



Challenges and Opportunities in Microfinance Technology

IN BRIEF

Demonetisation has led MFIs to upgrade their IT systems to better understand their customers and accelerate their customer acquisition and loan disbursement process using Core Banking Solutions (CBS). How are technology vendors catering to MFIs' dynamic technical needs, and what challenges are MFIs facing in upgrading their technology?

Report by

 awaaz.de



Photo: A women group part of CRISIL Foundation's Financial Literacy programme in Assam.

The MFI sector in India faced two significant disruptions in the last decade: the 2010 Andhra Pradesh crisis, where indiscriminate lending by MFIs put customers in more debt than they could manage; and demonetisation, an unexpected government action on black money that had a cascading effect on the cash-dependent MFI sector. The microfinance sector in India was just regaining its footing from the Andhra crisis when PM Narendra Modi announced demonetisation in November 2016. The PM's sudden announcement had a devastating effect. With a Rs. 54,000 crores book value before demonetisation, the sector had to write off Rs. 7,000 crores¹. Acute cash shortages during demonetisation led some people to withhold their cash, whereas others refused to pay their installments because of loan waiver rumours. For a cash-dependent sector like microfinance, demonetisation necessitated MFIs to invest in technology that can manage, monitor, and track electronic transactions, and also focus on understanding customer behaviour in order to make better credit decisions.

Transitioning to Core Banking Solutions (CBS)

Since 2010, most MFIs have done away with Excel sheets and other standalone software for managing customer data, credit analysis, and loan disbursements. Core Banking Solutions (CBS) have replaced manual methods, bringing in speed and precision to these MFI processes.

Recently, Allahabad-based Sonata Microfinance moved to a new CBS. Sonata's new CBS is capable of automating the entire loan disbursement process start-to-end, leading to time and cost savings while reducing the number of points of human error.

Sonata's CBS, developed by Nelito, is capable of collect-

ing customer data using mobility solutions, conducting e-KYC, snapping images of additional identity documents, storing it on their server, and much more.

"Authorised persons can even see credit bureau reports right in the mobile app. If the person is satisfied with the data, he or she can trigger the next step of loan disbursement. As soon as the authorised person gives a go-ahead, the account department gets an update for scheduling the loan disbursement. Once loan is disbursed, the customer is updated through an SMS. The loan is transferred directly into the customer's bank accounts via NEFT or IMPS and EMI collections happen using NACH," told Anup Singh, Managing Director, Sonata Finance.

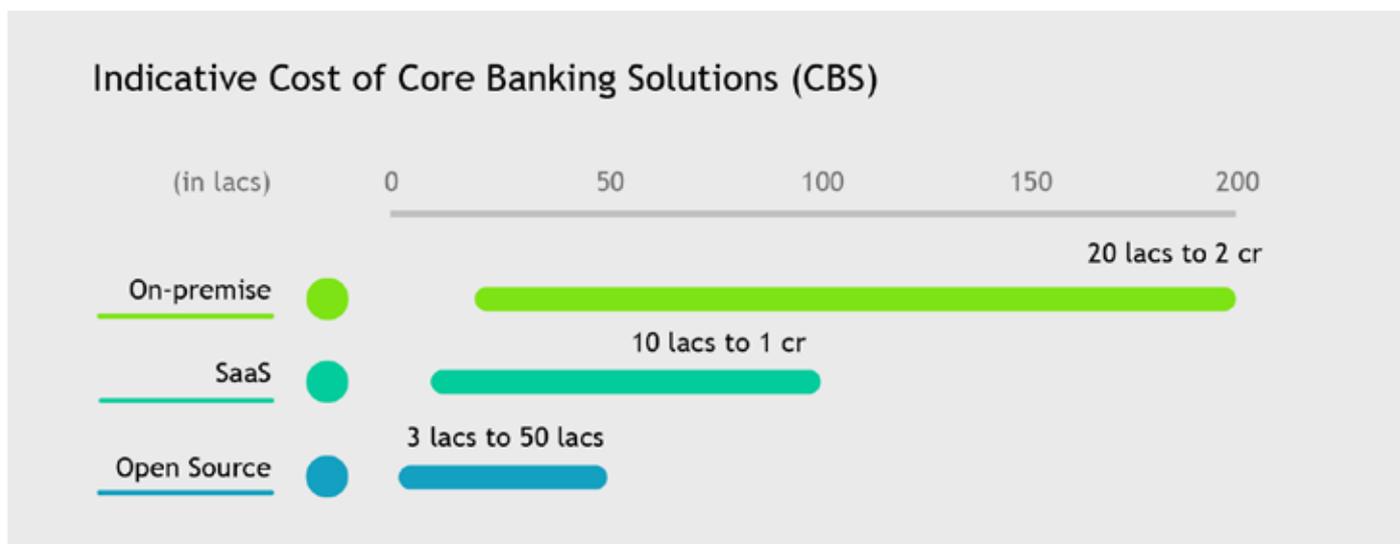
"I have learned this the hard way. I think our CEOs and MDs should not just have expertise in microfinance, but also IT"

