Policy Brief

Digital transformation of MFIs in Bangladesh

UNCDF | SHIFT
SHAPING INCLUSIVE FINANCE TRANSFORMATIONS

Background

In 2017/18 the United Nations Capital Development Fund (UNCDF) undertook the first comprehensive review of micro-merchants in Bangladesh engaged in the retail sector, particularly in Fast Moving Consumer Goods (FMCG) operating mostly in rural areas.

The Landscape Assessment of Retail Micro-Merchants in Bangladesh showed that retail micro-merchants require access to financial services, and credit in particular. Their need for financial services is high, and microfinance institutions are well-placed to meet the growing credit needs of micro-merchants. Micro-merchants predominately borrow from microfinance institutions. With the introduction of digital technologies, microfinance institutions have a new opportunity to further expand financial services to micro-merchants by embracing digital and mobile technologies in their operations.

Keeping the micro-merchant market segment in mind, this report answers the questions of how and why microfinance institutions should make a switch to digital technologies to better meet their customers' needs.

Data Source: FII 2017

Acknowledgments

This study was made possible by the Bill & Melinda Gates Foundation and by the European Union under the Poverty Reduction through Inclusive and Sustainable Markets (PRISM) in Bangladesh programme.

This report was authored by Bhavana Srivastava, Ravi Kant, Ishita Tarun Sharma of MicroSave Consulting (MSC) with support from Sivakumar Krishnan and Sonal Agrawal. We would like to thank our reviewers, Rajeev Kumar Gupta, Md. Ashraful Alam and Ana Klincic Andrews of UNCDF. The views expressed in this publication are those of the authors and do not necessarily represent those of the United Nations, including UNCDF and the United Nations Development Programme (UNDP), UN Member States or their partners.

About SHIFT SAARC

The Shaping Inclusive Finance Transformations for the South Asian Association for Regional Cooperation (SHIFT SAARC) countries is a regional market-facilitation initiative with the aim to improve livelihoods and reduce poverty rates in SAARC countries by 2021. The initiative seeks to stimulate investment, business innovations and regulatory reform to expand economic participation and opportunities for women, and help small and growing businesses to be active agents in the formal economy.

SHIFT SAARC is currently being implemented in Bangladesh where it focuses on accelerating the uptake and usage of DFS to respond to the needs for expanding financial inclusion through digital pathways as described in the Government of Bangladesh's (GoB) Seventh Five Year Plan 2016-2020.

SHIFT SAARC in Bangladesh aims at expanding the rate of digital accounts uptake, especially among women and small businesses by 2019 through two streams of intervention, one looking at policy and regulations and the other looking at merchants' acceptance. UNCDF aims to stimulate investment, business innovations and regulatory reform for promoting digital financial inclusion to expand economic participation and opportunities for low-income people, especially women, and small and growing businesses to be active agents in the formal economy. This is expected to contribute to increased growth in income and employment, reduced vulnerability to shocks and lower poverty levels contributing to the successful transitioning of Bangladesh from Least Developed Country (LDC) to Middle Income Country (MIC) by 2021.

Data Source: FII 2017

About UNCDF

The UN Capital Development Fund (UNCDF) makes public and private finance work for the poor in the world's 47 least developed countries.

With its capital mandate and instruments, UNCDF offers "last mile" finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. UNCDF's financing models work through two channels: financial inclusion that expands the opportunities for individuals, households, and small businesses to participate in the local economy, providing them with the tools they need to climb out of poverty and manage their financial lives; and by showing how localized investments—through fiscal decentralization, innovative municipal finance, and structured project finance—can drive public and private funding that underpins local economic expansion and sustainable development.

By strengthening how finance works for poor people at the household, small enterprise, and local infrastructure levels, UNCDF contributes to SDG 1 on eradicating poverty and SDG 17 on the means of implementation. By identifying those market segments where innovative financing models can have transformational impact in helping to reach the last mile and address exclusion and inequalities of access, UNCDF contributes to a number of different SDGs.

Data Source: FII 2017

About MSC

MicroSave Consulting (MSC) is a boutique consulting firm that has, for 20 years, pushed the world towards meaningful financial, social, and economic inclusion. With 11 offices around the globe, about 190 staff of different nationalities and varied expertise, we are proud to be working in over 50 developing countries. We partner with participants in financial services ecosystems to achieve sustainable performance improvements and unlock enduring value. Our clients include governments, donors, private sector corporations, and local businesses. We help our clients seize the digital opportunity, address the mass market, and future-proof their operations.

