

## OUTREACH EXPANSION THROUGH THE FIRST STEPS INTO MOBILE BANKING BY MICROBANCO FIDES MOZAMBIQUE

### 1. DEVELOPMENT RELEVANCE

**Economic and poverty context:** Mozambique currently has a population of 27,700,000, of which nearly 50% is younger than 17. GDP per capita was USD 602 in 2014, placing Mozambique in the lowest fifth of sub-Saharan African countries. The economy has developed significantly since the end of the long civil war between 1977 and 1992, but Mozambique is still one of the poorest and most underdeveloped countries in the world. As soon as peace was restored, the government implemented macroeconomic reforms designed to stabilise the economy. These steps, combined with donor assistance and with political stability since the first multi-party elections in 1994, have improved the country's growth rate. In 2014, Mozambique's economy continued to perform strongly, with annual GDP growth of 7.4%, and the outlook remains positive. Economic growth was 7.5% in 2015, and prospects for 2016 are still good, even taking falling oil and gas prices, as well as a considerable currency devaluation, into account. Mozambique continues to depend upon foreign aid, and the majority of the population still lives below the poverty line. Agriculture still employs the vast majority of the country's workforce, and only 33% of the population lives in urban areas.

Population and economic indicators <sup>1</sup>	
Population (2015 estimate)	27,700,000
Rural population (2010)	14,408,711
GDP growth (average: 2008 to 2014)	6.8%
Inflation (average: 2012 to 2014)	4.0%
Trade balance (% of GDP) (2014)	-10.2%
Foreign direct investment (net) (% of GDP) (2009, 2014)	8%, 42%
Net ODA & official aid received (% of GDP) (2013)	14.9%
Workers' remittances (% of GDP) (2013)	1.4%
Economic Freedom Index <sup>2</sup> (Rank among 185 countries)	139

Poverty indicators	
GDP per capita (current USD) (2014)	602.1
Gini Index (0= equality 100= inequality) (2013)	45.7%
Multidimensional poverty index (2011)	0.389
Poverty headcount at national pov. line (2008)	54.7%

**Financial sector context:** Mozambique has one of the lowest levels of financial inclusion in the world.<sup>3</sup> The 2009 FinScope survey underlines this:

Financial sector (source: Bank of Mozambique)			
	2005	2012	2014
Number of commercial banks	13	18	18
Microbanks and credit cooperatives	0	8	18
Insurance companies	6	13	17
Bank agencies	228	529	572
Automatic teller machines (ATM)	435	934	1,302
Points of sale (POS)	0	8,499	14,461
Districts with at least one agency (out of 158)	27	63	66

- Only 22% of Mozambican adults use financial services (i.e. financial products, both formal and informal);
- 12% of the adult population is banked and 4% use financial products provided by formal non-bank financial institutions. In rural areas, banks serve less than 5% of the active population.

- While the majority of the Mozambican population is not only poor, but also vulnerable, insurance inclusion is even lower still. Less than 2% of the rural population has access to formal insurance cover.
- The banks and MFIs focus primarily on salaried people and SMEs. Their outreach is still limited. The key financial inclusion challenge is to reach rural areas, where the majority of the population lives.

**Partner financial institution:** Microbanco FIDES Moçambique (MBFM) is a greenfield microfinance bank operating in the Nampula-Nacala corridor – the second-largest concentration of population after the Maputo area. It has SDC support and Swiss Microfinance Holding as its main shareholder. It received its banking licence in August 2014, and authorisation to collect



Map of Mozambique: The first branches of MBFM were in Nampula and Nacala, while progressive expansion in the Nampula-Nacala corridor, an area with agricultural potential, is planned.

<sup>1</sup> The World Bank Group (2015). World Development Indicators database. Washington, DC. <http://data.worldbank.org>. Accessed in 2015.

<sup>2</sup> Heritage Foundation, (2016) Index of Economic Freedom, <http://www.heritage.org/index/ranking>. Accessed (10 October 2016)

<sup>3</sup> See the FINSCOPE Mozambique Survey 2009. An update based on 2014 figures is under preparation. There has been limited development in the financial inclusion landscape over the past five years.

deposits in October 2015. MBFM is the only bank which primarily targets low-income client segments. Banco Oportunidade and Socremo, the only other two microfinance banks in Mozambique, have recently opened branches in Nampula city, but competition still remains limited. Many, if not all, microcredit operators run by international non-governmental organisations have failed in Northern Mozambique. MBFM offers loan and savings products with weekly or monthly instalments, in line with its clients' business cycles. In partnership with Hollard Companhia de Seguros SARL, MBFM is now offering urgently needed insurance products to its clients.

