Management Information Systems: A Practical Toolkit

Participant Manual

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A learning toolkit is never “final” as new techniques, tools and resources become available and are shared with one another. Participant feedback and comments will assist to continually improve this toolkit and its resources.
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1. Introduction to MicroSave

MicroSave is a team of experienced professionals that has been operating for ten years and is “the most reliable consulting firm for financial service providers”. We are locally based and understand the needs of our customers, their operating environments and the unique features of each institution. Our extensive experience and willingness to share means that we provide practical, market-led solutions. MicroSave provides each partner with comprehensive, customised strategies that drive growth and business profitability.

MicroSave provides premium quality technical assistance and training on an applied market-led approach to providing financial services. This includes:

- Strategic Business Planning
- Marketing (customer service, corporate brand and identity, product marketing, staff incentives etc.)
- Product Development (market research, costing & pricing, process mapping, pilot-testing, risk analysis, roll out)
- Developing and Delivering Savings Services
- E-banking
- Research/Documentation/Dissemination
- Project/Programme Reviews
- Qualitative Impact Assessments

MicroSave provides practical, market-led solutions to financial service institutions and technical assistance providers. The MicroSave team assists clients to succeed and achieve their mission and business objectives. Unlike other technical assistance providers, MicroSave’s on the ground experience provides practical, tried and tested approaches that build capacity leading to increased efficiency, innovations and customer-focused business growth.

MicroSave offers:

- Expertise grounded in years of experience working on a variety of organisations and institutional forms – commercial banks, NGO-MFIs, Postal Banks and NBFCs throughout Africa & Asia.
- Unique tools and practical solutions that are empowering for the financial institutions and their customers.
- A history of helping financial institutions achieve very significant growth and a sustainable, positive impact.
- A market-led approach that has changed the microfinance industry.

MicroSave has worked with a variety of clients over nearly ten years. Donors have included: DFID, UNDP, CGAP, the Governments of Norway and Austria, the Ford Foundation, the Bill & Melinda Gates Foundation, the Omidyar Network, Housing Development Finance Corporation, ICICI Bank etc. In addition, many institutions have bought services directly: Equity Bank, Vodafone, FINCA, Spandana, Commercial Microfinance Ltd., ABN Amro Bank, Bandhan amongst many others.

A few examples of MicroSave’s work are:

- At Equity Bank (Kenya), MicroSave played a key role in its growth from 100,000 to 1,500,000 customers in 6 years, working with bank on: strategy, market research, savings and loan product development, process mapping, costing and pricing, customer service, corporate brand and identity, product marketing and e-banking.
- MicroSave provides technical assistance to over 20 MFIs being supported by Opportunity International, Australia on rapid institutional assessment, strategic business planning, market research and product development, process mapping and credit management.
- At Bandhan (India) MicroSave assisted with process mapping, the strategic planning process as well as an analysis of the challenges to rapid growth and the state of the loan portfolio. Bandhan has already added nearly 1,000,000 new clients.
• **MicroSave** is working for the **ABN Amro Foundation** to strengthen around 40 small MFIs in the under-served areas of the north and north east India – providing training and technical assistance on governance, basic accounting and financial management, operations, internal audit and controls and human resource management.

2. **Management Information Systems**

With the current trend in the microfinance community toward significant scale-up of activities, managers of many microfinance institutions are increasingly recognising the acute need to improve their information systems. Methodological issues, staff development, and even financing are frequently not proving to be the critical constraints to growth. Rather, the institution's ability to track the status of its finances, and particularly its portfolio, in a timely and accurate manner is often the most pressing need. The reliability of the systems tracking this information is in many cases the difference between success and failure of the lending operations, and therefore of the institution. All organisations have information systems of some sort, or they wouldn't be able to retain adequate confidence from their employees, clients, donors, and investors to continue operations. Having the minimal necessary systems in place - say a manual accounting system that produces financial and portfolio reports one month late - might be seen as sufficient. Why undertake the massive effort and cost of improving information systems? Because good information is essential for the institution to perform in an efficient and effective manner - the better the information, the better the institution can manage its resources. In a competitive environment, the institution with better information management can make more informed strategic decisions and so is at a distinct advantage.

It can be concluded that the pursuit of a solid MIS is one of the most important tasks facing most MFIs. To endeavour to scale-up *without* adequate information is an invitation to disaster.

This toolkit will enable participants to appreciate the basic concepts of MIS and understand its role and importance in planning, management and control functions.

3. **Data and Information**

Management Information System or MIS is often used as a synonym to the network of computers that are seen in an MFI. However, to appreciate the importance of MIS, an understanding of certain basics about Data, Information and MIS, and the link between the three is necessary. The following picture captures the link between the three:

![Diagram of Data to Information]

A Management Information System is the series of processes and actions involved in capturing raw data, processing the data into usable information, and disseminating the information to users in the form needed to facilitate decision-making. So, what is the difference between data and information? *Exercise 3.1* helps in understanding the difference between Data and Information. *Exercise 3.1* provides a set of entities which could be either categorised as Data or Information.

Data is a gathered body of facts generally unprocessed and usually formatted in a special way. It is a formal representation of raw facts from which information is constructed by processing or interpreting. It

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also is factual information used as a basis for reasoning, discussion or interpretation. Data, on its own, never provides insights.

Information is the result of processing, manipulating and organising data in a way that adds to the knowledge of the receiver. This involves analysis and interpretation of data to describe something.

For example, a loan repayment transaction amount in its raw form does not show whether the payment was on time nor does it shed light on the status of the loan and so it is data. On the contrary, if the loan repayment transaction amount is compared with the repayment schedule, information can be obtained regarding the loan being current or not, and in case of the loan being delinquent, the age of delinquency.

This information can be used to make a decision on loan follow-up or provisioning.

Data in itself is generally not useful unless it is converted to information. An institution can be flush with data and yet have little information. Information is the data that has been processed and presented in a form suitable for interpretation often with the purpose of revealing trends or patterns. Information helps someone make a decision or gain insight.

To enable participants to appreciate the role of MIS in converting data to information Exercise 3.2 provides a few data points collected from an MFI and forces participants to identify what information could be gathered from these data points. Solution to Exercise 3.2 provides possible information that could be collected from these data points.

4. Understanding MIS

Exercise – MIS in your MFI – is used for understanding one’s own MIS and Handout 8.4 – Mapping MIS – can be used as a framework for doing this exercise.

When information systems are designed to provide information needed for effective decision making by managers, they are called management information systems. MIS is a formal system for providing management with accurate and timely information necessary for decision making. The system provides information on the past, present and projected future and on relevant events inside and outside the organisation. It may be defined as a planned and integrated system for gathering relevant data, converting it into correct information and supplying the same to the concerned executives. The main purpose of MIS is to provide the right information to the right people at the right time. The output of an MIS is information that sub-serves the managerial function of decision-making. When a system provides information to persons who are not managers, then it will not be considered as part of an MIS.³ Exercise 6.1 illustrates how decision-making is related to information and information sources.

An MIS is not simply a computer programme, and it involves more than just calculating a few ratios. Information management is first and foremost people communicating with one another about events that affect the work of their organisation. The chart of accounts, all the forms used by an institution - from receipts to loan applications to staff vacation requests - meetings, reports, policies and procedures, the staffing structure, job descriptions, the planning process, and, yes, the computer software - all these and more influence the flow of information in an institution and so, together, make up the Management Information System.

MIS in MFIs has special relevance since their operations involve large number of clients doing repetitive transactions of small amounts at frequent intervals of time and in small amounts. These transactions have to be constantly monitored to assess the health of the organisation and decide on future actions. The recent focus on the Double Bottom Line requires that MFIs keep track of the clients they serve, the extent, and the changes/impact in them.

Requirements of different stake-holders – both internal and external – play a key role in the way an MIS is designed. So, any analysis of an MIS or creation of a new MIS should be viewed in the light of the

stake-holder’s needs. The difference between a good and a bad MIS is the extent to which stake-holder’s needs are satisfied by the MIS. To get an idea of what could be some of the stake-holder’s needs, a role play is done as Exercise 5.2. This is designed for participants to play the roles of a few stakeholders and thereby understand two things: i.) the different stake-holders it should handle and ii.) whether the MIS adequately fulfils different stake-holder’s information requirements or not.

Management Information Systems should include certain key aspects to be effective – user-friendliness for maintenance and reporting, accurate and reliable information being provided on time, design and output flexibility to suit the organisation’s changing needs, ability to ensure data flow within an organisation and security and stability of the data collected as well as the information provided.

5. Sub-systems in an MIS

A full Management Information System includes all the sub-systems an institution uses to generate the information that guides management’s decisions and actions. A MFI generally has two main systems: the accounting system and the portfolio tracking system. MFIs have other information management needs such as those pertaining to human resource management for which they have a HR sub-system. Some MFIs also maintain a sub-system for gathering data on client profile and impact on clients, often at the behest of donors. But financial and portfolio-related activities generate by far the heaviest volume of data for processing.

Figure 5.1 below shows the relationship between the accounting system and the portfolio system, together with other elements that affect the MIS. The accounting system is influenced primarily by the chart of accounts. The portfolio system is influenced by an MFI’s specific policies and procedures as well as by its lending methodology. The data generated from day-to-day activities is processed into information, which is then presented in financial statements and management reports. The form and content of these reports are influenced by the indicators chosen by an institution to monitor its performance. Many indicators and reports are generated by combining information from the accounting system (such as income and expenses) with information from the portfolio system (such as number, amount, and size of loans, or number of staff). Although independent, the two systems share data and must be compatible.