Current level of digital technology adoption and willingness to transform in MFIs

UNCDF SHIFT

The majority of the surveyed MFIs in Bangladesh have migrated to web-based, real-time loan management system (LMS) and centralized database

75%

of the surveyed MFIs are using real-time, web-based loan management system with a centralized database

- Almost all the surveyed MFIs, except few large ones (BRAC, ASA, Sajida Foundation), are using web-based and real-time loan management system with a centralized database. BRAC and ASA aim to achieve 100% migration of their branches to the centralized database by June 2019.

- LMS solutions used by most MFIs have MIS dashboard. This MIS is able to automatically pull data from other applications, such as financial information system, human resource information system. However, MIS does not generate graphical dashboard* in approximately 50% of the surveyed MFIs.

81%

of the surveyed MFIs are using loan management system provided by a third-party service provider

- The LMS solutions used by most MFIs are those developed by third party service providers such as Datasoft, Grameen Communications, Benchmark etc. However, some of the large MFIs such as ASA, Shakti Foundation have developed in-house LMS due to the following reasons:
  - MFI is able to get desired changes in the software in a cost- effective manner.
  - Some of the MFIs plan to sell their software to other mid-size and small MFIs.

- Most of the large and mid-size MFIs showed reluctance to keep their data on the cloud on servers external to the organization. However, they also do not have adequate systems in place for data back up, data security and disaster recovery. MFIs whose management teams have exposure and awareness about the benefits of cloud backup solutions, have initiated discussions with the solution providers in this regard

Note: *Graphical dashboard helps management to understand and analyse the issues better and therefore help them make fast decisions

Only a few of the surveyed MFIs have started implementing digital field application (DFA) for loan origination and collection

18%

of the surveyed MFIs have been implementing DFA

- At present, most MFIs have not deployed a DFA solution.
- Only three of the sixteen surveyed MFIs, namely, BRAC, Rural Reconstruction Foundation and Sajida Foundation have rolled out pilots to use DFA for loan origination in some of their branches.
- BRAC has implemented DFA module for loan repayment across most of its branches. Sajida Foundation also plans to merge its Financial Advisory app with the loan origination app to provide their field officers with a single tool to manage both credit and saving products.
- Except for some smaller institutions, all other surveyed MFIs showed a willingness to implement DFA for client registration, loan application processing, and collections. Some of these MFIs have already initiated discussions with technology service providers for DFA solutions.
- Senior Management of most of the small-sized MFIs lack~~ed~~ awareness and understanding of DFA and have no future plans or strategy to move.
- Those MFIs who have rolled out the pilot opted for both offline and online functionality in their DFA.

> “**The cost of implementing DFA is high. The cost of hardware such as a mobile phone or tablet will be too high for us. Purchasing it for all the frontline field staff members will be a huge cost for MFIs**—Senior Management of one large MFI”

UNCDF SHIFT

A few MFIs have rolled out pilots for cashless loan disbursements and repayments, and savings collection

Only 19%

MFIs are doing a pilot test on cashless loan disbursement

Cashless loan disbursement:
MFIs such as Sajida Foundation and Shakti Foundation have rolled out pilot tests for cashless loan disbursements in two ways:

- Mobile Wallet: Disbursement of the loan amount in mobile wallets of customers such as bKash or Rocket
- Bank Account: Partnership with a commercial bank, such as Bank Asia to register MFI branches as banking agent outlets. Loans are disbursed directly in the bank account of clients.

Cashless disbursement* in mobile wallets received a setback after Bangladesh Bank guidelines on daily and monthly transaction limits. For a customer making several visits to agent point or ATM to cash-out her loan from mobile wallet led to a poor customer experience.

Only 19%

surveyed MFIs are doing a pilot test on cashless loan repayment

Cashless loan repayment:
Only a few surveyed MFIs such as BURO, BRAC, and Sajida Foundation have rolled out pilot tests for cashless loan repayments through mobile wallets in some of their branches

Savings:
BRAC and Sajida Foundation have also rolled out pilot tests for savings collection through mobile wallets in some of their branches

Note: *Shakti Foundation introduced cashless disbursement in the mobile wallet

Other technology initiatives undertaken By MFIs

100%
surveyed MFIs have financial accounting software

81%
surveyed MFIs have HRIS software

38%
surveyed MFIs have other applications, such as inventory management and asset management

- All the surveyed MFIs have financial accounting software and it is integrated with the loan management system.
- Most of the large and mid-sized MFIs have HRIS software that contains payroll, leave management, recruitment and performance management. Mostly, small-sized MFIs have not automated their HR system and do not have HRIS.
- Some of the large and mid-sized MFIs use asset management and/or inventory management to manage their vast operations. Small MFIs do not have such applications.
- MFIs such as Bangladesh Extension Education Services (BEES), Rural Reconstruction Foundation, Sajida Foundation, and Shakti Foundation send transaction-related SMS to clients (pilot stage).

