

Outreach expansion through the first steps into mobile banking by Microbanco FIDES Moçambique

1. DEVELOPMENT RELEVANCE

Country context: Mozambique counts at present a population of 27'700'000 inhabitants of which nearly 50% are less than 17 years old. The GDP per capita in Mozambique was USD 602 in 2014, placing Mozambique in the lowest quintal of Sub-Saharan African countries. The economy has significantly developed since the end of the long lasting Civil War (1977–1992), 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 stabilize 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 at 7,5% in 2015 and the outlook for 2016 is positive, even when taking into account decreasing oil and gas prices.

Mozambique continues to depend upon foreign aid, and a majority of the population remains below the poverty line. Agriculture still employs the vast majority of the country's work force; only 33 percent of the population lives in urban areas.

Population and economic indicators	
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 (Rank among 185 countries)	125

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.¹ The 2009 FinScope survey underlines this:

- Only 22 percent of Mozambican adults are financially served (i.e., use a financial product – formal or informal);

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

- 12 percent of the adult population are banked and 4 percent use financial products provided by formal non-bank financial institutions. In rural areas, banks serve less than 5 percent of the active population.

- While the majority of the Mozambican population is not only poor, but also vulnerable, insurance inclusion is even still lower. Only less than 2 percent of the rural population have access to formal insurance coverage.

- The financial sector is characterized by a

combination of banks and MFIs, focusing primarily on salaried people and SMEs. Its outreach is still limited, but steadily progressing.

- A remaining challenge is the outreach to rural areas, where the majority of the population lives.

Partner Financial Institution: The main partner financial institution of this project is Microbanco FIDES Moçambique (MBFM), which received its banking license in August 2014 and the authorization to collect deposits in October 2015. MBFM collaborates with the Inclusive Finance Academy (INFINA) for research and staff capacity building. The greenfield microfinance bank is operating in the Nampula-Nacala Corridor – which has the second largest population concentration of the country after the Maputo area - with support of

¹ See the FINScope Mozambique Survey 2009. An update based on 2014 figures is under preparation. There has been limited evolution of the financial inclusion landscape during the last 5 years.

SDC and with Swiss Microfinance Holding as the initial main shareholder. MBFM is the only bank targeting primarily the low income client segments. Banco Oportunidade and Socremo, the two only other 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 organizations have failed in Northern Mozambique. MBFM offers loan and savings products with weekly or monthly installments, in line with the business cycles of the clients. A mass approach with a large number of regular transactions, handled by an MIS enabling batch processing, allows to cover costs progressively and subsequently to break even. In partnership with Hollard Companhia de Seguros SARL, MBFM is now offering crucially needed insurance products to its clients.

2. INTERVENTION APPROACH

Ninety percent of MBFM's clients are female micro-entrepreneurs who rely on self-employment and family labor in a broad spectrum of entrepreneurial activities. Education of children is understood to be the most feasible way out of poverty. For a majority of clients, school related costs are higher than food expenditures. About 50 percent of the clients are running agricultural activities beside their micro-enterprises. These rainy season activities allow for food crops for consumption, and often, the production of raw material for businesses. Beside credit for expanding their economic activities, these clients are particularly interested in savings and insurance, in order to strengthen and to secure asset building. Savings are not only necessary to manage cash flow constraints, but also used as multi-purpose risk mitigation instrument (e.g. when a child falls ill or an accident occurs). In order to respond to the demand, MBFM offers insured savings plans with small installments. These products are sold mainly through client groups called DEGOs, the term meaning « Development through Organized Groups ». This is the brand name of the joint and several liability groups that work with the bank. More than 95 percent of DEGO members are women. These groups play an important role in the selection and the monitoring of the credit clients they guarantee. They are involved also in loan recovery and savings collection, thus enabling the bank to serve low-income clients with lower costs.