![Figure 5.1](source: CGAP, “MIS Toolkit”, 1999)
5.1. The Accounting Sub-System

Although the standards guiding accounting and auditing procedures vary greatly from country to country, there are almost always basic principles that determine the underlying logic of the accounting side of MIS. Frequently, these standards are developed by a central authority (such as the Financial Accounting Standards Board in the U.S.) and applied to institutions that fall within a particular area of the tax code (such as non-profit, or non-governmental, organisations). General ledger-based MIS programmes incorporate and reflect these accounting standards and conventions. Therefore, finding an existing accounting programme that performs at least the basic functions required of a microfinance institution, and that will provide the essential accounting reports (income statement, balance sheet, and cash flow), tends to be fairly straightforward. Management should clearly define the kinds of variations on these basic reports that it will need in order to oversee operations effectively, such as income statements by branch or balance sheets by funding institution. The general ledger can then be designed to capture the relevant data and generate reports at the appropriate level of detail.

The core of an institution’s accounting system is its general ledger. The skeleton of the general ledger is, in turn, the chart of accounts. The design of the chart of accounts reflects a number of fundamental decisions by the institution. The structure and level of detail established will determine the type of information that it will be able to access and analyse in the future. Management must be clear about its information needs and be able to reach a balance between two contrasting considerations. If the chart of accounts captures information at too general a level (for example, by not separating interest income from fees), the system will not provide the kind of detailed information that management needs to make informed decisions. On the other hand, if the chart of accounts is designed to capture too great a level of detail, the system will track needless amounts of data and generate information that is so disaggregated that management cannot identify and interpret trends properly. In addition, the greater the level of detail, the longer and more costly it will be to gather the data and process the information.

5.2. Financial Product Monitoring System or Portfolio Sub-System

While well-established accounting practices are reflected in general ledger-based MIS, there are currently no standards or widely accepted guidelines for the financial products tracked by an MIS. As a result, each MIS designed for portfolio management has its own approach to what information is tracked, what kinds of reports are generated, and, most importantly, what kinds of features are included. Some of the key features that vary widely among loan portfolio systems, for example, include: the types of lending methodologies supported (such as group vs. individual vs. village banking), the methods of calculating interest and fees, the frequency and composition of loan payments, and the format of reports. Each institution tends to have its own idiosyncratic way of structuring its credit operations, and so an MFI’s loan tracking MIS attempts to reflect the operational procedures and workflow of the institution.

Because there are no agreed upon standards for loan tracking systems, and because of the relative complexity of the information to be tracked and reported upon, institutions face a number of challenges when considering how to improve the loan management component of their MIS. A portfolio system should be designed to work with all major types of financial products offered (and likely to be offered in the future). All MFIs will offer loans, the most complex product for the system to track. Some may also offer savings accounts, time deposits, checking accounts, shares, credit cards, insurance policies, or other products. The portfolio system will need to accommodate each of these distinct products.

Within each major type of financial product, the system should be designed to establish distinct sets of “rules” for the different kinds of products. For example, an institution may offer working capital loans, fixed asset loans, small business loans, solidarity group loans, etc. Each of these types of loans will have distinctly different characteristics, or sets of rules. Interest rates, interest calculation methods, maximum allowable amounts and terms, definition of overdue payments, eligible collateral, and many other factors will vary among the different loan products.

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5 Same as above.
Exercise 5.1 encourages participants to think about their existing MIS in the framework of sub-systems and also enables them identify different indicators generated from their MIS.

6. Importance of MIS

“If only I’d known that six months ago.”
“I get all these numbers every month, but I have no idea what I’m supposed to do with them.”
“We have an MIS, but we’re still working out the glitches, it’s just not producing reports right now.”

All organisations have an information system of some kind. However, having good (usable) information is essential for an institution to perform efficiently and effectively.

The organisation may have capable and motivated staff, but if they lack information, they will be unable to perform up to their potential. A good information system can revolutionise the work of staff members, especially those in the field, enabling them to better monitor their portfolio and serve their existing clients, and also add new clients. It can enable supervisors (Area Managers, Regional Managers, Divisional Managers etc.) to better monitor the work under their area of supervision, provide better guidance to their subordinates, and pinpoint areas that most require their attention. And it can help senior managers to orchestrate the work of the entire organisation by allowing them to monitor the institution’s performance through a set of well-chosen indicators and by informing critical operational and strategic decisions. As more and more microfinance institutions scale up their activities, managers are becoming increasingly aware of the need to improve their information systems. For many MFIs, methodological issues, staff development, and even financing are no longer the critical constraints to growth. Instead, the most pressing need is often a system to track the status of their portfolios in a timely and accurate manner. The reliability of such systems can make the difference between the success and failure of lending operations—and therefore of an MFI.

7. Role of MIS

Generally, MIS deals with information that is systematically and routinely collected in accordance with a well-defined set of rules. Thus, an MIS is a part of the formal information network in an organisation. Normally, the information provided by an MIS helps the managers to make planning and control decisions. Every organisation in order to function must perform certain operations. Beyond current operations, an organisation must plan ahead for future ones. Also an organisation must control the operations in the light of the plans and targets developed in the planning process. The MFI managers must know if operations are in line with the targets and if not, they must make decisions to correct the deviation or revise their plans. Generally, an MIS has all the ingredients that are employed in providing information support to manager for making planning and control decisions. Managers often use historical data on an organisation’s activities as well as current status data to make planning and control decisions. Such data comes from a data base which is contained in files maintained by the organisation. This data base is an essential component and foundation of an MIS. Manual procedures that are used to collect and process information and computer hardware are other obvious ingredients of an MIS. These also form part of the MIS.

7.1. MIS and Planning

Business Plans are not created in a vacuum, but begin with a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats). In order to determine an MFI’s strengths and weaknesses, historical performance information based on quantitative data is necessary. A Strategic Business Plan draws from historical performance and articulates the future vision of the organisation in quantitative terms (indicators and targets). These targets, along with other stakeholders’ needs, should drive the design of the MIS. The MIS then becomes useful in measuring actual performance against these targets, and

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6 This section has been taken from the *MicroSave* Toolkit on Strategic Business Planning for Market-led Financial Institutions with very little modification.
understanding how the MFI is progressing in achieving its vision. Such an MIS would then provide regular reports that would assist management in reviewing the targets and re-strategising, if needed.

Strategic business planning\(^7\), (SBP) is a tool for organising the present activities on the basis of the projections of the desired future – it is a road map to lead an organisation from where it is now to where it would like to be in five or ten years. Strategising for the future is an important aspect of the planning process. However, strategies are best able to lead to achievements, when they are broken down into identifiable and measurable numbers. This can be done through a KOGMA Analysis. KOGMA stands for Key Objectives, Goals, Measures/targets and Activities – together these provide a clear, simple framework for implementation of an organisation’s Strategy. KOGMA Analysis is based on the Structure Tree approach developed by George Labovitz and Victor Rosansky\(^8\). It provides an intuitive approach to identifying the Key Objectives for achieving the mission/vision of the organisation and then setting the Goals that must be achieved to meet these Key Objectives as well as the Measures/Targets and the Activities necessary to achieve the goals. An example of KOGMA analysis of an MFI in India is illustrated in Figures 7.1 to 7.3 below:

![Figure 7.1](image)

Note how the Mission/Vision and Strategy drive the Key Objectives. The Key Objectives are, in Labovitz and Rosansky’s terms, the “Critical Success Factors”, that must be in place for this MFI to implement its Strategy and meet its Mission/Vision. This MFI has then analysed the Goals that must be achieved in order to meet the Key Objectives.

Measures and Targets are then identified for each of these Goals so that this MFI can evaluate its progress towards achieving them. In turn Activities are planned in order to best meet these Targets and thus the Goals. If we examine the Key Objective of “Maintain a High Quality Asset Portfolio”, we can see that four Goals were considered essential to meeting this Key Objective.

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\(^7\) To know the difference between Business Planning and Strategic Business Planning, refer to MicroSave Toolkit on Strategic Business Planning for Market-led Financial Institutions available at [www.microsave.org](http://www.microsave.org).

\(^8\) See *The Power Alignment*, by George Labovitz and Victor Rosansky, John Wiley and Sons.
Achieving these Goals has been identified as key to meeting the Key Objective of building a high quality asset portfolio.

In the case of this MFI, they saw the need to **maximise the return on all their assets** from yield on portfolio to yield on treasury investments (the latter being particularly important given the highly liquid state of the MFI). Similarly, this MFI understood that it needed to **re-train its staff and support them with new approaches/methods to assessing loan applications, issuing and recovering loans** (in all of the wide variety of credit products offered by the MFI). Finally, the MFI recognised that its **credit management systems required tightening and improvement** if it was to achieve the Key Objective of building a high quality asset portfolio.

The MFI then assigned a series of Measure and Targets corresponding to each Goal. Also, it planned the Activities necessary to meet those Targets and assigned responsibilities.

It is important to note that many (and often most) of the Measures are outcome rather than process focused. For example while this MFI decided to use International Benchmarks to assess compliance and to ensure the organisation sent managers to examine opportunities to learn from credit methodologies elsewhere in the world, the remaining three Measures focused on Portfolio at Risk, Write Offs and Provisioning.

The Targets must be specific, measurable, achievable, results oriented and time bound – in short SMART! The Activities are planned to meet those Targets and the departments/individuals responsible...
for their implementation are clearly defined so that their performance can be assessed. *Exercise 7.1* enables participants to understand how targets or measures are set for the goals that the organisation has set for itself as part of the planning exercise. Also, it enables the participants to identify what reports need to be generated and at what level to measure achievement of these goals. This would force the participants to think about how the MIS should be designed in order to measure these targets.