Some of the large and mid-level MFIs are developing or planning to integrate all applications such as FAS, HRIS, inventory management etc. with LMS through a single sign-on facility

Note: *Shakti Foundation introduced cashless disbursement in the mobile wallet

MFIs are on a digital journey, and are yet to explore emerging financial technologies, such as digital credit

30% surveyed MFIs showed interest in exploring digital credit in future

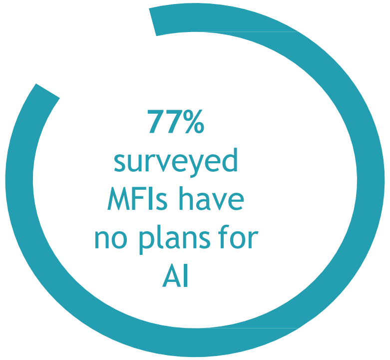
- Most MFIs lack awareness of the concept of digital credit. They doubt the relevance of digital credit due to low literacy levels of clients.
- However, some MFIs understand the potential of digital credit as a unique loan product to target unreached customers for micro-credit and micro-enterprises.
  MFIs such as BRAC have explored alternate lending to target new customer segments. These models are currently being piloted in collaboration with FinTech or Mobile Financial Service providers.

Alternate lending model (BRAC)

BRAC is conducting a pilot on an alternate lending model; however, it is in a nascent stage. The MFI is targeting customer segments that have requirements for micro credit. However, they cannot be served efficiently through traditional models. BRAC has tied up with a start-up that provides business development support to entrepreneurs to sell their products on Facebook. BRAC provides digital credit to these entrepreneurs through the technology platform supported by the start up company. The loans get sanctioned automatically using the algorithm developed by the start-up and disbursed digitally in bKash wallets of these entrepreneurs. BRAC receives repayment through the start-up from the sale proceeds of these borrowers. BRAC's management feels that digital credit is a powerful tool to come up with new product lines to serve those customer segments which are excluded from traditional microfinance model.

"If we ask customers to apply for loans through mobile apps or SMS, customers will tell us why are we harassing them—Senior Manager, TMSS

MFIs are on a digital journey, and are yet to explore emerging technologies, such as artificial intelligence-enabled tools and blockchain



- Most MFIs do not have plans in near future to explore emerging technologies, such as
  - Artificial Intelligence enabled tools like credit-scoring, chat bots, robo-advisors and blockchain
- Only a select few large-scale MFIs, such as BRAC and Sajida Foundation have been exploring usage of data analytics and big data to develop credit-scoring and financial advisory models.
- Most of the surveyed MFIs either consider blockchain not relevant for microfinance sector or too early to explore it as they are unable to find a use-case in Bangladesh. Most MFIs are not aware of the concept, functionality, and use of blockchain.
- Discussion with technology service providers revealed that they do not have experience of working on blockchain technology as it is a recent innovation. Moreover, the absence of a regulatory framework for use of blockchain technology by financial institutions has also contributed towards the "wait and watch" stance of the MFIs.
- MFIs need to keep up with the innovations such as blockchain and artificial intelligence else they will have to catch up

> "As of date, there is no use-case for blockchain for bank and MFIs. Therefore, do not see any takers for blockchain technology in Bangladesh in the near future.—CEO, Data Edge"

Current challenges faced by MFIs

MFIs face several operational challenges that lead to inefficiencies and high costs.....

Center meeting has become collection meeting

- Usually, center meetings take an hour or two to complete. These meetings have now merely become collection meetings as members repay their loan installment and immediately walk away. There is hardly any discussion among members on any relevant issue. The attendance of members is also low during the center meetings. It can be inferred that members do not see much value in attending center meeting apart from making loan repayment and applying for the next loan.

Cash management poses a challenge

- Cash management is a human-intensive activity in microfinance programs as operations ranging from disbursements to repayment collections are done in physical cash. This results in low productivity, leakages, fraud, and other operational risks. There is also a huge risk to the lives of staff members who manage cash in bulk quantities

Documentation level is high

- Majority of MFIs continue to capture client information through paper-based forms which are then fed into an MIS solution either at MFI branches or at a centralized data-entry hub.
- Clients have to submit a number of documents to apply for a loan. These include identity proof, address proof, photographs of self, spouse and guarantors. In the case of business loans, documents such as business proof, ownership of house or business premises etc. are submitted. High documentation level results in high turn-around-time for loan disbursement and also leads to high cost of stationery, storage, and transportation contributing to high operational cost for the organization.