Map of Mozambique: The first branches of MBFM are in Nampula and Nacala, progressive expansion in the Nampula-Nacala Corridor, an area with agricultural potential, is

1) The next key challenge for financial inclusion: opening up the options of irregular savings

SCBF supported MBFM in developing technologies that enable the collection of irregular savings on a sustainable basis. Research showed in an impressive way how the clients are affected by their irregular cash flows. They need to set aside part of their income in good days for difficult periods when business fails or shocks have to be absorbed. However, when they can set aside some money from a good day's market, they can access only informal savings mechanisms to prevent this money being spent for the immediate family consumption. 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 amounts of irregular savings are of high importance for the 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 at the bank through classical 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 transaction for poor clients; such a network of bank outlets 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. cost of transport to get to the bank) are higher than any banking fee and result in negative return on formal savings. Opportunity costs are also high. Research with the clients of MBFM shows that most of the micro-entrepreneurs are highly interested in a formal deposit opportunity, but cannot afford to spend more than 15 minutes to deposit money; if more than that, 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 percent of MBFM's clients have a mobile phone, which is used almost exclusively for voice and SMS (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.

Therefore, MBFM plans 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. It has the following features:



1. The bank issues deposit cards in the most requested amounts. It is expected that this will be in units of 50, 100, 200, 500 and 1000 MZN (between USD 1.40 and 28.00). 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 to be processed.

2. Deposit cards can be bought with third parties that earn a commission for selling these cards. In a 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 methods will be close to those of scratch cards for telephone recharge and the commission to the intermediaries will be similar to those paid for phone cards.

3. The clients buy these cards against cash. They then reveal the code by scratching the card. They send this code by SMS to the bank by entering it in their mobile phone in the following form `#scratched number#1#`. The `#1#` stands for the standard savings account, equivalent to a passbook savings account. If the money is intended to be sent to another account, `#2#` for the savings plan, `#3#` for the current account, or `#4#` for the credit account is entered.
4. When the client sends the SMS, 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.

As compared to 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 less staff is needed to serve clients. At the same time, it is much more accessible for low-income clients:

- Sending an SMS code is similar to recharging of phone units. The main difference is that the code is sent to a phone number of the bank and not to a number of the mobile phone provider.
- Cards are sold through the same channels as phone recharge cards. Selling scratch cards of MBFM 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 that MBFM does not need to control a network of third party agents, nor does it need to make available and to maintain transaction terminals, card readers, etc.
- Since the system is SMS-based, there is no need to load specific applications on the phones of the clients. A simple first generation mobile phone (feature phone) is sufficient.

3. Roll out the approach under a new MIS and under a business model that is viable for all stakeholders

While testing of the delivery mechanism has been up to now conducted in a 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 new MIS of MBFM has an inbuilt SMS facility enabling such technology.

The new scratch card-based delivery channel needs to be a value proposition for all parties involved in order to insure long-term viability. The pricing model guarantees to the scratch-card seller a similar margin as for that of phone recharge cards (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 offer for small ticket deposits.

3. RESULTS ACHIEVED AND NOT ACHIEVED

3.1. Client level

Testing of the new delivery mechanism outside the new MIS shows a clear interest of clients for this new way of putting money on their bank account. As charging the savings account is similar to recharging units on a phone, the approach is easy for clients. It is also anonymous, it can be hidden from the husband, and a child can be sent to buy the scratch cards. As the used scratch card remains with the client as a receipt, the SMS confirmation is again similar to a phone recharge.

Since the new delivery mechanism will go live on a non-experimental scale only now, it is too early to evaluate precisely the uptake of the system by clients. From the project, it can be expected that a majority of clients will use the new mechanism, saves time as compared to a visit to a bank branch. The initial estimate is as follows:



Projected Outreach of the Let's go card	12/2016	12/2017	12/2019
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 closely the perceptions of the clients about the new

approach and how they integrate it into their strategy.

CLIENT PROFILES

Hemete Tawata, 42 years old, 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 handicapped. His parents didn't have the money for surgery. He then stayed with his father, a tailor, and learned his profession. At the age of 26 he started successfully his own tailoring business in Cabo Delgado, and could buy a house and a cashew plantation. Unfortunately, his business was robbed and he lost all his assets. To get on his feet again, he took a job as a tailor with another entrepreneur for three years and then came to Nampula in 2007 to start again his own business.