## 2. INTERVENTION APPROACH

Some 90% of MBFM's clients are female micro-entrepreneurs who rely on self-employment and family labour in a broad spectrum of entrepreneurial activities. For them, their children's education is the most feasible way out of poverty. For a majority of clients, school-related costs are higher than food expenditures. About 50% of clients run agricultural activities in parallel with their micro-enterprises. These rainy season activities allow for food crops for consumption and, often, the production of raw material for businesses. In addition to credit to expand their economic activities, these clients are particularly interested in savings and insurance in order to strengthen and secure asset-building. Savings are thus not only necessary to manage cash flow constraints, but also as a multi-purpose risk mitigation instrument (e.g. when a child falls ill). In response to demand, MBFM offers insured savings plans built up in small instalments.

These products are sold mainly through client groups called DEGOs, or "Development through Organised Groups". This is the brand name of the joint and severally liable groups that work with the bank. More than 95% of DEGO members are women. These groups play an important role in the selection and monitoring of the credit clients they guarantee. They are also involved in loan recovery and savings collection, thus enabling the bank to serve low-income clients at lower cost.

### 1) The next key challenge for financial inclusion: opening up options for irregular saving

SCBF supported MBFM in developing technologies that enable the collection of irregular savings amounts on a long-term basis. Research showed in impressive terms how clients are affected by their irregular cash flows. They need to set aside part of their income during good times for difficult periods when the business fails or shocks have to be absorbed. However, when they are able to set aside some money from a good day's market trading, they can access only informal savings mechanisms to prevent this money being spent on consumption for the immediate family. Women entrust traders or other trustworthy persons to keep their extra money, or they hide it, or they buy goods in advance. Often these mechanisms fail, and there is most often a considerable negative interest rate to be paid.

Small, irregular savings are of great importance to clients. At the same time, they represent a transaction cost challenge, for the client as well as for MBFM:

- **For the bank**, the collection of small deposits through classic banking methodologies would mean building a relatively dense network of branch offices and service points. Given the high Gini index in Mozambique, this would translate into high costs for qualified staff compared to the small amounts per client transaction. Such a network of bank outlets thus could not be profitable. At the same time, MBFM needs to collect higher amounts of deposits in order to refinance its portfolio.
- **For the clients**, transaction costs are also high. In most cases, non-bank transaction costs (e.g. the cost of transport to get to the bank) are higher than any banking fee, and result in a negative return on formal savings. Opportunity costs are also high. Research with the clients of MBFM shows that most of the micro-entrepreneurs are very interested in a formal deposit opportunity, but cannot afford to spend more than 15 minutes depositing money. If more time is required, the opportunity cost is too high and they prefer to rely on informal means of saving.

### 2) Introduction of the most accessible phone banking technology



Almost 90% of MBFM's clients have a mobile phone and use it almost exclusively for voice and text messaging (plus its role as electronic calculator). Furthermore, considerable financial education would be required for clients to use mobile phones as the main tool for accessing banking services. It is therefore too early for MBFM to launch a full mobile phone banking application. Consequently, it planned to offer sustainable access to small and irregular savings through an innovative scratch card solution that allows clients to transform cash into money in accounts with the following features:



1. The bank issues deposit cards in the most requested amounts<sup>4</sup> of MZM 50, 100, 200, 500 and 1000 (between USD 1.4 and 28). Each card includes a scratch surface covering a sequence of numbers that represents a specific algorithm codifying the amount, the ID code of the card, and security calculations that prevent a code with an error in one or more digits being processed.
2. Deposit cards can be bought from third parties that earn a commission for selling these cards. In the first experimental step, these intermediaries will be the DEGOs, selling the cards to their members. In a second step, traders and other third parties will make these cards accessible in the open markets, bus stations and anywhere where low-income people gather. The distribution method will be similar to that for scratch cards for purchasing telephone credit, and the commission to the intermediaries will be similar to that paid for phone cards.
3. The clients buy these cards for cash. They then reveal the code by scratching the card. They send this code by text message to the bank by entering it in their mobile phone in the following form  $\neq \text{scratched number} \neq 1 \neq$ . The  $\neq 1 \neq$  stands for the standard savings account, equivalent to a passbook savings account. If the money is intended to be sent to another account,  $\neq 2 \neq$  for the savings plan,  $\neq 3 \neq$  for the current account, or  $\neq 4 \neq$  for the credit account is entered.
4. When the client sends the text message, it is received and processed by the MIS of the bank. The MIS credits the account and sends back to the client a message confirming that the amount has been credited to his or her account.

