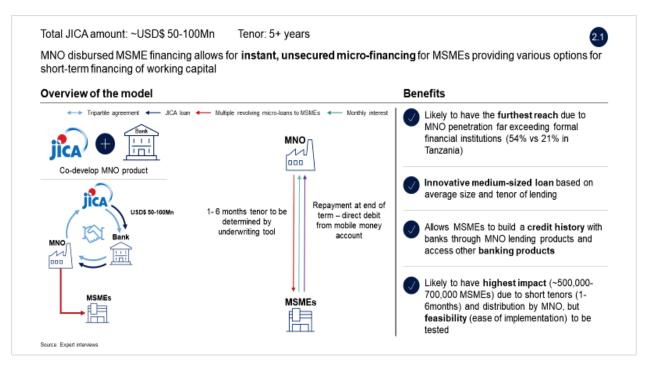


Figure 70: 4. MNO Lending Product Overview

The product would require a no-objection letter and licenses from the Bank of Tanzania (BoT) and the Tanzania Communications Regulatory Authority (TCRA). If BoT approves, it is very unlikely TCRA would have an issue. Approval is usually obtained by submitting a MOU, product paper, and FI/MNO agreement terms to BoT. Non-bank financial institutions (e.g., MNOs) are required to have a trust account and adhere to minimal capital requirements. The Electronic Money Act, 2015 (Reg 35 (1)) identifies four categories of customers, each with different AML/KYC (anti-money laundering/know your customer) procedures, and with different daily balance and transaction limits. The product needs to adhere to these requirements. The MNO must have AML/CFT (anti-money laundering/combatting financing of terrorism) intelligent systems, auditable transaction records, and AML/CFT staff; it must also submit Suspicious Transaction Reports. Previous mobile-money daily transaction limits of TZS 3-5Mn were increased to TZS 5-10Mn at the start of the COVID-19 pandemic to encourage paperless transactions.

Business considerations include clearly-defined roles and responsibilities and an agreement between JICA, the MNO, and the bank about all associated costs. Data ownership and access needs to be clearly defined and monitoring processes should ensure adherence. The parties must agree to use MNO data to develop an early-warning system for the bank. The bank, MNO, and JICA would need to negotiate the exclusivity of target segments, along with loan amounts, interest rates, and tenors. The partnership would also need monitoring and evaluation metrics for both the bank and MNO.

(3) Enablers

As an enabler to maximize the impact of the above financial products ideas, a **development hub for MSMEs** (Figure 71) could help them become more financially literate and improve their abilities. In the long-term, it would improve their credit ratings, which could lead to lower quoted-interest rates. The

MSME development hub would be an online platform which provides access to trainings, advisory services and tools (e.g., basic accounting software) to build capabilities for MSMEs. Trainings would likely be online and in class and would need to be delivered in Kiswahili and English. Training and MSME capability building add value and up-skills MSMEs, there is also evidence to suggest MSMEs with basic financial education have lower non-performance of loans⁸³. This enabler provides development of MSMEs and solves key bottlenecks of MSME financial illiteracy and management capabilities. Highlevel estimates indicate development time of about **12 months.** A lean team including consultants and digital consultants could be required to develop this enabler.

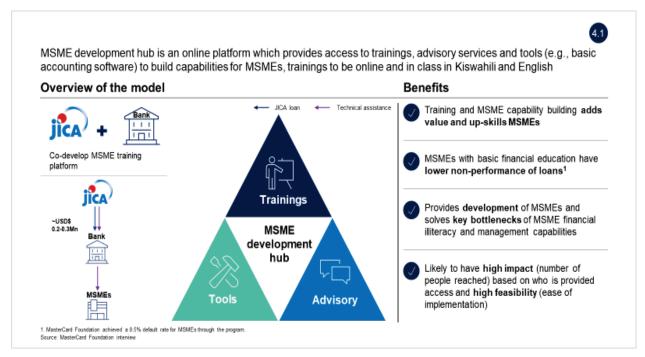


Figure 71: External enabler: MSME development hub

Business considerations would include clearly defined roles and responsibilities and an agreement between JICA, the bank, and the training partner on all associated costs. The parties would need to ensure that content developed or bought is in a form accessible to MSMEs and relevant to their needs. Shorter-term partnerships (yearly) with content providers are also possible. This would allow the bank to monitor MSMEs' usage, and obtain customer feedback, potentially changing providers on a yearly basis if required. Like the products, this enabler would need to have monitoring and evaluation metrics, and clearly define the role of JICA's technical assistance.

In addition, a **digital risk-underwriting capability** (Figure 72) could also be an important enabler. A digital risk-underwriting capability uses non-traditional data sources. The digital risk-underwriting capability would assess risk based on several data points which include traditional sources such as credit ratings or bank statements and non-traditional sources such as mobile phone data (e.g., location of users or frequency of transactions). The digital risk-underwriting capability would use the data to price the risk of each MSME and provide an associated interest rate. The capability would also be able to monitor

As per interview with MasterCard Foundation - MasterCard Foundation achieved a 0.5% default rate for MSMEs through a similar program

repayments and have an early warning system for potential non-payment. This would significantly improve the bank's understanding of MSMEs and improve risk underwriting accuracy, providing more equitable interest rates for MSMEs. Digital risk-underwriting capabilities could lead to 10-20 percent reduction in annual credit risk IT costs, 5-10 percent credit loss reduction and 3-5 percent increase in net interest income. Allowing analysis of non-traditional information for loan determination can increase uptake of MSME focused products. MSMEs would also benefit from immediate decision making and shorter and simpler application requirements. This enabler is likely to have high impact in terms of number of people positively benefiting from the roll-out. It would require a team of at least five digital consultants and a project team. High-level estimates indicate about 12 months development time.

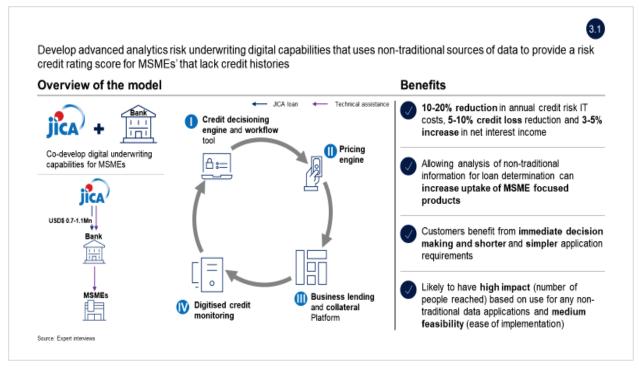


Figure 72: Internal enabler: Risk underwriting capability building

Like the products, regulatory requirements would include a no-objection letter and license from the Bank of Tanzania (BoT). Business considerations would incorporate clearly defined roles and responsibilities and an agreement between JICA and the bank on all the associated costs. Experienced digital consultants should be chosen given the complexity of building a non-traditional digital risk-underwriting system. There is potential to partner with MNOs to mitigate or lower the costs of data acquisition. Like the products, this enabler would need to have monitoring and evaluation metrics, and clear definition of the role of JICA technical assistance.

3.2 Private sector partnership projects

This sub-section addresses corporate partnerships that JICA could form with other companies and institutions. It starts by covering the various risks that foreign companies (particularly Japanese ones) face when they start to operate in Tanzania (3.2.1), then highlights six prioritized business ideas in some

detail (3.2.2). It closes with an in-depth discussion of three pilots that JICA might use to help companies better meet MSMEs' needs (3.2.3).

3.2.1 Operational business risks in Tanzania

Risk is a key consideration for Japanese companies that are expanding to new markets, especially in emerging economies where they have limited experience. Often, they have limited information on country-specific risks and potential mitigation measures. Sharing such information with potential partners will help increase their confidence and ensure they are well-prepared for any potential risks they may come across. This section therefore reviews Tanzania's business environment and risks when operating business in Tanzania and reflects lessons learned from Japanese companies that already operate there.

Though the government has made continuous efforts to improve its business environment; including trying to establish online methods and platforms to reduce the burden of administrative tasks, the country's Doing Business ranking remained about the same for the past five years (Figure 73). Currently, companies in Tanzania can use online platforms to register themselves and complete customs documentation for imports and exports⁸⁴.

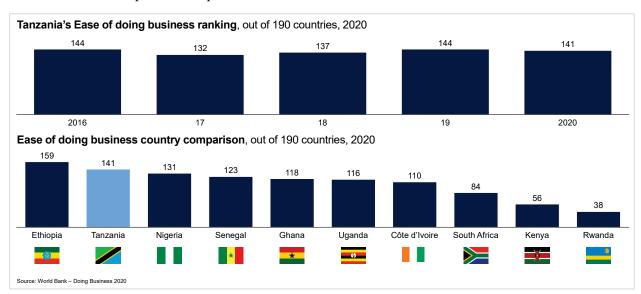


Figure 73: Ease of Doing Business Ranking

For example, Tanzania was in the bottom quartile on government-policy-related parameters such as dealing with construction, registering property, paying taxes, and trading across borders (Figure 74).

World Bank Group, "Doing Business: Business Reforms in Tanzania," 2019, https://www.doingbusiness.org/en/reforms/overview/economy/tanzania.

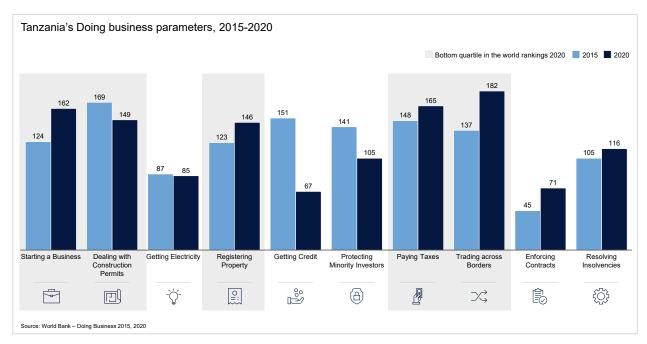


Figure 74: Tanzania Ease of Doing Business Ranking by Parameter

While the cost of dealing with construction permits and registering a property are lower in Tanzania, business processes take longer than in other sub-Saharan Africa countries (Figure 75). Although businesses can be registered on an online platform, the procedure takes about 30 days on average, compared to 22 in other sub-Saharan countries⁸⁵. Business opportunities that call for construction, such as building a new production facility, require significant preparation time because construction permits and property registration both take over three months to process. Japanese companies that are thinking about entering Tanzania will need to pay close attention to such government regulations.

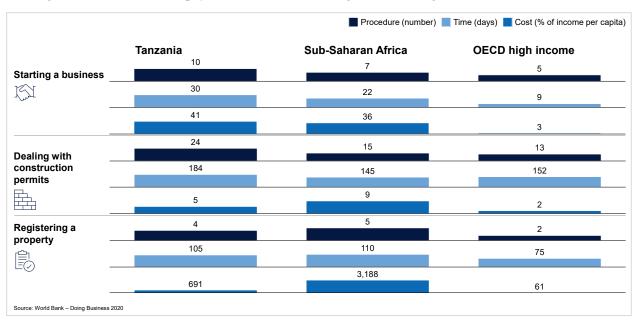


Figure 75: Comparison of Business Registration Process

⁸⁵ World Bank Group, "Doing Business 2020: Measuring Business Regulation."

In addition, Japanese companies tend to use one of three main entry models: set up a satellite office, establish a local subsidiary, or acquire/invest in a local company. Even though Japanese companies' presence is limited in Tanzania, we were able to gain insights into operating a business by conducting interviews with 4 Japanese companies operating across different industries. These helped identify key business risks and potential mitigation measures. These are highlighted below; comments from the interviews are included in italics.

(1) Key business risks

• Lack of adequately skilled talent. It is hard to find local talent to meet company needs, especially for management roles, because many candidates have limited work experience.

'High volume of applications makes it difficult to screen the candidates.'

'Many candidates do not have the appropriate work experience.'

'Local workers have good understanding of the context as long as training is provided.'

• **Slow work-permit process.** The Tanzanian government requires proof that the job requirements cannot be met by local employees before it will provide a work permit.

'Obtaining a work permit can take at least 3-6 months, sometimes even one year.'

'Hiring expats can be difficult due to prioritization of the local workforce.'

 Tax risk. Tax policies for investors are complicated, with limited transparency. Tax refund procedures are also complex and time-consuming.

'We didn't expect tax refunds would take such a long time. We have yet to receive refunds from multiple years ago when we first set up the business.'

• Strict labor laws. Companies do not have the option to hire under a fixed-period contract and must hire permanently or for casual labor.

'Labor laws focus on employees and are too strict on the companies.'

'Once hired as permanent employee, it is difficult for companies to terminate.'

• **Slow imports.** Customs clearance takes a long time, often requiring multiple confirmations and submission of related documents (e.g., invoice from suppliers).

'Every time, we have to submit documents or invoices from suppliers.'

'Some customs officers confirm repeatedly on the same product.'

(2) Potential mitigation measures

While interviewees highlighted the limited number of measures that Japanese companies can take to reduce political risk, they did suggest some possible ones for dealing with:

- Lack of adequately skilled talent
 - Share and align on clearly defined job descriptions
 - Identify trustworthy local partners early on who can find and train locals (i.e., local HR manager with previous experience)

- Find local talent and invest in training them
- Slow work permits
 - Liaise with JICA and the Japanese Embassy to support work permit registrations
 - Hire staff under local contracts, where possible
- Tax risk
 - Consult local tax professionals on a regular basis, as policies are subject to frequent changes
 - Engage government proactively on relevant policies
- Strict labor laws
 - Find local talent and invest in training them
 - Consult local lawyers on any cases of employee termination
- Slow imports
 - Source locally and regionally as much as possible
 - Work closely with a local partner with a deep understanding of regulations

In addition, both fiscal and non-fiscal incentives are available for potential new entrants⁸⁶. Investors need to apply for a certificate from the TIC. Once certified by the TIC, the investor becomes eligible for the investment incentives outlined under the Income Tax Act, VAT Tax Act, and EAC Customer Management Act.

(3) Fiscal incentives

- 0 percent import duty on project capital goods
- 0 percent VAT on selected input materials (e.g., pesticides, fertilizers)
- 10 percent import duty on semi-processed goods
- Capital allowance initial allowance of 50 percent for manufacturing
- Depreciation allowance, depending on the asset

(4) Non-fiscal incentives

- Automatic immigration quota for five people
- Protection against non-commercial risks
- Protection against nationalization and expropriation
- Unconditional transferability of foreign exchange earned

Investors may also apply for Strategic Investor Status so they can request additional investment incentives. This is granted by the Ministry of Industry and Trade in consultation with the Minister for Finance and other stakeholders.

Ministry of Energy and Minerals, The United Republic of Tanzania, "Tanzania's SE4ALL Investment Prospectus," Dec. 2015, https://www.se4all-africa.org/fileadmin/uploads/se4all/Documents/Country_IPs/Tanzania_IP_EN_Released.pdf

3.2.2 Proposed business ideas

The business ideas long list

Based on the demand-side bottlenecks identified in the previous chapter, we identified 24 potential business ideas for private sector partnerships. The ideas were designed primarily to solve for challenges in collateral, financial literacy, market access, and MSMEs' capacity. We then further assessed them for impact on MSMEs and feasibility and determined which ones we should analyze further. The top grade was 100 (Figure 76). We then selected the six ideas with the highest total scores for deep-dive analysis.

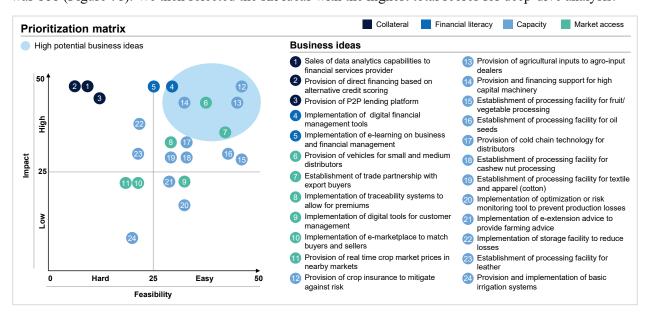


Figure 76: Prioritization Matrix for Business Ideas

3.2.3 Top six business ideas

For each of the top six ideas, we evaluated the solution approach, potential partnerships, and business requirements.

(1) Ideas included in final selection

1. Provision of agricultural insurance to mitigate natural risks

This business idea would offer insurance for agricultural outputs to farmers, off-takers, or banks that provide financing for farmers. A Japanese company could provide either the insurance product or the relevant weather data to a local insurance provider (Figure 77).



Figure 77: Business Idea: Agricultural Insurance for Smallholder Farmers

2. Provision and financing support for high-capital machinery

This solution could create equipment-sales partnerships with intermediary institutions that focus on smallholder farmers selling commercially. Since most equipment needs are seasonal, rental or leasing options would be considered (Figure 78).

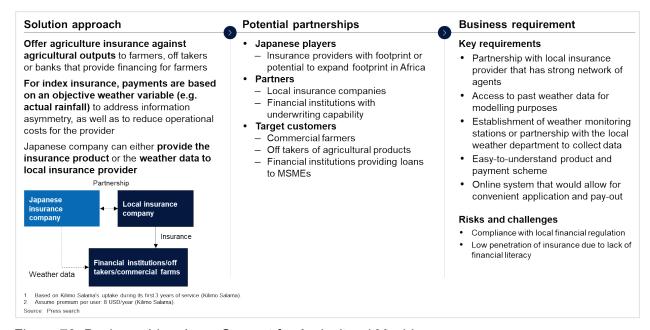


Figure 78: Business Idea: Loan Support for Agricultural Machinery

3. Provision of agricultural inputs to agri-input dealers

This idea would develop a supply partnership with agri-input suppliers that have access to a wide network of agri-dealers. Suppliers typically offer discounts to distributors that make purchases through their input credit scheme (Figure 79).

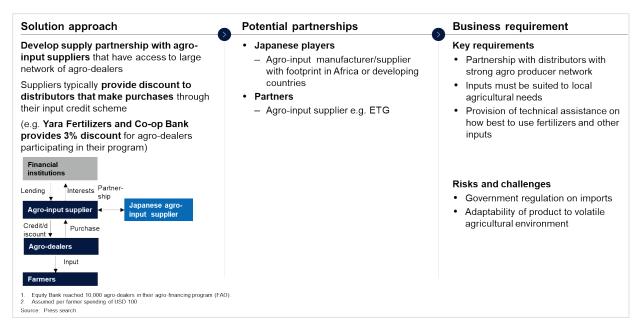


Figure 79: Business Idea: Loan Support for Agricultural Inputs

(2) Ideas excluded from final selection

1. Implementation of digital financial management tools

In this business idea, stakeholders would develop and provide a digital financial management app (e.g., bookkeeping) for MSMEs by working with local intermediary institutions that have MSME focus. Business-to-business channels may be preferred, as the service fee may be unaffordable for most MSMEs. Although this business idea has high potential impact on MSMEs, it was excluded from the final selection due to the limited number of Japanese players in this space and difficulty in acquiring paying users (Figure 80).

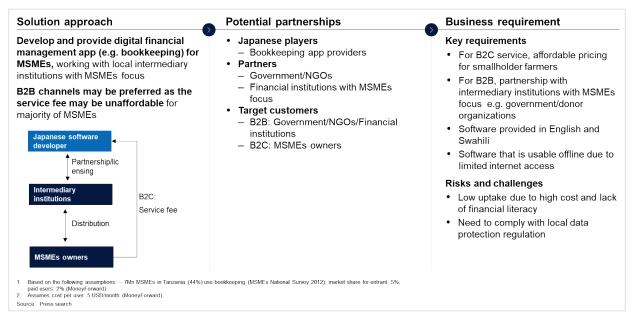


Figure 80: Business Idea: Introduction of Digital Financial Management Tool

2. Provision of vehicles to delivery service providers

This solution could provide vehicles to large delivery service providers or MSMEs' distributors to improve last-mile delivery. Financial conditions need to be favorable to lenders, with flexible payment terms that include leasing options, to encourage uptake. This business idea was excluded from the final selection as automotive manufacturers have already entered Tanzania; there will therefore be limited additional potential (Figure 81).