To better appreciate the role of MIS in planning and management, a case study of an MFI has been given as *Exercise 7.2*. The case gives a part of the KOGMA analysis and also provides the MIS reports that the MFI generates. The case enables participants to better understand what has been planned and what is being tracked and where the gaps are.

### 7.2. MIS and Management

From the above example, it is understood that SBP tells an organisation what needs to be tracked and monitored, at what intervals and at what level (Field level, Branch/Federation level or Head Office level). This is the crux of the Information System of a MFI whereas the crux of management and control is how to do this and to check whether this is being done as designed. The MIS tracks whether the targets have been achieved or not. So, the design of a MIS should be done in such a way that it is able to track the measures identified in the strategic business planning exercise.

“I get all these numbers every month, but I have no idea what I’m supposed to do with them.”

Most often, you know what is being tracked and how it is being reported. However, what decisions need to be taken based on this information becomes the management aspect of an MIS. Otherwise it is just an Information System and not a Management Information System. For effective management, Information is the input (bottom-up) and Decision (top-down) is the output. Thus for management to be effective, the MIS has to be a two-way process.

“If you are not going to use it, do not track it”

and

“If you track it, use it”

Many MFIs may not be tracking what is required to achieve that vision and mission. The Strategic Business Planning exercise clearly specifies the MIS requirements. SBP is an outcome of the SWOT analysis and MIS clearly should be assessed under the internal resource analysis. However, MFIs should not think of revising their SBP targets on the sole pretext that their MIS cannot track them.

An MIS is created to generate information for decision-making, and the best information for that purpose is generally that in the concise form of a financial or management indicator. The typical indicators include those that would measure Sustainability and Profitability, Asset/Liability Management, Portfolio Quality and Efficiency and Productivity. A standard set of indicators are outlined in *Annexure 1* provided as *Handout 7.1 Indicators List (SEEP Network)* which lists out Performance ratios recommended by the SEEP network. Conceptual frameworks for defining and interpreting financial information abound. Nearly every recommended list of indicators for microfinance institutions groups those indicators in a comprehensive framework designed to meet the needs of the intended users. Which indicators should be chosen often depends on the institution’s characteristics—such as its financing sources, institutional structure, lending methodology, and range of services.

An important thing to remember in using indicators, however, is that numbers alone don’t tell everything about an institution. To avoid misinterpretations, no indicator should be evaluated in isolation from others. For example, an evaluation of PORTFOLIO AT RISK should always include the LOAN WRITE-OFF RATIO and the LOAN RESCHEDULING RATIO. Indicators generally compare two or more pieces of data, resulting in a ratio that provides more insight than do individual data points. The data for an indicator are usually selected because they have a causal link, and the resulting number, often a percentage, can be judged relatively independent of such factors as changes in scale of activity. For example, comparing salaries as a percentage of total expenditure from one year to the next can be more informative than simply comparing total salary expenditure for each year.
The selection of the denominator for a ratio can be extremely important. One of the most useful ways of measuring efficiency is to compare the relationship between income and costs with the assets being used by the institution. Income and costs are readily obtained from the financial statements. But there are different measures for the assets used by the institution, the two most common being average total assets and average performing assets. Average performing assets is generally the more appropriate denominator for measuring financial productivity, particularly for an institution using only part of its assets to support its credit program (such as a multipurpose institution operating several types of programs). A typical balance sheet should include only cash, interest-bearing deposits, net loans outstanding, and long-term investments as performing assets. The average is calculated by totalling those assets at the beginning of the year and at the end of each month, and dividing the total by 13.

Looking at trends in indicators—dynamic analysis—can often be more illuminating than examining their absolute values—static analysis. It is more helpful to know, for example, that the share of portfolio at risk for more than 90 days dropped from 9 percent last month to 7 percent this month than to know that it is now 7 percent. Static analysis can also lead to misinterpretation of brief aberrations and seasonal fluctuations. For example, if repayment typically slips slightly in December, this can be more accurately interpreted in dynamic analysis. An institution can incorporate dynamic analysis in its reports or even more effectively in a regularly produced series of graphs.

Ratio analysis can be a useful way to compare and evaluate the performance of institutions. Managers can learn a great deal by comparing indicators for their institution with those for similar institutions, particularly institutions exemplifying best practice. External stakeholders, such as regulators and donors, can use ratio analysis to monitor performance problems. But ratio analysis must be done responsibly, taking into consideration the many factors in an institution’s circumstances and methodology that can influence its financial ratios. This is particularly important in comparing institutions—whether institutions in the same country or (much more problematic) in different countries. Following are some of the factors that affect these ratios:

- **Size**: Large institutions have economies of scale that should reduce their cost ratios.
- **Maturity**: A well-established institution should perform more efficiently than a new one.
- **Growth rate**: Compared with other institutions, those growing rapidly tend to be less efficient and profitable as they absorb the growth. They typically have greater underutilised capacity (for example, new branch offices that have not yet reached capacity) and a higher percentage of their portfolio tied up in smaller and less profitable initial loans.
- **Loan portfolio turnover**: Short-term loans may be more expensive for an institution because they have to be made more often to keep the same amount of funds in the portfolio.
- **Average loan size**: Making 10 loans of $100 is more costly than making one loan for $1,000.
- **Frequency of repayment**: Small regular repayments are more costly to process than fewer large repayments.
- **Geographical coverage**: High-density urban areas are less costly to cover than are sparsely populated rural areas.
- **Services offered**: For multipurpose institutions (which offer non-business related services, such as nutrition, health, and community services) and integrated programs (which offer, in addition to financial services, such business-related services as marketing and management or technical training), the costs of financial and non-financial services should be separated when calculating financial ratios. But this is not always possible to do accurately.
- **External economic conditions**: International comparisons are complicated by differences in inflation rates, cross-currency exchange rates, and relative purchasing power.

*Exercises 5.1 and 6.1* enable participants to understand the management aspect of MIS in MFIs. Exercise 5.1 requires participants to list out what indicators are currently being tracked by the MFI and what decisions are taken based on these indicators.
7.3. MIS and Control

“We can’t control what we do not know”

The most important aspect to be controlled in an MFI is risk. MIS plays a supportive role in the overall internal control system because identification of risks is the first step in control and information provides leads to identify risks. For example, Portfolio reports that are relevant, correct and timely provide insights into potential or actual risks in the portfolio.

The COSO-developed model Internal Control – Integrated Framework is illustrated in Figure 7.4 below. The components do not act as separate, independent units in sequential steps. They interact in an integrated management process.

COSO Internal Control Framework

![Internal Control Components](image)

The internal control system extends beyond matters relating directly to the accounting system and comprises the control environment and control systems. The five components work to support the achievement of the MFI’s mission, strategies and related business objectives. Given below is a short description of all the components of Internal Control. A more detailed description of this framework is provided in the MicroSave Toolkit on MFI Internal Audit and Controls.

The control environment is the overall attitude, awareness, and actions of the Board of Directors and managers regarding the internal control system and its importance.

Risk assessment is the process of identifying, prioritising and implementing risk management strategies, policies and procedures. Systems, policies and procedures must be regularly reviewed and systematically revised in order to prevent repeating mistakes of the past, and to protect your MFI from new risks. Risk Management Feedback Loop is used as a tool for Risk Assessment. The role of information is significant in each of the steps of the loop depicted in Figure 7.5 below:

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9 [www.coso.org](http://www.coso.org)
10 [www.MicroSave.org](http://www.MicroSave.org)
Risk Management Feedback Loop

Figure 7.5

The two key components of control activities are the accounting system and specific control policies and procedures. The accounting system has to do with the collecting, recording, processing and reporting of financial transactions. The integrity of individual transactions is critical for the reliability of the system. Specific control procedures are the policies and procedures that guide staff to process transactions, manage assets, and conduct their work.

Part of the management function involves supervision and monitoring. Through segregation of duties and independent checks and verification, an element of ongoing monitoring takes place in the every day operations of a MFI.

The information and communications component of an internal control system is not a stand-alone component. It intersects, interacts with, and is part of each of the other four elements. Strong MFI and portfolio management at all levels is highly dependent on good information, particularly financial information and portfolio information. In order to be useful, it must be relevant, correct and timely. Loan officers who do not know the status of their portfolio at any given time cannot make adjustments or be held fully accountable for their performance. Branch managers need to know their branch’s financial status – its revenues and costs need to be known to be managed and controlled. Sudden changes in portfolio performance may signal a variety of problems, but without portfolio reports, managers are not aware of the potential risks. All these reports form the crux of the MIS in an MFI.

Internal Audit gathers its inputs from the MIS. For example, whether the policy on weekly balances with the branches is being followed or not is an Audit aspect to be checked and can be known from the MIS reports. MIS can be designed to have inherent controls on the day-to-day activities. For example, a cap on daily balance, if incorporated into the MIS, will automatically indicate amounts to be transferred from the Branch account to the Head Office account at the end of the day. MIS also helps in designing better policies and procedures by identifying gaps in the current policies and procedures. For example, recurring arrears in a specific geography as known from the MIS reports might lead to changes in credit policy for that region.

The design of the MIS needs to take care of these three roles – planning, management and control. Information has different characteristics, depending on the purpose for which it is used. And the same information will need to be presented in different forms for different uses. There are three levels of information use in an organisation—strategic, management, and operational.

* Information for strategic planning
  Strategic information is used primarily by the institution’s board and senior management. Strategic information such as the national distribution of micro-entrepreneurs, trends in the informal economy, and
the institution’s coverage helps decision-makers determine whether the institution is meeting its ultimate objectives. Strategic information also supports decision-making on the acquisition and allocation of resources, such as planning and budgeting for growth, opening and closing branch offices, and developing new financial products. Strategic information is predictive, dealing with the future and the relative unknown. It encompasses such issues as projected economic growth, inflation rates, competition, and changes in government policies. Strategic information is oriented toward the long term. As it affects the directions that the institution takes, the future existence of the institution depends on its quality.