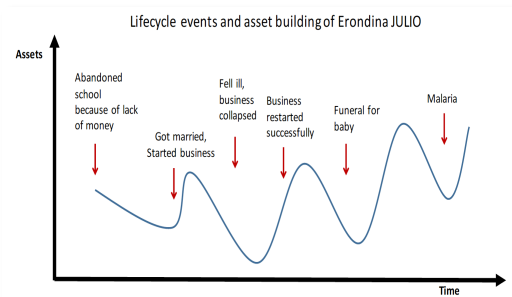


His new business started out well, and he has since hired four workers. He now has a family with two children and he takes care of three other relatives. His house and his workplace are rented. He still runs his cashew plantation in Cabo Delgado and, as a side business, he sells agrochemicals there, which he buys in Nampula at a cheaper 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 needed 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 on 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 case of an event if he has only MZN 10,000 left. He is now requesting a first loan from MBFM to enlarge his shop and to buy new sewing machines, considering for that a small enterprise loan of MZN 50,000, repayable within one year out of his cash flow. Hemete's case is interesting since he intends to take a loan that is in an amount roughly equivalent to his savings. He wants to maintain his savings as an insurance rather than to invest it into the business. He could become a typical client for the savings scratch card. The opportunity cost for depositing savings through the 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 the 10th year. She then started to learn to be an electrician, but she had to abandon this since her mother could not afford the school fees anymore. She got married in 2007; her husband works in a bakery, at a low salary. Her husband takes care of the rent for a house and some food expenditures. All other expenditures are covered by her 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. 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 SMS system will open up a new way for MBFM to interact with clients. It is a first step into the use of telephone banking for clients and for the staff of the bank, broken into doable steps. It is also an entry product that might open up the bank to new client segments, for example salaried people and farmers. It seems attractive for the poorest clients as well as for wealthier ones who do not want to lose their time by 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 be used also to repay loans and to pay bills, including premiums for the MBFM insurance products. This will ease the work of the DEGO since it will allow a reduction in cash operations, it will also allow clients to transact remotely for repayment, for example when they travel.

- In a second step, the phone banking system can be opened for pay-outs, those who sell the cards and have the necessary cash can also become cashpoints for withdrawals. Again, this will be first tested in the DEGOs, which in their weekly meetings collect a considerable amount of cash from the credit repayment, which can be used partly for savings pay-outs.

Thus the approach has a lot of potential for the bank, and the system will play a key role for productivity gains in serving low income clients. Especially in rural areas, where in the longer run a substantial part of the clients will be situated, the scratch card system will save considerably on transaction costs. Hence it will be a pre-condition for efficient savings mobilization. As a consequence, MBFM will now integrate the card and SMS banking related elements in its revised procedures and operations manual. The internal audit and control procedures will have to be adjusted to integrate specific risks related to the use of this technology.

4. RECOMMENDATIONS FOR OTHER SIMILAR INTERVENTIONS

This approach to improving, at low additional cost, an existing financial services distribution platform can be replicated. Its underlying principles are:

1. To listen to clients, in order to understand their constraints to approaching financial services;
2. To listen to staff, in order to understand the bottlenecks of the existing work flow and the possibilities for gains in productivity;
3. To observe how other service providers, here the mobile phone companies, sell their services through third parties without building a big workforce;
4. To understand 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 a new technology.
6. To invest in education of staff and clients in order to enable them to use the new tools and to explain them to others.

The result will be increased value for customers, with substantial productivity gains for the bank. Nevertheless, the innovation has to be introduced at the right time, not too soon and not too late. In the case of MBFM, the development started early, in 2013, based on an understanding of the need for productivity gains in other microfinance banks. The implementation was then put on hold; it could not be rolled out because the introduction of the new MIS took much more time than initially foreseen. The initiative has confirmed that develop products from the demand side, analysing client strategies and client vulnerability first, and then building products as a response to the challenges identified is definitely the right way to approach innovation in delivery mechanisms.

The roll-out will be monitored by research. This will allow to resolve still open questions about client satisfaction and the large-scale use of the new tool.