

MIS and Microfinance Issues, Challenges and Future Prospects

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I. INTRODUCTION

Management information service (MIS) has emerged as a potential force to solve various types of business problems. Technology is widely regarded as the solution to most problems. Although its importance is being felt in every sector yet its role in microfinance is of vital importance. It has grown as an effective tool to achieve the goal of providing access to financial services by the low income people. It can be used f at three levels in microfinance: (a) Institutional level; (b) Institutional -Client interface level; and (c) Sectoral/Industry level.

At the institutional level, MIS is very critical for the building of efficient/effective system to manage data and information processes and activities. A good MIS also helps an institution to understand its client needs. At the institution - client interface level, MIS is typically used for delivering (low cost) retail solutions. Here, the use of technology is to promote efficiency and client oriented products/processes, so that the overall cost of delivering market led financial services is minimized. The use of MIS at the sectoral level, relates to providing the sector with information on various aggregate segments of Individual clients and also individual institutions.

In other words, MIS can be used to help develop a credit bureau or more appropriately, a financial services information bureau. This paper is an attempt to look at this critical aspect and highlights issues and challenges for deployment of MIS for microfinance.

II. FINANCIAL SERVICES AND MIS

There is high interdependence between financial services and MIS. MIS Plays a dominant role for making people to access the financial services at all levels. In case of microfinance it works at three different levels namely at stakeholders level(ii)strategy formulation level (iii)decision level helps to operationalise the process for effective out comes at the basic level. This is elucidated by **fig no 1**.

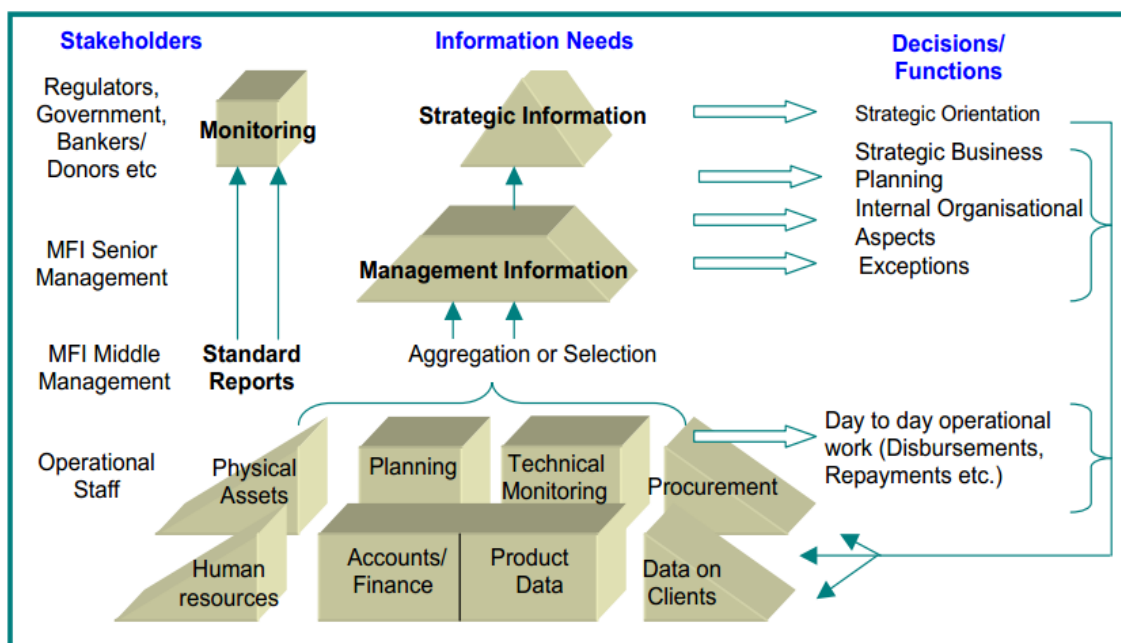


Figure 1: Information Needs in a MFI

“A management information system is the series of business processes and actions involved in capturing raw data, processing the data into usable information, and disseminating the information to users in the needed form. Hence, a management information system captures data, processes it and provides relevant information for control, analysis and decision-making at the operational and strategic level in a cost efficient and timely manner”.

MIS has a special relevance for microfinance institutions (MFIs) as their operations involve a very large numbers of repetitive and small financial transactions with clients at frequent intervals. These transactions have to be constantly monitored to assess the health of the organization and decide on future actions. Thus, operational and strategic decision making in a MFI relies heavily on appropriate and timely information being gathered through an effective MIS.