- **Information for management control**
  Management information is used primarily by the executive director, chief financial officer, and senior department heads. These managers need information on the use of resources and whether or not resources are being used as planned. Financial reports and portfolio reports that compare actual performance with budgets and annual objectives fulfil this need. Decision-makers need management information to maintain control of the institution’s activities and performance. Thus they monitor monthly portfolio quality reports, for example, so that they can react to any warning signs in the reports. Management information focuses on the medium term, from three months to a year.

- **Information for operational control**
  All staff members responsible for day-to-day activities need operational information that enables them to accomplish their tasks—such as disbursing loans, collecting payments, carrying out training programs, or paying bills. Operational information enables the user to take action. A delinquent client report identifies which clients a loan officer needs to visit. A delinquent loan follow-up report enables a supervisor to ensure that corrective action is being taken. Operational information focuses on the short term.

These three levels of information use can be depicted in a pyramid whose shape roughly follows that of an organisational pyramid. Strategic information is needed at the top of the organisation, and operational information is used by the vast majority of employees. The characteristics of the information vary along several lines, depending on the level of use.

- **Source**
  Virtually all operational data are generated from internal sources—accounting records, client files, staff reports. The more strategic the use, the more information must be drawn from external sources, such as inflation rates, growth trends, and pending legislation.

- **Coverage**
  Strategic information deals with a diversity of topics and looks at issues related to the institution as a whole. Moving down the pyramid, information becomes more defined, narrower in focus, relating to single activities, departments, or employees.
c. Aggregation
Strategic information may look at loan repayment performance for the institution as a whole (and compare it with repayment for other institutions—an external source of information). Management information may look at repayment performance for each branch office, line of credit, or loan officer. Operational information will look at repayment performance for each loan.

d. Time scope
Strategic information is forward-looking, predictive, and speculative. Operational information is based on historical data—such as which clients made their loan payments yesterday. Management information compares actual (or historical) data with budgeted (or predictive) targets.

e. Age
Operational data are based on recent information—in some cases, the more recent the better. Loan officers need to know as soon as possible which clients have paid and which are delinquent. Even if staff members do not visit delinquent clients until five days after a missed payment, the information needs to be up to date to ensure that they do not visit clients who made their payment on the fourth day. Strategic data can be more dated.

f. Precision
Precision is most important for operational information, on which staff are likely to take immediate action. Cashiers need to know the precise interest and penalties to charge clients; accountants need to know precise amounts to write checks for recently approved loans. Management information can tolerate some imprecision; supervisors can review financial statements that are only 95 percent complete and still reach meaningful conclusions. Strategic information tolerates the broadest range of uncertainty because it deals with the future.

g. Frequency of use
Operational information must be generated frequently—monthly, weekly, even daily, and sometimes on demand. Management information is less frequent, usually monthly or quarterly. Strategic information is needed only periodically—usually once a year.

To better appreciate the role of management in analysing and making decisions based on MIS reports, Exercise 7.3 offers participants a chance to analyse several financial and portfolio reports generated by MyMFI’s MIS and to make recommendations for action.

8. Designing and Implementing an MIS

Designing and implementing an MIS requires a sequential approach that is described by the steps listed in the table below: Participants can use Exercise 9.1 to understand the sequence of steps for designing and implementing an MIS.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Description</th>
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<td>Selection of broad cross-section of staff, users of MIS</td>
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<tr>
<td>Step 2</td>
<td>Stakeholders Analysis</td>
<td>Focus Group Discussions</td>
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<td>Step 3</td>
<td>Needs Assessment</td>
<td>SBP, Interviews, Focus Group Discussions, and related techniques like PRA Tools</td>
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<tr>
<td>Step 4</td>
<td>Mapping Existing Data and Information Flows</td>
<td>Process Mapping backed by discussions, interviews, PRA tools, Observation etc</td>
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<td>Step 5</td>
<td>Determining Information needed for Management</td>
<td>Discussions, Selecting Variables and Indicators, SBP, Secondary Research</td>
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<td>Step 6</td>
<td>Creating Reports in an MIS</td>
<td>Discussions, Secondary Research, Report</td>
</tr>
</tbody>
</table>
**Steps** | **Description** | **Tools**
---|---|---
Step 7 | New MIS System Design | Templates, Process Mapping, backed by discussions and Secondary Research
Step 8 | Selecting MIS Type: Manual vs. Computerised System | Interviews, Discussion, Secondary Research
Step 9 | Train Staff and Create MIS manual | Interviews, Secondary Research
Step 10 | Pilot-test new MIS | Documentation of the Processes, Discussions

**Precursors of effective MIS Design**

Designing or refining an MIS system is a serious undertaking for an MFI - requiring sufficient time and energy to design, implement and test the new system. It is essential that an MFI begin with thorough understanding of the following:

- **An MFI’s Strategic Business Plan:**
  Designing or refining an MIS forces an MFI to look closely at what it wants to accomplish, how it measures success, and how it aims to achieve its goals. These items should be spelled out in detail in an MFI’s Strategic Business Plan and should be tightly aligned with the MIS.

- **Regulatory requirements:**
  The regulatory requirements for an MFI may vary depending on country, changing central bank regulations, or form of incorporation (NBFC, MFI, NGO, SHG, JLG, Cooperative, etc.). Regulators have a set of non-negotiable information needs (capital requirements, loan provisioning, external audits, etc.) that should be rigorously adhered to when designing an MIS.

- **Stakeholders’ needs:**
  All of an MFI’s stakeholders – from staff, management and the Board, to donor agencies, regulators and auditors – require varying information at different times that should be fully accounted for when designing an MIS.

- **Standards and best practices in systems (Accounting, HR, etc.), processes and procedures:**
  MFIs should not reinvent the wheel. There is much available information, guides and templates to help an organisation utilise best practice.

- **Products and services to be offered:**
  The products and services being offered by the MFI would have features which may or may not be similar. So, an MIS should be able to track these features and also should retain flexibility by keeping in view the possibility of adding new products and features in future.

- **Expected Future Growth of the MFI:**
  Predicting future needs is a critical part of designing a new MIS. An NGO that plans to grow into a formal financial institution in the next few years is best off investing in an MIS that will stay with it well into its new incarnation. Likewise, an MFI that will begin offering demand and time deposits, individual loans, or health insurance will require additional information and reports to form part of the system. The last thing an institution should have to do in the midst of a massive expansion is to change its MIS. Planning for the future and “over-investing” now can avoid serious problems later on.

**Elements in an MIS**

There are four basic elements that constitute all types of information systems.

- **Personnel:** Determine suppliers and end-users of information, and the decisions that are taken.
- **Information:** Information requirements determine the type of data to be collected. It is important to organise data collection to avoid inconsistencies and minimise processing time.
- **Processes and Procedures**: Who does what and when so that appropriate information is collected, aggregated, processed, analysed and distributed to the right people at the right time.
- **Tools**: Tools that are needed to carry out the conversion of raw data into usable information.

![Figure 8.1](image)

**Figure 8.1**

Figure 8.1 reiterates the three levels of decision-making and the kind of information needs at each of these levels – strategic planning, management control and operational control.

**8.1. Step 1: Forming a Design Team**

The starting point is to form a task force to provide guidance and input throughout the early part of the process and to ensure broad representation in defining the institution’s information needs. Programmers and external consultants can provide expertise and advice, but representative users of information - people who understand the institution, its procedures, and its philosophy and work culture - must be heavily involved in the critical early stages. The task force should meet regularly - at least once a week - for perhaps four to six weeks. The task force should be made up of one knowledgeable person from each department, along with the person responsible for internal auditing. It should include representation from each level in the organisation, from senior management to field staff. And it should include several members from the information systems department - selected for their listening skills - to document the input from the task force and coordinate the technical work.

An institution with limited in-house expertise may want to hire an external consultant, but this person’s role should be clearly defined as one of advising, not decision-making. It is also useful to consult with the institution’s external auditor, although the auditor need not have a representative on the task force. The task force should be led by a senior person in the organisation who has a broad understanding of the institution and commands respect. And it is helpful in large institutions to have a “project champion,” an influential person such as the executive director or the board chair who endorses the process, ensures that everyone takes it seriously, and clears bureaucratic hurdles.

**8.2. Step 2: Mapping Stakeholder Needs**

It is important early on in the creation of an MIS to take into consideration MFI’s main stakeholders, as they are likely to require information updates that must be provided at very specific times and via a number of different reporting formats. The consequences of being ill-prepared, or for providing incomplete or faulty information, can be as serious as losing major funding or having operations closed.
down. The main stakeholders to consider for most MFIs include: clients, staff (field, branch, region, HO, Board), service partners (health, etc.), regulators (such as a Central Bank), government, donors, wholesale funders, as well as domestic and international banks. While designing an MIS, MFIs should diligently spell out who are their stakeholders, what information needs they have and when they require these reports.

*Exercise 9.2* enables participants to identify the stakeholders in their organisation and arrive at the information needs of each of these stake-holders. This would help them analyse their current MIS and then decide on what needs to be incorporated to make the MIS cater to all the information requirements keeping in view considerations like cost, time, relative importance, etc.