Compared with a full mobile-based banking system, the proposed solution has considerable advantages for the clients and for MBFM. The electronic transaction saves the client a visit to a branch and helps reduce branch operation costs, as fewer staff are needed to serve clients. At the same time, it is much more accessible to low-income clients:

- Sending a text message code is similar to buying telephone credit. The main difference is that the code is sent to a phone number at the bank and not to one belonging to the mobile phone provider.
- Cards are sold through the same channels as phone top-up cards. Selling MBFM scratch cards could become a side business for some of the clients of the bank.
- These third party agents just sell cards. They do not handle transactions on behalf of MBFM. This means that MBFM does not need to control a network of third-party agents, neither does it need to provide and maintain transaction terminals, card readers, etc.
- Since the system is text message-based, there is no need for clients to download specific applications on their phones. A simple first-generation mobile phone (feature phone) is sufficient.

### **3) Roll out of the mobile banking solution supported by a new MBFM MIS and a viable business model for all stakeholders**

While the delivery mechanism has so far been tested in dry-run mode, the introduction of a new full banking MIS will make it possible to go live on a larger scale with the scratch card system. The planned new MBFM MIS has an in-built text-messaging facility which enables such technology. However, the introduction of the new MIS has been delayed substantially, so SCBF support needs to be wound up without waiting for the delayed rollout out of the fully developed mobile banking solution.

The new scratch card-based delivery channel needs to be a value proposition for all parties involved if it is to have long-term viability. The pricing model guarantees the scratch-card seller a similar margin to that for phone credit top-up cards, and they are often sold by the same person. For the bank, the cost of financial resources is still much lower than with commercial refinancing. For the client, the system is the least expensive and safest solution for small-ticket deposits.

## **3. RESULTS ACHIEVED AND NOT ACHIEVED**

### **3.1. Client level**

Tests of the new delivery mechanism outside of the new MIS show clear client interest in this new way of depositing money in the bank. As making deposits to the savings account is similar to topping up credit on a phone, the approach is easy for clients. It is also anonymous, can be hidden from the woman's husband, and

<sup>4</sup> A specialist printing company – which also works for leading phone companies – is to produce the scratch cards to ensure the necessary security features at a reasonable price.

a child can be sent to buy the scratch cards. As the used scratch card remains with the client as a receipt, the text message confirmation is again similar to a phone credit top-up.

Since the new delivery mechanism has not yet gone live on anything but an experimental scale, it is too early to evaluate client uptake precisely. The project indicates that the majority of clients will use the new mechanism, as it saves time compared with a visit to a bank branch. The initial estimate is illustrated in the table to the right.

Projected outreach of the Let's go card	Year 1	Year 2	Year 3
Number of clients using Let's go	5,600	20,000	>100,000
% female clients	95%	90%	90%
% rural	30%	45%	60%
Number of scratch cards sold	30,000	100,000	>500,000

Financial education will accompany the product. MBFM will follow client perceptions of the new approach closely, and observe how it is integrated into client strategies.

## CLIENT PROFILES

**Hemete Tawata, 42**, was born in Cabo Delgado and raised in a family with five children. He went to school



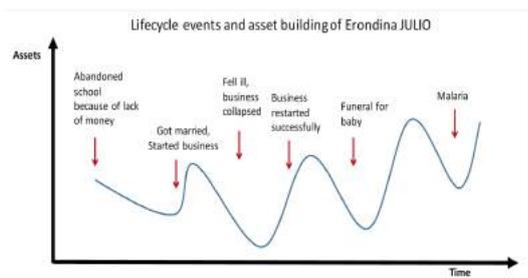
for three years and then stopped after an accident left him disabled. His parents did not have the money for surgery. He then stayed with his father, a tailor, and learned his profession. At the age of 26 he started his own successful tailoring business in Cabo Delgado, and was able to buy a house and a cashew plantation. Unfortunately, his business was robbed and he lost all his assets. To get back on his feet, he took a job as a tailor with another entrepreneur for three years and then came to Nampula in 2007 to start a new business of his own.

His new business started out well, and he has since hired four workers. He now has a family of two children and he takes care of three other relatives. His house and his workplace are rented. He still runs his cashew plantation in Cabo Delgado and, as a side business, he sells agrochemicals there, which he buys in Nampula at a lower price.

Although he had never been in contact with a financial institution before becoming a client of MBFM, Hemete always saved money by informal means, being well aware from his own history that these savings were required as an insurance mechanism should the need arise.

