



# FSDT CASE STUDY

## Digital Automation for Economic Empowerment in Rural Areas

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Contributions from Daniel Mhina, Head - Digital Finance, FSDT

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“Digital services help to reduce poverty and enable the economic empowerment of rural areas.”

Kabisu Bujome, FINCA branch manager Morogoro

DFA Digital field automation

FINCA Foundation for International Community Assistance

FSDT Financial Sector Deepening Trust

FSP Financial service provider

KYC Know your customer

## 1 Overview



**The Digital Field Automation (DFA) is an automated account opening and loan application program which has increased access to financial services for individuals and small business owners living in rural areas. The DFA was developed by FINCA Microfinance Bank Tanzania Limited in partnership with the Financial Sector Deepening Trust. As at December 2019, 58,537 accounts had been opened using the digital system.**

Prior to the launch of the DFA, people living in rural communities were handicapped by their location from opening formal bank accounts or applying for farming or small business loans. Bank branches were in towns and cities and they would have to travel there. These journeys cost money and took time away from their income generating activities.

Research conducted by FINCA showed there was growth potential in accessing rural customers. In 2016, FINCA approached FSDT with the concept for developing a digital system that would allow its bank officers to be mobile, travel outside of the branches and reach out to rural customers. The system would link to the national identity system (NIDA), enabling officers to fulfil “know your customer” (KYC) requirements and open accounts speedily with no inconvenience to applicants.

FINCA's concept aligned closely with FSDT's goals to improve the proximity of financial services to where people live and transact and to ensure that the financial service providers can develop products that better serve the rural unbanked, helping them improve their livelihoods.

FSDT provided thought leadership and an interest free loan of \$200,000 and a grant of \$50,000 to FINCA for the development of the DFA over 2016 and 2017.



Finca presented plans for the entire DFA project to the Bank of Tanzania and was granted approval to proceed with the entire programme, including the opening of accounts in the field with KYC checks. In May 2017, the first accounts were opened in Morogoro.

Over the two years of the project, the DFA account opening service was rolled out to FINCA's 23 branches in Tanzania in the first phase. In the second phase, 16 branches launched DFA loans via mobile which with a plan of reaching out to all 23 branches in Tanzania.

For FSDT, the project allowed for the testing of a market-driven model for financial inclusion and its success will inform other financial service providers of how digital services can work.

“Now we can open bank accounts easily for these people in the rural areas and having bank accounts means we can help them get loans more easily. These bank accounts mean they can save for something and improve their lives. It also saves us time and when we have more time, we can serve our clients better.”

Kabisu Bujome, FINCA branch manager Morogoro



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## 2 Context



Around 66% of all Tanzanians and almost 60% of its poorest live in rural areas.<sup>1</sup> For these people, farming and entrepreneurship hold the key to improving their livelihoods and it therefore goes without saying that access to formal bank accounts and business loans would help them.

However, most banks require people to come into branches to open bank accounts and to apply for loans. This is largely due to the need to fulfil KYC requirements but also has a lot to do with outmoded manual processes demanding a lot of paperwork being manually completed onsite.

Digital finance services, like mobile money, have enabled banks to reach rural communities when it comes to small personal financial transactions, but the same cannot be said for formal bank account opening and loan applications.

Those in rural communities who require a formal bank account or want to apply for a loan have typically had to travel lengthy distances into an urban center to visit a bank branch. At times, bank staff would venture into the rural areas to enlist new clients but this was a time-consuming and inefficient system too. DFA has simplified the process and made business banking accessible to rural communities.

<sup>1</sup> FinScope 2017, Insights that drive Innovation.



### 3 FSDT and FINCA partnership

FSDT seeks to enable all Tanzanians to derive value from regular use of financial services which are delivered with dignity and fairness. This includes those in rural areas. FSDT works in partnership with financial institutions to improve the proximity of financial services to where people live and transact.

To ensure that the financial services offered meet the needs of individuals and enterprises FSDT also works with financial service providers (FSPs), providing them with research and assisting them with product development to better serve those who are unbanked. This includes diagnosis of the barriers to agriculture and rural finance transactions and working with FSPs to address the constraints and unlock access, usage, quality, and welfare of financial services.