- Dr Kalpana Sankar, Co-Founder, HiH India

Even though Sonata had a successful implementation, it required a year to identify the solution and perform the implementation. According to the Microfinance India Report (2010), MFIs have struggled with implementation of technology with some projects stretch over years. One of the main reasons is MFIs' inability in clearly articulating their needs to technology vendors.

"I have learned this the hard way. I think our CEOs and MDs should not just have expertise in microfinance, but also IT. Over a period of 8-10 years in the microfinance segment, I have learned to do proper due diligence,

1. Mondal, D. (2017, November 8). Demonetisation: Micro-finance industry sees Rs 7,000 crore write-offs. *Business Today*.



and ask the right questions to IT vendors. We recently conducted our IT audit with Deloitte. After working with them, I really learnt a lot about systems, disaster management, and system recovery. I think knowledge of IT will be a key driver for growth going forward,” says Dr Kalpana Sankar, Co-Founder, Hand in Hand (HiH) India.

A variety of Core Banking Solutions (CBS) are available in the market, delivered as open source software, SaaS, and on-premise. Costs range from Rs. 3 lakhs (open source solutions) to 2 crores (SaaS and on-premise solutions), with open source solutions on the lower end and on-premise at the higher end depending on the requirement, particularly the need for mobile solutions, automation, custom development, and technical support. Pricing models include transaction-based, percentage of portfolio size, cost per customer, or percentage of loan processing fees.

Of the CBS solutions currently in the market, OpenCBS, is one of the most affordable, at Rs. 3.25 lakhs. Yet cost is not the only important factor when selecting CBS solutions. Shirish Kalangi, Partner & Director at OpenCBS says, “MFIs are not well-acquainted with what open source is all about. More than price, the biggest advantage of using OpenCBS is that it gives complete access to the source code. MFIs who have proprietary CBS cannot easily move to a different vendor for support, but with OpenCBS they can, if they want to.”

OpenCBS has 32 paying clients across the world, including India, Africa, and the Caribbean. With open source technology, MFIs can modify the solution as per their requirement at a cost. The charges are for customisations and developments and are based on the time needed to implement them. They can also be based on the size of the NBFC-MFIs portfolio, and their requirement for additional support services.

Another important factor in CBS selection is choosing the solution that is right for the business in the long run in a way that accommodates technology changes in the future. This requires a deep understanding of the organisation’s needs, but also the technology itself.

An MFI professional who did not wish to be identified for this report stated that even though MFIs might feel they

have transitioned to a better technology, they may still be incapable of integrating with other systems. Recalling a past experience, he said that his MFI’s partnership with a nationalised bank came to a halt because they were using a SaaS-based CBS, which was incompatible with the bank’s systems.

“We wanted to integrate our API with a nationalised bank and use their prepaid cards. But after their technical team audited our systems, they found that it was incapable of handling that process. For MFIs, it’s important that they anticipate technology challenges that they may face in the future before migrating to a new CBS,” he said.

“MFIs are not so much acquainted with what open source is all about. More than the price, the biggest advantage of using OpenCBS is that it gives complete access to the source code”

- Shirish Kalangi, Partner & Director, OpenCBS

According to the Microfinance India Report, in 2010, 42 percent of MFIs were spending less than 5 percent of their annual expenditure on Information & Communication Technology (ICT). Only 15 percent of institutions spent more than 15 percent of their annual expenditure on ICT. However, industry insiders agree that 5 percent of annual expenditure on technology is not sufficient, and should at least double.