Generally, an effective MIS should incorporate the following characteristics

- ❖ User friendliness for maintenance and reporting
- ❖ Timely, accuracy and reliable information
- ❖ Design and output flexibility to suit the organization’s changing needs
- ❖ Links to ensure data flow within an organization
- ❖ Secure and stable.

A good MIS is therefore absolutely necessary for the MFI to manage its interface with the clients and also to manage its activities/processes in a manner that brings efficiency and effectiveness to its operations.

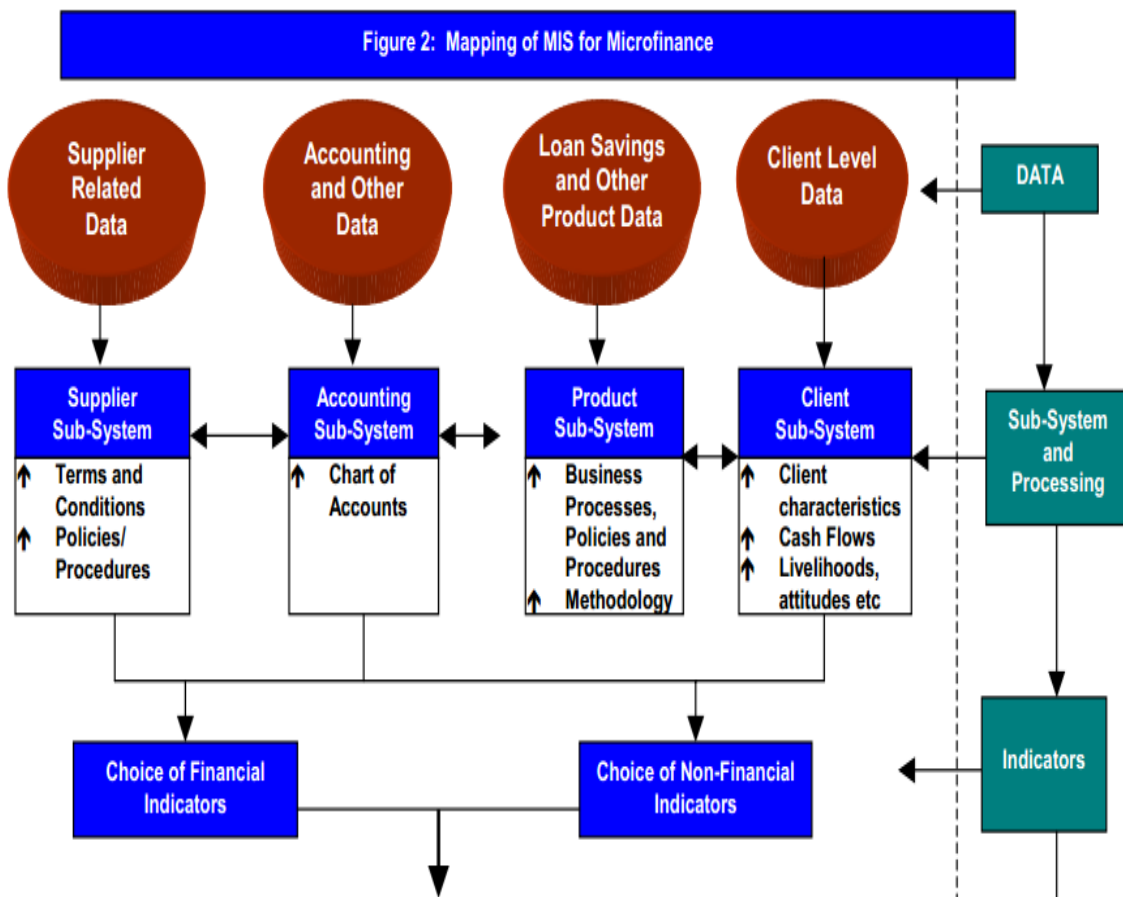


Figure 2. Working of MIS

III. CRITICAL ASPECTS IN DESIGN OF AN MIS FOR MICROFINANCE

“Microfinance is characterized by a large number of repetitive transactions, and MFIs have significant diversity in their approaches to delivery of financial services for the poor. These aspects certainly complicate the design and implementation of MIS for microfinance.