FSDT pushes for interventions that will catalyze and improve financial inclusion for rural persons and enterprises. Improved user experiences and improved quality of financial services and products are integral to growth of rural finance as they are the key drivers for new demand for access and usage for financial services and improved welfare. The DFA program fulfilled these ambitions.

FINCA Microfinance Bank in Tanzania was the first microfinance institution in the country to be licensed by the Central Bank of Tanzania. FINCA Microfinance Bank is part of the FINCA Impact Finance global network that provides impactful and socially responsible financial services enabling low-income people to invest in their futures. FINCA has 24 branches in 23 regions of Tanzania. In addition to branches it has mobile banking and more than 150 banking agents.

FINCA management realized that the rural communities of Tanzania offered enormous market growth potential but that the bank needed to bridge the access divide between its branches and the rural areas. It approached FSDT in 2016 with the DFA concept and the alliance was forged.

FSDT provided insight from its experience of financial inclusion programs and its latest research. It also gave FINCA an interest free loan of \$200,000 and a \$50,000 grant to help it develop the DFA and roll it out in the pilot phase.

#### FINCA

- 🏠 24 branches
- 🚩 23 regions
- 👤 150 agents



**“We played a thought leadership role and contributed to the design of DFA. We understood the demand side, where there were gaps and challenges, as well as where there were opportunities. We were enthusiastic because we wanted to test a model for business-led microfinance.”**

**Daniel Mhina, FSDT Head of Digital Finance**

### 4 The Concept: What is DFA?



**The technology is paperless and provides instant banking services**

DFA is a ground-breaking digital financial services system accessed on a tablet via a mobile connection which brings banking to the door of the customer.

The software programme and mobility of the device enable bank officers to open new accounts, start loan application processes, credit score clients and disburse loans anywhere and anytime. This removes the need for a potential client to travel to visit a “bricks and mortar” bank branch.

The automated process is powered by a biometric function that is used to set up secure access for clients as they open accounts. The program comprises standardized templates that are completed by the officer using the tablet’s keyboard. The software enables the upload of photographs and signatures. The technology is paperless and provides instant banking services.

DFA also ensures a high level of risk management because it is connected to the country’s National Identity Card Authority. Bank officers only need the customer’s National ID to initiate account opening or loan application process. The tablets are also equipped with biometric accessibility to back up customer’s security pass to their accounts or approve a loan application online form. This increases a connection and assures a client of their details.

The system also allows online credit scoring based on FINCA loan enterprise data and credit history. This is to ensure transparency in the workflow with an audit trail.<sup>2</sup>

#### Objectives of the DFA

- To make financial services more easily accessible to rural people.
- To increase the rural customer base of FINCA.
- To standardize FINCA’s processes to reduce time and cost incurred.
- To improve loan accessibility through KYC fulfilments and credit checks.

<sup>2</sup> FINCA review, Transforms FINCA from Brick and Mortar Operations to Digitized Solutions.

“Previously if we wanted to access the rural areas where we didn’t have any branches, we would have to take computers, printers and generators with us. It would take the whole day, just to set up the “office” in the field.”

Chilufya Mwazambe, FINCA DFA Project Team

Witnessing the opening of an account

Visiting FINCA’s Morogoro branch, the FSDT field trip group witnessed a demonstration of the DFA account opening application process. From start to finish, it took eight minutes for one of our group to apply for an account and get confirmation of the application’s success.

**Step 1**

The representative completes a standardized template with the applicant’s details.

**Step 2**

The applicant’s fingerprints are taken and uploaded to the system.

**Step 3**

A new photograph of the applicant is taken and uploaded.

**Step 4**

Photographs of the applicant’s ID document and signature are taken and uploaded.

**Step 5**

The complete application is then submitted and a response awaited.

The DFA is a standardized, automated system that requires no paperwork and therefore centralizes information and removes duplication.

If a client is not in possession of ID, then they can get a letter from their local government official verifying their identity but they need to then bring the letter into the branch. If this is the case, then accounts are opened via DFA and labelled as “potential”. These accounts are then confirmed and activated once the letter is received.