“If a person is technologically literate, than they can definitely save costs. Because the entire game is understanding the software and typically everyone goes with past experience. However, we should consider future-based solutions. Usually organisations buy solutions that others are buying, but by the time that solution is implemented, technology becomes obsolete,” says an MFI professional in Mumbai.

Besides CBS, MFIs are also looking at implementing technology solutions that can help them decode customer

behaviour. As of now, MFIs largely rely on data such as timely loan repayments by the customer to determine whether or not to extend another loan. Since MFI customers do not use Google, social media platforms, or other internet-based applications, it means that they leave no digital footprint for behavioural analysis.

The Need to Understand Customer Behaviour

MFIs who have upgraded to CBS have started using NACH mandates to ensure that loan repayments get directly debited from bank accounts of the customers. However, using NACH mandates may not be a full proof solution because most rural customers still do not put their money in bank accounts. Due to this challenge, one way in which MFIs can improve their understanding of customer behaviour is by collecting more data directly from end-customers in the field.

Bangalore-based Artoo provides paperless, and instant customer onboarding solutions to MFIs to manage their customers. It is also capable of capturing 800+ rich data points at the customer's doorstep.

“While everyone thinks of themselves as data-poor, they do have a lot of rich data—you just need to go and ask the customers about their business, their house, source of income, standard of living, etc. You can gather rich data points which we can be used to do big data analysis related to customer behavior. MFIs are always going to remain a high-touch business. And nobody is going to try to change that. But using data, we can create new things for the customers, such as more nuanced products using AI-powered technology,” says Sameer Segal, Co-Founder, Artoo.

According to an MFI professional, since many MFIs are behind acquiring customers, going forward, it will help to have a system for internal credit scoring.

Among CBS', Dvara Solutions offers a multi-dimensional

credit scoring and risk scoring engine based on the data that an MFI has collected from its customers. The tool can be used for making credit decisions, the data for which is collected only once at the source. And if a customer doesn't pass particular criteria, the system prescribes deviations and mitigations.

“We ensure that when the field officer meets a customer, data is entered at the source itself and this is done through the business intelligence portal. We also have a data warehouse which organises data from our system and through other systems such as credit bureaus. All these things are organised into denormalized data sets. Every table has well-defined column headings from which it is possible to pull data in an efficient manner. We do not recommend multiple data entries. We do not recommend copying data from one source to the other,” says Arun Kumar D, Head - Business Development, Dvara Solutions.

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- Sameer Segal, Co-Founder, Artoo

Technology providers like Artoo and Dvara Solutions know that training is critical to adoption and understanding of the software. Both the technology providers have trainers who help MFI staff onboard with their technology.

“We feel that it is not right to give technology and then be hands-off. We create our own training modules in local languages, and our training happen at client locations. We understand that the technology can change their lives and the way they function. People who are using the technology, their lives will definitely be changing,” says Dvara's Kumar.

Dvara's platform can be localised to regional languages.



Photo: A woman interacts with a field officer (right) from Rashtriya Gramin Vikas Nidhi (RGVN) in Assam.

When it did a pilot in eastern UP sometime back, the staff was not used to smartphones. But it took only three days for Dvara Solutions to train them and get the field staff up and running because the system was ready in Hindi. Dvara also has an internal learning management system where they provide certifications.

Technology providers understand the value of integrating local language in MFI technology for staff training. It helps the staff to become comfortable with the product. MFI customers too have continued to respond well to local language communication in payment updates and story-based financial literacy training on mobile phones.

Maintaining the 'High-Touch' using IVR

Even in a high-touch industry like microfinance, there are gaps in customer engagement. MFIs typically interact with their customers once in 15 days while collecting cash payments. Between two collections, there is no connection between an MFI and the customer. Many MFIs have started using SMS or IVR during this period for broadcasting episodes on financial literacy and voice payment receipts, collecting data on user perceptions about personal finance, and mobilisation efforts before important events.

When HiH India was working on a recent project for SIDBI in Madhya Pradesh, they had broadcast IVR calls to 20,000 people in their local language inviting them to learn about how ATMs and POS work. However, more than 25,000 people attended the promoted sessions because many who received the IVR calls also brought their friends and family. This instance also showcases that penetration of mobile phones in rural India is huge and MFIs can use this reality to their advantage.