Gaps in the existing technology

- Data encryption, version control, change management process, backup process and availability of disaster recovery site needs significant enhancement in the existing technology

“ One of the challenges with the in-house IT teams of the MFIs is that they start developing a software or application without a holistic understanding of benefits and challenges of the new system. ” -General Manager, BRAC Microfinance

Technology constraints further limit their growth

Cybersecurity is low

- Most of the MFIs that maintain their own data center do not have a disaster recovery center. They usually maintain data back up at the data center, which is located on the same premises. In case of disaster or any unforeseen situations, these MFIs run the risk of losing their entire database.

High operational cost for MFI

- Historically, microfinance field operations have been human intensive, making it inefficient and prone to redundancies. This limits the MFIs' ability to scale up and makes them vulnerable to sub-optimal service, risks, and fraud.

Gaps in the existing technology

- Data encryption, version control, change management process, backup process and availability of disaster recovery site needs significant enhancement in the existing technology

Regulatory limitations have impeded the transformation of MFIs into the digital world

Multiple borrowing and over indebtedness

- According to a study (Khalily and Faridi, 2011), around 31% of individual members reported multiple memberships in 2009. The trend of multiple memberships has been increasing over the years.
- Bangladesh does not have a credit bureau for MFIs which has also aggravated risks of over-indebtedness.

Lack of access to national identity database

- MFIs do not have access to the NID database to help them check the authenticity of clients information and reduce fraudulent activities.
- This often leads to a poor selection of members.

Low cash withdrawal limit at the agent point (MFS)

- According to MFS regulation 2018, "for any cash in transaction in a certain a/c, not more than BDT 5,000/- can be withdrawn from that a/c within next 24 hours."
- This poses a huge challenge for MFIs who plan to make use of MFS channel for loan disbursements as many clients want to withdraw the loan amount on the same day.
- MFS loan repayment transaction charges are high. The customer has to pay transaction fee up to 2% of the transaction amount.

MFIs are not a part of payment system

- MFI clients are not able to get full benefits of products offered by MFIs e.g. savings product as MFIs cannot participate in payment systems of the country like banks do.
- FinTech can become a potential threat in future.

Imperatives for Digital Transformation

Digital transformation of MFIs is essential to remain competitive and better serve their clients (1/2)

MFIs have an edge over new digital entrants in terms of stronger connect with customers, innate customer awareness, human touch. MFIs also have an advantage as they operate within a defined regulatory environment, which though fraught with limitations, has enabled their growth in the last several years. If they transform digitally, they have high chances to retain or even enhance their market share and cope up with the challenges. Digital transformation is no longer an option for the microfinance industry, if they do not wish to become obsolete.

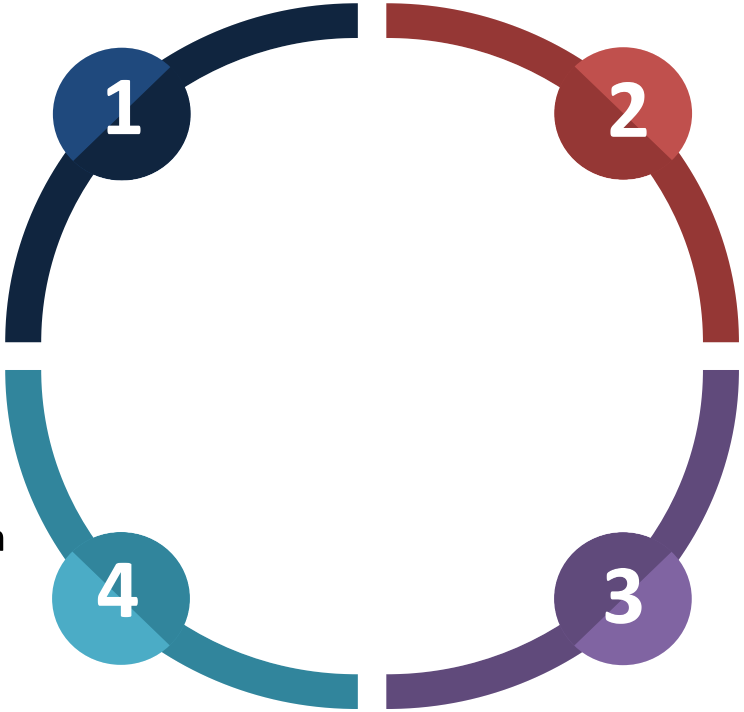
MFIs can undertake digital transformation in four ways