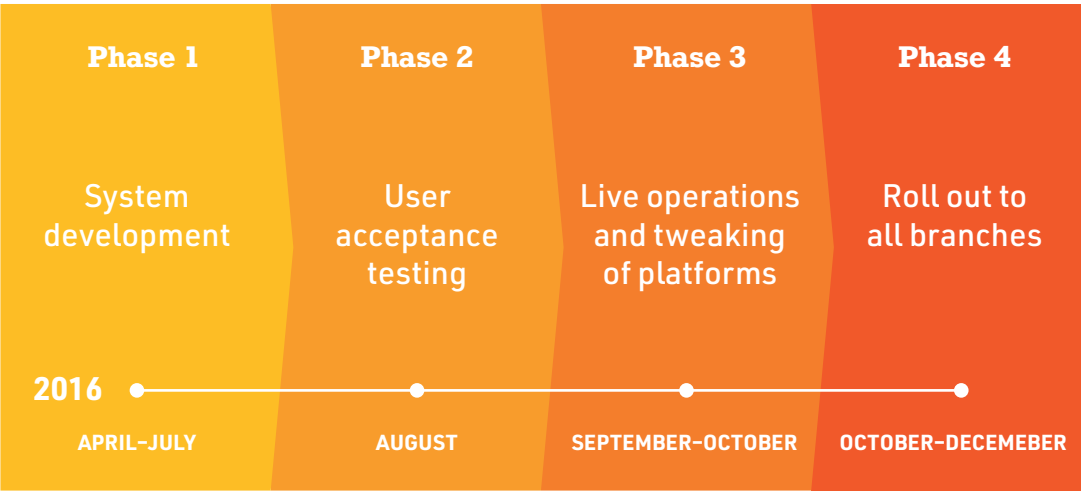


“When people heard that we were coming to them, they told us that they were so happy about this that they would be customers for life. This digitalization was a very big transformation of our bank. It has enabled us to do things more professionally and more efficiently. At the end of the day, for our customers, it has made dreams come true.”

Jacqueline Bartalome, FINCA DFA Project Team

5 Project implementation

The implementation of the pilot was in phases:



The DFA project required the initial development of remote account opening software with its linking to the National ID database and then piloting of this. Once tested, the credit scoring and digital credit allocation features were enabled. The implementation of DFA varied according to location, some branches introduced digital credit later than others.

DFA was piloted in Morogoro and then rolled out to all FINCA branches in Tanzania.

FINCA trained bank officers across the country how to use the tablets and the system. The initial training comprised a 1-2 hour tutorial but officers undergo regular refresher training.

“We always want to see the market adapting and we expect the market to see the value in FINCA’s pilot of the DFA.”

Daniel Mhina, FSDT Head of Digital Finance

The approach and project continuation

Applying the Adopt/Adapt/Expand/Respond approach, FSDT’s involvement in the project ended at the Adopt stage after completion of the pilot phase (Phase 4). Following Phase 4, the Adapt phase began when FINCA continued to invest independently of FSDT and other donor support.

FINCA also shared its findings at a conference for other Tanzanian FSPs. It is FSDT’s expectation that the DFA concept will now enter the Expand whereby competing players in the market will start crowding-in by copying the model. It is also expected that all players may add variants to the model as the Respond to market needs.

The project allowed for the testing of a market-driven model for financial inclusion and the objectives set out by FSDT in its project scoping were all achieved, according to an FSDT Digital Field Automation Project End Review Report, March 2019.

The report showed that both FINCA staff and new customers positively adopted DFA and this ready acceptance fueled the quick roll out to all branches. Positive outcomes of the program include:

- Improved bank efficiency
- Time and cost savings for customers
- More account opening
- Increased customer base
- Increased loan access
- Reduced fraud

**“The rate of accounts opened since DFA started is tremendous. Cost savings for FINCA have already been seen and there is enormous customer satisfaction. We are also seeing a huge amount of loans being taken. DFA was truly transformational.”**