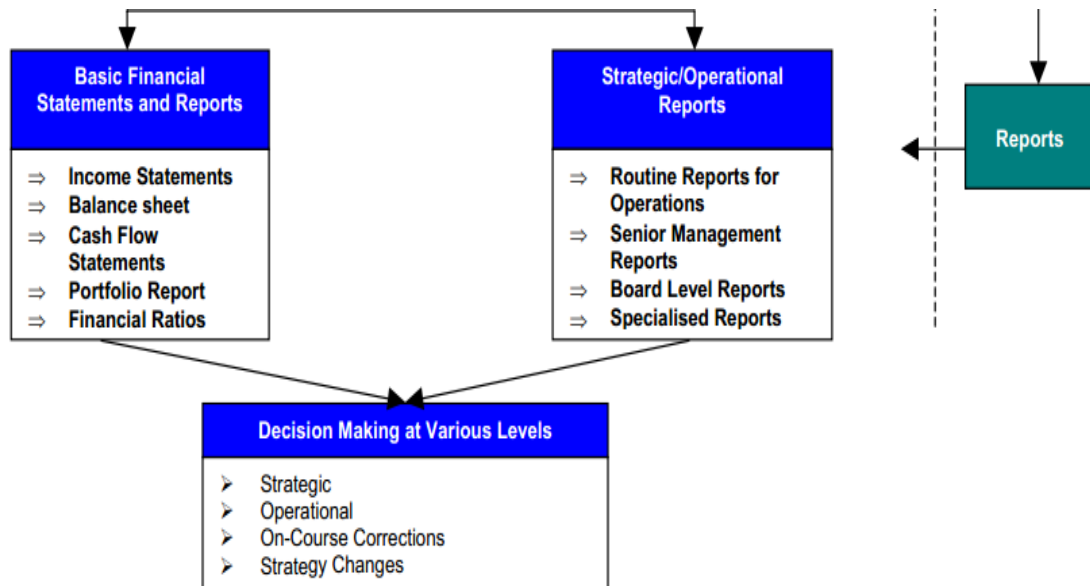


Figure 3. Designing aspect of Microfinance

Assuming that MIS stores almost 500 entries per client per year, most of which will be automatically updated and may not require data entry on a concurrent basis and if the MFI has 10000 clients, the number of entries would be equal to 5 million entries, which is certainly huge. If 5 million entries are required for 10000 clients for a year, than it is difficult to imagine the number of entries that would be required in a situation where an MFI has been operational for several years.

Going by the above analysis if an institution has operated for 10 yrs, has 10000 clients, uses weekly repayment, offer's savings and insurance, products and collects basic demographic data from clients, such an MIS is likely to have at least 50 million entries with regard to client data and transactions. If accounting, wholesaler and other information is included, the number of entries would certainly increase. This certainty has implications for design and implementation of MIS in MFIs. **Thus, the database design is very critical, and it should optimize system accuracy, performance and functionality.**

3.1 Factors involved in the Implementation of MIS

Following things are vital for effectively integrating technology and automating MIS in MFIs:

- ❖ Do not computerize until the microfinance model is reasonably stable. Often nascent MFIs, which are experimenting their basic and core processes, find themselves faced with the never ending task of (re) designing the MIS .
- ❖ There is no substitute for a comprehensive need assessment through appropriate methods, prior to automating an MIS. A complete needs assessment is very critical and the time spent on this aspect, is well worth its cost. Proper needs assessment would provide detailed process maps and flows on various activities - with inputs, process descriptions and outputs and their sequential linkages.
- ❖ Develop flexibility into the MIS. The MIS design should also be flexible, to the extent possible and feasible. The best way to address this is by having a separate business rules module, with options for alternative methods of interest calculation, interest rates, loan installment repayment frequency, loan term and several other aspects including generating user defined reports.
- ❖ Ensure compliance of MIS to best practices. Six best practice aspects are very critical while automating an MIS for an MFI: (a) the sequence in which client repayments is being appropriated. should be as follows – (b) fines (if applicable), (c) interest (d) overdue, (e) interest due (if due on the date on which repayment comes in), (f) principal overdue and principal.
- ❖ Past data conversion must be looked into at the time of designing an automated MIS. Migration of past data is very critical to continuity and it needs to be reviewed even at the design stage, so that the new database is designed to take care of various aspects with regard to past data. Using professionals for data conversion is very critical.
- ❖ Maintenance of the automated MIS is a serious business. Maintenance is an often ignored aspect and MFIs must be willing to pay for this aspect. The importance of negotiating a maintenance contract for the automated MIS at the design stage of the MIS itself should not be underestimated.