8.3. **Step 3: Needs Assessment**

Needs assessment is thus an important step for arriving at the design requirements of an MIS. What should be done as part of the needs assessment? The MFI top management team or MIS design team should begin by studying existing systems, procedures, books, forms, statements at the client, group and intra-organisational levels along with concerned officials, staff and clients of the MFI. Some MFIs may not have rigorous documentation on all areas, but may discuss them verbally. This process helps determine what has been working as well as some of the more glaring problem areas in the MFI that the MIS will address. A documentation review should largely focus on five core areas of import to the MFI and its MIS design:

1. Accounting policies and procedures
2. Operating policies and procedures
3. Internal control procedures
4. System parameter values
5. Stakeholder and Regulatory requirements

They should review statutory, donor and investor requirements, visit groups, branch/cluster offices, and other levels within the organisation, participate in the meetings of the MFI at all levels, have in-depth interviews and discussions with MFI staff and other stakeholders such as bank managers, wholesalers and regulatory authorities to get feedback on various aspects necessary for designing the MIS. Broadly speaking, a Needs Assessment should begin providing answers to the following questions:

- Who, at all levels of the MFI, needs what Data and Information?
- What decisions need to be made?
- What Information is required to make those decisions?
- When do the decision-makers need it?
- What Information needs to be submitted to which stakeholders and by when?

As the design process proceeds, the team will focus on rationalising the use, contents and magnitude of existing processes with the objective of producing a minimum of records and forms that are simple and consistent with the requirements of information for effective decision-making and control at various levels. This will be discussed more in Steps 5 and 6. Figure 9.1 shows documents that need to be assembled so that the needs assessment could be done effectively when existing MIS is being redesigned.
8.4. Step 4: Mapping existing Data and Information flows

The documentation on policies and procedures can be used to diagram the flow of information through the institution. The goal is to discover answers to these questions:\(^{13}\):

- Where are data collected?
- Where are data transformed into information?
- Who needs what information?
- What decisions need to be made?
- What information is required to make those decisions?
- When do the decision-makers need it?
- Where is information stored?
- Where can reengineering make processes more efficient?
- Where are the leverage points and critical processing points where a change in procedure could significantly improve efficiency and service?

These questions, when answered, enable an MFI to understand and refine its existing MIS or to construct a new MIS that can be represented by a process map that articulates what data is collected by whom and at what intervals and what information is used by whom, for what purpose and at what intervals.

**Process Mapping**

An information flow diagram, or process map, can be an important visual tool when designing an MIS—showing where data are collected, transformed, used for decision-making, and stored. For example, a process map can help one not only to understand how a process such as loan disbursement works, but to find ways to improve the process. Process mapping uses tools that enable an MFI to document, analyse,

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improve, streamline, and redesign the way it works. Process mapping is a simple yet powerful method of looking beyond functional activities, such as marketing or accounting, to reveal an organisation’s core processes and discover how its different parts work together to serve customers. Process maps enable us to peel away the complexity of an institution’s organisational structure (and internal politics) to focus on the processes that are truly the heart of a business.

Process mapping is thus a valuable communications tool, a strategic business planning tool, and an analytical management tool. A process map enables an MFI to compile data about the processes in place so that they can be analysed. Armed with a thorough understanding of the inputs, outputs, and interrelationships within each process, an MFI can use this for identifying information requirements at different levels and thereby design its MIS. A process map is a visual representation of a process (an example is shown below), within specified boundaries, that uses symbols and arrows to display inputs, outputs, tasks performed, and task sequence, an example of which is shown in Figure 9.2.

![Process Map Example](image)

Figure 9.2

Process maps can be used to document both broad organisational processes and the smallest details of work. In general, there are three levels of mapping possible: system (institutional level), macro-processing (core processes, such as lending activities or deposit-taking), and micro-processing (for instance, processing a savings withdrawal). Maps at these three levels resemble each other in format, but provide information at different levels.

Creating a system map is the first step needed to give direction and focus to any quality improvement effort. A system map builds outward from the processes to identify suppliers, inputs, outputs, customers, expectations, performance gaps, and feedback loops. Just as departments are often managed in a vacuum, processes can be designed and managed without emphasis on the customer and the results produced. The system map integrates the core processes with each other within the organisation, and links those processes to the MFI’s objectives (outputs), as well as the inputs needed in order to generate the desired outputs. An MFI’s core processes may consist of lending, deposit-taking, treasury (investing) and reporting. Other functions, such as purchasing and requisitioning, while important within the organisation, are sub- or micro-processes, and may not show up on a system map. In developing a system map, start with core processes. Then the customers and inputs (such as donors) intended to drive those processes should be defined, and the outputs, such as profitability and providing value for the stakeholders, are added. Finally, the linkages should be shown in the form of a process map.

Maps of macro-processes are the starting point for most engineering efforts that cut across departmental boundaries. The macro processes are the core processes in an MFI. An example is the lending function, which affects the Credit Department, Operations, Accounting, Treasury, Human Resources, and perhaps others. In order for an MFI to support a lending function, Human Resources must supply qualified personnel; the Treasury Department, customer deposits, or donors must supply the funds that will be loaned. These, then, are the suppliers. The lending function will also require that the Credit Department deliver lending products and methodologies to customers as inputs, that the Operations Department...
process customer credit transactions, and that Accounting record and report on lending activities. The profitability of the lending function and the accomplishment of the MFI’s mission will be the outputs.

**Maps of micro-processes** are useful for any quality improvement. Numerous inefficiencies can be found in small processes. An example might be a portion of the credit function, such as the loan-application process. In such a case, it is often useful to map the process from the point of view of the customer (rather than that of the employee). Though the procedures involved may seem very reasonable to the MFI, tracing the steps that the customer must follow will provide a different perspective—and possibly a better understanding of customer complaints.

MIS requirements could be identified by both the micro-process maps and macro-process maps as the former capture the data requirements and information outputs and the latter capture the interdepartmental information flows.

*How to draw Process Maps*

Process maps are flow charts and can be drawn using standardised symbols enable the map to clearly, visually display what happens in a given process. The most common symbols used for the Process Maps developed by *MicroSave* are included in *Annexure 3*. Exercise 9.3 enables participates to get familiar with the process mapping symbols used as standards by *MicroSave*. Participants can use *Handout 9.1* to run through a process map and thereby understand the process flow. *Exercise 9.4* is used by participants to suggest improvements in a small process. Such processes can be mapped within an MFI to better understand its data/information flows.

8.5. Step 5: Determining Information needed for Management

At this stage, an MFI should begin to make explicit the specific information needed for decision-making as well as tracking and monitoring performance and activities for all key staff and stakeholders (eg. field workers, supervisors, MFI managers, board, clients, wholesalers, donors, investors). The design team will draw heavily from the preceding steps in MIS system design, particularly the:

- Completed Stakeholder’s Analysis
- Comprehensive Needs Assessment
- MFI’s Strategic Business Plan
- Process Mapping

An MFI must carefully choose and define which variables, ratios and indicators will provide the information needed (eg: PAR < 30, Operating Expense Ratio, Loan Officer Productivity, Portfolio Yield) for each of the stakeholder groups above. Next, it should determine which Data is necessary (and which is not) for transformation into the Information and Reports most relevant to staff, decision-makers and stakeholders. By defining the informational needs (variables and indicators) required for reporting to staff, management and stakeholders, an MFI can more easily reassess its process maps to determine which data it must start, continue or cease collecting. Again, the objective should be to produce minimum number of records and forms that are simple and consistent with the requirements of information for effective decision-making and control at various levels.

8.6. Step 6: Creating Reports for an MIS

What is the process of creating reports in an MIS? The MFI top management team or the MIS design team should define information needs by level of analysis and stakeholder/product/client categories. It

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*For a good practical understanding of Process Mapping, please refer to the *MicroSave* Process Mapping Toolkit.*
should identify report categories and level of detail for each report (across stakeholders/products/levels of analysis). In addition, they should decide on frequency and timeliness of reports, specify information to be included in various reports, identify and understand the overlap(s) and incorporate trend analysis while specifying the period covered. Design of reports should ensure usability with good design (readability and parsimony) – this is very important!! Where required, graphic/visual analysis should be incorporated as it often can transmit information and trends more powerfully. Most importantly, process mapping should be used to document the data and information flows across persons and/or departments. These process maps should be used to refine the reports and MIS flow.

Handout 9.2 shows a sample loan ledger to help participants appreciate simplicity and accuracy in collecting data in the MFI. Handout 9.3 shows what report formats could be used based on the information requirements at the different levels in the MFI. Exercise 9.5 helps participants to look at different reports generated in an MIS and categorise them as per level by identifying the information requirements at these different levels within an MFI. Here, an SHG-based MFI has been used as an example.

8.7. Step 7: New MIS System Design

Designing a new MIS brings together results from the previous steps – from determining which stakeholders need what information and by when, reviewing current documents and mapping processes, to linking the new MIS to your MFI’s strategic business plan and discussing the system with staff at all levels and departments. At this point, it may be useful to have the facilitation of a skilled consultant or IT expert, particularly if upgrading to a computerised system. Before purchasing any software, MFIs should perform a comprehensive review and live trial testing of potential software options to determine the best fit and reveal any glitches (see more below in Selecting MIS Type). Even if using a manual system or modifying your existing system, when designing the new MIS, MFI staff should clearly define: the processes and procedures of the new system, the data table structures, which data will be collected by whom, the information needs of staff at different levels, and the report format designs that will be used.

This step should involve the creation of “Could-Be” Process Maps for the MIS of your MFI. Regardless of whether the “Could-Be” maps are focused on optimizing existing processes or creating entirely new ones, they should clearly link:

- Data Collection: This includes displaying what data is entered into which forms, by whom, and, how the data flows upwards from the field to the Branch to the Head Office?
- Information/Reports needed at each level of MIS for Decision-Making: This should demonstrate where, how and by whom data is transformed and formatted into reports for ease of use. Equally, it describes who needs to receive the information and what decisions need to be made.
- Information required by stakeholders and timelines for delivery: It is critical have processes in place for producing and sending reports to key stakeholders (Board, Donors) in a timely fashion.
- The MFI’s Strategic Business Plan: Everything should flow from the business plan, from what you are measuring to financial and portfolio projections that can be measured against actual performance.