**Daniel Mhina, FSDT Head of Digital Finance**

## Improved bank efficiency

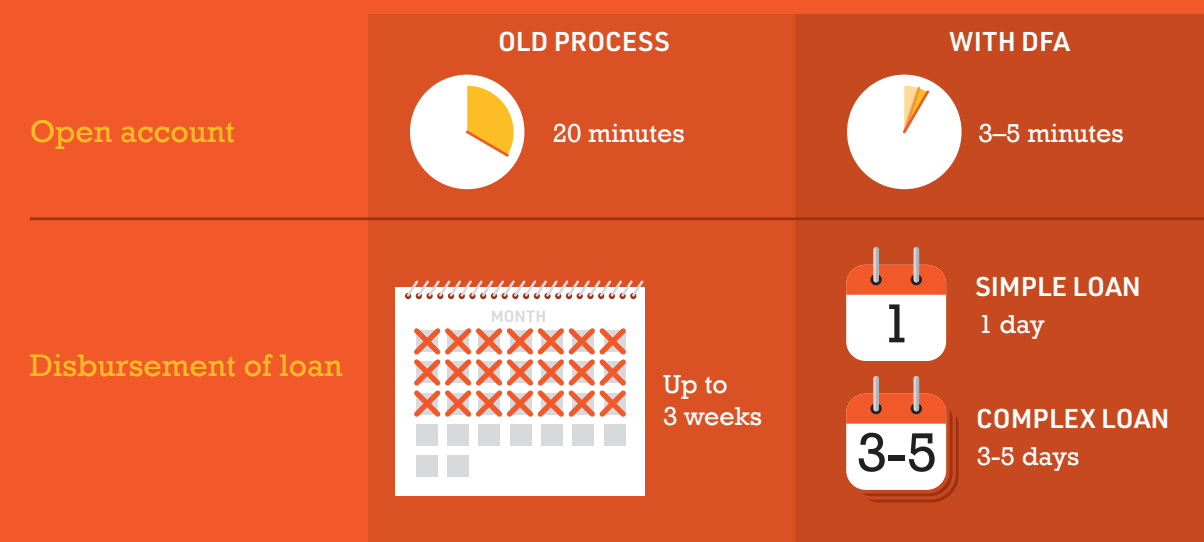
One of the objectives of the DFA project was to improve the turn-around efficiency for the opening of new accounts or the application of loans. Prior to DFA, bank officers would be required to complete copious – and often duplicating – amounts of paperwork and file it. The automated and standardized system removes this. The linking of DFA to the NIDA system also makes checks easier.

**...they are reaching more people remotely within a shorter period of time**

Since the rolling out of DFA, FINCA staff are serving more customers than before. Therefore, they are reaching more people remotely within a shorter period of time.

For example, before the DFA a FINCA bank officer would typically take 20 to 30 minutes to open an account but with DFA the process now takes 3-5 minutes. This means the same officer using DFA can now open at least five times as many accounts within the same period. Likewise, DFA enables officers to disburse simple analysis loans within one day of application and within 3-5 days for more complicated loans. Prior to DFA, loan disbursement could take up to three weeks.

## Time required



The DFA turnaround time compared with other banks ranged between 3-5 minutes for NIDA customers and 10-15 minutes for non-NIDA customers. The difference in time for NIDA and non-NIDA customer was due to easy identification of NIDA customers from the NIDA database because the DFA is integrated with NIDA.

## Time and cost savings for customers

Customers generally acknowledged that the process of opening a DFA account saved them time and money because the process was done at their locality. For example, a group of women and men at Mikese which is 35 kilometers away from FINCA Morogoro Branch opened their accounts in the village. This means that each saved about TZS 5,000 in transport fares.

Prior to DFA, account opening and processing was limited to the location of a bank branch (which housed the application system) and its restricted opening hours. DFA enables bank officers to work when it is convenient for the clients and where it is convenient for them.

This appeals to those for whom travelling would take time away from their production activities e.g. farmers, small business owners. This also helps women for whom child care would have restricted their ability to travel.

## More account opening

The path to financial inclusion requires access to financial services and formal financial services – e.g. bank accounts – offer opportunities, such as increased access to loans. A key success of the DFA program was the rapid rise in new bank accounts being opened.

A survey<sup>3</sup> conducted by FSDT shows that just after the launch of DFA the number of accounts started increasing while non-DFA accounts were decreasing. Within just three months, the number of DFA accounts surpassed the number of non-DFA accounts.



The reasons for the rise in bank accounts include: more access to customers because of the mobility of DFA; a cheaper and faster process for clients; and the fact that bank officers cultivated trust and awareness among rural communities, encouraging them to open accounts.

### Increased customer base

The faster, lower cost DFA process has improved the efficiency of FINCA's business and enabled it to grow by opening up rural communities as a new market.

Bank accounts are a prerequisite for broader financial services and products utilization, which will increase financial inclusion. DFA enabled more people to open accounts, save money and access loans at reduced cost and turnaround time.