“Our use of SMS or IVR is limited to giving updates to customers on their payments. But we are working on a system based on guidelines laid out by the RBI where we can update customers in vernacular languages. Today, most of the customers have a phone, and we want to make use

of it to make our engagement with our customers more friendly,” says HiH India’s Dr. Sankar.

Awaaz.De’s end-to-end voice solutions overcomes the language, literacy, and communication barriers that NBFC-MFI customers face. Active in more than 20 states across India, the technology is so flexible that it seamlessly integrates with any MIS.

“Since many MFI customers and their families use basic feature phones, Awaaz.De’s pre-recorded, interactive, vernacular voice communications platform uses this fact to its advantage to help MFIs grow and cut NPAs”

- Elliot Rosenberg, VP Business Development, Awaaz.De

“Since many MFI customers and their families use basic feature phones, Awaaz.De’s pre-recorded, interactive, vernacular voice communications platform uses this fact to its advantage to help MFIs grow and cut NPAs. Dozens of MFIs including IFMR Rural Channels and Services, Margdarshak Financial Services, and NABFINS leverage Awaaz.De to send welcome calls, payment receipts, and overdue notifications as well as cross-sell products at 90% lower cost than telecalling,” says Elliot Rosenberg, VP Business Development, Awaaz.De.

Awaaz.De recently worked closely with IFMR Rural Channels and Services (IRCS) to design and implement personalised voice payment receipts as a replacement to SMS. Seamlessly integrated with IRCS’ MIS, Awaaz.De’s solution fully automates dynamic, near real-time, Tamil-language voice payment receipts targeting over 2,50,000 customers monthly. Awaaz.De is empowering customers with timely transaction information to prevent discrepancies with cash collections and build customer trust.

HOW VOICE PAYMENT RECEIPTS WORK

1



Borrower gives cash to the loan officer

2



Loan officer enters payment details in the tab

3



Data gets registered in MIS

4



MIS calls Awaaz.De’s API

5



Awaaz.De sends call with unique details to the borrower in in local language

Conclusion

CBS has improved the overall MFI loan disbursement process. Many MFIs agree that the solution has brought much needed speed and precision, allowing them to scale services to more customers.

The availability of various CBS solutions such as on-premise, SaaS, and open source has presented a wide variety for MFIs to choose from. While each of these platforms has its advantages and disadvantages, the most important advice MFI professionals want to give to their peers is to choose a solution that is advanced enough to accommodate future developments in the sector. MFI professionals believe that having in-house technology talent can certainly help in articulating needs to technology vendors and speeden up the implementation process. Some professionals also feel that having MDs and CEOs with expertise in technology can help MFIs in negotiating with technology vendors and save on technology-related costs.

Technology providers like Dvara and Artoo are offering solutions that are capable of making the most of rich data collected from field officers to analyse customer behaviour and avoid credit risks. The fact that both these solutions provide staff training and certifications along with their technology is also helping MFIs in faster implementation. The use of SMS and IVRs to remain connected with their customers outside of the 'high-touch' hours is an innovative step forward. The growing use of mobile phones and penetration of mobile networks in rural India has prompted MFIs to consider using the platform to broadcast messages in local languages on financial literacy and voice payments receipts.

After demonetisation, there is a paradigm shift in the way MFIs are using and aspiring to use technology. And without a doubt, technology vendors too have made significant progress in catering to unique MFI needs. However, MFIs continue to find innovative ways through technology to cost-effectively reach and collect data from hard to reach last mile customers.

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ABOUT AWAAZ.DE

Financial institutions trust Awaaz.De's end-to-end mobile communications approach spanning campaign design, multi-language audio creation, IVR/SMS/web platform delivery, and data analysis.

Our clients and partners include leading NBFCs, banks, insurance companies, and BCs. Moreover, a Harvard University research study showed our platform gives a 10x social impact ROI and achieved a 75% cost savings of data collection compared to in-person surveys.

Awaaz.De has business operations in Mumbai and headquarters in Ahmedabad. Leading organizations in Agriculture, Finance, Health, and Education trust Awaaz.De's full-service platform to communicate at the last mile. Awaaz.De has reached over 1.5 million end users across 12 countries and over 23 states in India.

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