3.2 Standards for MIS in Microfinance

The application of a standard MIS in a microfinance unit accompanied by the same standard in its different vendors may help an MFI to compare the results across the system meaning fully. The minimum acceptable standards for MIS should include the following parameters:

- Scope of MIS in terms of products and activities covered.
- Nature of System – whether a Relational Data Base Management System (RDBMS) or otherwise.
- Type of System – Simple MIS to Comprehensive ERP etc.
- Robustness of the database in terms of its ability to upscale and perform with accuracy and speed at very high volume of operations.
- Transparency in terms of the various processes that the MIS uses to generate information. For example, this should include information method of ageing a past due loan, sequence of client repayment appropriation etc.
- The MIS should be capable of satisfying the future requirements of the MFI as well, which means that it should not be a small experimental piece of software but should be scalable to reach the large number of clients along with the institutions’ growth.
- Utility and efficiency of MIS in terms of its capture and processing of data for decision making.
- Interface design of MIS in terms of how easy it is for the ultimate user to use it and whether it facilitates error free usage.

Thus, there is a critical need to establish standards for certain non-negotiable in terms of minimum system requirement for the MIS, for financial intermediaries, including aspects like asset classification and provisioning, income recognition and reversal, accounting standards, capital adequacy.

Further, the MIS should be consistent with the information that the financial intermediary generates and uses internally to measure, manage and monitor its portfolio and other risks. As management information systems and management reporting continue to evolve and improve, the timeliness and extent of such disclosures should correspondingly improve.

IV. MIS BASED RETAIL MODELS FOR FINANCIAL SERVICES:

4.1 A Generic Framework

In the last few years, we have seen several new initiatives being implemented / tested across the sector, worldwide. Figure 3 below provides a generic diagrammatic framework to understand such MIS based retail models for financial services.

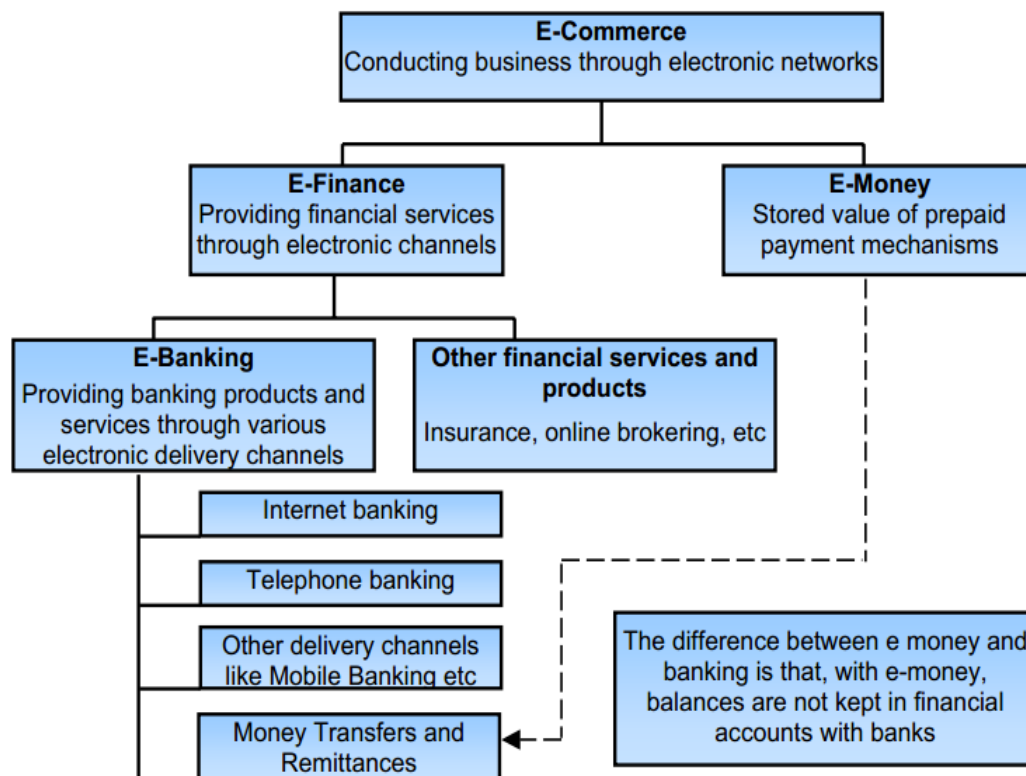


Figure 4: Framework for understanding technology based retail models

4.2 Alternative MIS Technologies used for microfinance.

The growing importance of MIS for better financial services has made certain banking organizations to apply it at various levels. The following table clearly testifies its usage:

Table 1 gives a brief idea on alternative technologies for microfinance in India.