Most of those surveyed<sup>4</sup> by FSDT opened their accounts in order to get a loan (76%) while the rest did so for savings purposes. According to the latest DFA dataset, most of the opened accounts are still active (80%).

### Increased loan access and better loan performance<sup>5</sup>

The provision of DFA loans started in 2018 and aimed to increase the number of loans and the average loan size of people in remote areas. The trend shows that since the introduction of DFA loans, the average loan size has been increasing. For example, for the period from November 2018 to March 2019 a total of TZS 14.48 billion loans has been disbursed by FINCA remotely, out of which TZS 1.79 billion were DFA loans.

DFA has made it easier for clients to get loans. DFA accounts are opened with detailed client background and proof of identity so KYC requirements are instantaneously fulfilled, making the potential borrower a lower risk. The more efficient system also allows staff to disburse loans within one day for loans that need simple analysis and 3-5 days for loans that need tough analysis as compared to Non DFA era whereby disbursement took 10 days to 3 weeks. The faster turnaround time makes it easier for business clients to react to and plan for opportunities and risks.

DFA loans disbursed to individuals through the DFA mobile credit scoring system are performing well and have positively impacted their livelihood.

### Reduced fraud

Most fraud incidents are detected in loan related transactions and include: cheating and forgery; external fraud; loans and advances; and staff fraud. FINCA staff say that records prove DFA has halved the number of fraud incidents.

DFA has helped reduce fraud because it enables instantaneous NIDA checks to facilitate KYC and recognizes an existing customer using the captured biometrics. The platform also reduces the potential for staff to tamper with loan documents because all information is stored in a centralized database. The automated process also helps prevent the intentional delay of loan processing to influence bribery and kickbacks to officers from customers.

The automated process helps prevent the intentional delay of loan processing

<sup>4</sup> FSDT Digital Field Automation Project End Review Report, March 2019.

<sup>5</sup> FSDT Digital Field Automation Project End Review Report, March 2019.



Next steps include:

- Technology upgrade
- Update templates
- Upgrade bio reader
- Better staff communication
- Customer awareness raising

## 7 Learnings and next steps

**Testing an innovative model like DFA enabled FINCA and FSDT to learn in the field and identify areas for improvement and enhancement. Although FSDT's involvement in the program has ended, FINCA continues to roll out the DFA and increase access for rural customers. FINCA recently called a conference to share their experiences from the DFA with other banks so that they find similar solutions which can improve efficiency in serving the rural unbanked.**

Next steps include:

- Technology upgrade
- Update templates
- Upgrade bio reader
- Better staff communication
- Customer awareness raising

### Technology upgrade

According to FSDT field trip interviews with bank officers in the field, the implementation of DFA platform could have been more efficient if more appropriate testing before roll-out had occurred. They say that the software was not adequately configured and that any future updates should undergo more rigorous field testing.

The platform should also be made compatible with the bank's POS system used by bank agents to make and take payments. DFA allows clients can register and open accounts but they cannot access their account remotely so need to still travel to a bank branch to access their funds.





DFA should also be upgraded to allow the refinancing of loans.

### Update templates

The standardized templates have greatly improved efficiency but bank officers told FSDT that not all occupations are listed on the form and this can slow the process down. They believe there should be an option to add a new occupation to applications.

### Upgrade bio reader

FINCA officers reported that some customers had very worn fingerprints due to the very nature of the manual work they do. This made it impossible for them to open a bank account using DFA because the bio reader could not capture their prints. A strong bio reader or offering another form of bio data capture would enable this.

FINCA officers reported that some customers had very worn fingerprints due to the very nature of the manual work they do

### Better staff communication

Officers said they often lacked information that officers in other regions had access to. For example, some officers were not aware that DFA has started to disburse loan amounts up to TZS 49,000,000.

Field officers encountered a large amount of disbelief – and some distrust – from those in the rural areas

FINCA Management should encourage sharing of information from field to head office and from head office to the field offices in order to ensure there is no information gaps related to the DFA platform. A central messaging system via social media – e.g. WhatsApp – would ensure all field officers were up to date on all developments.

### Customer awareness raising

Field officers encountered a large amount of disbelief – and some distrust – from those in the rural areas. Due to a lack of technological and financial literacy people in the rural communities found the DFA platform unbelievable. They could not believe something as significant as opening a bank account could be done over a mobile phone connection.