Figure 81: 6: Provision of vehicles to delivery service providers to improve last-mile delivery

3. Establishment of export trade partnership to increase access to markets

In this business idea, parties would establish export trade partnerships with local or international trade players to increase the offtake of domestic agricultural products (e.g., sesame oil and cashew nuts). Like the automotive idea, this idea was excluded from the final selection because Japanese trading companies have already established their business models and limited additional potential would be expected from this project (Figure 81).



Figure 82: Business Idea: Loan Support to Logistics Players

3.3 Proposed pilots for executing business ideas in final list

After discussing the business ideas with the JICA project team, we collectively selected three pilot projects: provision of agricultural insurance, provision and financing support for high-capital machinery, and provision of agri-inputs to agri-dealers. Each of these ideas is detailed below and includes an overview of the global and Tanzanian landscape, business entry challenges and opportunities, and potential business models for Japanese companies.

3.3.1 Pilot 1: Agricultural insurance

Agricultural insurance is an important product that allows farmers to protect themselves against the impact of natural incidents. It can offer protection against a range of incidents, including droughts, pests and diseases, hail, flooding (excessive rain), earthquakes, and fire (Figure 83). Policies are held by farmers and various stakeholders who rely on their outputs. Three main types of stakeholders exist⁸⁷:

1. Government or high-level aggregator.

The government or a relief agency insures a large area of land against potential risks. Pay-outs are typically distributed to farmers to compensate for their losses.

2. Regional aggregator (financial institutions or agribusinesses).

Aggregators insure against potential business losses or to promote their products and services. For agribusinesses, pay-outs are used to replace or reimburse inputs bought by smallholders, including seeds and fertilizers. For financial institutions, pay-outs are used to cover losses in case of default.

⁸⁷ Emilio Hernandez, "Digital Innovations in Smallholder Agricultural Insurance," CGAP, 27 Sept. 2017, https://www.cgap.org/blog/digital-innovations-smallholder-agricultural-insurance.

3. Commercial or smallholder farmers.

Commercial or smallholder farmers insure their own farms against their own losses. The government often provides subsidies to make the insurance more affordable and attractive to consumers.

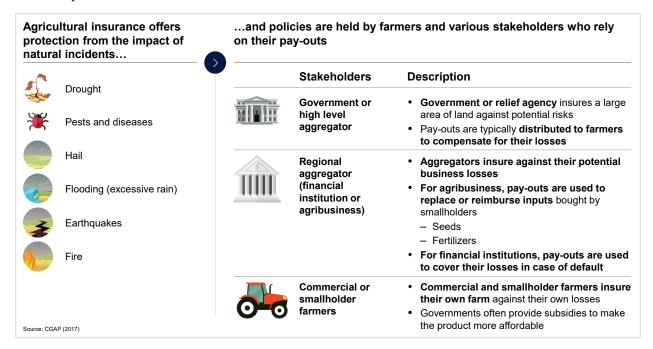


Figure 83: Overview of Agricultural Insurance

(1) Agricultural Insurance: Global landscape

Since 1980, the number of natural disasters has increased at 3 percent p.a., with hydrological events – including floods – and mass movement showing the greatest increase, at 5 percent p.a. (Figure 91)⁸⁸. The value at stake from climate-induced hazards could conservatively increase from 2 percent of global GDP to more than 4 percent of GDP by 2050⁸⁹. As natural disasters increase, agricultural insurance can play a critical role in helping stakeholders mitigate the negative impacts of climate change. Identifying the many effects of climate change on agriculture could also help insurers offer more creative products.

Eberhard Faust, "Effects of climate change on natural hazard damage worldwide and in Germany from the perspective of a reverse safer," Munich Re, 3 March 2018, (Original source: Munich Re), https://de.readkong.com/page/auswirkungen-des-klimawandels-auf-naturgefahrenschaden-8572960.

Antonio Grimaldi, Kia Javanmardian, Dickon Pinner et al., "Climate change and P&C insurance: the threat and opportunity," 19 Nov. 2020, https://www.mckinsey.com/industries/financial-services/our-insights/climate-change-and-p-and-c-insurance-the-threat-and-opportunity#.

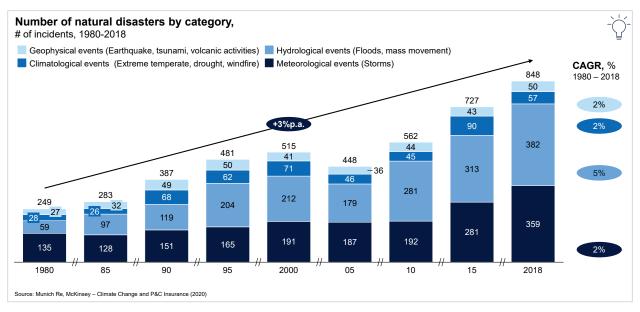


Figure 84: Number of Natural Disasters by Category

The global agricultural insurance market is worth approximately USD\$ 32Bn and is growing at 2 to 3 percent p.a. Asia-Pacific and North America are the largest markets for agricultural insurance, with 42 percent and 40 percent shares, respectively, of total gross written premiums; Africa, however, accounts for less than 1 percent (Figure 85)90.

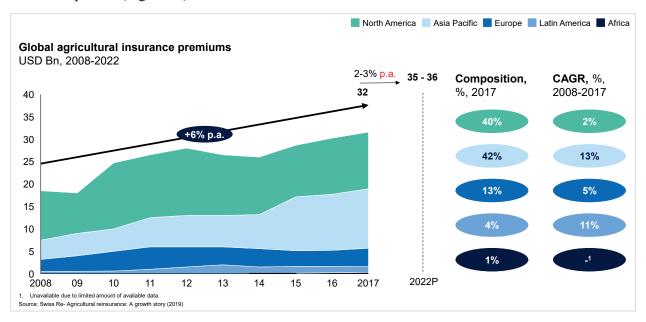


Figure 85: Global Agricultural Insurance Market

Despite the risk-management benefits for farmers and relevant stakeholders, the penetration of agricultural insurance products is low around the globe. In the US, the most advanced country,

⁹⁰ Hans Feyen and Alexandra Schelbert, "Agricultural reinsurance: a growth story," 18 Nov. 2019, https://www.swissre.com/reinsurance/property-and-casualty/reinsurance/agro/growth-story.html.

penetration is 7 percent⁹¹; in emerging economies, penetration rates are often at or below 1 percent⁹². However, penetration is rising in emerging economies thanks to increasing government subsidies.US and European markets have not shown significant changes over the last decade (Figure 86).

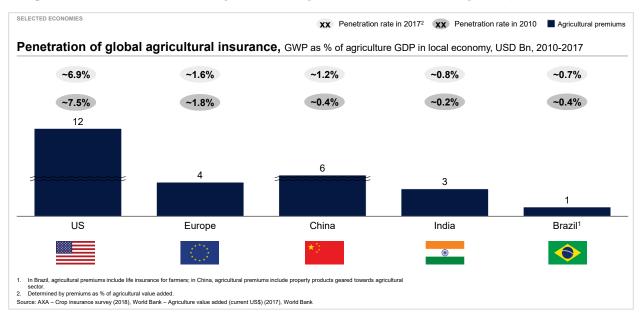


Figure 86: Penetration of Global Agricultural Insurance

(2) Potential product offering

There are two main types of crop insurance products: indemnity and index insurance (Figure 87). Indemnity insurance offers pay-outs based on actual loss while index insurance is on the value of an objective parameter – regardless of actual amount of damage.

⁹¹ US Insurance Regulatory Filings from S&P Global Market intelligence

⁹² AXA: Reinsurance, "Agricultural Insurance Survey, 2018," accessed 25 July 2021., https://axaxl.com/media/axaxl/files/pdfs/reinsurance/products/global-agricutural-treaty/axa-xl re agriculturesurvey brazil china india 2019.pdf?sc lang=en.

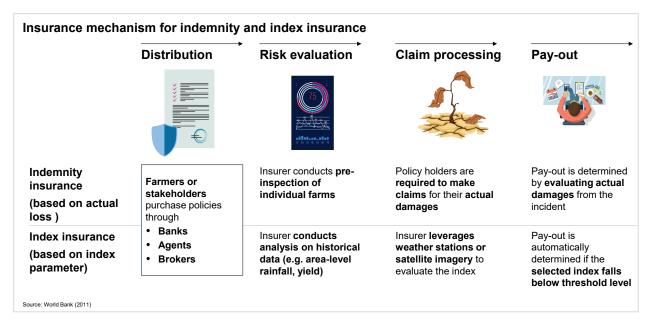


Figure 87: Mechanism for Indemnity and Index Insurance

Currently, indemnity insurance has been more widely adopted and accounts for 87 percent of agricultural insurance volume, while index insurance has shown potential in emerging economies (Figure 88)⁹³.

NON-EXHAUSTIVE			XX% Mar	xx% Market share, %, 2017		
	Name	Metric	Pay-out scenario	Regions		
Indemnity insurance	Multi-peril crop insurance (MPCI)	Farm-level yield loss	Realized average yield for the farm is lower than the insured yield, which is typically 50-70% of the farmer's historical yield	Widespread		
87%	Named-peril crop insurance	Percentag e of damage	Percentage of damage incurred on the farm soon after the event occurs. Damage assessment is postponed if it cannot be done immediately	Widespread		
Index insurance	Area yield insurance	Area-level yield	Realized average yield for the area or county is lower than the insured yield, regardless of actual damage incurred on individual farms	■ US ■ India ■ Brazil		
13%	Weather insurance	Weather parameter e.g. rainfall	Realized value of index falls below the expected threshold, measured over a given time period at a particular weather station/satellite	☑ India I Mexico ☑ Malawi		

Figure 88: Penetration of Indemnity and Index Insurance

ACRE Africa is an example of an index-insurance provider that targets smallholder farmers (Figure 89). ACRE was launched in 2014 by the Syngenta Foundation. Originally called 'Kilimo Salama', the program offers weather index insurance, which uses daily data from weather stations and satellites to determine pay-outs. Smallholder farmers can elect to insure certain growing phases, the whole season, or a particular severity of loss. ACRE has partnered with various financial institutions and seed companies to

⁹³ Hans Feyen and Alexandra Schelbert, "Agricultural reinsurance: a growth story."

develop products tailored to smallholder farmers' needs. ACRE's main products include MFI-linked insurance, a contract seed-grower program, and a replanting guarantee. So far, 1.7 million smallholder farmers have registered for their program in Kenya, Tanzania, and Rwanda.

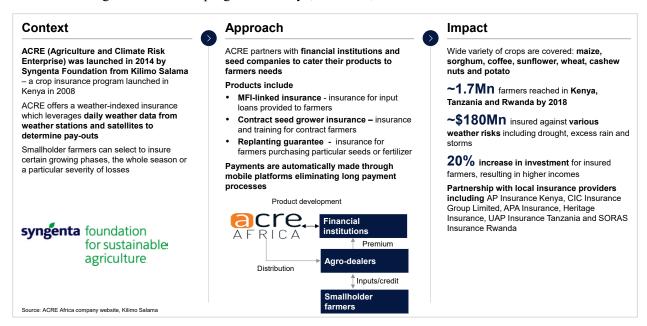


Figure 89: Case study - ACRE Africa

Each type of insurance offers different benefits to farmers and insurers (Figure 90).

Benefits	Indemnity	Index	Rationale Limited benefit Medium benefit High benefi				
Farmers	Coverage for damage (basis risk)		Basis risk can occur in index insurance where pay-outs do not match the individual's losses . Farmers may not get paid even if they suffer losses and vice versa				
	Timeliness of pay-out	•	Pay-outs for index insurance are more timely as insurers do not need to evaluate the losses. Instead, pay-outs are determined automatically based or weather station indexes and satellite imagery.				
	Product cost	•	In the long-term, insurers have the potential to lower the price of premiums for index insurance as administrative costs are lowered, making the product more affordable for smallholder farmers				
Insurers	Administration cost	•	While requiring initial investment to set-up, index insurance has lower administration costs as insurers will no longer need to conduct pre-inspections or damages evaluations				
	Detection of fraud	•	Moral hazard and information asymmetry is minimized through index insurance, as pay-outs are determined by an objective metric that farmers are unable to influence through their actions				
	Prediction accuracy	•	Lack of high quality data in many developing countries makes it difficult for insurers to conduct accurate actuarial analysis for index insurance				

Figure 90: Benefits of Insurance by Type

The major benefits of index insurance include the following:

• **Timeliness of pay-out.** Pay-outs for index insurance are more prompt, as insurers do not need to evaluate the losses. Instead, pay-outs are determined automatically based on weather station indexes and satellite imagery.

- Administration cost. While it requires an initial investment to set it up, index insurance has lower
 administration costs than other insurance types, as insurers do not need to conduct physical preinspections or damage evaluations.
- **Detection of fraud**. Index insurance reduces the potential for moral hazards and information discrepancies because pay-outs are determined by an objective metric that farmers cannot influence through their actions.

On the other hand, basis risk remains a challenge for it. Farmers may be dissatisfied with the insurance if they believe that pay-outs do not accurately compensate for their losses. If the area-based index variable does not fall beneath the threshold determined by the insurers, farmers will not receive pay-outs, even if they have suffered damages.

(3) The potential impact of technology

Improved technology can address multiple pain points for farmers and insurers. Technology innovations have enabled more accurate, less costly business processes across the value chain (Figure 91).

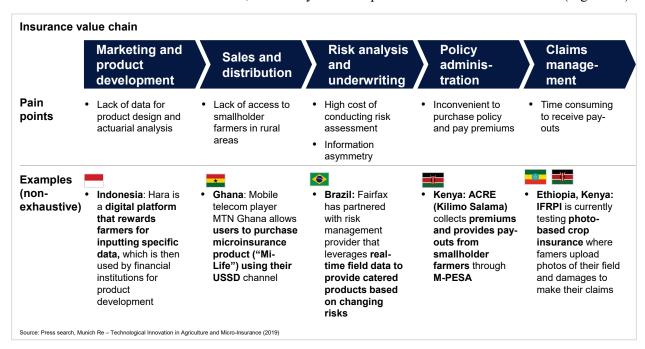


Figure 91: Value Chain for Agricultural Insurance

Most notably, the International Food Policy Research Institute is currently testing photo-based crop insurance in Kenya, Ethiopia, and India⁹⁴. Picture-based crop insurance is an indemnity-based insurance product in which farmers themselves take photos of their land for damage verification. By reducing the need for in-person evaluation, this product helps make agricultural insurance more accessible (Figure 92).

⁹⁴ International Food Policy Research Institute, "Picture-based Crop Insurance (PBI)," n.d., (2016): https://www.ifpri.org/project/PBInsurance.

Context

Picture-based crop insurance is an indemnity-based insurance where farmers take photos of their land for damage verification

International Food Research Policy Centre (IFRPC) is currently conducting proof of concept with partners across Kenya, Ethiopia and India

Reducing the need for in-person evaluation will make the insurance product more affordable for smallholder farmers



How it works

- 1. Farmers download a free app on their smartphones
- 2. On the app, farmers register their farms and take photos of the land
- 3. Every few days from sowing to harvest, farmers upload pictures of their land from the same spot
- 5. After harvest, a series of pictures are analysed by agronomists to determine the losses
- 6. If damage is recognized, pay-outs are made directly to farmers' bank accounts



Source: IFPRI website, Munich Re – Technological Innovation in Agriculture and Micro-Insurance (2019)

Figure 92: Picture-based Indemnity Crop Insurance by IFPRI

(4) Government intervention

Governments' support through subsidies and commitment to national schemes are important factors in increasing the penetration of crop insurance. In agricultural insurance's largest markets, the government provides substantial subsidies for farmers who take out coverage (Figure 93). For example, the US subsidizes 60 to 90 percent of premiums⁹⁵. In emerging economies such as China, India, and Brazil, increased government subsidies help helped encourage the uptake of agricultural insurance⁹⁶. However, subsidies are limited in Africa because its insurance markets are less developed, and governments' funds are constrained —even though agriculture is an important sector for many countries on the continent.

Olivier Mahul and Charles J. Stutley, "Government Support to Agricultural Insurance: Challenges and Options for Developing Countries," The World Bank, 2010,

https://openknowledge.worldbank.org/bitstream/handle/10986/2432/538810PUB0Gove101Official0Use0Only1.pdf?sequence=1&isAllowed=y.

AXA: Reinsurance, "Agricultural Insurance Survey, 2018," accessed 25 July 2021., https://axaxl.com/-/media/axaxl/files/pdfs/reinsurance/products/global-agricultural-treaty/axa-xl_re_agriculture-survey brazil china india 2019.pdf?sc lang=en.

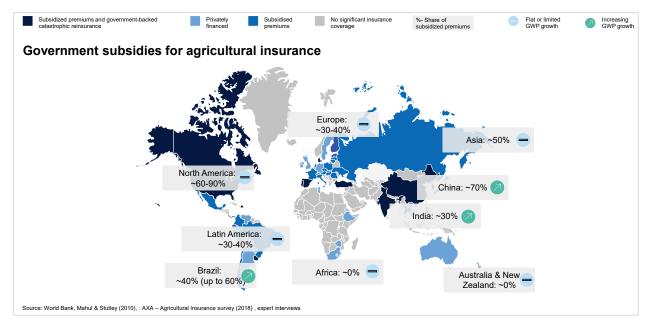


Figure 93: Government Subsidies for Agricultural Insurance

China, India, and Brazil, which are among the top five agricultural producers globally, have seen strong growth in agricultural premiums over the last decade. Advancing and protecting farmers' incomes is a high priority for these countries' governments, not least because a high proportion of their populations belong to the agricultural sector. Government subsidies in all three countries have strengthened public-private partnerships and helped agricultural insurance schemes achieve scale (Figure 94).

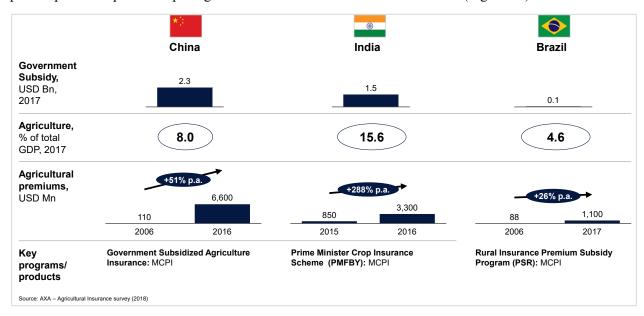


Figure 94: Scale Up of Agricultural Insurance Schemes due to Government Subsidies

(5) Competitive landscape

Only a few international property and casualty insurers offer agricultural insurance products in emerging economies outside their domestic market (Figure 95). In China and India, government

agricultural insurance programs are largely administered by local insurance providers. In Africa, ACRE Africa partners with various regional insurance providers to offer agricultural insurance.

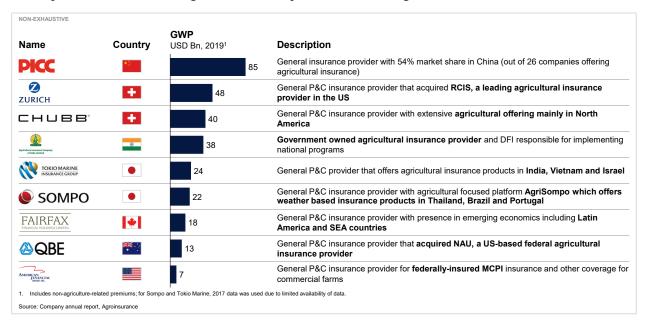


Figure 95: Global Players Offering Agricultural Insurance in Emerging Economies

(6) Tanzanian landscape for agricultural insurance

Agriculture is the largest contributor to GDP in Tanzania. The sector accounts for 27 percent of GDP and employs 67 percent of the population⁹⁷. According to a survey by FSDT, 71 percent of smallholder farmers report weather-related events as the most significant risk to their business³⁸, while 79 percent report that these have seriously affected their output. The most commonly occurring events in Tanzania are pests and diseases, flooding, strong winds, and drought.

Despite the importance of agriculture to the economy and the frequency of natural incidents, Tanzania's insurance market is still underdeveloped when compared to global and regional benchmarks (Figure 96) (e.g., Tanzania's penetration rate is 0.5 percent, while Kenya's is 2.5 percent) 99. As a result, premiums per capita in Africa are eleven times lower than the world average 100. One exception is South Africa, where penetration has increased, driven by the rising ownership of motor vehicles and more uptake of auto insurance.