These “Could Be” Process Maps should also contain the following:

- Description and flowchart of how the basic data will be entered and stored
- Description and flowchart of all staff required and their duties
- Description and examples of all printouts and reports that will be generated by the system
- Definitions of all indicators generated by the system
- Detailed list of all functionality required by the system for the financial products
- Description and flowchart of the flow of information and reports through the system
- Description of internal control and confirmation procedures for the information flow
- Security procedures for user access and data backup

“Could Be” process maps provide an excellent way to thoughtfully lay out the specific steps that are taken at each stage of an operational MIS process. Furthermore, these maps can serve as the basis of an MIS training manual and guide for staff members, from those who enter and transform data to those that
receive information and make key decisions. Below is an overview map of an MIS to help users conceptualise how data is transformed into information, ending up in concise and timely reports that allow stakeholders to make decisions from the field level to the Board.

8.8. Step 8: Selecting MIS Type: Manual vs. Computerised Systems

At this stage in the design process, an MFI must choose the most appropriate format for its MIS – whether manual or computerised systems, or elements of both. The microfinance sector is quite diverse in its use of information systems – particularly for loan or portfolio tracking needs which vary depending on the methodology, products and institutional culture. Generally, MFIs utilise one (or sometimes both) of the following two broad types:

Manual System
Some MFIs rely only on manual systems, which involve maintenance of records in forms and ledgers and at times, use of basic spreadsheets. The reports used or sent to the higher levels are a manual consolidation of data from these forms and ledgers. Organisations having manual systems are typically either small microfinance programmes or NGOs. However, a very highly standardised programme with few products and very little complexity can afford to have such a system despite being large in size. There are MFIs in Bangladesh and India which have demonstrated the robustness of a manual system in spite of being big (a few hundred branches).

Computerised System
Most MFIs are operating in a semi-automated mode. In this category, a simple database is used with an MIS application that fulfils the information requirements of the MFI’s portfolio but the accounting and financial information is still maintained manually at the field level – consolidation happens at the Head Office. Some MFIs use MS Access or Excel as the back-end along with a standardised and simple front-
end like Visual Basic to capture data at the field level and also to generate standard reports. Depending on the flexibility built into the application, these could be updated and customised to handle complexity in operations. There are also certain off-the-shelf MIS solutions available in the market.

Very few MFIs are either large enough or have the financial strength to have a fully automated and integrated MIS, fulfilling the entire information requirements of the organisation. Such systems are existent only within banks. This requires huge infrastructure support for networking the branches and communicating on a real-time mode which translates into huge operational costs, both initial and recurring. However, the choice is dependent on relative merits, opportunity costs and also certain contextual factors like the size of the microfinance programme and the financial strength of the MFI (which are often directly proportional). There are clear advantages and disadvantages to both.

The following are the main advantages of Manual Systems:

- The tools are more easily created, altered, and maintained than databases.
- They are easier to understand, especially for the staff members at the field level who have minimum or zero computer literacy.
- Costs of implementation and maintenance are lower.
- They are easier to implement at the field level.
- They require lower skill set for MFI staff members who generally are pass-outs from School or Pre-University.
- These can work in remote areas where communication and power facilities remain unreliable.

However, there are certain disadvantages of these systems:

- Manual and spreadsheet systems collapse when an institution scales up and structure becomes more complex.
- It is difficult to consolidate manual or spreadsheet information especially when there is rapid growth.
- They are typically slow and labour-intensive in producing reports.
- Manual systems, are the most corruptible and inefficient methods of storing and retrieving financial data.
- They are prone to abuse, fraud, mathematical error, and information loss through improper storage.
- Spreadsheets were designed basically to analyse data and not for storing data.
- For storing and retrieving data and reporting on large amounts of data, databases have a clear advantage.
- Spreadsheets are typically two-dimensional—they have rows and columns—and as a result have difficulty expressing and maintaining complex relationships between data.
- Data security and integrity is always an issue in spreadsheets.

Correspondingly, the advantages of a computerised MIS are:

- These save enormous time for the staff members.
- They produce more accurate reports and at a quicker rate.
- They help in controlling fraud, as well as in reducing unintentional errors as computerised systems involve minimal errors.
- These systems help develop confidence among investors and regulators with respect to transparency, and serve to enhance overall productivity.

In India, small and medium sized MFIs are rushing to purchase new computerised MIS software, often at the behest of donors or banks. However, their experiences have shown that a fully computerised MIS may have too many glitches, is expensive to maintain, or that staff may not be skilled enough to operate the complex technology. Large MFIs like Spandana and Bandhan actually used manual or semi-automated systems until their portfolios had reached almost 30,000 clients – at which point they required a computerised system to scale up further. It is important to remember that the choice between the two should be based on a careful analysis of several factors which are interlinked to one another.

- Business Model – Whether the model is a rapidly scalable model or is restricted to a small geographical area is an important criterion. Also, the operational methodology – SHG or JLG – will influence the choice of the system because based on differing cost structures in maintaining records.
Cost factor – A computerised MIS definitely costs more than manual MIS, but it has to be viewed in terms of the benefits that it yields and also the size of operations. Normally, as the scale of operations increases, the need for a computerised MIS becomes more important. Also, the scale can take care of the increase in costs.

Suitability to the staff quality – Normally, the need for a computerised MIS becomes important after achieving a certain scale of operations by which time there is a general understanding of the staff quality required for operations. A computerised MIS should not drastically alter these staff skill requirements. Otherwise, it might disturb existing operations and also put pressure on costs (either to acquire new staff members with such skills or train existing staff members).

Ease in operating – MFIs are typically characterised by staff with limited educational qualifications and any MIS should be easy to operate by the staff members at that level. There have been instances of very good and robust computerised applications that have made staff members resign from their job fearing its complexity.

Infrastructural facility – This becomes a constraint particularly when an MFI wants to have an integrated MIS. There are areas in India which do not have more than a few hours of power supply during the day, which makes maintaining even a simple spreadsheet-based MIS difficult.

8.9. Step 9: Train Staff and Create MIS manual

MFIs should design Training Programs for new/refined MIS tailored to all levels of staff within an MFI describing new roles and responsibilities. MFI should also ensure that adequate training is offered on how to operate the MIS to those who are users of the system at various points in the system flow.

To bring about uniformity in the training and also to create a strong support system for trouble-shooting MIS related issues from time to time, creation of a technical manual for MIS is essential. This is a way for knowledge transfer and also for safeguarding institutional memory for the future.

8.10. Step 10: Pilot Test new MIS

Implementing a new system is never easy. At the beginning stages, an MFI should budget extra time/cost and be very attentive to process. During the pilot, the implementation team should collect feedback on the MIS from staff at every level, as well as key stakeholders (eg. Board, Donors, Regulators). Make corrections as required based on feedback and incorporate these into the final system.

8.11. Lessons for Design and Implementing an MIS

Some key lessons for Design and Implementing of an MIS for Microfinance Institutions are given below:

- Thorough needs assessment is critical, and the time and effort spent on this aspect should not be underestimated.
- Learning from past experiences of other MFIs/Vendors is very important and, in many ways, vendors and MFIs need not reinvent the wheel.
- The MIS design must be kept simple such that no information is entered twice and all information entered is indeed useful for decision-making.
- A modular structure - where different elements of the MIS are linked and share information - is very advantageous as it affords flexibility and compartmentalisation while also providing synergies.
- Transitions and adaptations must be handled carefully – they are more difficult than a new design.
- Maintenance is serious business and requires an immediate response from the vendor. MFIs must budget costs accordingly
- The MIS design must be kept flexible, to the extent possible and feasible.
- Data conversion is difficult and so, migration of past data needs to be reviewed even at design stage. Using professionals for data conversion is very critical.
- Proper documentation of the MIS – source codes (in case of computerised MIS), explanations and other aspects are very important to ensure continuity and reduce dependence on the original staff/developers.
9. Technology Strategies

India is home to some of the most innovative software companies in addition to its thriving microfinance market. What has been lacking is an ability to bridge the divide between the microfinance and technology worlds, with IT professionals often speaking a different language than senior management at an MFI. While consultants may provide some assistance, MFI professionals have to become more technologically savvy if they are to take advantage of the benefits of information systems.

When considering upgrading to a computerised MIS, an MFI should study as much as possible about the options available – including learning from similar MFIs’ experiences, as well as from donors and technical assistance providers. When considering a computerised system, in addition to the factors mentioned above (cost, business model, projected growth, etc.) MFIs should ask themselves:

- When and where does one buy the new technology?
- How quickly will it be outdated?
- Do they wait or invest now?
- What opportunities are being missed while the core problems that still beset the finance industry are being tackled?

The time taken to reach consensus on these issues, and then implement the chosen solution, may be delayed and therefore increase rather than reduce project costs. So what practical steps should companies take when they are considering a computerised MIS?

- Understanding the problem is often the most important factor. A computerised MIS will not improve an MFI that has poor systems, lack of standardization, or unmotivated staff.
- Timing any upgrade is critical. To get it right requires a subtle mix of:
  - personal commitment,
  - an ‘MIS champion’ stepping forward in the organisation, and
  - working through a logical, step-by-step plan with accepted priorities.
- Automation should be applied as quickly as possible, tackling the root problem of at least comparison checking before building a more functionally rich application
- The ideal: A multi-functional systems that not only compares items, but analyses accounts and suggest actions using artificial intelligence, while producing a full audit trail.