His projects for the future are to build a house in Nampula and to expand his tailoring business. He has already identified a plot of land for sale for MZN 30,000, but he hesitates to buy it, since his present savings are only MZN 40,000, and he fears that his family could be vulnerable in the event of an incident if he has

only MZN 10,000 left. He is now requesting his first loan from MBFM, to enlarge his shop and to buy new sewing machines. He believes that a small enterprise loan of MZN 50,000 should be repayable within one year out of his cash flow. Hemete's case is interesting, since he intends to take out a loan that is roughly equivalent to the amount of his savings. He wants to maintain his savings as a form of insurance, rather than investing them in the business. He could become a typical client for the savings scratch card. The opportunity cost of depositing savings through a bank teller are high for him.



**Erondina Julio** has recently become an MBFM client. She was born in a village in the region. She had a difficult childhood, as her father abandoned her family when she was a baby. She went to school until year 10. She then began training as an electrician, but had to abandon her studies because her mother could no longer afford the college fees. She got married in 2007. Her husband works in a bakery, on a low salary. He covers the rent for their house and some food expenditures. All other expenditures are met by Erondina's business, the most important expenditure item being education costs. She sells prepared food in town, with beans as the main ingredient. Bean prices vary between MZN 150 a bag at harvest in April and MZN 300 a bag at the end of the year. With her first loan, she intends to increase the productivity of her business by buying ingredients for her business in bulk at harvest. She is an active saver, participating in three Roscas, with savings of MZN 100 weekly, MZN 50 weekly and MZN 25 every three days respectively. Furthermore, she offers credit to her clients and allows them to pay back at the end of the month. Her biggest problems are health-related. She has had to abandon her business several times already for family health reasons, including the death of her baby from malaria in 2014.

### 3.2. Partner financial institution level

The scratch card and the related text messaging system will open up a new way for MBFM to interact with clients. It is the first step towards telephone banking for clients and for the staff of the bank, broken into viable steps. It is also an entry product that might open up the bank to new client segments, such as salaried people and farmers. It seems attractive for the poorest clients as well as for wealthier ones who do not want to waste time queuing in the bank. Several steps to further develop the system are already envisaged:



*Picture of the first branch of MBFM*

- The scratch cards can also be used to repay loans and to pay bills, including premiums for MBFM insurance products. This will ease the work of the DEGO, since it will allow for a reduction in cash operations, and will also allow clients to make repayment transactions remotely, for example when they travel.

- In a second step, the phone banking system can be opened up for pay-outs, as those who sell the cards and have the necessary cash can also become cashpoints for withdrawals. Again, this will first be tested in the DEGOs. These collect a considerable amount of cash from credit repayments at their weekly meetings, and some of this can be used to honour withdrawals from savings accounts.

The approach therefore has considerable potential for the bank, and the system may well play a key role in productivity gains in the low-income client segment. Especially in rural areas, where a substantial proportion of clients will be situated in the long run, the scratch card system will save considerably on transaction costs. Hence it will be a condition for mobilising savings efficiently.

## 4. LESSONS LEARNT

The SCBF support in developing and testing this first-step mobile banking solution with mobile network providers was interrupted twice by (1) MBFM's long-delayed banking licence and deposit-taking authorisation, which was finally granted in October 2015 and (2) the delayed introduction of a new core banking MIS. Thus, in hindsight it was granted too early at the beginning of 2013, based on overly optimistic estimates of the licensing processes in Mozambique, and the installation of a new MIS at the initial stage of MBFM operations.

FIDES has now terminated the SCBF project without the pilot implementation that was originally planned, so as not to extend the project duration further.

Irrespective of its still-pending introduction and up-scaling with MBFM, this innovative mobile banking solution can be replicated in other under-developed mobile banking markets as a first-step approach to improving an existing financial services distribution platform at low marginal cost. FIDES is assessing the possibility of introducing this innovation in two other countries with interested microfinance banks, as it carries considerable promise of increased value for customers, with substantial productivity gains for the bank. Its underlying principles are:

1. To listen to clients, to understand their constraints when approaching financial services;
2. To listen to staff, to understand the bottlenecks in existing workflows and the options for productivity gains;
3. To observe how other service providers, in this case the mobile phone companies, sell their services through third parties without building a large workforce;
4. To understand the cost and income structures of the bank and how to improve them;
5. To adjust work flows and procedures in a meaningful way while introducing new technology;
6. To invest in training for staff and clients to enable them to use the new tools and to explain them to others.