Bank of Tanzania, "Annual Report 2019/20," Dec. 2020.

Financial Sector Deepening Trust, "Current State of the Industry: Challenges Facing Agriculture Insurance in Tanzania," 2018, https://basis.ucdavis.edu/events/agricultural-insurance-tanzania-public-and-private-sector-roles-and-responsibilities

McKinsey & Co., Inc., "Panorama Global Banking Pools." McKinsey & Co., Inc., "Panorama Global Banking Pools."

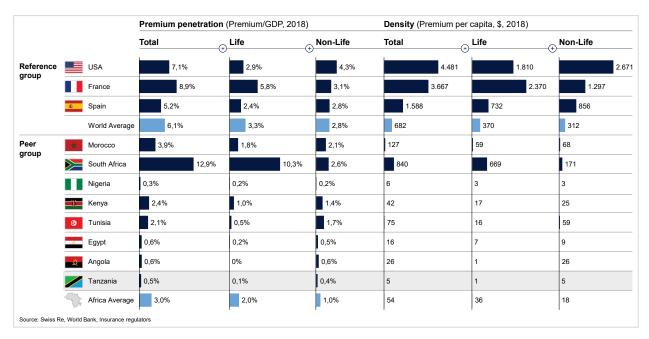


Figure 96: Premium Penetration and Density Across Countries

In Tanzania, agricultural insurance has a market share of less than 1 percent of the industry¹⁰¹, where the total market is USD\$ 300Mn. Much like its peer countries in the African region, non-life insurance accounts for 85 percent of the insurance market, with motor and health as the largest segments (at 35 percent and 22 percent respectively). Industry growth is expected to stay steady at about 6 percent for life and non-life insurance, according to 2018-2022 estimates (Figure 97)¹⁰².

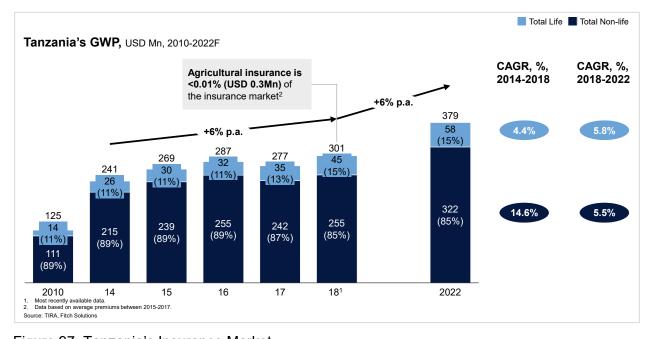


Figure 97: Tanzania's Insurance Market

Microsave, "The Feasibility of Microinsurance for Maize and Rice Smallholder Farmers in Tanzania," Study conducted in July 2018, https://agra.org/wp-content/uploads/2020/10/Feasibility-Microinsurance-for-Maize-and-Rice-Smallholder-Farmers-in-Tanzania.pdf.

Fitch Solutions (2018): Tanzania Insurance Report https://store.fitchsolutions.com/all-products/tanzania-insurance-report

However, only six of the 24 non-life insurance companies registered with the Tanzania Insurance Regulatory Authority (TIRA) currently offer agricultural insurance (Figure 98). UAP leads the market with an 80 percent share of the agricultural insurance market, followed by Mgen at 14 percent and Jubilee at 5 percent¹⁰³. Given the small number of players, the range of products available for agricultural insurance is limited.

Insurer	Non-life Market share, %, 2018	Agricultural insurance, %, 2017	Product off Indemnity insurance	fering Index insurance	""	Agricultural insurance is an untapped market. Premiums are high due to the lack of
Jubilee	15%	~5%				available data Insurance expert
Better. Simple. Life.	4%	~80%			""	Index insurance can be difficult to understand for
Reliance	3%					farmers who are not familiar with insurance. Indemnity insurance is easier-to-grasp
Sanlam Sanlam	3%					Insurance expert
ASSURANCE Ms Coverage. Mere Proce	1%	-			""	For now the processing for insurance is still analogue. There is space for underwriters who can
MGen Tanzania Ter Insurer of purposes chance	N/A	~14%				provide digital solutions Insurance expert

Figure 98: P&C Insurance Players Offering Agricultural Insurance

The government has implemented various initiatives to help develop the agricultural insurance industry in Tanzania. For example, under the National Agriculture and Livestock Insurance plan for 2021-2025, the government aims to increase the number of insurance players and product offerings for agricultural insurance, and to raise the overall insurance penetration rate to 5 percent by 2024 (Figure 99)¹⁰⁴.

Microsave, "The Feasibility of Microinsurance for Maize and Rice Smallholder Farmers."

Food Business Africa, "Tanzania launches five-year plan to boost agriculture insurance," 9 Oct. 2020, https://www.foodbusinessafrica.com/tanzania-launches-five-year-plan-to-boost-agriculture-insurance/.

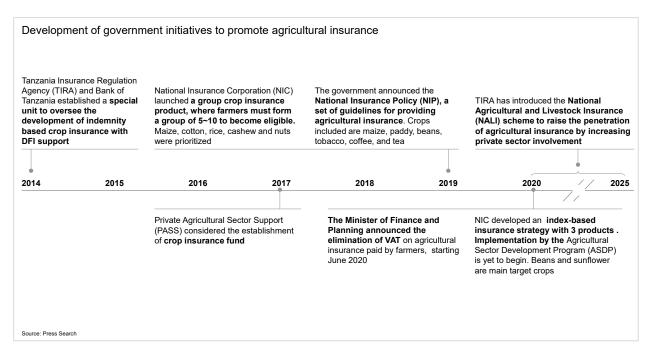


Figure 99: Government Initiatives to Promote Agricultural Insurance

(7) Challenges and potential mitigation measures in agricultural insurance

The key challenges in the agricultural insurance industry include few tailored products, limited data availability, affordability issues, and a dearth of distribution channels. This section addresses each challenge and describes potential mitigation measures that insurers may consider.

- A lack of tailored products. Though improvements have been made, current agricultural insurance products do not fully cater to farmers' needs. Factors contributing to this challenge include:
 - High administrative burden. Registration and claims processing are burdensome processes for farmers and insurers. To address this issue, insurers have used technology to reduce the need for physical inspections and other manual processes. In India's national agricultural insurance program, PMFBY, drone-based images are used to speed up damage evaluations¹⁰⁵.
 - Basis risk. Farmers' losses are not always accurately reflected in pay-outs. The indexes used by weather-based index insurance companies sometimes do not accurately predict yield. To increase farmers' confidence in these products, insurers can tailor them to crop- and location-specific needs. In addition, they can identify index parameters that correlate strongly with actual yield loss. For example, VanderSat and Swiss Re collaborated on Soil Moisture Deficit index insurance, in which pay-outs are made when the soil moisture falls below a pre-determined threshold¹⁰⁶.
 - Lack of education. Given their limited exposure to insurance products, agricultural MSMEs,
 particularly farmers often do not understand the value of purchasing insurance. Moreover, many

- 100 -

Swiss Re, "Revolutionizing Agricultural Insurance," (Presentation at Organization of Islamic Cooperation's Executive Programme, 6 Sept. 2019), https://www.oic.or.th/sites/default/files/institute/course/89369/public/4-9-62 swiss re - revolutionizing agriculture insurance.pdf
 Swiss Re, "Revolutionizing Agricultural Insurance," (Presentation at Organization of Islamic Cooperation's Executive Programme, 6 Sept. 2019), https://www.oic.or.th/sites/default/files/institute/course/89369/public/4-9-62 swiss re - revolutionizing agriculture insurance.pdf

of them do not trust the insurers and are skeptical that pay-outs will be made when losses occur. To address this issue, insurers can offer education to farmers. Specifically, insurers can make farmers more familiar with their products by packaging insurance with other, better-known products (e.g., loans). ACRE's most prominent product is the MFI loan, in which insurance is bundled with a loan provided to farmers. The program also offers community-level education to increase the general awareness about insurance.

- Limited data availability. In many emerging economies, the rudimentary infrastructure prevents the collection of high-quality, historical data on weather and yield. Without such data, product development, risk analysis, and risk evaluation can become challenging tasks for insurers. Possible sources of data include:
 - Government or public-sector organizations. Insurers can leverage data from government meteorological and agricultural agencies, as well as related public-sector organizations. While this is the most cost-effective option, insurers must comply with data regulations, which may inhibit them from gaining direct access to the data.
 - Private sector data providers. Insurers can also consider working with satellite-data companies and other private sector data-service providers. Insurers often deem the data to be more reliable when provided by a third-party vendor. However, since East Africa has few data-service providers, coverage may be inadequate and required data unavailable.
 - Insurers' own investments. Insurers can collect their own data by establishing their own facilities. While this option offers flexibility as to what and how data is collected, it also requires a substantial initial investment. Furthermore, insurers will have to wait to gain access to historical data.

In Myanmar, Sompo developed weather-index insurance by leveraging data from the Japan Aerospace Exploitation Agency (JAXA) and the Remote Sensing Technology Centre (RSTA), both of which are public-sector organizations based in Japan. JAXA's GSMaP is a multi-satellite precipitation map that provides hourly global data. To make the data applicable to insurance, RSTI helped analyze and calibrate the GSMaP data so it accounted for the differences between satellite-measured rainfall and ground rainfall. Starting in December 2018, Sompo established a pilot program with Myanmar Insurance and Myanmar Agricultural Development Bank. The product is offered to those who apply for their loans¹⁰⁷.

- Affordability. Farmers often consider agricultural insurance products to be too expensive. The
 products' high cost is largely driven by the lack of data availability, high administrative costs, high
 behavioral risk, and the general unpredictability of weather events and their outcomes. Potential steps
 to address the affordability challenges include:
 - Operational improvements. Improvement in administrative procedures could reduce operational
 costs for insurers and help reduce premiums. Digitization, for example, has helped to curb costs
 in advanced insurance markets. However, local insurance companies in Tanzania may have

Sompo, Press Release, 2019 https://s-net.space/special/frontrunner/29.html

limited digital capabilities and resources to implement innovative measures that would require initial investment.

- Group insurance. Provision of insurance to aggregated groups rather than individuals can help insurers pool potential risk more effectively. It must be noted, however, that group insurance may not be possible in regions where farmers are not organized into groups.
- Government donors/subsidies. Governments can provide direct subsidies for premiums through public-private partnerships that reduce the cost burden for farmers. While this measure has proven to have substantial impact, its scalability depends heavily on the availability of government funds. In Tanzania, the possibility of government intervention at scales similar to those in China, Brazil, and India is unlikely.
- Private sector financing. Private sectors can also contribute by establishing risk-sharing schemes in which one or more stakeholders contributes a share of the premiums. When farmers suffer from crop failure, input providers also suffer because farmers will be unable or unwilling to buy their products in the future. Input distributors therefore regard insurance as a means of promoting their products and are often willing to cover the cost of insurance to make their own products more attractive in the market.

For example, in ACRE Africa's Seed Replanting Guarantee, seed companies incorporate insurance premiums into the retail price of the seed bags (Figure 100). Each bag of seed includes a scratch card containing an USSD code, which farmers can use to register for insurance using their mobile phones. The SMS message also contains geographical information, which allows for index-based evaluation of damages. If a drought occurs within the first three weeks of registration, farmers receive a refund through M-Pesa for the price of the seeds¹⁰⁸.

Mercy Musya and Mercy Muttai, "Formative evaluation on increasing the uptake of ACRE Hakika in Kenya: 3ie Formative Evaluation Report," International Initiative for Impact Evaluation (3ie), July 2020, https://doi.org/10.23846/TW13FE16.

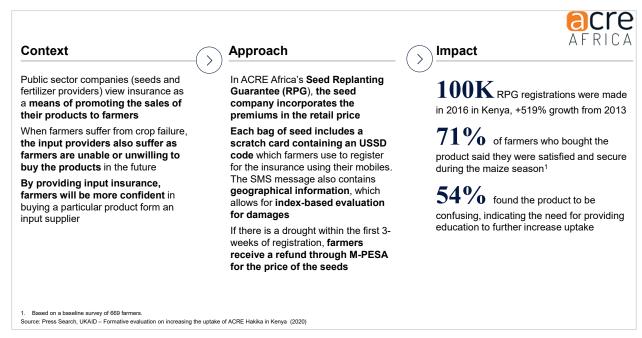


Figure 100: ACRE Africa's Risk-Sharing

• **Distribution**. Distribution is a significant challenge for any financial product or service targeting farmers. In Tanzania, only 4 percent of micro-insurance is provided directly from insurers to consumers¹⁰⁹. Moreover, many farmers distrust insurers due to the low penetration of insurance products.

Five potential distribution channels were identified and assessed based on their geographical footprint and the strength of their agricultural network. Commercial banks and input distributors appear to have the most potential to become viable distribution channels, as they have branches across the country with direct access to farmers.

Going forward, bancassurance – in which banks can sell insurance products to their existing client base – is expected to grow, as TIRA recently introduced new regulations that allow banks to offer insurance more easily to existing customers. These regulations, established in March 2019, permit banks to be involved in the development and distribution of insurance products without having to set up a separate agency – a burdensome process that had previously discouraged their involvement in insurance. As of February 2021, TIRA had issued licenses to 13 banks, including NMB, CRDB, DTB, ABSA, and Mandeleo Bank¹¹⁰. Banks must comply with the following restrictions:

- They must work with a minimum of three and a maximum of ten insurance companies. (Prior to the regulation, banks as agents could only work with three insurance companies).
- Banks are required to sell different products from different companies to maintain fairness.
- The people selling the insurance at the bank must obtain Certificates of Insurance (CoI) to operate.

Microsave, "The Feasibility of Microinsurance for Maize and Rice Smallholder Farmers."

Atlas Magazine (2020): https://www.atlas-mag.net/en/article/introduction-of-bancassurance-in-tanzania

(8) Business models for implementing agricultural insurance

We evaluated four potential business models for implementing agricultural insurance in Tanzania (Figure 101):

- Japanese subsidiary direct provision model: In this model, a Japanese company or its subsidiary provides underwriting and distribution to local consumers. While this model has the largest revenue pool, its feasibility is low due to the difficulty of complying with local financial regulations and the lack of access to local consumers.
- Local insurance direct provision model: A Japanese company partners with a local insurance
 company to provide technical assistance and re-insurance. The local insurance company is
 responsible for underwriting and distribution to local consumers. This model's reach is limited,
 however, as insurance companies rarely provide insurance directly to consumers.
- Local insurance-aggregator model: As in the above model, a local insurance company partners with a
 distribution aggregator to better reach smallholder farmers. This model has the highest potential to
 improve financial inclusion for MSMEs, but its feasibility is low because Japanese companies
 primarily focus on serving the needs of Japanese businesses.
- Local insurance Japanese agribusiness model: A Japanese company partners with a local insurance company to provide re-insurance. In this model, the local insurance company provides underwriting to Japanese agribusinesses with which the Japanese company has existing connections. This model is highly feasible, but its potential impact is small, as few Japanese agribusinesses operate in Tanzania.

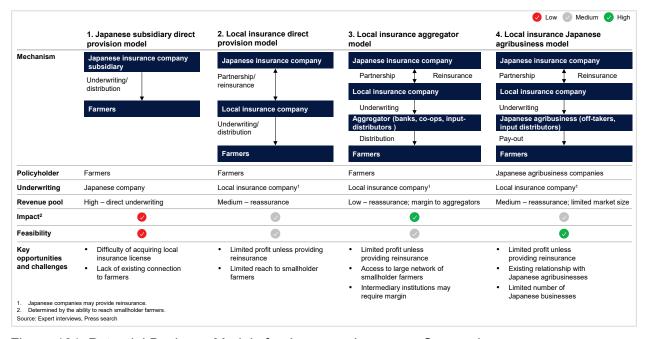


Figure 101: Potential Business Models for Japanese Insurance Companies

(9) Japanese company interviews

To understand Japanese insurance companies' interest in these business ideas, we conducted interviews with a few Japanese property and casualty insurance providers

The key themes and takeaways from the interviews were:

Difficulty in developing agricultural insurance products

- It's not easy to apply agricultural insurance know-how from the US to Africa because each market is different.
- For index insurance, re-insurance for Japanese businesses is possible but would require reliable data that is verified by a third-party, such as the government.

• Importance of meeting the needs of Japanese businesses

- In Tanzania, there is a limited number of Japanese companies operating outside the ODA scheme, which curbs the incentive to grow our current offerings.
- For an ESG initiative, the story would need to focus on the merit of their existing Japanese clients.

• New business ideas need to be driven by the Japanese business side

 It is difficult for insurance companies to lead new business development; the demand must come from Japanese businesses, such as off-takers of Tanzanian agricultural products.

(10) Recommendations for JICA

Based on findings from the agricultural insurance pilot, four recommendations were identified for JICA to develop and implement agricultural insurance in Tanzania (Figure 102).

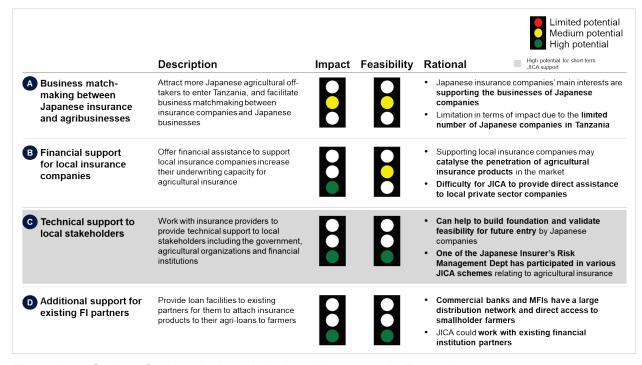


Figure 102: Options for Developing Agricultural Insurance in Tanzania

A. Business matchmaking between Japanese insurers and agribusinesses

JICA could try to attract more Japanese agricultural off takers to Tanzania and to facilitate business 'matchmaking' between insurance companies and Japanese businesses. Because Japanese insurance companies are primarily driven by the needs of Japanese companies, unlocking a market for agricultural insurance will depend on their ability to attract more Japanese agribusinesses to Tanzania.

While few Japanese companies currently operate in Tanzania, JICA could potentially approach food manufacturers, trading companies, and input distributors that have existing operations in Tanzania (Figure 103).

	Company name	Business description	Potential insurance	e product	
Food manufacturers	(B) KIKKOMAN°	Soy sauce manufacturing	Soy beans		
	JT	Tobacco manufacturing	Tobacco leaf		
	⊘ JINOMOTO	Seasonings manufacturing	Cassava		
	FUJI OIL	Vegetable oil manufacturing	Sunflower seeds		
Trading companies	TOCHU	Sesame, coffee trading	Sesame, coffee		No.
Companies	Marubeni	Sesame, coffee trading	Sesame, coffee		
	Mitsubishi Corporation	Sesame, coffee trading	Sesame, coffee		
Input distributors	SUNÍTOMO G-EMICAL	Fertilizer manufacturing	Fertilizer		
	SAKATA PASSION in Seed	Seed manufacturing	Seeds		
Based on ABP list (2018). Source: Company websites					

Figure 103: Examples of Japanese Agribusinesses in Tanzania

B. Financial support for local insurance companies

JICA could provide financial support to local insurance companies to increase their underwriting capacity for agricultural insurance. Six criteria helped identify potential local property and casualty insurance providers; these criteria were market share (each company's received premium as percentage of total gross written premium based on FITCH Tanzania Insurance Market Report 2021), bancassurance network, number of branches, focus on MSMEs, agricultural product offering, and reputational risk (Figure 104). Companies with an existing agricultural insurance offering may have a stronger appetite for partnership (Figure 105).