9.1. Due Diligence for Software Purchase

Once a decision has been made, a team formed, and senior-level commitment has been established, MFIs should conduct a rigorous screening (or ‘due diligence’) process to determine which software application is best fitted to their unique context, model and capabilities. Some of the steps include:

- Match needs and budget with available products
- Contact short list of vendors
- Request: Documents, Demo, References
- If possible, visit another MFI to see them in action
- Ask vendor for demonstration of various scenarios
- Comprehensive evaluation and costing of options
- Selection of product and support that offers ‘best fit’
- Small independent suppliers are still very much in force, offering detailed functionality, experience and support.
- They often provide a refreshing way to perform tasks with cost-effective, small footprint systems.
- Choice is a good, but too much can be overwhelming
- Does the product always deliver on its promises?
- The problem is not always with software, but also with insufficient evaluation of options, project planning and support relationship with the vendor.
- After all, how many ways are there to differentiate entry of key data into financial systems, when screens and rules are common?

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There are several strategies an MFI may pursue when purchasing MIS software. The easiest and cheapest, but also the most fallible, option is purchasing an off-the-shelf MIS product. Today, there is an increasing variety of such systems available on the market. However, if an MFI lacks the technical capacity to implement the MIS - or to adjust it to fit the organisation’s model (JLG, SHG), parameters (interest rate, fee calculations) and context (rural, urban) - then there is a risk of ending up with a non-functional MIS. Or, as a worse case scenario, they may end up with one that costs more (in time, money, etc.) than the benefits it provides in increasing efficiency. Another option involves hiring external consultants to help modify MIS products that are in the market. This is a ‘middle road’ that has often proved very successful – depending on the quality of the consultant(s) and the amount of planning and commitment by the MFI and its senior staff.

Next, there is a costly but effective strategy of utilizing (or hiring) in-house IT capacity to develop an MFI’s own unique MIS. This strategy has been used successfully by organisation’s like India market leader, SKS. Meanwhile, one of MicroSave’s own partners – Hindusthan, an urban cooperative based in Mumbai – used the CEO’s own IT company to build its MIS. Finally, there is a new Application Service Provider (ASP) model emerging, whereby a third-party company, such as IBM, manages a database for multiple MFIs from a remote site (much like a server) that is easily accessible from any computer. This model, though cost-effective, has yet to take off as some MFIs are wary of trusting their core business information to an outside agency. Also, this model requires a reliable internet connection to access the database regularly – which is something most MFIs or their branches do not possess.

**MicroSave Resources**


There is a growing array of MIS software options available to MFIs, many of which are profiled on CGAP’s website ( ). Some of the MIS applications that are proving the most popular among Indian MFIs include:

- **BASIX- F amis Plus**
  BASIX is disseminating their home-grown MIS software, F amis Plus, for MFIs. However, as BASIX’s core business is microfinance and it suffers from high turnover in its IT department, implementation and support services are weaker.

- **Outside India: Banker’s Realm, Kredits**
  Banker’s Realm has sold more than 8 licenses to MFIs in India. Meanwhile, Kredits core team is known for being strong on project planning and helpful in data migration from the old to the new system. Kredits also possesses a credit scoring model that analyses client risk.

- **Small Indigenous providers: Jayam and Safal**
  Jayam offers an integrated accounting package built on the guidelines set forth by CGAP. Safal can be tailored to SHGs and can verify key processes from loan application to collection.

- **Open Source: MiFOS, FINO, Emerge and Mahiti**
  MiFOS has an excellent set of planning tools online. Mahiti is eager to spread its free software or ‘shareware’. FINO works with an innovative core banking solution (CBS) model and has worked on biometric atm cards.

**9.2. Successful Implementation**

Installing a new software package for an organisation’s MIS may take minutes. However, making it perform well may take months or even years. Countless MFIs in India still struggle after a year to utilise their new computerised MIS properly or to produce the right reports on time (or at all). Successful implementation often depends on the skill of the team that is implementing the solution, and the MFI’s planning and management of each part of the project - as detailed in section 8 above (Designing and
Implementing an MIS. Thus, often times the problem of implementation lies in not following a detailed and systematic planning phase, rather than any faults or lack of features in the software itself.

An example which displays some of the challenges inherent in implementing a computerised MIS involved a case where two institutions implementing the same software at a similar time:

1) One institution began the MIS installation process by insisting on weekly updates, performance reviews, enhancements meetings and co-ordinated testing, all documented within a shared co-ordination manual. Both the customer and the software house had clear guidelines and rules of engagement, which included a logical step-by-step process and, above all, executive management sponsorship. Throughout the implementation process, the importance of the project was never diminished, and everyone associated with it took pride in solving any problems collectively, with a structured contribution to any additional enhancement requests on behalf of either the software house or the MFI. The result was a successful implementation of an operational, computerised MIS for that MFI.

2) The second institution started out with the best of intentions. After a few management changes, however, the team began to lose direction. The executive sponsor left, and the project was downgraded to programmer and operator management levels. Tight control and quality procedures were not observed and timescales slipped as extra (untrained) resources were found to fill gaps in knowledge and testing. The collaborative initial project camaraderie descended into a culture of blame and recrimination. Without an executive sponsor, no department took responsibility as costs rose with minimal results. Despite the frustrated efforts of the software house that proposed a return to process with guidelines, milestones and achievable end points, the project stalled to the point where it was no longer feasible to continue.

This type of project failure is more common than one may think. Project success is not about luck or the amount of money an organisation can throw at a problem, but more down to the skills of the team that install, implement and support any system.

10. Records and Formats for MIS

An MIS is only as effective and accurate as the records and books that provide it the basic data. Hence, this is a crucial aspect that requires attention in the design of the MIS. Two aspects of record keeping at the group level in Microfinance require specific mention. First, the basic philosophy of the MIS should be to reduce record keeping work at the group level through standardisation of transactions. This is because, groups struggle to keep records and many stop maintaining them once an MFI withdraws. This is especially relevant for SHG models. In the JLG model, where group level records exist, they are maintained by the staff. Second, the problem is with the nature of the records - they do not provide the right kind of information. For example, group loan ledgers rarely, if ever, permit accurate ageing of a loan portfolio and, age of an overdue loan is very crucial to managing delinquency and ascertaining whether or not delinquency is caused by faulty and insensitive product design.

With these aspects in mind, the approach should be to simplify and standardise records at group level while providing sufficient time for groups to acquire a mastery over these records.

10.1. Field level Records

The most basic level records are used to collect data from the field. Client-level records vary in number depending on methodology - JLGs have minimal records and SHGs have more records.

Some of the commonly used records at the group level are mentioned here.

- Minutes Book (for SHGs) is used to record minutes of meetings to provide a general (historical) record of happenings at the meetings - it is a chronological account of the various activities and meetings since inception to note client attendance at group meetings.
- Savings Ledger (for SHGs) is used to record individual client savings.
- Loan Ledger (for SHGs) is used to note the loans disbursed and to indicate amounts due and received, interest due and received, and to facilitate calculation of portfolio quality indicators, etc.
• Field Officer Register (for JLGs) is used to note all receipts from and payments to the client in the form of repayments, fees etc., and loan disbursements.
• Cash Book (for SHGs) is used to record all cash transactions – inflows and outflows of money.
• General Ledger (for SHGs) is used to capture all transactions in one record and facilitate the preparation of all necessary financial statements – Income Statement, Balance Sheet, etc.
• Receipts and vouchers (for SHGs and JLGs) are used to have a record of all monetary transactions that take place – loans, savings, fees, etc.
• Client Pass Books (for SHGs and JLGs) are used to record savings deposited by the clients and, interest credited, if any, and to record demand, collection and balance of loans taken by clients (at times this is referred to as ‘loan card’).

Client passbooks for financial transactions and receipts and vouchers are very crucial. Multiple signatures are generally taken in receipts even thought this consumes time. This is necessary until internal controls are stabilised.

The general ledger is critical but it is better maintained at the level of the federation/branch and at the MFI level.

10.2. Federation/Branch level Records

Broadly, a federation or a branch is the intermediary level between the client and the Head Office. Some institutions have a few more levels between the branch and the head Office, but for the sake of gathering data and generating information, they mimic partly the branch and partly the Head Office with the difference primarily being in scale. Data collection happens minimally at levels above the field in the case of an SHG; exceptions are SHG Federations, where the same transactions happen, but the client is replaced by the SHG. In the JLG methodology, consolidation and processing of data happens at the higher levels. Records and formats used for consolidation and processing normally differ from MFI to MFI. However, some common formats are listed here.

• Minutes Book (for SHG Federations) is used to record minutes of meetings and to provide a general (historical) record of the happenings at the meetings - it is a chronological account of the various activities and meetings since inception and to note SHG attendance at federation meetings.
• Savings Ledger (for SHG Federations) is used to record individual SHG savings.
• General Ledger (for SHG Federations and JLG Branches) is used to capture all transactions and facilitate the preparation of all necessary financial statements - Income Statement, Balance Sheet, etc.
• Receipts and vouchers (for SHG Federations and JLG Branches) is used to have a record of all monetary transactions that take place - loans, savings, fees, expenses etc.
• Pass Books (for SHGs which are members in a federation) are used to record savings deposited by the SHGs and interest credited, if any and to record demand, collection and balance of loans taken by SHGs.
• Loan Ledger (for SHG Federations) is used to note the loans disbursed to indicate amounts due and received, interest due and received and also facilitate calculation of portfolio quality indicators.
• Cash Book (for SHG Federations and JLG Branches) is used to record all cash transactions – inflows and outflows of money in the federation (SHG) and in the branch (JLG).
• Receipts and Payments Statement (for SHG Federations and JLG Branches) is used to record portfolio and non-portfolio related receipts and payments, bank and other transfers etc.
• Group Formation register is used to record details of new groups formed during the period, especially in the case of JLGs.