Table 1: Alternative Technologies for Microfinance Delivery Under Testing		
S.No	Organization	Description
1	IDRBT	“The Institute for Development and Research in Banking Technology (IDRBT), along with banks, is rolling out a pilot project at Warangal in Andhra Pradesh to offer Biometric cards to people in rural areas. Union Bank of India, SBI, Andhra Bank and UTI Bank, among others, are participating in this project. Under the pilot project, each bank will appoint a village business facilitator to identify account holders before offering biometric cards to villagers for use at the terminals deployed in the area.”
2	NABARD	””NABARD has initiated and supported several pilots described below. As the NABARD annual report 2006 notes, “The micro-finance sector is making rapid strides and has had a positive impact on the lives of the rural poor. In order to improve the sustainability of the SHG-Bank linkage programme and also to simplify some of the procedures related to it, NABARD has been experimenting with Grama’ and Setting-up of Computer Munshi.
3.	ICICI Bank	‘ICICI and some MFIs are said to be conducting a pilot whereby loan officers use POS devices at group meetings’.
4.	Citi Bank	Citi Bank is using bio-metric ATMs for rural conservers to collect savings using Business Correspondent/ Business Finance Channel.
5.	ICICI Bank - Fino	ICICI Bank Fino Outsourced MIS and Smart Card Technology pilots in India with some MFIs.
6.	UTI Bank	UTI Bank is using ATMs/other technology to deliver a range of Financial Services to low income tribal and other farmers. UTI Banks is also likely to get into using a mobile ATM network for farmers.

‘While electronic banking can provide a number of benefits for customers and new business opportunities for banks, it exacerbates traditional banking risks. Even though considerable work has been done in some countries in adapting banking and supervision regulations, continuous vigilance and revisions will be essential as the scope of e-banking increases.

4.3 Perceived benefits

At the face of it, the existing system of wage payment (through the Post Office or POs) looks fine especially given the 1.55 Lacs plus post offices (POs) in India (roughly one in every Panchayat). Banks offer a technology platform (based on biometric identification and smart card) with the following benefits:

- Long queues in front of a Post Office mean a loss of a full day’s work/wage. Under the new arrangement, this can be avoided.
- There are chances of bias or discrimination because of the socio-political linkages of post masters, which can be minimized under the new arrangement.
- Rural POs are short on manpower and using them as a channel for wage disbursement can burden them further.
- VOs can have better penetration and reach as compared to PO or Village Panchayat since they are not present in every village (roughly three to five villages). VOs may also be easy to monitor.
- Cash for the beneficiaries that don’t turn up, can’t be taken by another person in case the verifications are done electronically. Manual records are easier to manipulate than electronic records and POs/Panchayat secretaries could do so. Also, there are minimal chances of frauds or siphoning of funds as physical presence of the beneficiary (biometric identification) is necessary for getting the payments in case of smart cards.

4.4 Future possibilities

Under the present pilot, FINO has “virtual account” of all the beneficiaries of the NREGA at their core banking solution enabled servers but are yet to find a Bank which can buy/share this client specific data and upgrade it into a saving bank’s account. Unlike the present case then, FINO’s role will be limited to that of technology provider.

- As stated earlier, this ‘virtual account’ for every beneficiary at the Core Banking Solution’ of FINO can act as a saving banks account after it is transferred to a bank that wishes to make the beneficiaries of such programmes as its customers for driving the financial inclusion mandate. Banks would still need an agent that is able to deliver the cash at the doorstep of the customer. An NGO or preferably an MFI (as it has experience of holding cash) acting as a Business Correspondent could provide this service.

4.5 Technology, Regulation and Future of Microfinance

Several stakeholders (MFIs, banks, corporate, postal/commercial banks, insurance companies, pension funds, telecom companies etc.) are keen to enter/scale up Microfinance in India. Technology is being used to incentives them to deliver efficient and client responsive financial services to low income groups, in a sustainable and scalable manner and this effort will have to continue more vigorously.

Thus, technology must first be piloted properly and re-oriented based on piloting feedback before it is introduced. Otherwise, it could turn out as a recipe for large scale disaster, at time of full and final rollout.