	Evaluation criteria					
			Σ			4
Criteria	Market share	Bancassurance network	Number of branches	MSMEs focus	Agricultural product offering	Reputational ris
Weighting	30%	20%	20%	15%	10%	5%
Description	Local insurance company needs to have reasonable underwriting capacity	Existing partnerships with banks will positively impact distribution	Number of branches may be indicative of brand recognition	Strategic focus on MSMEs will increase likelihood of partnership	Companies that have existing agriculture products are more likely to show interest	Reputation of the local insurance company is critical
Definition	1- bottom 1/3 market share 2- top 2/3 market share 3- top 1/3 market share	1- no bancassurance offerings 2- bancassurance partnership with 1 bank 3- bancassurance partnership with multiple banks	1 – Less than 5 branches 2- 5-10 branches 3- More than 5 branches	1- No MSMEs related department/products 2- MSMEs related department/products	1- no agricultural insurance products offered 2– 1 type of agricultural insurance products offered 3 - 2 types of products offered	1- scandal in the las 5 years 2- no scandals in the last 5 years

Figure 104: Six Evaluation Criteria for Local P&C Insurance Companies

Name	Market share, %, 2018	Bancassurance, 2020	# of physical branches	MSMEs focus ²	Agricultural products	Reputationa risk
Jubilee	15%	(absa) DTB DIAMOND TRUST BANK	10	\checkmark	\checkmark	
Alliance	11%	TobBank	4	\checkmark		
	8%	Clears to you	24			
AAR Insurance You're in control	7%	absa	5	\bigcirc		
Heritage Tanzania	7%	DTB DIAMOND TRUST BANK	4			No scandals
Britam	4%	(absa)	8			over the last 5 years
Phoenix	4%	(absa) DTB DIAMOND TRUST BANK	10			
Mare Somple USE	4%	NMB Clear to you	10		\checkmark	
Sanlam	3%	(absa) standard chartered	7	\checkmark	\checkmark	
W	3%	NMB Close to you	7		\checkmark	

Figure 105: Possible Local Insurance Companies for Partnership

C. Technical support for local stakeholders

JICA could also consider supporting Japanese insurance companies in providing technical assistance to local stakeholders, including the government, agricultural organizations, and financial institutions. For example, these organizations might include:

- Insurance stakeholders: TIRA, National Insurance Company
- Agriculture-related organizations: The Ministry of Agriculture, PASS, and FSDT
- Development banks: The Tanzanian Agricultural Development Bank

Insurance companies: Jubilee, Sanlam, and UAP

Working with public-sector organizations may be preferrable due to the availability of their resources and the government's keen interest in promoting agricultural insurance in Tanzania. While this option does not involve directly providing insurance, support would help establish a foundation for the agricultural insurance business and confirm the feasibility of future entry by Japanese companies.

D. Additional support for existing financial institution partners

Lastly, JICA could consider providing loan facilities to existing financial institution partners so the partners can develop insurance products to attach to their loans to agricultural MSMEs. To do so, JICA could leverage its connections with commercial banks that have direct access to farmers. JICA could use the terms and conditions attached to a two-step loan to support banks in providing bancassurance as part of the loans given to farmers, with the bank designated as the first-response payee.

3.3.2 Pilot 2: Agricultural machinery

Agricultural machinery is key to mechanizing the agricultural industry and increasing productivity and farmers' yields. Agricultural equipment includes tractors, harvesting machinery, tillage machinery, planting and fertilizing equipment, and haying and foraging equipment. Non-tractor equipment is often referred to as agricultural implements, many of which are then attached to tractors.

(1) Global landscape

Key trends in the global agri-equipment market include 1) a high growth rate; 2) incorporation of startups for smart component manufacturing and data-based solutions; and 3) the advent of IOT usage for productivity improvements.

1. High growth rate in the agri-equipment market:

The global agricultural equipment market is expected to grow at ~9 percent p.a. from 2019-25; it will be driven by the non-tractor segment (14 percent CAGR), an increase in smart components and IoT technologies that improve productivity, and a shift to lighter-weight farm machinery¹¹¹ (Figure 106). Previously, rising equipment prices and low replacement demand led to slow growth in these sales from 2008-13 (4 percent global CAGR).

Demand is expected to rebound (7 percent global CAGR 2018-23) due to a positive sales cycle, increased government support for farmers, and better access to capital leading to improved mechanization rates¹¹².

Research and markets, Agriculture Equipment Market Size, Share & Trends Analysis Report 2019-2025, January 2019 https://www.researchandmarkets.com/reports/4751835/agriculture-equipment-market-size-share-and

The Freedonia Group, Inc, Global Agricultural Equipment - Demand and Sales Forecasts, Market Share, Market Size, Market Leaders, October 2020 - https://www.freedoniagroup.com/World-Agricultural-Equipment.html

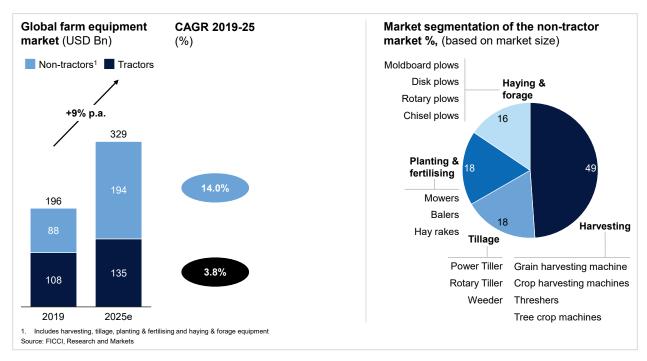


Figure 106: Growth Rate in Agricultural Equipment Market

The Indian agricultural equipment market shows a potential growth of ~8 percent, primarily due to tractors and harvesting machinery (Figure 107). India's tractor penetration is ~0.8HP/ha¹¹³ (tractor penetration is examined in horsepower/hectare (HP/ha) because different countries use tractors with various horsepower), in contrast to established markets like Japan (~7HP/ha), Italy (8.2HP/ha), and Germany (9.8HP/ha), which are ~10 times greater. The significant growth in tractors may be due to the later adoption cycle of essential machinery in emerging markets.

Growth drivers in emerging markets include an increased need for mechanization, increasingly available finance, and government promotion initiatives. In India, the government allocated USD\$ 350Mn to subsidies to promote the usage of machinery by farmers in the last 5-year plan (2012-17). It also provided financial assistance to help them procure agriculture machinery and equipment, and subsidies of 35 percent on tractors in the North-East states (up to a max of INR 125,000). Gross loan disbursements to the agriculture sector in India are expected to grow ~8 percent p.a. over the next few years.

¹¹³ Tractor penetration is examined in horsepower/hectare (HP/ha) because different countries use tractors with various horsepower.

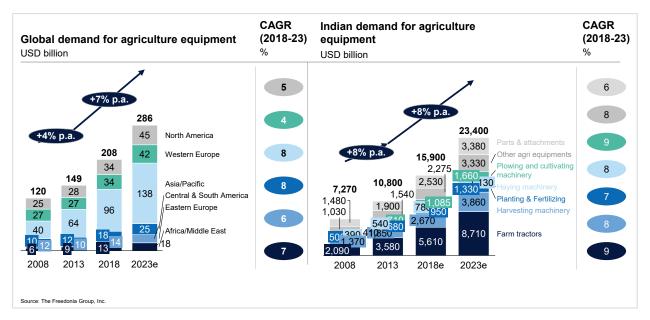


Figure 107: Africa CAGR from 2013-23

The Chinese government also provides an enabling environment for mechanization for smallholder farms, including 30 percent input subsidies for the purchase of agricultural machinery. The government also applies production subsidies to raise smallholder-farm family incomes. (USD\$ 2.2Bn a year for the grain minimum support price).

Mechanization also tends to increase as farm sizes increase (see the peer countries of Ethiopia, Kenya, and Nepal (Figure 108)). In Ethiopia, only about 1.4 percent of the smallest farms (the first farm-size quartile with an average farm size of 0.34 ha) have access to mechanization. But farm size and access increase in tandem. About 16 percent of the largest farms in Ethiopia (the top quartile of the farm-size distribution with an average size of 4.3 ha) use mechanically-powered technologies. In Kenya, which has small farm sizes, capital requirements increase steeply with farm size; the largest farms have 2.1 ha of land. Machinery can include small equipment as farm size increases to 1 - 2 ha and labor constraints lead to more mechanization. This equipment can include water pumps, seed planters, or hydraulic pressing machines¹¹⁴.

UNFAO, George Rapsomanikis, The economic lives of smallholder farmers: An analysis based on household data from nine countries, 2015 - http://www.fao.org/3/i5251e/i5251e.pdf

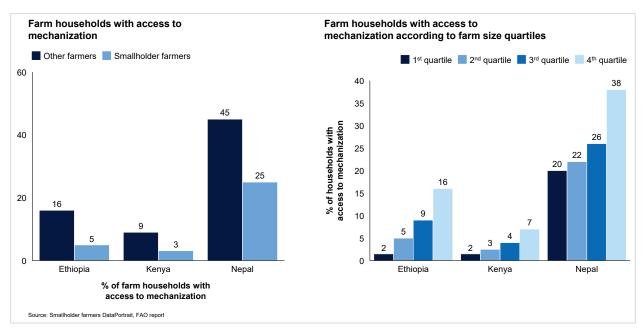


Figure 108: Mechanization examples from Ethiopia, Kenya and Nepal

Tractors, pumps, and threshers are the most-frequently used agricultural machinery for smallholder farmers in South Asia; larger equipment is used less often. Access to credit and extension services, economic status, and training all positively influence farm mechanization. Local manufacturing and adapting farm machinery to local needs, especially for small and fragmented lands, is also important, as are custom hiring services for farm machinery. The latter facilitates farm-machinery use so farmers do not have to purchase expensive agricultural machines and equipment. In Bangladesh, for instance, farm machinery is mostly used for land preparation (80 percent) and threshing (>80 percent); other farm operations such as planting and harvesting are usually performed manually. In Nepal, land preparation, which is mostly in the Terai region, is carried out with tractors, while there is little use of machinery for other agricultural operations. In India, tractor use intensity increased from 0.19 units per 1,000 ha in 1961 to 9 units per 1000 ha by 2000. Farm mechanization there depends on land size and topography – penetration of tractors is higher in northern India, whereas penetration of power tillers is higher in southern and eastern India, a region with a majority of small and marginal farmers¹¹⁵.

2. Incorporation of start-ups for smart component manufacturing and data-based solutions:

Smart component manufacturers, data analytics start-ups, and equipment OEMs are working together to offer a bundled product with data components, software and hardware respectively (Figure 109). Start-ups focus on building accessories to enhance traditional machines, (e.g., guidance, sprayers, telematics, and yield monitors), while OEMs integrate the smart equipment into traditional machinery (e.g., adding autosteer to tractors).

Xinshen Diao, Jed Silver, Hiroyuki Takeshima, Agricultural Mechanization and Agricultural Transformation - IFPRI Discussion Paper 01527, April 2016 - https://www.ifpri.org/publication/agricultural-mechanization-and-agricultural-transformation

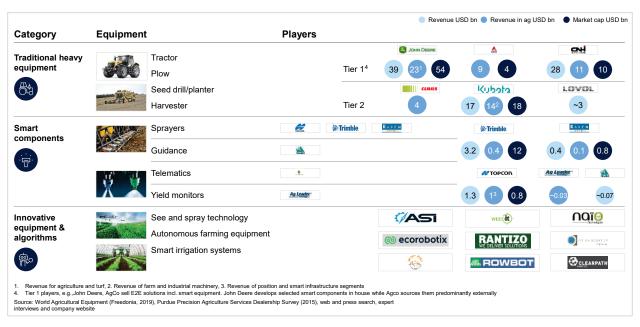


Figure 109: Examples of Smart Agriculture Start-ups

3. Advent of IOT usage for productivity improvement:

This involves prescriptive farming with artificial intelligence systems for farm management and fleet deployment (e.g., that show status, performance, and potential bottlenecks). They can also monitor climate conditions and crop yield, automate the irrigation system, and predict when farm equipment will need maintenance. As farmers adopt this new technology, three major trends have emerged:

- Assisted agricultural equipment: This uses telematics and sensors to improve the productivity
 of agricultural operations. Assisted Agricultural Equipment helps operators view on-ground
 conditions at a much more detailed level and enables them to produce better results in less time.
 Applications for this technology range from basic activities like ploughing and harvesting to more
 complex ones like spraying and baling.
- Fleet management: This system shows the status, performance, equipment security, and potential bottlenecks in fleet deployment; it also suggests ways to optimize deployment. It provides the location and status (e.g., idle, in operation, experiencing a technical problem) of critical equipment in real time, and offers a holistic snapshot of the fleet's condition vs. scheduled operational needs.
- Autonomous agricultural equipment: Much new equipment already comes with built-in semiautonomous functionality (e.g., task management, autonomous routing). The first generation of completely autonomous tractors has already been launched, with a complete sensing and perception package that includes radar, LiDAR, and video cameras. This autonomous technology could potentially be expanded to other agriculture equipment (e.g., harvesters, grain transporters, and support vehicles).

Key agricultural equipment providers include Japanese companies such as Kubota and Yanmar and global players such as John Deere, Agco, and CNH (Figure 110).

		Examples o	f key players	
Category	Description	Japanese	Global	
Farm tractors	Most basic type of ag machinery, they are used to draw other implements so are typically the first machines purchased. Available in a wide array of sizes and power ratings, ranging from the smallest pedestrian-controlled units with just 5 hp up to the largest production four-wheel units putting out up to 660 hp	KUDOTO.	JOHN DEERE	
Harvesting machinery	Due to the high unit prices of large harvesting machinery, this equipment tends to be more prevalent in the developed world. Primary component of the harvesting equipment product segment is the combine (or combination harvester/thresher), which represents the largest and most complex piece of machinery for most mechanized farms.	Kubota	JOHN DEERE	Mahindra LERAS
Planting & fertilizing machinery	Many different items are included in this category, from more generalized products like fertilizer distributors (excluding general-purpose sprayers), manure spreaders, planters, seed drills, and transplanters, to specialized units like corn planters, cotton planters, and sugar cane loaders. Most of these products are pulled by tractors.	KUPOTO	BUCHER	Your Agriculture Company
Haying machinery	Equipment used in the preparation and collection of hay and other similar products (e.g., haylage or silage), including balers (round, rectangular, and the increasingly less common square types), mowers (sickle/reciprocating, rotary/drum, and reel/cylinder types), rakes, stackers, swathers (also called windrowers), and tedders		CH KERMS	SINOMACH BUCHER
Livestock machinery	A diverse range of products, including feed grinders, crushers, and similar items; hog and cattle equipment (for feeding, watering, handling, etc.); milking machines; and poultry-related equipment, including incubators, feeders, brooders, etc		afimilk A-DeLaval	PATKOL
Plowing and cultivating machinery	Equipment such as plows (ploughs), cultivators, harrows (chain, disk, and tine types), land levelers, pulverizers, rippers, rollers, and weeders. While these units differ in physical design and specifics of operation, all are used in preparing the soil for planting or maintaining soil during growing season	YANMAR	JOHN DEERE	MAGCO That Agriculture Company BUCHER
Parts & Attachments	Wide array of aftermarket products include blades, drawbars, forks, frame mountings, knives, and tines. Most major OEMs produce and sell aftermarket parts and attachments to both dealers, who use them to make repairs, and to individual customers	Kuboha	JOHN DEERE	Your Agriculture Company
Source: World Agricultural Equipme	ent (Freedonia, 2019), Web and press search			

Figure 110: Major Providers of Agricultural Equipment

Tractors, ploughs, harrows, small-scale irrigation systems, hand-operated sprayers, and aftermarket parts are the types of agricultural equipment that are most relevant for farmers.

Tractors currently constitute more than 50 percent of all agricultural equipment sales in Africa but are expected to decrease to ~30-35 percent in the long-term¹¹⁶; other agri-equipment's and implements' usage will increase simultaneously (Figure 111).

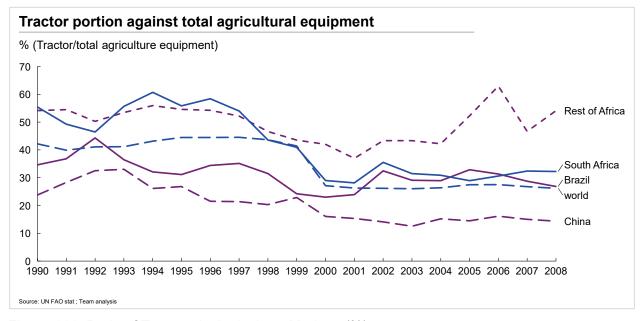


Figure 111: Ratio of Tractors in Agriculture Markets (%)

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¹¹⁶ UN FAO Stat

Size of African market Tractor range Market share USD million, 2008 Horse Power **Product** Percent 1,344 Agricultural tractors 359 **Threshers** Under 50 230 Agricultural machinery Soil machinery 227 92 Milking machinery 50-100 58 Combine harvesters 76 41 Seeders 38 Ploughs 100-200 Balers 32 26 Milking machines 14 Manure spreaders Over 200 9 Threshing machines Tuber har-machines

In addition, medium-sized tractors make up the majority of this market (Figure 112).

Figure 112: Tractor Market Overview

Source: UN FAO stat; expert interview; team analysis

The top five African players include New Holland (24 percent market share), John Deere (18 percent), Agco (16 percent), Landini (15 percent), and Mahindra (6 percent). The top three competitors are premium players, while Landini and Mahindra play in the 'value for money' segment. Local dealer partners are important for distribution; for instance, New Holland has an extensive dealer network.

Typical buyers of agricultural equipment include large farms, farmer-based organizations (FBOs), and leasing companies. Large farms will usually buy multiple pieces of agricultural machinery directly from suppliers/distributors according to their farm's size and needs. FBOs, which include cooperatives and farmer associations, usually pool smallholder farmer resources to buy machinery that is shared among the members of the FBOs. Leasing and service companies buy and lease/rent machinery services to FBOs and large farms.

(2) Tanzanian landscape

Agriculture is the largest contributor to Tanzania's economy, employing ~65 percent of overall workforce (~17Mn people) (Figure 124). In 2019, it made the largest contribution to GDP (~USD\$ 16Bn).

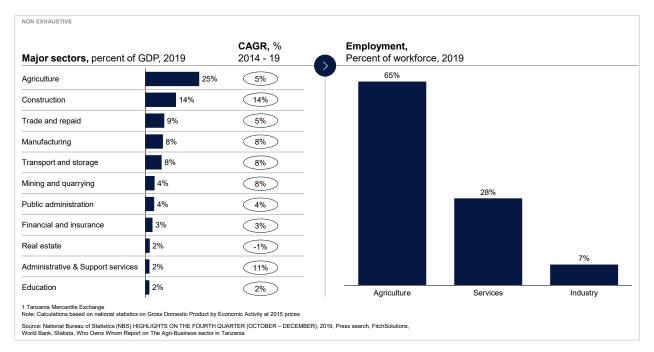


Figure 113: Tanzania's GDP and Employment Ratios by Sector

Cereal production comprises the largest share of agricultural production, with maize being the most important crop (Figure 114). Commercial farming is carried out on only 1.5Mn ha (~17 percent) of Tanzania's land; most of its farmers engage in small-scale farming on farms ranging between 0.9ha and 3ha in size. They produce some 80-85 percent of maize output under rain-fed conditions. Around 75 percent of maize production is consumed on the farm or is procured by non-farming households.

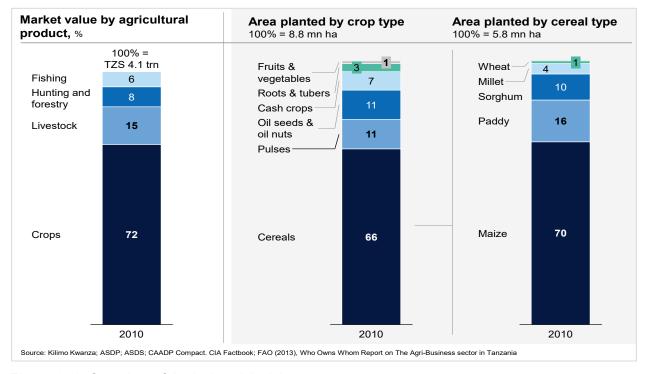


Figure 114: Overview of Agricultural Activity

The low productivity of land and labor (Figure 115) are two of the major impediments to agricultural growth. Tanzania's maize yields of 1.2 MT/ha are ~40 percent lower than its peers' average. Over the past five years, its maize productivity has declined even as that of its peers has registered large productivity gains. The key factors that are driving this lacklustre performance include low public expenditure on R&D, inadequate financing, poor production techniques, underdeveloped markets, and very limited rural infrastructure.