Digitise Processes

Digitising a number of repetitive and low-risk processes

Digitise product and business models

Digitisation for fostering innovation across products



Digitise Engagement with People

Technology can increase connectivity with customers and employees

Digitise Channels

Leverage technology to digitise traditional distribution channels

Digital transformation of MFIs is essential to remain competitive and better serve their clients (2/2)

Future Digital Option (Suggested)	Pillar for Digital Transformation	Challenges it aims to solve
Digital Field Application	Customer Engagement	Staff efficiency, TAT, operational expenses, documentation process, client turn over
• Cashless loan repayment • Cashless loan disbursement • Cloud Database Management	Process and Channels	Cash management, operational expenses, staff frauds Cybersecurity
• Digital Credit • Core Banking System	Product and Business Model	Competition from fintech, operational expenses, new/unreached client segments MFI clients are not able to get full benefits of savings product
Artificial Intelligence	Process and Customer Engagement	Operational expenses, client turn over, credit underwriting through credit scoring model

Regulatory Gaps and Policy Recommendations

MSC

Regulatory Gaps and Policy Recommendations (1/3)

Opportunity	Current Status	Way Forward	
Access to NID data base would enable MFIs to authenticate clients and reduce fraudulent/ghost clients as well as benefit the regulators in their efforts to ensure identification of all.	MFI do not have access to NID consequently client verification is hard, and fraudulent cases may occur.	**Short Term:** Investigate how NID access could happen with MFIs -i.e. what is required, how to go about it, technical specifications Organize a consultative process between MRA and NID regulatory body to support MFIs in NID data access.	Medium Term: • Pilot NID access with a few MFs • Learn from Pilot • Develop a roadmap for all MFIs to have access to NID data Approach: Collaborative effort between MRA and NID
Integration of MFIs into a payment system would benefit MFIs clients access broader range of financial products, such as savings, and consequently support financial inclusion agenda in Bangladesh.	MFIs are not yet part of payment systems consequently MFIs clients do not fully benefit from all financial services.	Short term: • Assess sector's suitability for integration with payment systems • Develop a road-map for integration • Develop an MFI sector strategy for payment system integration • Hold consultations with Bangladesh Bank and MRA to see how integration may be possible	Long term: Introduce gradual integration starting with low hanging fruit Approach: Collaborative effort between MRA and Bangladesh Bank

Regulatory gaps and policy recommendations (2/3)

Opportunity	Current Status	Way Forward	
Increase in cash withdrawal limit in mobile account would enable MFI clients to withdraw the entire loan amount on the same day. It would help MFIs to disburse loan into customer's mobile account and transform their cash dependent operations into cashless or cash-lite.	According to MFS regulation 2018, for any cash in transaction in a certain a/c, not more than BDT 5,000/- can be withdrawn from that a/c within next 24 hours.	**Short to medium term:** Bangladesh Bank should assess the risks of increasing the cash withdrawal limit using mobile account. Bangladesh Bank should take adequate risk mitigation measures before increasing the cash withdrawal limit.	**Approach:** Bangladesh Bank can increase the cash withdrawal limit step- by-step and assess the risks every time.
Regulator should make it clear who would bear the transaction charges for loan repayments made by clients through MFS agents.	Responsibility to bear transaction charges for loan repayments made by clients through MFS agents is not clear.	**Short term** MRA should conduct a consultative workshop with MFIs to understand their views	**Approach:** MRA can approach Bangladesh Bank after having conducted the consultative workshop.

UNCDF SHIFT

Regulatory gaps and policy recommendations (3/3)

Regulatory challenges	Policy recommendations	How to adopt	Responsible regulator
A specific IT guideline including data security standard, data protection, business continuity standard, and cybersecurity, among others, would enable MFIs implement standard IT practices.	MRA does not have IT policy or guideline for MFIs.	**Short team to medium term:** MRA should draft standard IT practices for large, medium and small MFIs.	Approach: MRA should seek MFIs and experts opinion through a consultative workshop.
A clear guideline on the requirement of maintaining a disaster recovery center would help MFIs who want to maintain their own data centre implement standard practices	There is no policy for MFIs to maintain a disaster recovery center. Most of the surveyed MFIs who have in-house data center do not maintain a disaster recovery center	**Short term to medium term** MRA should draft a policy and seek stakeholders opinion	Approach: MRA should seek MFIs and experts opinion through a consultative workshop.

SHIFT

SHIFT in Bangladesh
UN Capital Development Fund
E/8-A, IDB Bhaban, Level 7, Agargaon, Dhaka.
Phone : 88 02 9183471-72
Email : shift.saarc@uncdf.org

UN CDF | SHIFT
SHAPING INCLUSIVE FINANCE TRANSFORMATIONS