Before introducing technology, it is therefore imperative to examine the following aspects:

- i. Whether there is any value addition through the deployment/development/use of the said (innovative) technology?
- ii. How does the technology proposed to be introduced/deployed, really compare and compete with currently used technology/process/activities, especially in terms of aspects like - affordability to client, cost of deployment – pilot and rollout, scope of services offered and features available, ease of use from a client perspective, physical and other convenience for customer etc.
- iii. Whether significant training would be required to enable staff/end user/other stakeholders to use the technology on the ground?
- iv. Whether there is a business case for introducing/deploying the technology? What direct or indirect or cross subsidies would be required, for what aspect and for how long?
- v. Can the technology be scaled up and replicated easily in several contexts and are there minimum scale requirements for the technology, both in terms of the volume of its operations and also supportive infrastructure required?
- vi. Is the technology compatible with existing and/or future regulatory/supervisory requirements? Does it mandate the presence of specialized skill for regulators and supervisors?

Therefore, while new and innovative technology is always welcome, it is imperative that prior to Large-scale rollout, these technologies is thoroughly piloted and pilots dispassionately and objectively evaluated.

V. SUGGESTIONS

MIS in microfinance represent an ‘end- to-end’ business solution. At the field level, It addresses customer information, processing and client related transactions. The field technology should literally transform the field operations into a mobile banking system. The mobile system in our country can do wonder for the microfinance industry. it can connect millions and may allow the customers to receive disbursements, make loan repayments and also conduct other transactions electronically. the main computing platform forming the core of the central workout should have the ability to handle huge data from varieties of customers and also process the data. The field level technology can comprise card based solutions that can be used with mobile devices, handheld computers, simputers and of course mobile phones. The smart card can serve as an electronic passbook that can hold information about all the transactions carried out by the customers. Technology can certainly aid in the outreach and networking of micro-entrepreneurs.

The third of world population posses mobile phones and partnering with mobile service operators may provide banks a chance to penetrate in the remote areas. The ability to leverage an existing infrastructure relieves the pressure on squeezing more out of each transaction and thus enables small-value transactions. WIZZIT, a recent start-up, is a cell phone based banking facility that targets an estimated 16 million unbanked or underbanked South Africans – about 60% of the country’s population. WIZZIT does not require users to have a bank account and is compatible with early generation cell phones that are popular in low- income communities.

MIS is an enabler. To serve the unbanked population cost effectively, bank needs to innovate. Apart from microfinance, concepts such as peer-to-peer lending, use of alternative credit data and mobile banking have opened up numerous possibilities for banks, including: low fee cheque accounts, money orders, remittances, and payroll cards. For instance, Citibank's Suvridha programme has penetrated new segment and has targeted the emerging middle class in India and has a low minimum deposit requirement for opening new cheque accounts. To each diverse segment, banks can concentrate on sponsoring or promoting their affiliations with local community organizations and through local publications.

The microfinance industry has been operating with outdated technology like physical ledgers, voluminous entries, and papers and files occupying a huge office space and then the most critical; the safety of the documents is not assured. This coupled with the coordinator carelessness sometimes leads to deficiency of the system and may lend itself to fraud. MIS can address these issues very effectively.

VI. CONCLUSION

Riding on the technology will give the MFIs a definite edge and it is considered an ideal solution to outsource the central system and the facility could be accessed deploying the various connectivity options. Multiple users will bring in economics of scale and the MFIs stand to benefit from the outsourcing model. The availability of basic demographic data through unique ID opens up flood gates of delivering multiple products. The development of credit data of a poor customer helps convert the repayment history to soft collateral, which in the absence of any physical collateral is a definite enabler to access finance.

The day is not far off when poor in India equipped with mobile phones and smart cards obtain microfinance, buy seeds and fertilizer by making payments via the mobile phones, sell their crop and receive a payment into their bank accounts, update their balances on their smart cards at POS terminals, and file their taxes through the POS terminals, facilitated by agents. For the bankers it would definitely reduce the workload as well as the transaction cost. Individual client level information makes microfinance more transparent and also puts together the data available for verification and scrutiny that will allow substantial amount of low cost funds to be deployed in the priority sector of microfinance. Bringing unbanked people into the mainstream has been an important social goal of responsible banking.

It may be concluded that MIS plays a vital role for the success of microfinance organization. It gives an easy access to the customers on the one hand and on the other it makes the collection and interpretation of data easy for the microfinance institutions, which can be passed on the customers. It can increase the efficiency of such institutions and make them competitive. The efficiency of such institutions will not only widen the horizons of Indian capital market but may also help to make low income people equal partners in the economic development of the country.

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