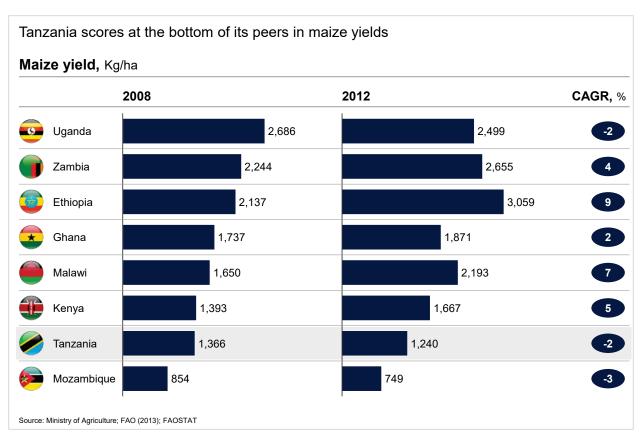


Figure 115: The Tanzanian agriculture sector productivity

The Tanzanian agricultural sector can be segmented into three main types of actors: small holder farmers, agricultural MSMEs, and large corporates. For purposes of this survey, farmers producing for their own consumption were not considered as MSMEs, however smallholder farmers producing for commercial sale have been included (Figure 116).

Types of actors	Sub-segments	Description Services Production Processing/Distribution					
Farmers	Farmers with very low income	Farmers mainly cultivate food crops for their own consumption; some also sell small volumes of export products (notably maize)					
~17mn	Farmers with low income	Small farmers for whom the marketing of export products is the main income-generating activity (notably obacco, cashew) and who also grow food products for subsistence					
	Farmers with moderate income	Medium-size actors located on more profitable crops (e.g. cashew, tobacco), with a potential of income sources outside the agricultural sector					
Agricultural SMEs	Input suppliers	ompanies marketing inputs (e.g., livestock products and food)					
	Mechanization providers	Companies marketing and / or offering mechanization services (notably agricultural machinery and equipment)					
<u></u>	Agricultural research and advisory	Organization carrying out research in agriculture (notably setting up inputs), and agricultural advisory to producers					
	Transport & storage	Companies transporting and storing agricultural products					
	Cooperatives	Grouping of actors on the same chain, facilitating the pooling of services and the marketing of products					
	Small/ medium processors	Companies guaranteeing the processing and the distribution of processed products to wholesalers, distribution chains or agro-industrial groups					
	Small/ medium distributers	Local distributers (e.g. wholesalers, distribution network) and exporters marketing primary raw materials and 1st/2nd degree processing products					
Large companies	Industrial operations	Large modern, formal and exporting operations; the main crops are sugar cane and tobacco					
000	Agro-industrial groups and distribution specialists	Vertically integrated international or Tanzanian groups (e.g. Bakhresa group), companies specialized in the raw materials wholesale trade and major actors in distribution					
Source: Interviews, pres	s searches						

Figure 116: Actors in the Tanzanian Agricultural Sector

While Tanzania's agri-employment is largely based on maize farming, larger players also operate in sugar, tea, tobacco, and avocado production. Raw sugar producers include Kilombero Sugar Company (~40 percent), TPC (~34 percent), Kagera Sugar (~17 percent), and Mtibwa Sugar Estate (~9 percent). Tea producers include Tatepa, Mohammed Enterprise, and Unilever Tea Tanzania. Another notable producer is Bakhresa Food Products (milling) (Figure 117).

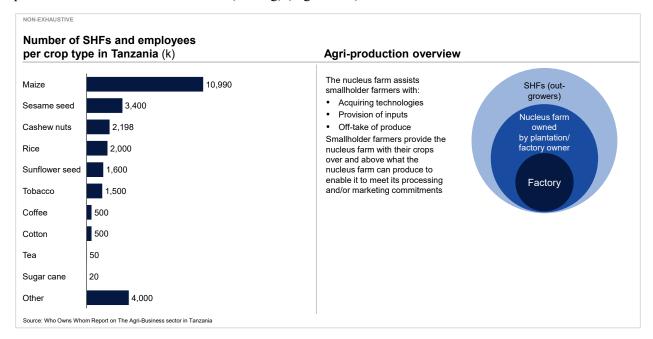


Figure 117: Tanzanian Agri-employment

Tanzanian smallholder-farmers, who make up most farmers in Tanzania, have land sizes that range from 0.9ha to 3ha; mechanization is only present on 14 percent of cultivated land. Roughly half of these households (owning or renting land) own less than 1 ha. The mean size of owned land (80 percent) is 2.06

ha and that of rented land (68 percent) is 1.69 ha¹¹⁷. In 2014, tractors were used on only 14 percent of cultivated land; draught-animal power (24 percent) and human-powered tools were used on the majority of farms (62 percent)¹¹⁸.

Though small farms still account for the largest amount of production and land, the number of medium-sized farms has been growing. Medium- and large-scale farms tend to be held by farmers who reside in less densely-populated areas (Figure 118).

Tanzania's agri-equipment players include private sector direct players, governmental players, financial institutions, and farmers. Current agri-equipment manufacturers and distributors include the 11 companies detailed below (Figure 119).

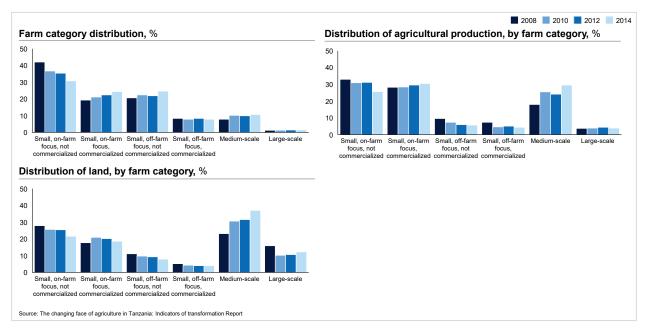


Figure 118: Changes in Land Distribution and Production

Jamie Anderson, Collins Marita, and David Musiime, "National survey and Segmentation of Smallholder Households in Tanzania," Consultative Group to Assist the Poor (CGAP), May 2016, https://www.cgap.org/sites/default/files/Working-Paper-Smallholder-Survey-Tanzania-May-2016.pdf.

David Kahan, John Sariah, and Benesta Titus, "Assessing Market Performance of 2-Wheel Tractors and Their Accessories in Tanzania," CIMMYT (International Maize and Wheat Improvement Center), 2014, http://facasi.act-africa.org/file/20151002 market analysis for small mechanization tanzania.pdf.

Company name	Business description	Products
BCA GRAIN & FEED GAPPING LISTER	Distribution of agricultural machinery, equipment, instruments and devices as well as trading in cereals, grains, dairy products, fertilizer and animal feed.	Cleaning & grading machines, milling & animal feedstuff machines, dryers, color sorting machines, ph testers, thermo-hygrometers & weather stations, digital weighing scales, storage silos, coffee machinery, irrigation tractors, ploughs & harvesters
LONAGRO	Lonagro is the sole distributor of John Deere Agriculture	Tractors, planters, grab loaders, harvesters, sprayers
AGRO AFRICA net	Importer & Supplier of New Holland, Massey Ferguson tractors and Farm Equipment	Agricultural loader, bed shape planter, boom sprayer, border disc, chisel plough, cotton ridger, disc plough, farm trailer, fertilizer spreader, fodder chopper, fodder cutter, front blade, hydraulic tipping trailer, jib crane
GROUP Tie Projet's feast	Reliable farm implements at an economical price, supplying both pre- and post-harvest equipment, all of which conform to international quality standards	Disc ploughs, disc ridge, tipping trailers, non-tipping trailers, slashes, boom sprayers, sub-soilers, cultivators
KANU KQUIPMENT	Supply of world-class earthmoving, mining, construction, road construction, agriculture and forestry equipment.	Agricultural tractors, articulated tractors, cane loaders, forklifts, haulage tractors, tandem tractors, versalifts
farmequipment	Sales and service of farm machinery, spare parts, tools and equipment	Rotary tillers (rotavator), disc harrows, disc ridgers (bund maker), tyne ridgers, tipping trailers, spring loaded tillers, rigid tillers, land levelers, post hole diggers, sub soilers, rotary slashers
	Provide farming solutions	Irrigation system design , installation and materials supply i.e drip irrigation , sprinkler , spray pipes , pivot etc
OHANS	Manufacturer of Farm Equipment under the brand name HANS	Rotary tillers (rotavator), disc harrows, disc ridgers (bund maker), tyne ridgers, tipping trailers, spring loaded tillers, power harrow, ripper, box blade, terrace blade, rotor seed drill, sugar cane loader, rigid tillers, land levellers, post hole diggers, sub soilers, rotary slashers, reciprocating forage mower, rice planter, rice harvester
AgriCom	Products and services that serve the Tanzania agribusiness sector	Tractor, disc plough, harrow, subsoiler, moldboard plough, reversible moldboard plough, rotary slasher, disc seed drill, happy seeder, multi crop row planter, pneumatic planter, post hole digger, roto seed drill, zero till, boom sprayer, fertilizer spreader, threshers, baler, baler spear, hay rake, rotary multcher, sugar can loader, trailer and water bowser and tanker
Kishen Enterprises Ltd	Manufacturing, trading, marketing and distribution of agri-machinery and equipment	Diesel engine, electric motor, rice huller, oil mill, concrete mixer, oil filter, mist machine
WHIRLSTON	Manufacturer of various oil pressing machines and equipment	Oilseeds cleaning/sifting machine, oilseeds shelling machine, oilseeds crushing machine, oilseeds roaster

Figure 119: Agri-equipment Manufacturers and Resellers in Tanzania

There are four rental companies for agricultural equipment in Tanzania:

- Sustainable AGR (Tanzania) Ltd: Leases UK-sourced farming machinery such as tractors, potato planters, and corn drills, as well as crops, seeds and information on farming, technology, agronomy and livestock.
- ELT: Leases, hires, and sells all kinds of equipment in construction, farming, mining, transportation, and all kinds of business.
- Hello Tractor: Provides tractor-sharing services for tractor owners and farmers through the cloud.
- Vaell leasing: Provides vehicle leasing.

In addition, five Japanese agri-equipment and food processing companies are already present in Africa (Figure 120).

Company name	Industry	Description of activities in Africa and Tanzania			
Kubota	Agricultural machinery	Manufacture and sale of agricultural machinery, engines, construction machinery and electrical equipment. Tractors, combines and rice planting machines are the main products of agricultural machinery. The ratio of overseas sales to Japanese sales is more than 60%			
LEON	Food Machinery	Develops, manufactures and sells food processing machinery. Developed the world's first automatic molding machine for manju and croissants. The domestic market share of the wrapping machine is 90%. Exported to more than 120 countries and regions around the world.			
jana	Food Machinery	Food processing machine sales			
SATAKE	Agricultural machinery	Sales of grain dryers and rice polishing machines			
Hightech	Food Machinery	Ham sausage processing machine sales			

Figure 120: Agri-equipment and Food Processing Japanese Companies Present in Africa

(3) Bottlenecks to introduction of agricultural equipment

- Finance and demand aggregation: Smallholder farmers have lacked access to finance for purchasing machinery, and co-operatives, associations, and farmer-based organizations have had limited access to shared machinery. In addition, low utilization levels among individually-owned tractors often do not cover their capital and operational costs. Finally, labor has often been cheaper than mechanization (especially with household members' help).
- Services: Hire services may be lacking, and when they are available, they are very costly. They also have limited availability during peak periods. This can be problematic because certain planting and harvesting tasks need to be done on a timely basis. Few support services for regular maintenance are available and spare parts for farm machinery are expensive and can be difficult to obtain.
- **Locations**: Machinery distributors are primarily based in the capital and have few branches/partners in regions. This shortage of support services in rural areas means spare parts are often inaccessible there on a timely basis, and costly if smallholder farmers can get them.
- Education: Many farmers have not had the opportunity to learn about farm machinery's types, quality, and multipurpose uses. Households with a higher literacy rate are often more likely to use machinery (e.g., water pumps for irrigation). Education can help build farmers' awareness of how mechanization can enhance agricultural productivity.
- Government policy: The government subsidy distribution process can be difficult to understand. As a result, elite farmers benefit more from it than small and marginal ones. In addition, frequent changes in policies such as government subsidies or development organization grants to help farmers purchase machinery can produce strong market distortions for traders.
- **Infrastructure**: The energy supply tends to be irregular and somewhat unstable. In addition, the agricultural value chain relies on different machinery and implements being available at different

points (Figure 121). Unfortunately, a shortage of roads to and in rural areas makes such timely transportation of machinery difficult.

(4) Agricultural equipment uptake

	Agricultural machinery Food processing ed						
	Inputs	Input distribution	Ag. Production	Trade and primary processing	Secondary processing	Retail & distribution	
Examples of sub-sectors	Seeds Fertilizers Crop protection Machinery Animal Health/ Nutrition Crop insurance	Farm suppliers Machinery dealers	Staple crops Fruit and vegetables Dairy Livestock	Cold storage Commodity trading Agriculture wholesale Packaging	Biofuels Meat & dairy products Fruit products Cereals, flours, etc	Food whole-sellers Groceries Food retailers QSRs and casual dining Foodservice	
Potential Machinery	Tractors for plowing and levelling land	Tractors Sowers Fertilizers	Plant protection machinery – Sprayers, dusters, soil processors Harvesters Irrigation	Machine for after treatment – e.g. driers, shellers	Processors Packaging	N/A	
Typical size of players	Small holder farmers	Small holder farmers	Small holder farmers	Small and Medium sized factories	Medium and large sized factories		
In SSA, human power is usually used to cultivate 1–2 ha farms, draft animal power (DAP) hirers cultivate 2 ha, households owning DAP cultivate 3–4 ha, tractor hirers cultivate about 8 ha and households owning tractors cultivate more than 20 ha. Irrigation is considered one of the most important productive assets, leading to significant increases in yields. Access to water and irrigation is a major determinant of land productivity – irrigated land is twice as productive as rain-fed land							
Source: MDPI report on I	Mechanization in Sub-Saharan Africa						

Figure 121: Machinery in the Agri-Value Chain

Tanzania's smallholder farming systems have been largely dominated by hand hoes (~62 percent); only 14 percent use tractors. For instance, Tanzania had only 8,466 tractors in use in 2010, although it has 11.5 million hectares of arable land¹¹⁹. However, the government and private sector started to import more farm machinery in 2005, a trend which has continued. There was a sharp increase in four-wheel tractors (4WTs) from 2005 to 2011, threshers from 2008 to 2011, and disc ploughs (tractors) from 2005 to 2012. Seeders or planters have also risen. For instance, the government and private sector imported 10,200 4WTs and 6,000 power tillers in 2010. Tanzania also estimated in 2014 that it would need between 30,000 to 40,000 animal-drawn ploughs and 1,500 to 1,800 4WTs annually for it to meet farms' power needs and achieve satisfactory agricultural growth. The government has now disengaged from direct commercial activities in the mechanization sector and opened doors for the private sector to import and distribute 4WTs¹²⁰.

Tanzania also had almost 6,000 two-wheel tractors in 2013(2WTs). The number of 2WTs has continued to increase since 2005; the Tanzanian government purchased 260 power tillers for demonstration in 2006, and estimates show that the private sector supplies about 300 2WTs annually since 2005 (Figure 122).

Tractors, draught-animal power implements, and hand tools are imported mainly from Europe, China, India, South Africa, and Kenya.

David Kahan, John Sariah, and Benesta Titus, "Assessing Market Performance of 2-Wheel Tractors and Their Accessories in Tanzania," CIMMYT (International Maize and Wheat Improvement Center), 2014, http://facasi.act-africa.org/file/20151002 market analysis for small mechanization tanzania.pdf.

Brian Sims and Josef Kienzle, "Making Mechanization Accessible to Smallholder Farmers in Sub-Saharan Africa," Environments 3, no. 2:11, 19 April 2016, https://doi.org/10.3390/environments3020011.

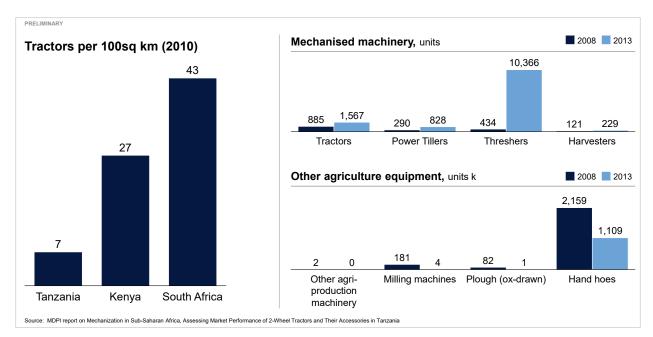


Figure 122: Equipment use in Tanzanian farming

A very small portion of land in Africa is irrigated; Ethiopia has the highest percentage, with ~5 percent of smallholder farms having access to irrigation. Less than 3 percent of Tanzania's cultivated land uses mechanized irrigation¹²¹. Irrigation is considered one of farming's most important productive assets because it leads to significant increases in yields; for instance, irrigated land is twice as productive as rain-fed land.

Micro-evidence from Asia suggests that irrigation produces not only higher yields and income, but also reduces the risk of crop failure and provides higher year-round farm and non-farm employment. It also allows smallholders to adopt more diversified cropping patterns and to switch from low-value subsistence production to high-value, market-oriented production. For example, a small-scale community-managed irrigation project in Tanzania achieved a rate of return of 22 percent and increased farm incomes by 86 percent.

(5) Growth drivers of mechanization

1. Aggregation of demand:

The growth in co-operatives (to >4,000) and farmer associations produces pooled resources (e.g., members often share a bank account) that allow them to afford large capital machinery that can be shared with multiple smallholder farms.

2. Diversification of products:

Large capital machinery requires a minimum utilization per year to be viable. Product diversification of various crops with different seasonal crop cycles allows for agricultural equipment to be used in different crops and regions throughout the year and increases capital utilization.

UNFAO, George Rapsomanikis, The economic lives of smallholder farmers: An analysis based on household data from nine countries, 2015 - http://www.fao.org/3/i5251e/i5251e.pdf

3. Labor moving from rural to urban:

Growth in urbanization has led to an exodus of farm labor from rural to urban areas in search for increased wealth. As a result, the rural population declined from 74 percent in 2008 to 65 percent in 2019. Less available labor increases the need for mechanization and the cost of labor.

4. Support from government:

The government is increasingly focused on supporting agriculture through initiatives that would increase smallholder farmers' access to finance and improve business conditions for equipment importers.

(6) Potential business model

We initially considered five business models including a leasing model however after analyzing the scope and operational cost barriers we landed at two potential models. The two potential business models for agri-machinery in Tanzania include a single OEM model and a multi-equipment distribution model. Given the large addressable market, the multi-equipment model appears to have greater potential (Figure 123).

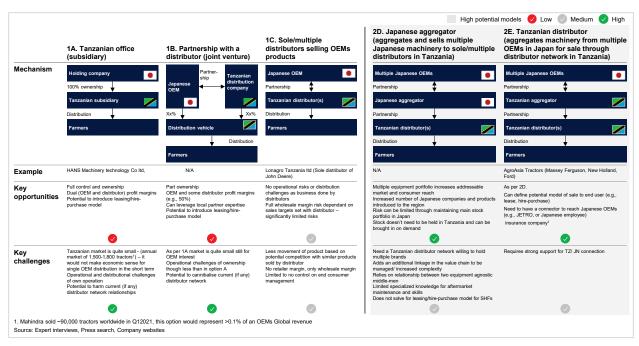


Figure 123: Business models for agri-machinery in Tanzania

3.3.3 Pilot 3: Agricultural inputs

High-quality agricultural inputs – such as hybrid seeds – help resource-constrained Tanzanian farmers to improve their yield and thus increase productivity. Global demand for crop production has increased by 2 percentage points over the last two decades, from 2000 to 2019¹²². Between 2020-2030, this growth is expected to continue at about 1 percent per annum. Growth in demand for crop production is largely

FAOSTAT. Accessed September 1, 2021. http://www.fao.org/faostat/en/#data/QCL

driven by growing populations, improving diets, and the growth of biofuels. By 2050, the global population will reach approximately 9 billion, multiplying the number of mouths to feed across the globe (Figure 124). At the same time, increasing wealth means that people will become more conscious about their health and able to afford better, higher-calorie diets. The use of biofuels such as ethanol and biodiesel to meet future sustainability goals will further increase crop production (Figure 125).