FINCA organized community meetings and hired local people to help convince the rural communities but more regular awareness raising should be considered.

### Train bank agents

In addition to the existing bank officers, FINCA should also train its banking agents to use DFA so that they can not only handle payments but also open accounts.



A central messaging system via social media – e.g. WhatsApp – would ensure all field officers were up to date on all developments



No case study is complete without hearing from the real people impacted by the program and the FSDT field trip to Morogoro enabled us to hear from those who had used DFA.

## Amiri Nondo

Amiri Nondo is the former mayor of Morogoro who now runs a hotel and a transportation business. His business is growing fast thanks to the rapidly expanding neighborhoods around Morogoro which demand the building materials that his trucks deliver.

Nondo needed a loan quickly for his business and had applied for one with another bank, not FINCA. The process was complicated and cost him a lot of money because he had to travel into their office. He grew tired of the inconvenience because it was taking too long and taking too much time away from his business. He heard about the FINCA DFA platform from a friend and got in touch.



**“This machine and the whole experience made me very happy. Within six hours I was able to have the loan I wanted and I respect this. There were no problems at all.”**

Although not a poor man, Nondo emphasized to FINCA bank officers Victor Laurian Sanday and Beatrice Said how DFA would financially empower those who are excluded from the financial system: “This DFA machine will play a key role in the economic development of local people. Victor and Beatrice can go to the villages and financially empower the people there. Poor people can’t afford to take themselves to town. This will play a very important role in rural economic development and empowering the poor.”

Nondo urged FINCA to train more staff how to use DFA.

## Juma Hassan Chuma

Juma Hassan Chuma owns two trucks which transport maize and rice from the rural areas to the towns and four tuk-tuk taxis. He employs 11 people and his business is growing. Chuma approached FINCA for a loan to purchase his second truck and on the spot, instantaneously, he opened a bank account using DFA. It then took him only a week to borrow TSh 23 million.

**“I prefer the new system because it is more convenient. I don’t have to wait a month from starting a bank account application to getting one. This machine does it speedily and you can get your money faster than before. This is good for business because we don’t miss opportunities.”**



## Goodluck John Luoga

Goodluck John Luoga owns a hardware store in a small rural village far from any bank branches or agents. The entrepreneur also has a business that processes and packages flour from wheat grown by the rural communities. Luoga employs about 10 people full time and lots of casual workers when necessary. He needed a business loan to fund some expansion activities and had heard great things about the FINCA small business loans but was too far away from the bank.

When a FINCA bank officer approached him, he jumped at the chance to open a FINCA account and apply for a loan:

**“It was a really quick process. Much easier and much quicker than any account opening I have ever experienced. When I applied for a loan it only took two days the money to be in my account. This is unbelievable. More people must be told about this DFA machine.”**



## Aziza Hassan Mussa – Group loan



Aziza Hassan Mussa heads a group of seven women in Dakawa village a group of seven women, among them mothers and grandmothers. They farm vegetables for their own tables and sell the surplus at market. The women needed a loan of TSh 4 million to buy more seeds, fertilizers and tools so that they could expand their farming and earn more money to pay for school fees.

Standing as guarantors for each other, they applied for a group loan from FINCA bank officer Victor Laurian Sanday when he came to the village to raise awareness. The women applied for their bank accounts via DFA and by opening these accounts they could apply for a loan.

“We prefer it that the bank comes to us. If we have to go into town then we have to worry about the cost of transport and food, as well as who will look after the farms, the animals, the children. Going from here into Morogoro takes the whole day for us,” says Mussa.

One obstacle, however, was that some of the women's fingerprints were so worn down that the bio reader could not record them. These women did have to go into town to have their identity verified. Although group loans cannot be applied for remotely, once the accounts were open it only required one member of the group to go into the branch to complete the loan application. The money was in their accounts one week after application.

“Other women should form groups like this, open accounts and apply for small business loans. The DFA machine makes it easier for these women to do so and then they can grow their own business and financial independence,” says Mussa.





Financial Sector Deepening Trust  
2nd Floor "De Ocean Plaza"  
Plot 400 Toure Drive Oysterbay  
PO Box 4653  
Dar es Salaam, Tanzania

[www.fsd.tz](http://www.fsd.tz)