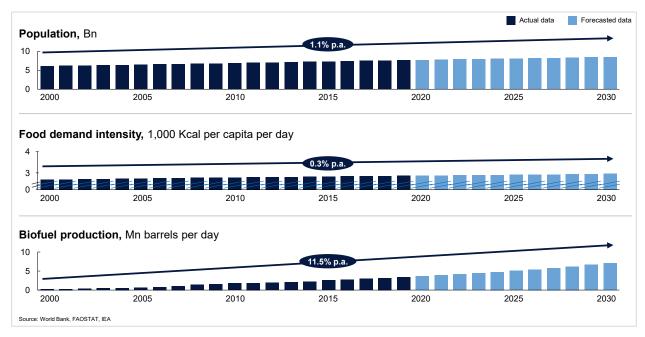


Figure 124: Growing Populations, Improved Diets, and Growth in Biofuels

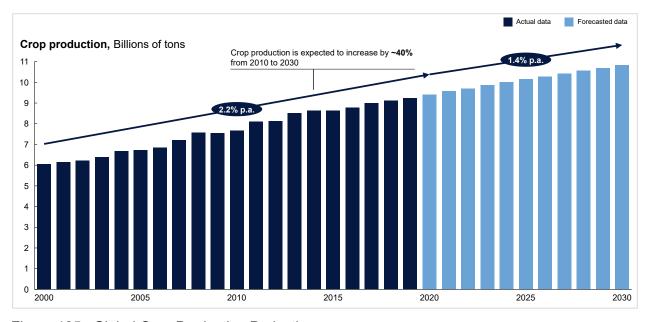


Figure 125: Global Crop Production Projection

Due to the scarcity of resources on the supply side, the Food and Agriculture Organization of the United Nations (FAO) predicts that yield improvements will spur about 80 percent of growth in crop production¹²³. Key supply-side constraints include the following:

- Water a 40 percent deficit is expected by 2030 due to rising demand and limited supply.
- Land over 20 percent of arable land is already degraded, requiring an additional 175-220 million hectares of crop land to meet 2030 demand.
- Climate change climate change is expected to diminish productivity by 13-16 percent by 2080.
- **Productivity gains** productivity gains have steadily decreased since the 1960s, from an average annual yield increase of 2.2 percent in 1969 to a 1.2 percent increase in 2012.

Across the agricultural value chain, agricultural inputs are an attractive market due to high margins — more than 20 percent above EBITDA (earnings before interest, taxes, depreciation, and amortization) margins (Figure 126) — but require large amounts of capital¹²⁴. Agricultural inputs have the highest capital intensity ratio across the value chain, at 1.7 x. The processing and ingredients market has a similar financial profile, but with slightly lower EBITDA margins of approximately 18 percent. Other opportunities across the value chain appear to have lower profitability — between 3 to 10 percent — but are also less capital-intensive.

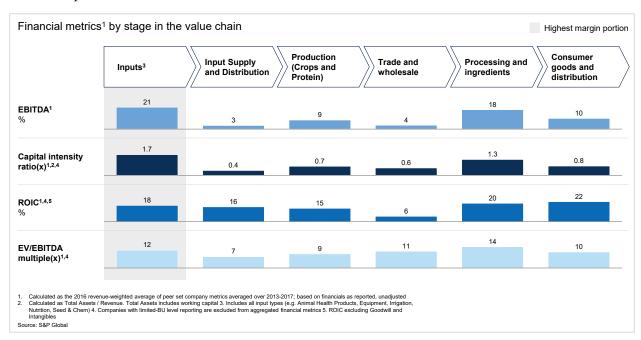


Figure 126: Financial Metrics for Agricultural Value Chain Steps

Specifically, within the seed value chain, seed breeding is most profitable, with margins at approximately 60 percent EBITDA and gross margins of about 90 percent. Seed breeding is thus three times as profitable as other stages in the value chain (Figure 127). This advantage is partially fueled by

FAO World Food and Agriculture to 2050; FAO Expert Meeting on How to Feed the World in 2050

S&P Global Company Data. Calculated as the 2016 revenue-weighted average of peer set company metrics averaged over 2013-2017.

intense competition and consolidation among top players, driven by high economies of scale in R&D as well as the capital intensity of seed breeding.

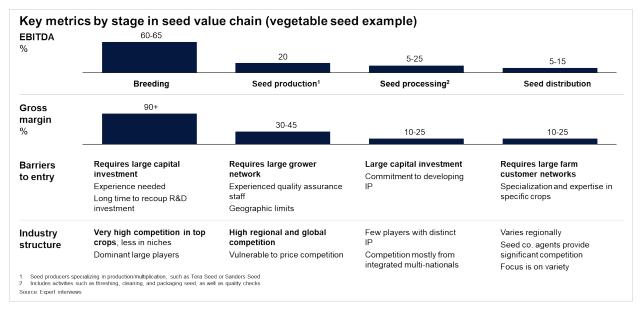


Figure 127: ... specifically in seeds, breeding is one of the most profitable segments

(1) Global agricultural seed landscape

Crop types

Across all inputs, commercial seeds have shown particularly high growth, at more than 5 percent CAGR (compound annual growth rate) between 2010-2018¹²⁵ (Figure 128). The commercial seeds market is worth about USD\$ 50Bn, or 20 percent of the entire inputs market. Within seeds, maize, soybean, and rice are the largest markets, but their size and growth significantly vary by region. In the production of crops of related inputs, fruits and vegetables tend to have a higher profit margin of 40 to 90 percent due to their unique and limited markets and growing needs; by comparison, row crops such as rice and maize have a profit margin of less than 20 percent.

Kleffmann AgriGlobe Database. Accessed August 2021

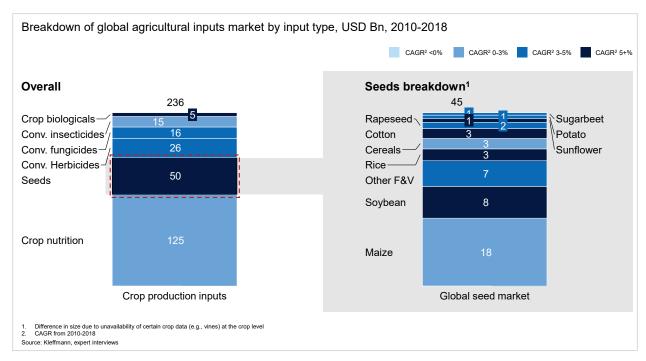


Figure 128: Global Agricultural Inputs Market by Input Type

Globally, the demand for vegetable seeds is likely to accelerate. The global fruits and vegetables ("F&V") seed market was worth USD\$ 6.2Bn as of 2019¹²⁶ and is estimated to grow to USD\$ 8.4Bn by 2024, thanks to growth in all vegetable seed types. Key trends include the following.

- Solanaceae (e.g., tomatoes and chilis) has the highest portion of the market (approximately 50 percent of all vegetable seed sales) and is expected to see strong continued growth of 7.2 percent per annum between 2015-2019. Most of this production focuses on fresh consumption, which contributes to its resilience.
- Cucurbits (e.g., cucumbers) are a large, fast-growing segment that represents approximately USD\$ 1Bn and is estimated to grow by about 5 percent per annum.
- **Brassica** (e.g., broccoli) is likely to accelerate to 6 percent CAGR by 2024, constituting the second-highest growth in this market.

Seed types

Three main seed types are available in the current market: open-pollinated, hybrid (also known as F1 seeds), and GMO (genetically modified organisms). Key characteristics of each seed type are described below.

- **Open-pollinated**: Pollination to breed this seed variety occurs in an open, unrestricted process; as a result, seeds are more genetically diverse. While this type is easier to bring into the market and can be purchased at low cost, its yield and disease resistance tend to be lower.
- **Hybrid** (F1): Pollination for breeding this type occurs in a controlled process in which two deliberately chosen plants are crossed through hand-pollination. Seeds in the F1 generation are

Mordor Intelligence report "Vegetable seed market – growth, trends, and forecasts (2019-2024)"

genetically uniform and stable, but remaining seeds cannot be saved until the following year because the F2 generation will have different genetics. Hence, farmers must purchase new hybrid seeds every year. Self-pollinating crops (e.g., peas and beans) cannot be hybridized.

• **GMO:** Breeding typically occurs in a lab setting, where genetic engineers modify the genetic material (DNA) in a way that does not occur naturally or through recombination. Induvial genes are selected and transferred from one organism to another to create a GMO.

Going forward, the seed market is forecasted to grow to USD\$ 75Bn by 2024, thanks to growth in all seed types. Hybrid seeds are likely to comprise the largest share of the market, with 50 to 55 percent, and to grow at a CAGR of 7 percent from 2019 to 2024 (Figures 129, 130). Hybrid seeds are used for a wide variety of F&V crops and have been growing in popularity for three main reasons: 1) GMO seeds have not significantly penetrated the F&V market due to high upfront costs and high regulatory hurdles, 2) hybrid seeds perform better than open-pollinated varieties, and 3) smallholder farmers are increasingly able to finance the upfront purchase of hybrid seeds.

Open-pollinated and GMO seeds are expected to grow more slowly, at 5 percent annum between 2019-2024. Open-pollinated seeds are expected to decline in growth as smallholder farmers become more willing and able to afford specialty hybrid seeds. GMO seeds, mainly concentrated in row crops such as maize, will likely face regulatory challenges that limit their adoption and consumption.

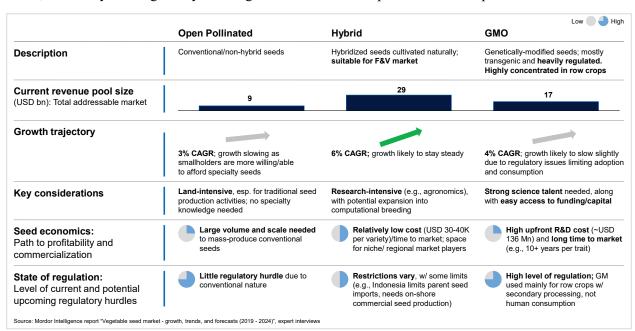


Figure 129: Types of Seeds

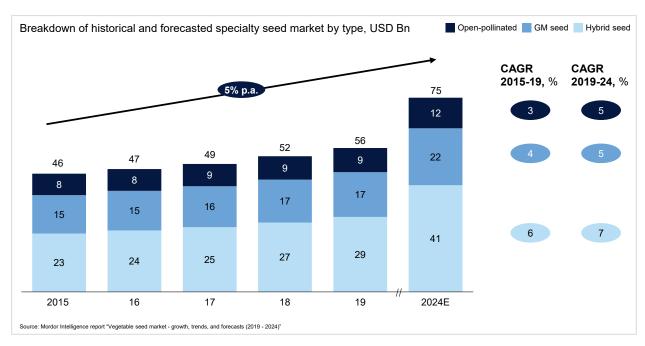


Figure 130: Specialty Seed Market by Type

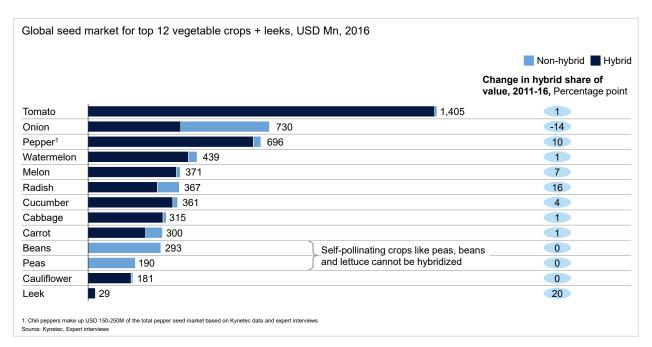


Figure 131: Global Seed Market for Top 12 Vegetable Crops

Competition

Overall, the seed market is highly consolidated. Large global players such as Bayer and Corteva sell approximately 40 percent of all seeds in the market (Figure 132). Since upfront R&D costs are high, only large-scale sales can recoup these costs, prompting consolidation in the market (for example, the formation of Syngenta through the merger of Novartis and Zeneca). Notably, however, these large players mainly focus on row crops – including rice and maize – leaving space for local and regional boutique players to supply niche F&V seeds.

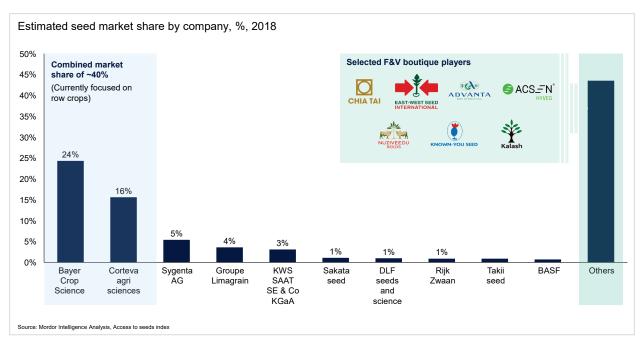


Figure 132: Estimated Seed Market Share

Geographical trends

Among global regions, North America and Asia together account for more than 50 percent of global demand for seeds, while the Middle East and Africa account for only 7 percent¹²⁷ (Figure 133). But Africa is a growing market; its demand for maize, soybeans, and other F&V categories is rising by more than 5 percent per annum. This growth can be attributed to expanding populations and a growing export industry. Farmers who grow commercial crops are more likely to adopt hybrid seeds to protect their crops from diseases and to maximize their yields. If yield in Africa improves, current production could double. The use of hybrid seed could then lead to a six-fold increase in the hybridization rate, based on maize hectarage¹²⁸.

¹²⁷ Kleffmann AgriGlobe Database. Accessed August 2021

McKinsey & Company. https://www.mckinsey.com/industries/agriculture/our-insights/winning-in-africas-agricultural-market

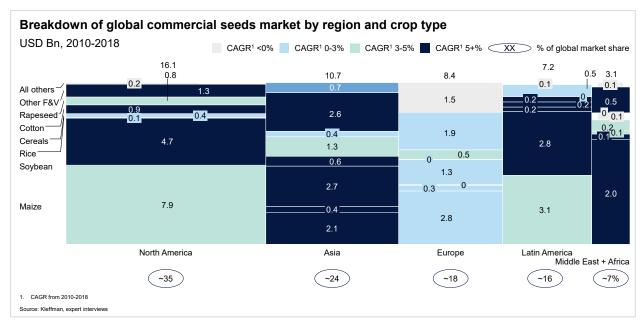


Figure 133: Global Commercial Seeds Market by Region and Crop Type

(2) Tanzania landscape

One of the major impediments to agricultural growth in Tanzania is the low productivity of land and labor. Maize yields are approximately 20 percent lower than peer countries' averages, and only limited improvements have been made over the last decade¹²⁹. Key factors underlying this poor performance include low public expenditures on R&D, lack of agronomic education, and limited access to high-quality inputs. Providing and making high-quality inputs accessible to smallholder farmers could significantly improve the productivity of the agricultural sector.

Tanzania is an attractive market for seed producers and distributors. Its advantages include a favorable climate for agricultural production, a strategic location with access to central and East Africa, a growing market due to increasing export demand, supportive government regulations, and the availability of labor at low cost.

Favorable climate

Located only 12 degrees south of the equator, Tanzania has tropical as well as temperate climate zones, which allow for a wide variety of agricultural crops. Tanzania has four main climate zones ¹³⁰ (Figure 134):

1. The coast has a hot, humid climate suited for off-season production of tropical fruits, such as mangoes and pineapples. Its proximity to the airport and Dar Es Salaam is a plus; however, improvements in infrastructure at the port in Dar Es Salaam are needed to facilitate expanding international trade

FAOSTAT. Maize Yield. Accessed September 1, 2021. http://www.fao.org/faostat/en/#data/QCL

Horticulture Study. Kingdom of Netherlands 2017.

 $[\]underline{https://www.rvo.nl/sites/default/files/2017/05/Tuinbouwrapport_tanzania_kenia_2017.pdf}$

- **2. The central plateau** has a hot, dry climate. It is an emerging production area, with onions and cabbage as its main products.
- 3. The highlands have a cooler, dry climate suited for high-value vegetables. French beans, baby carrots, and bay corns are grown in the northern highlands, as the Kilimanjaro airport's infrastructure and strategic location help to facilitate exports. The Southern Highlands are still a developing zone for exports, with additional investment needed in transport and logistics (such as cold-chain capabilities).
- **4.** The lake region has a cooler, humid climate. Its products are targeted at the local market, with emerging export production for regional countries.

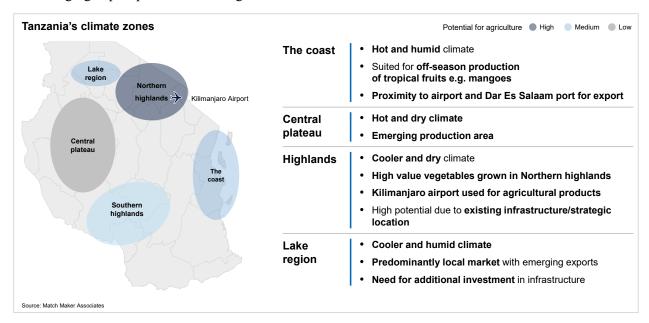


Figure 134: Tanzania's Climate Zones

Of the four zones, the northern highlands – particularly the Arusha and Kilimanjaro areas – are the most suitable for floricultural (flowers, cutting, seeds) products and temperate vegetables. Its favorable climate and longer daylight hours allow seed players to engage in seed production throughout the year. International players – including Rijk Zwaan, East West Seeds, and Enza Seeds – have established seed production facilities in Arusha. As of 2015, Tanzania has become a member of the Union for the Protection of New Varieties of Plants (UPOV)¹³¹, which has helped to stimulate investment and development in the sector.

Lastly, Tanzania has two main rainfall regimes. The central plateau and the highlands experience their rainy season between October and April, while the lake region and the coast have two rainy seasons: one between October and December, and the other between March and May. In addition, Tanzania has one of the largest areas of arable land in the region (40 million hectare, compared to 27 million in Kenya¹³²). However, only about 40 percent of that land is currently utilized. Large areas of uncultivated land are

UPOV https://www.upov.int/edocs/pubdocs/en/upov_pub_437.pdf

¹³² FAOSTAT. Accessed September 1, 2021

favorable for seed production, which would require producers to maintain isolation distances between the different varieties.

Strategic location

Tanzania's strategic location ensures good access to markets within the continent as well as to international regions, including Europe, Asia, and the Middle East. Given its reach to six land-locked countries in the East Africa region, Tanzania could become a hub for businesses seeking to expand their footprint across Africa.

Tanzania has four international airports; Julius Nyerere Airport (JNIA), Zanzibar International Airport, Kilimanjaro International Airport (KIA), and Mwanza Airport. As of September 2021, from Kilimanjero International Airport that is the main terminal for agricultural products and inputs, international airlines operate direct flights to Kenya, Ethiopia, Turkey, Qatar, Rwanda, Uganda, Switzerland, Netherlands, etc. (in order of flight frequency)¹³³(Figure 135). The main cargo terminals are JNIA and KIA; however, capacity is said to be limited and costs high, as the cargo quantity is currently too small. For this reason, many Dutch and other international companies operating in the northern zone of Tanzania use the Jomo Kenyatta International Airport in Kenya to export their products to other regions. In addition, many regional seed companies have headquarters in Kenya; these companies reduce their logistics costs by consolidating volume before exporting.

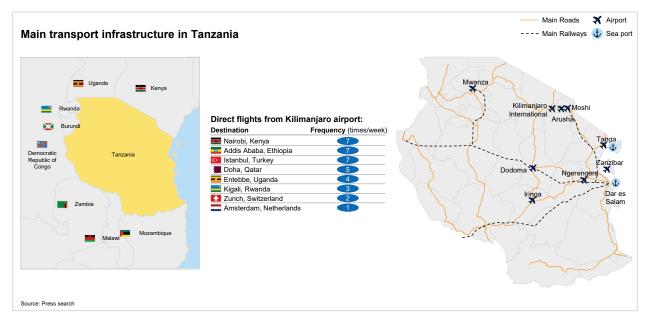


Figure 135: Tanzania's Main Transport Infrastructure

Tanzania is a member of the East African Community (EAC) and the South African Development Community (SADC) regional trade organizations, which allows the country to benefit from various trade agreements. The EU and EAC have partnered to establish trade terms that facilitate the export of horticultural products to the European market. MARKUP (EU-EAC Market Access Upgrade Programme)

¹³³ FlightConnections. 2021. https://www.flightconnections.com/flights-from-kilimanjaro-jro

helps MSMEs to improve the quality of their final products by ensuring compliance with international regulations and standards¹³⁴.

Market opportunities

At just one fourth the size of the Kenyan market, Tanzania's commercial seed market is still at a nascent stage ¹³⁵ (Figure 136). The F&V seed market in Tanzania is currently worth USD\$ ~25Mn, with demand expected to increase by 10 to 20 percent per annum, reaching approximately USD\$ 65Mn by 2024. Key contributors to recent growth have included infrastructure improvements and better education among farmers. The development of road infrastructure in rural regions has significantly improved access for smallholder farmers, while the government, donors, and NGOs have raised awareness of improved seeds through education.

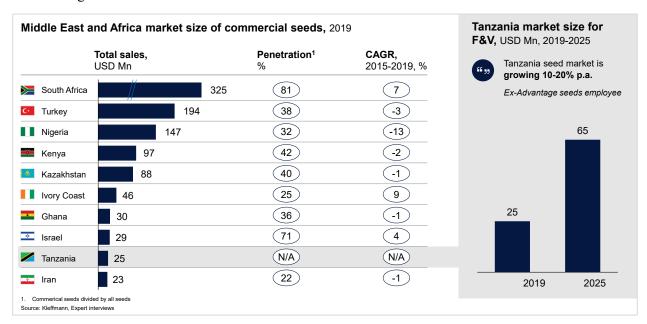


Figure 136: Middle East and Africa Seed Market

Going forward, the growing demand for exports is expected to further expand the market for improved seeds in Tanzania. Tanzania's horticulture export subsector has grown from USD\$ 64Mn in 2006 to 779Mn in 2019¹³⁶ (Figure 137). Horticulture crops are mainly exported to Europe, the Middle East, and the regional African countries. Recently, farmers have started to form groups to become contract farmers or out-growers for large-scale exporters. MUVIKHO, an umbrella organization for groups of vegetable farmers who focus on exports, now has 15 registered groups near Arusha¹³⁷. In 2016, the prices of peas and French beans increased by 20 percentage points due to high competition among off-takers of MUVIKHO products.

EAC MARKUP. Accessed September 1 2021. https://www.eacmarkup.org/

¹³⁵ Kleffmann AgriGlobe Database. Accessed August 2021

¹³⁶ Kingdom of Netherlands. 2017. https://www.rvo.nl/sites/default/files/2017/05/Tuinbouwrapport tanzania kenia 2017.pdf

Mordor Intelligence. 2021. https://www.mordorintelligence.com/industry-reports/fruits-and-vegetables-industry-in-tanzania-industry

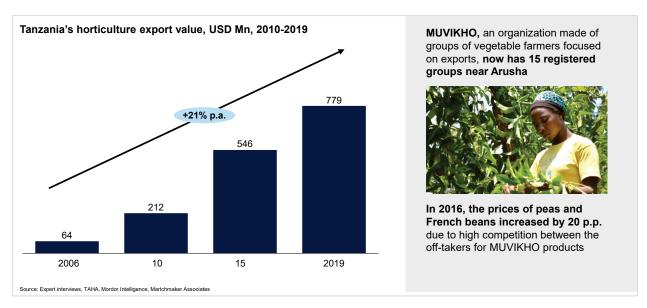


Figure 137: Tanzania's Horticulture Export

Key international players have entered Tanzania across the seed value chain. Approximately 35 companies are now actively participating in the F&V market in Tanzania, where international companies account for 60 to 65 percent of market share ¹³⁸ (Figure 138). While ten companies have seed production sites in Tanzania, only four companies have integrated operations that span the value chain, including breeding (Figure 139). Large regional players have a large market share due to their expansive distribution channels. Multinational players mainly focus on the hybrid market. Given this market's low penetration, one of the most effective ways to win share would be to create demand rather than beating out competitors.

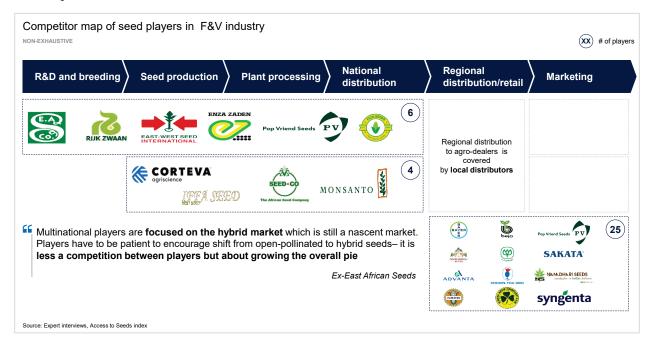


Figure 138: Competitor Map of F&V Seed Industry

¹³⁸ Access to Seeds Index. Accessed September 1 2021



Figure 139: Major Players in F&V Seeds Market in Tanzania

Government support

Since privatization occurred in 1990s, the Tanzanian government has curtailed its control of the seed sector to encourage more private seed companies to operate. In 2013, the Tanzanian government established the Tanzanian Official Seed Certification Institute (TOSCI) for registration and promotion of quality seeds¹³⁹. In addition, Tanzania has become a member of the International Seed Testing Association and the Organization for Economic Co-operation and Development (OECD)'s Seed Scheme for facilitating the international seed trade. Lastly, in 2008, the government launched the National Agricultural Input Voucher Scheme (NAIVS), in which the government subsidized the provision of seeds to over 2.5 million farmers. The public sector provides 80 percent of extension services; NGOs and donors are also involved.

Labor opportunities

As mentioned previously in this report, agriculture is the largest contributor to Tanzania's economy. The country has an estimated 4 million smallholder and commercial farms. As of 2019, 65 percent of the workforce is employed by the agricultural sector, implying a strong supply of affordable labor for Japanese investors who are considering entry¹⁴⁰.

(3) Potential business model

A potential go-to-market strategy was developed by analyzing three areas: crop types, the value chain, and supporting enablers.

National Bureau of Statistics 2019. https://www.nbs.go.tz/nbs/takwimu/na/Highlights_on_the_Q4_GDP,_2019.pdf

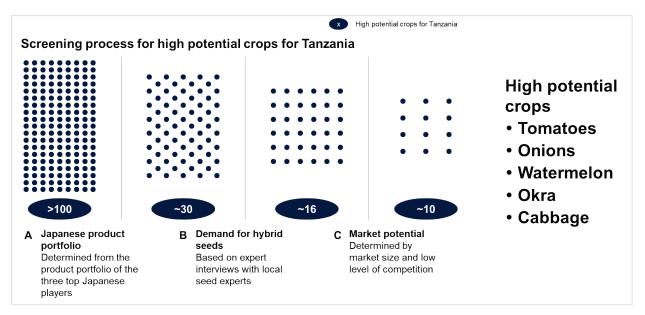


Figure 140: Screening Process for Potential F&V Seeds in Tanzania

Crop types

To identify high-potential crops, a three-step screening process was conducted based on the product portfolio of key Japanese players, the potential for hybrid seed uptake, and market size (Figure 140).

The Japanese seed industry is highly consolidated, with three players accounting for approximately 30 percent of market share¹⁴¹ (Figure 141). F&V and flowers are top products, with only a limited offering of row crops such as maize and rice. Japanese hybrid F&V seeds have seen success overseas when pitted against other international players' seeds, especially since many Japanese seeds can withstand high rainfall.

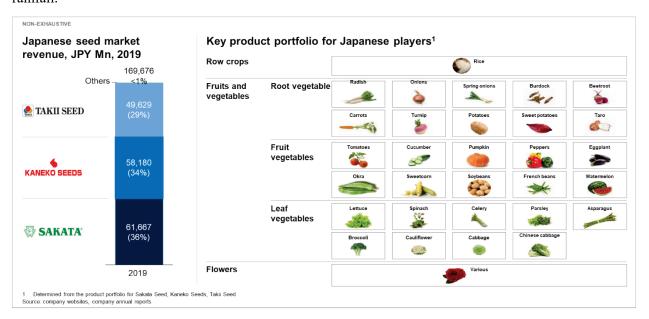


Figure 141: Japanese F&V Seed Players and Portfolio

¹⁴¹ Company websites. Accessed September 1, 2021.

According to experts, local farmers in Tanzania have little incentive to adopt hybrid seeds, largely because the ready availability of arable land lessens any pressure to maximize yield. However, this trend is changing as export demand rises. Export crops are likely to drive more demand for improved seeds, as off-takers have stricter quality requirements. Conversely, row crops and vegetables for local consumption have seen only limited uptake of improved seeds due to low demand for exports. F&V that can be grown in the off-peak seasons between January-April for European markets – such as tomatoes, carrots, and French beans – have high potential for export¹⁴² (Figure 142).

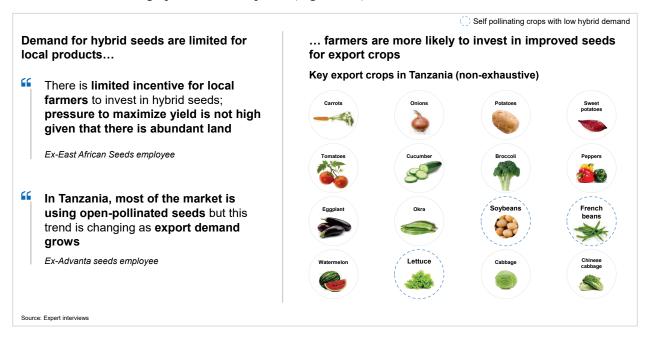


Figure 142: Demand for Hybrid Seeds

Of the selected export crops, tomatoes and Chinese cabbage currently have the largest seed market, with hybridization levels at less than 5 percent. Competition for tomatoes, Chinese cabbage, watermelons, cabbage, and cucumbers is high due to the involvement of key international and regional players. However, the hybrid seed market for F&V remains unsaturated, indicating room for potential new entrants.

¹⁴²

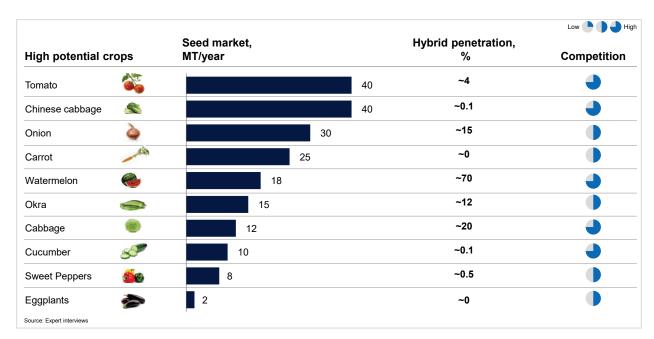


Figure 143: High Potential Crops

Value chain

Next, an analysis of the value chain was conducted to identify options for viable business models. Three types of potential business models were identified (Figures 144, 145).

- 1. Set up national/regional distribution with local partners. This model would allow a Japanese company to conduct R&D and produce seeds outside Tanzania, and then to export its final products to Tanzania. The company would not have any physical assets in the country but rather could work with local partners for national and regional distribution. Entry is possible at low cost; however, the Japanese company would have limited control over distribution and would need to carefully select its partner(s).
- 2. Establish national distribution through a local office. In this model, a Japanese company would set up its own facility in Tanzania to handle national distribution and possibly business-to-business sales to commercial farms. The company would have to invest in warehouses and set up logistics to transport products to regional distributors. For regional distribution, the Japanese company would likely work with a local partner. With a physical presence in Tanzania, the Japanese company could have more control over its operations.
- **3. Integrate operations across the value chain.** In this model, a Japanese company would establish R&D, breeding, production, and distribution in Tanzania. While this model is the most capital-intensive, requiring high upfront costs, the Japanese company could potentially reduce the intermediary margin and final retail price for farmers.

In the third, full-integration model, in which the Japanese company expands its business across the value chain, the company could increase revenue through improved distribution and lower retail prices. More affordable products could then help expand the demand for improved seeds. In addition, if the

company has some ownership of distribution, it could work to boost uptake in the market rather than relying solely on the efforts of its distributor partner.

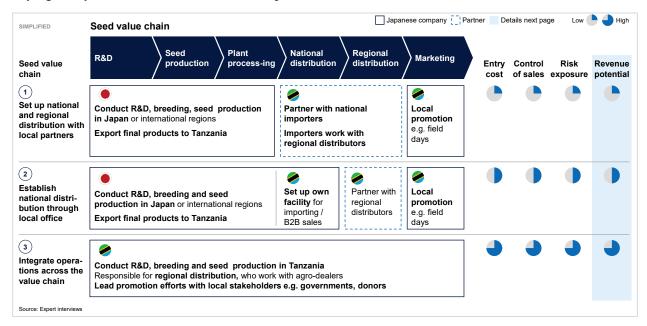


Figure 144: Business Models for Japanese Seed Companies



Figure 145: Cost Build-up for Seed Breeder

Potential next steps for each business model are described below (Figure 146).

LUSTRATIVE	Short-term (<1 year)	Mid-term (1-3 years)	Long-term (3-5 years)	Profitability
Set up na and regio distributi with local partners	understand farmer practices	Develop and conduct testing of new variety Registration with TOSCI¹ Importing of seeds to the local market through national importer	Strengthen marketing efforts to improve brand awareness Conduct open-days Offer giveaways	Achievable at low cost Limited control over sales and distribution
2 Establish national distributi through I office	Dofing clear DOD between	Conduct field testing with farmers and support on seed production Establish support service for commercial farmers	Develop or adjust variety based on customer feedback	Able to reduce distribution margin Need to invest in own importing facility
3 Integrate operation across the value character of the control of	production site	Develop and conduct testing of new variety Registration with TOSCI¹ Seed production and processing in Tanzania	Establish nationwide distribution network through its own fleet or with local distributors	Most control in creating own market Very high overhead costs

Figure 146: Potential Roadmap for Implementation

Enablers

Last, a pain-point analysis was conducted to identify potential obstacles to the uptake of improved seeds in Tanzania. These obstacles fell into three categories:

- 1. Education. Many farmers are unfamiliar with the purpose and impact of fertilizers and hybrid seeds. They also lack sufficient knowledge about soil, as soil tests are slow and expensive. Objective information about best practices in agronomic service is not available, and farmers tend to distrust brand-influenced experts, preferring to listen to other farmers instead.
- **2. Finance.** Due to the high risk of the agriculture industry, farmers are often unable to access loans that would allow them to purchase improved seeds.
- 3. Market access. Product availability can be unstable; farmers often have difficulty finding products that are specific to their business in local agri-dealer shops. Moreover, farmers face logistical issues; they frequently lack transport to shops, and not all shops offer delivery of their products. Limited market access also affects farmers; farmers may struggle to determine the value of improved seeds when off-take is not assured.

Based on these challenges, key success factors were identified from supply- and demand-side perspectives. (Figure 147)

- 1. Understanding local processes is the key to registering and selling new products in a local market.
- **2.** Locally adapted variations market-focused R&D is necessary to breed and manufacture the right seeds for the Tanzanian market.
- **3.** Market access identifying a local partner with a large footprint across the region is critical to expanding reach to rural smallholder farmers.

- **4. Financing** financing schemes that improve access to inputs help to increase smallholder farmers' uptake.
- **5. Education** will boost awareness and encourage the correct use of improved seeds.

	Description	Expert comments
Familiarity with local processes	Understanding of local processes is the key to register and sell new product in the local market	For new varieties, the government requires careful testing before registration of the product
Locally adapted variations	Market-focused R&D is necessary to breed and manufacture Tanzania ideal seeds and win in the market	Product development is the key to success in EA seeds market. Product needs to be tailored to the region
A Market access	Identifying local partner with large footprint across the region is critical to expand reach to rural regions	Reaching smallholder farmers in Tanzania is a challenge without working with local distributors
B) Financing	Financing schemes focused on improving access to inputs are beneficial to increase uptake by smallholder farmers	Governments and donors have established input financing schemes to make products more affordable to smallholder farmers
© Education	Education is important to increase awareness and correct usage of improved seeds	Seed companies need to correctly identify influencers in the community to efficiently achieve results
	Locally adapted variations A Market access Financing	the key to register and sell new product in the local market Locally adapted variations Market-focused R&D is necessary to breed and manufacture Tanzania ideal seeds and win in the market A Market access Identifying local partner with large footprint across the region is critical to expand reach to rural regions Financing Financing schemes focused on improving access to inputs are beneficial to increase uptake by smallholder farmers Education Education is important to increase awareness and correct usage of

Figure 147: Barriers to address include market access, financing and education

On the demand side, Japanese companies could take on the three success factors in the following ways.

(4) Market access

The current system of seed distribution relies on a network of regional distributors and agri-dealers who have the furthest reach to farmers (Figure 148).



Figure 148: Current Seed Ecosystem

There are five types of regional distributors that Japanese companies could consider:

- 1. **Institutional distributors** are large distributors that distribute seeds through an extensive network of agri-dealers across the country (e.g., ETG).
- 2. **Regional distributors** focus on one or a few regions but have a large regional network of agri-dealers (e.g., Arusha Seeds).
- **3. Niche distributors** focus on very few seeds but have a far reach to the farmers who focus on those seeds (e.g., Grand Tobacco).
- **4.** NGOs work with multiple seed and other input companies and provide inputs, financing, and training to farmers (e.g., One Acre Fund).
- **5. Government organizations** buy or produce seed in bulk and distribute it to smallholder farmers through subsidy schemes (e.g., ASA).

When selecting a local partner, the distributor's reputation, product portfolio, brand promotion efforts, and contract-renewable periods are key considerations. Contracts for exclusive distribution typically expire after two years, which opens opportunities for new entrants to approach distributors for potential partnership.

(5) Financing

Establishing financing schemes that would make products more accessible to farmers is essential. While the Japanese seed company may not provide the financing directly, it would need to find partners that could help finance potential consumers of their products. There are four major types of input financing to consider:

- 1. **Donor financing** donors purchase inputs on farmers' behalf or provide credit for input purchasing.
- 2. **Direct bank financing** banks provide loans to individuals or groups. The financing typically matches the growing cycle. Land or final products serve as collateral.
- **3.** Alternative financing SACCOs or micro-finance institutions provide loans using guarantees or savings as collateral.
- **4.** Value-chain financing an off-taker provides a guarantee for the bank to finance smallholder farmers. Alternatively, off-takers can provide financing themselves, using produce value for repayment of loan and interest.

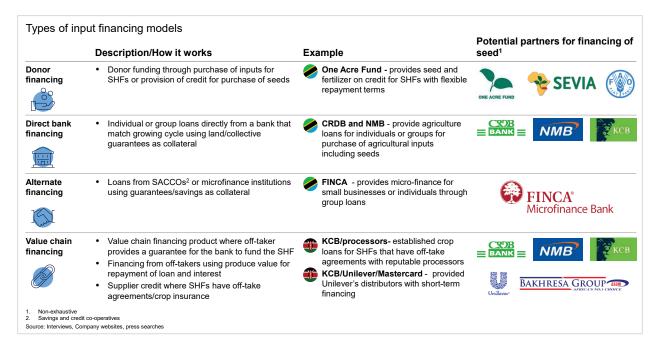


Figure 149: Various financing models have been established to improve farmers access to inputs

(6) Education

To improve the education of farmers, a Japanese company could work with public- and private sector stakeholders. Working with NGOs or government agencies can increase the reach of seed distribution and provide a full spectrum of educational and funding support for smallholder farmers; however, NGOs and government organizations are non-exclusive and price-sensitive. Working with private sector partners, on the other hand, promotes specific seed types and brands while providing agricultural best practices; in these scenarios, business and financial management is often outsourced to local NGOs or education-focused companies.

The type of education provided can vary and may include agricultural best practices, financial management, and/or business management. Examples for each are given below.

- Agricultural best practice: By holding "field days," Seeds of Expertise for the Vegetable Sector in Africa (SEVIA) shows farmers how they can improve their cultivation practices to increase yield and quality¹⁴³.
- **Financial management**: Yara, SeedCo, Syngenta, Bayer, CropScience, and NMB formed Last Mile Alliance to provide coordinated finance, financial education, and distribution network services across various inputs¹⁴⁴.

¹⁴³ SEVIA https://euroseeds.eu/

¹⁴⁴ McKinsey & Company. https://www.mckinsey.com/industries/agriculture/our-insights/winning-in-africas-agricultural-market?cid=other-eml-alt-mip-mck&hlkid=0981f36204ff462ca7f23f02fe2be581&hctky=1758668&hdpid=235f0b4f-dc4a-4226-98ca-e6c36e7703cd. Accessed September 1, 2021.

• **Business management:** One Acre Fund provides training throughout the growing season on modern agricultural techniques, as well as education on price fluctuations in the market¹⁴⁵.

¹⁴⁵ One Acre Fund.https://oneacrefund.org/blog/bringing-take-it-farmer-very-last-mile/#:~:text=One%20Acre%20Fund%20farmer%20trainings,on%20learning%20in%20the%20field.&text=At%20One%20Acre%20Fund%2 C%20we,%2C%20prosperity%2C%20and%20sustainable%20development. Accessed September 2021

Chapter 4 Next steps for improving MSMEs' financial access

Chapter 4 focuses on the next steps that JICA can consider in providing assistance to improve financial access for MSMEs.

This chapter includes Section 4.1, which provides a high-level roadmap for JICA over the next few months, and 4.2, which provides a detailed overview of key lessons learned from this project analysis, as well as implications for JICA in future, related activities.

4.1 Next steps for JICA in improving MSMEs' financial access

Following the detailed desktop research and market analysis undertaken, the study aimed to suggest specific assistance measures that JICA could undertake or promote in two areas: formation of private sector investment projects, and formation of private sector collaboration projects. This section describes the next steps JICA could consider in implementing the suggested measures detailed above.

4.1.1 Private sector investment and finance projects

After identifying three financial-institution candidates for assistance, the study team interviewed professionals at these institutions to collect more detailed information. The interviews sought to determine each financial institution's needs related to ongoing projects and MSME initiatives already in place. In addition, the team sought to identify any operational improvements that could increase project impact. In parallel, the team conducted a series of stakeholder interviews with other financial institutions in the region to find projects that have succeeded in expanding MSMEs' financial access, and to identify success factors and key lessons.

Because some information can be shared only if a non-disclosure agreement (NDA) or similar instrument has been executed, suggestions consist of shared examples from other institutions and recommended approaches for future efforts. The analyses described in this report provided a basis for formulating advice and action plans. This is not detailed advice tailored to a financial institution's specific circumstances but is more general in nature. Nonetheless, it gives indication of the direction to be taken in improvement efforts. As next steps, we therefore suggest the following actions for JICA as it seeks to use its investment loan towards supporting MSMEs in Tanzania.

Next steps for Private sector investment and finance

In order to solidify a partnership with one or more financial institutions in Tanzania, JICA Private Sector Investment and Finance department and JICA's Tanzania office could do the following over the next 12 months:

Conduct follow up meetings: JICA held initial partnership meetings with all three short-listed banks.
They should continue to discuss with candidate banks and as a first step for negotiation, identify any legal requirements to proceed to investment partnership discussions including potential letters of intent (LOI).

- **2. Due diligence**: JICA would need to conduct a more detailed due diligence of the selected financial institution, this could take from one to four months.
- 3. Finalization of partnership agreement: After conducting due diligence, JICA and the selected bank would need to negotiate details of the loan terms. JICA could also begin a longer-term relationship with the bank by providing technical cooperation with the loan. JICA should align on roles and responsibilities for monitoring the loan, including the expectation of MSMEs loan track record.
- 4. Provision of the loan: Once the above steps have been taken, JICA could move forward with an investment loan to the relevant financial institution. JICA would need to agree on the enablers (MSME development hub and/or digital credit risk underwriting capability) to be developed with a portion of the loan and JICA's technical assistance budget. JICA would need to carefully monitor the loan, technical assistance and impact statistics to ensure the loan is providing MSME finance as per the signed agreements. It would be important for the loan terms to be specific to the identified product for on-lending in order to maximize impact for MSME financial inclusion as detailed in the proposals above.

4.1.2 Private sector partnerships

After analyzing the corporate partnership landscape, the project team collected basic information for the formation of SDGs Business Supporting Surveys and other private sector collaboration projects.

The approach for examining private sector assistance measures was based on the bottleneck analysis and the MSME finance needs survey. It included the following steps:

- Creation of a long list of approaches by which private sector companies can contribute to the improvement of financial access for companies in Tanzania, including the challenges addressed, an overview of possible solutions, and determination of the preconditions for successful business.
- Prioritization of business ideas based on the feasibility of their execution and MSME impact, to identify three to four ideas for deeper pilot analysis.
- Analysis of Japanese companies involved in the identified solution space, prioritized by their overseas
 expansion strategy and footprint in Africa.
- Formulation of hypotheses on potential business models for entry into Tanzania and prioritization to determine the most feasible model for success.
- Identification of potential domestic business partners that Japanese companies could work with for pilot implementation.

To provide measurable support for MSMEs through private sector collaboration, the following timeline and activities are suggested for JICA over the next few months:

Next steps for corporate partnership

To ensure that the information-sharing seminar on 'Seed Business Development in Tanzania' leads to a tangible outcome, it is critical that JICA Corporate Partnership and JICA's Tanzania office provide continuous support to Japanese companies that express interest during the seminar. Over the next six months, JICA can proactively keep in touch with these Japanese companies and provide any information they need to develop a pilot business idea. Key activities may include:

1. Follow-up meetings. From the list of participants in the information-sharing seminar, JICA can create a contact list for high-potential companies. This information can be updated frequently to reflect the content of discussions. Ideally, catch-up sessions would be set up to ensure that JICA and the target companies are closely communicating about the next steps required.

4.2 Key lessons and directions for improved assistance measures

Conducting this survey has helped to identify key issues affecting MSMEs and to learn about providing technical support in countries such as Tanzania. This section details some of the findings on lessons learned, as well as possible options for improving assistance measures in the future.

1. General considerations

Co-ordination with other Japanese agencies

Agencies other than JICA (such as the Japan External Trade Organization, or JETRO) are working to attract the Japanese corporate private sector. These agencies are involved in a variety of activities and have rich, relevant knowledge and experience of what has worked before for Japanese companies, as well as contacts for these Japanese companies. Overlapping coordinated activities could provide an opportunity to strengthen the impact of efforts aimed at the private sector in countries like Tanzania.

Efficient co-ordination of JICA's diverse set of departments and knowledge

Analysis of an agricultural insurance pilot revealed that JICA has other departments effectively working in areas of interest for future development support in Tanzania. One example is JICA's current work with Japanese companies to provide technical assistance. Early identification of such efforts, as well as co-ordination of departments and complementary activities, could accelerate potential ideas for providing development support and strengthen their impact on the MSME segment.

2. Private sector investment and finance

- Enhancement of investment support to meet development needs

While JICA's mandate for ODA is clear, identifying specific support needs and building in the flexibility to meet support requirements could further enhance development assistance for specific countries. For example, in Tanzania, the needed ODA support for private financial institutions was more narrowly defined as risk mitigation in the form of guarantees, which the

current PSIF mandate does not allow. This discovery helped to define potential partnership projects more precisely but also narrowed potential partners.

Development of more comprehensive assistance support

The survey results uncovered a pressing need for specific technical assistance to both governmental agencies and the private sector. A comprehensive approach for targeted assistance is required. The Agency could review its specific technical assistance approaches to enable more structured, relevant support when providing ODA. For example, JICA could allocate designated funds to targeted development capacity-building within institutions and create stringent development targets as part of the provision of overseas loans.

3. Corporate partnership

Consideration of direct domestic support

Though JICA's primary objective is to enhance the presence and investment of Japanese companies in Tanzania, JICA could also support domestic, private sector companies that would serve as partners or bridges to Japan through their development assistance and technical support. As an example, JICA could lend its support to public programs that directly assist the domestic private sector by providing safety nets that help to accelerate growth.

Strengthening partnerships with the domestic private sector

Given the importance of the private sector in the economic growth and development of Tanzania, developing strong ties with the local private sector – similar to its ties to the government – will enhance JICA's overall development impact in the country. This effort would involve identifying the leading private sector organizations that drive trade and industry, including manufacturing, to provide direct technical assistance and other development support.

Chapter 5 Conclusion

This final report on the 'Data Collection Survey on Enhancement of Financial Access of Private Sector in the United Republic of Tanzania' for JCIA includes overviews of the surveys and analyses conducted, the results of those surveys, the bottlenecks impeding financial access for MSMEs, and proposed approaches to overcoming or mitigating those bottlenecks. Our recommendations are embedded in the next steps section earlier in the document, as it relates to the PSIF department and Corporate Partnership, but we have provided a summary below as part of the conclusion.

For the PSIF department, we have outlined the process to progress the discussions with the financial institutions, which will involve further due diligence and negotiations to get to a workable program for the two parties. We would recommend that JICA continues to conduct follow-up discussions with the short listed financial institutions. Additionally, we recommend that JICA implements the program with some technical assistance support, in the form of the MSME hub or the risk assessment tool, when formulating the new project.

For the Corporate Partnership, while entry into the Tanzania market by a Japanese player might not be in the short term, we recommend that JICA continues engagement with the interested Japanese seed companies following the workshop in September. To keep the interest levels high, JICA may also plan a trip to Tanzania, COVID-19 conditions permitting, for the potential seed companies to meet industry players and build up their confidence regarding a Tanzania market entry.

Chapter 6 Appendix: MSME Finance Needs Survey

In collaboration with a sub-contractor, GeoPoll, 3-week CAPI (Computer-Assisted Personal Interviews) survey was conducted for 614 MSMEs across three regions in Tanzania - Dar Es Salaam, Mwanza, and Arusha. Results were analyzed by the McKinsey team, and leveraged as inputs for developing measures for overseas investment and business ideas for corporate partnership workstream.

Table 3: MSME Finance Needs Survey questionnaire

McKin	sey SME CAPI Survey
SCRE	ENING QUESTIONS
SQ1	How are you involved in your company's financial decision making process?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)You are the only decision maker 2)You contribute equally to the decision 3)You are involved in decision-making - but you are not the main decision maker 4)You are not involved in decision-making process 5)DON'T KNOW 6)REFUSED
SQ2	What is your current occupation within your company?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)Owner of business 2)General manager of a business owned by another person/company 3)Financial manager of the company [including accountant] 4)Employee within sales 5)Employee within procurement 6)Employee within the financial/accounting team 7)None of these 8)DON'T KNOW 9)REFUSED
SQ3	How many full-time-equivalent employees does your company have? [ENUMERATOR: SELECT ONE OPTION ONLY]
	1)1 2)2-4 3)5-9 4)10-49 5)50-99 6)100-300 7)301+ 8)DON'T KNOW 9)REFUSED

McKinsey SME CAPI Survey What is the annual sales turnover/revenue of your company? In Tsh. SO4 [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Less than 20 million 2)20 million - 100 million 3)More than 100 million - 200 million 4) More than 200 million - 6 billion 5) More than 6 billion - 30 billion 6)More than 30 billion 7)DON'T KNOW 8)REFUSED **SECTION A: CURRENT STATUS** Q1 In which sector does your business operate in? [ENUMERATOR: SELECT ONE OPTION ONLY] 1) Agriculture / forestry / and fishing 2) Mining and quarrying 3)Manufacturing 4) Electricity / gas / steam / air conditioning supply 5) Water supply / sewerage / and waste management 6) Wholesale / retail trade / repair of motor vehicles 7)Transportation and storage 8)Accommodation and food service activities 9)Information and communication 10)Professional / scientific and technical activities 11) Administrative and support service activities 12) Public administration / defence and social security 13)Other [specify] 14)DON'T KNOW 15)REFUSED O2 How many years has your company been operating? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Less than 6 months 2)Less than 1 year 3)1-4 years 4)5-9 years 5)10-24 years 6)Over 25 years 7)DON'T KNOW 8)REFUSED Q3 How do you handle your company's financial transactions? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Company's bank account

2)Personal bank account 3)Mobile money 4)Cash only 5)DON'T KNOW 6)REFUSED

McKi	nsey SME CAPI Survey
Q4	Which of these is your business' main bank for your financial needs?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)CRDB 2)NMB
	3)NBC
	4)Standard Chartered
	5)Stanbic
	6)Exim
	7)Diamond Trust Bank
	8)Barclays 9)FINCA [MFI]
	10)VisionFund [MFI]
	11)Yetu Microfinance Bank [MFI]
	12)Other [specify]
	13)DON'T KNOW
	14)REFUSED
SECT	ION B: PRODUCTS AND SERVICES
Q5	What financial products and services do you currently use?
	[ENUMERATOR: MULTIPLE RESPONSES POSSIBLE]
	1)Current account
	2)Term deposit
	3)Cheques
	4)Cash pick/up/delivery 5)Domestic/international money transfer
	6)POS terminal
	7)Bank transfer
	8)Mobile/Internet banking
	9)Letters of credit
	10)Factoring
	11)Overdraft 12)Corporate credit card
	13)Short-term secured loan
	14)Short-term unsecured loan
	15)Medium term loan
	16)Asset finance
	17)Foreign exchange products
	18)Import documentary collection
	19)Payroll services 20)Import or export insurance
	21)Advisory
	22)Other [specify]
	23)DON'T KNOW
	24)REFUSED
Q6	For services NOT mentioned, what are your reasons for not using them?

[ENUMERATOR: MULTIPLE RESPONSES POSSIBLE]

McKins	sey SME CAPI Survey
Q7	How do you make payments in your business transactions?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)Company's bank account 2)Personal bank account 3)Mobile money 4)Cash only 5)DON'T KNOW 6)REFUSED
Q8	What is your overall level of satisfaction with your main bank across all products and services you use?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)Extremely satisfied 2)Very satisfied 3)Somewhat satisfied 4)Somewhat unsatisfied 5)Very unsatisfied 6)Extremely unsatisfied 7)DON'T KNOW 8)REFUSED
Q9	Which financial product and service is the MOST important to you? [ENUMERATOR: SELECT ONE OPTION ONLY]
	1)Current account 2)Term deposit 3)Cheques 4)Cash pick/up/delivery 5)Domestic/international money transfer 6)POS terminal 7)Letters of credit 8)Factoring 9)Overdraft 10)Corporate credit card 11)Short-term secured loan 12)Short-term unsecured loan 13)Medium term loan 14)Asset finance 15)Foreign exchange products 16)Import documentary collection 17)Payroll services 18)Import or export insurance 19)Advisory 20)Other [specify] 21)DON'T KNOW 22)REFUSED
Q9	Which financial product and service is the 2ND MOST important to you? [ENUMERATOR: SELECT ONE OPTION ONLY]
	1)No second most important financial product or service 2)DON'T KNOW 3)REFUSED

McKinsey SME CAPI Survey 09 Which financial product and service is the 3RD MOST important to you? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)No third most important financial product or service 2)DON'T KNOW 3)REFUSED **SECTION C: FINANCING** Where do you currently borrow money from? Q10 [ENUMERATOR: MULTIPLE RESPONSES POSSIBLE] 1)Microfinance institutions [MFI] 2)Commercial banks 3)SACCO 4)VICOBAs [Village Community Banks] 5)Local government 6)Family members/friends 7)Money lender 8)Donor/NGO 9)Other [specify] 10)Don't borrow money 11)DON'T KNOW 12)REFUSED Q11 What is the most important to you when you select your source of finances? (Select 3 options) [ENUMERATOR: MULTIPLE RESPONSES POSSIBLE. SELECT A MAXIMUM OF 3 OPTIONS] 1)Speed/convenience 2)Loan size 3)Quality of service 4)Trust/relationship 5)Low interest rate 6)Accessibility [i.e. many branches] 7)Flexible security/collateral 8)Sense of community 9)Other [specify] 10)DON'T KNOW 11)REFUSED O12 Which of the below best describes the purpose of borrowing? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)To buy tools / machines [capital expenditure] 2)To finance working capital 3)To pay rent 4)To pay salaries 5)To refinance existing loans 6)To move locations 7)To expand your business 8)Other [specify] 9)DON'T KNOW

10)REFUSED

McKin	nsey SME CAPI Survey
SECTI	ION D: BOTTLENECKS
Q13	Which of the below best describes your MOST IMPORTANT challenge when running your business?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)Insufficient working capital 2)Insufficient market access 3)Low demand for my products/services 4)High competition from other businesses 5)High cost of inputs 6)Having to maintain low prices 7)Lack of business/management education 8)Other [specify] 9)DON'T KNOW 10)REFUSED
Q13	Which of the below best describes your 2ND MOST IMPORTANT challenge when running your business? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)No second most important challenge 2)DON'T KNOW 3)REFUSED
Q13	Which of the below best describes your 3RD MOST IMPORTANT challenge when running your business? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)No third most important challenge 2)DON'T KNOW 3)REFUSED
Q14	What has been the MOST RELEVANT challenging issue when borrowing from banks and microfinance institutions? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Long processing time 2)High interest rates 3)Lack of collateral 4)Unregistered 5)Lack of required documents 6)Default on previous loans 7)Short loan period 8)Other [specify] 9)No challenge 10)DON'T KNOW 11)REFUSED
Q14	What has been the 2ND MOST RELEVANT challenging issue when borrowing from banks and microfinance institutions? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)No second challenge 2)DON'T KNOW 3)REFUSED

McKins	sey SME CAPI Survey
Q14	What has been the 3RD MOST RELEVANT challenging issue when borrowing from banks and microfinance institutions?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)No third challenge 2)DON'T KNOW 3)REFUSED
Q15	Please describe your most challenging issue when borrowing in few sentences.
	[ENUMERATOR: RECORD THE RESPONSE GIVEN. ENTER 88 FOR DON'T KNOW & 99 FOR REFUSED}
Q16	Would you be interested in borrowing money in the near future?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)YES 2)NO 3)DON'T KNOW 4)REFUSED
Q17	What is the size of the loan you would want to apply for? In TZS
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)Less than 1 million 2)1 million - 2 million 3)More than 2 million - 20 million 4)More than 20 million - 60 million 5)More than 60 million 6)Other [specify] 7)DON'T KNOW 8)REFUSED
Q18	What is the maximum interest rate that is acceptable for this loan?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)0 interest rate 2)Up to 6-7% 3)Up to 11-12% 4)Up to 14 -15% 5)Up to 20% 6)Other [specify] 7)DON'T KNOW 8)REFUSED
Q19	What is the desired payment period for this loan?
	[ENUMERATOR: SELECT ONE OPTION ONLY]
	1)Less than a month 2)1 - 6 months 3)More than 6 months - 1 year 4)More than 1 year -2 years 5)More than 2 years - 3 years 6)More than 3 years -5 years 7)Longer than 5 years 8)DON'T KNOW 8)REFUSED

McKinsey SME CAPI Survey O20 If you apply for a loan right now with current lender, what can you provide as collateral? [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Assets of the business 2)Your personal assets 3)You don't have collateral 4)Other [specify] 5)DON'T KNOW 6)REFUSED **SECTION E: SUPPORT NEEDS** O21 Which of the following would incentivize you to request financial support? Please mention the MOST RELEVANT. [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Access to financial institutions 2)Better information on products available 3)Simpler requirements 4)Lower loan interest rates 5)Lower loan repayment periods 6)Other [specify] 7) Nothing would incentivize you enough 8)DON'T KNOW 9)REFUSED Q21 Which of the below would incentivize you to request financial support? Please mention the 2ND MOST RELEVANT. [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Nothing else 2)DON'T KNOW 3)REFUSED O22 What additional support would make it easier for you to approach institutions for financing? Please mention the MOST RELEVANT. [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Receiving advice on how to interact with financial institutions 2)Preparing loan documentation 3)Training on internal finance and tax management 4)Training on digital capabilities 5)Writing business cases 6)Other [specify] 7) Nothing would make it easier 8)DON'T KNOW 9)REFUSED Q22 What additional support would make it easier for you to approach institutions for financing? Please mention the 2ND MOST RELEVANT. [ENUMERATOR: SELECT ONE OPTION ONLY] 1)Nothing else

2)DON'T KNOW 3)REFUSED