10.3. Head Office level Records

At the Head Office level, information that is gathered from the lower levels is fed into the different sub-systems and then processed to generate reports and performance indicators. Indicators are generated by mixing the information from the different sub-systems or from a single sub-system. The following list of reports is generally sent to the Head Office, (region-wise or branch-wise) and these are consolidated at the institutional level.

• Portfolio Sub-system
  – Weekly/Monthly Performance Report
    • Disbursements
Management Information Systems: A Practical Toolkit

- Repayments
- Over-dues/Arrears
- New Branches
- New members and groups

- Accounting Sub-system
  - Weekly/Monthly Reports
    - Receipts and Payments
    - Cash and Bank Balances
    - Operational Expenses
    - Financial and other incomes

- HR Sub-system
  - Periodic reports (monthly/quarterly) on
    - New Staff recruited
    - Promotions and Transfers
    - Staff Requirements
    - Incentives

Sample formats for MIS at different levels (Field, Branch/Federation and Head Office) have been provided as Handouts – Handout 10.1\(^{17}\) for SHG Sample Formats and SHG specific Sample MIS, and Handout 10.2\(^{18}\) for MFI level Sample MIS. Data formats for JLG can be accessed from the Sample Operations Manual for JLG MFIs.\(^{19}\)

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\(^{17}\) Formats have been developed by L B Prakash for Sa-Dhan and other SHG-based MFIs.

\(^{18}\) Formats taken with permission from Hindustan Microfinance Pvt Ltd., Mumbai.

\(^{19}\) Refer to MicroSave’s MFIOOAB (MFI Out of A Box)
Annexure 1 – Indicators for measuring performance

There are a multitude of financial ratios and indicators, each of which may provide useful information to a microfinance institution (MFI) manager. Ratios and indicators help managers evaluate the performance of their organisation in several different aspects of its activity. The 18 indicators selected in this Framework recommended by the SEEP network reflect the areas of measurement that are priorities for most MFIs. The “SEEP 18” are divided into the following four groups:

- Profitability and sustainability,
- Asset/liability management,
- Portfolio quality, and
- Efficiency and productivity.

This handout begins by listing the term for each ratio, its formula, and an explanation of its purpose. Each ratio is then discussed in the context of its group, including a brief introduction to each group and a definition of each ratio. For each ratio, the Framework includes a description of the following:

- The formula,
- Why the ratio is important, and
- How to use adjusted data in the calculations and the effects of using adjustments.

Taken as a whole, the ratios in this Framework provide a multidimensional perspective on the financial health of the lending and savings operations of the institution. The ratios must be analysed together; selective ratio use can create an incomplete picture.

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<table>
<thead>
<tr>
<th>Term</th>
<th>Formula</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sustainability and Profitability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Self-Sufficiency</td>
<td>Financial Revenue  = \frac{\text{Financial Expense + Impairment Losses on Loans + Operating Expense}}{\text{Financial Revenue}}</td>
<td>Measures how well an MFI can cover its costs through operating revenues.</td>
</tr>
<tr>
<td>Financial Self-Sufficiency</td>
<td>Adjusted Financial Revenue  = \frac{\text{Adjusted Financial Expense + Adjusted Impairment Losses on Loans + Adjusted Operating Expense}}{\text{Adjusted Financial Revenue}}</td>
<td>Measures how well an MFI can cover its costs taking into account adjustments to operating revenues and expenses.</td>
</tr>
<tr>
<td>Return on Assets (ROA)</td>
<td>Net Operating Income – Taxes \div \text{Average Assets}</td>
<td>Measures how well the MFI uses its assets to generate returns. This ratio is net of taxes and excludes non-operating items and donations.</td>
</tr>
<tr>
<td>Adjusted Return on Assets (AROA)</td>
<td>Adjusted Net Operating Income – Taxes \div \text{Average Adjusted Assets}</td>
<td></td>
</tr>
<tr>
<td>Return on Equity (ROE)</td>
<td>Net Operating Income – Taxes \div \text{Average Equity}</td>
<td>Calculates the rate of return on the Average Equity for the period. Because the numerator does not include non-operating items or donations and is net of taxes, the ratio is frequently used as a proxy for commercial viability.</td>
</tr>
<tr>
<td>Adjusted Return on Equity (AROE)</td>
<td>Adjusted Net Operating Income – Taxes \div \text{Average Adjusted Equity}</td>
<td></td>
</tr>
<tr>
<td><strong>Asset/Liability Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yield on Gross Portfolio</td>
<td>Cash Received from Interest, Fees, and Commissions on Loan Portfolio \div \text{Average Gross Loan Portfolio}</td>
<td>Indicates the MFI’s ability to generate cash from interest, fees, and commissions on the Gross Loan Portfolio. No revenues that have been accrued but not paid in cash are included.</td>
</tr>
<tr>
<td>Portfolio to Assets</td>
<td>Gross Loan Portfolio \div \text{Assets}</td>
<td>Measures the MFI’s allocation of assets to its lending activity. Indicates management’s ability to allocate resources to the MFI’s primary and most profitable activity—making microloans.</td>
</tr>
<tr>
<td>Cost of Funds Ratio</td>
<td>Financial Expenses on Funding Liabilities \div \text{(Average Deposits + Average Borrowings)}</td>
<td>Calculates a blended interest rate for all the MFI’s funding liabilities.</td>
</tr>
<tr>
<td>Adjusted Cost of Funds Ratio</td>
<td>Adjusted Financial Expenses on Funding Liabilities \div \text{(Average Deposits + Average Borrowings)}</td>
<td>The adjusted ratio will usually be higher due to affect of the Subsidized Cost of Funds adjustment.</td>
</tr>
<tr>
<td>Debt to Equity</td>
<td>Liabilities \div \text{Equity}</td>
<td>Measures the overall leverage of an institution and how much cushion it has to absorb losses after all liabilities are paid.</td>
</tr>
<tr>
<td>Adjusted Debt to Equity</td>
<td>Liabilities \div \text{Adjusted Equity}</td>
<td>The adjusted ratio considers reductions to equity due to adjustments.</td>
</tr>
<tr>
<td>Term</td>
<td>Formula</td>
<td>Explanation</td>
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</tr>
<tr>
<td>Liquid Ratio</td>
<td><strong>Cash + Trade Investments</strong>&lt;br&gt;(Demand Deposits + Short-term Time Deposits + Short-term Borrowings + Interest Payable on Funding Liabilities + Accounts Payable and Other Short-term Liabilities)**</td>
<td>Indicates level of cash and cash equivalents the MFI maintains to cover short-term liabilities. Short-term means assets or liabilities or any portion thereof that have a due date, maturity date, or may be readily converted to cash within 12 months.</td>
</tr>
<tr>
<td>Portfolio at Risk (PAR) Ratio</td>
<td><strong>PAR &gt; 30 Days + Value of Renegotiated Loans + Gross Loan Portfolio</strong></td>
<td>The most accepted measure of portfolio quality. The most common international measurements of PAR are &gt; 30 days and &gt; 90 days.</td>
</tr>
<tr>
<td>Adjusted PAR Ratio</td>
<td><strong>Adjusted PAR &gt; 30 Days + Value of Renegotiated Loans + Adjusted Gross Loan Portfolio</strong></td>
<td>The adjusted PAR reduces the Gross Loan Portfolio by the Write-off Adjustment.</td>
</tr>
<tr>
<td>Write-off Ratio</td>
<td><strong>Value of Loans Written Off + Write-off Adjustment</strong>&lt;br&gt;Average Gross Loan Portfolio</td>
<td>Represents the percentage of the MFI’s loans that has been removed from the balance of the gross loan portfolio because they are unlikely to be repaid. MFIs’ write-off policies vary; managers are recommended to calculate this ratio on an adjusted basis.</td>
</tr>
<tr>
<td>Risk Coverage Ratio</td>
<td><strong>Impairment Loss Allowance</strong>&lt;br&gt;Portfolio at Risk &gt; 30 Days</td>
<td>Shows how much of the portfolio at risk is covered by the MFI’s Impairment Loss Allowance.</td>
</tr>
<tr>
<td>Adjusted Risk Coverage Ratio</td>
<td><strong>Adjusted Impairment Loss Allowance</strong>&lt;br&gt;Adjusted Portfolio at Risk &gt; 30 Days – Write-off Adjustment</td>
<td>The adjusted ratio incorporates the Impairment Loss Allowance Adjustment and the Write-off Adjustment.</td>
</tr>
<tr>
<td>Efficiency and Productivity</td>
<td><strong>Operating Expense</strong>&lt;br&gt;Average Gross Loan Portfolio</td>
<td>Highlights personnel and administrative expenses relative to the loan portfolio the most commonly used efficiency indicator.</td>
</tr>
<tr>
<td>Adjusted Operating Expense Ratio</td>
<td><strong>Adjusted Operating Expense</strong>&lt;br&gt;Average Adjusted Gross Loan Portfolio</td>
<td>The adjusted ratio usually increases this ratio when the affect of subsidies are included.</td>
</tr>
<tr>
<td>Cost per Active Client</td>
<td><strong>Operating Expense</strong>&lt;br&gt;Average Number of Active Clients</td>
<td>Provides a meaningful measure of efficiency for an MFI, allowing it to determine the average cost of maintaining an active client.</td>
</tr>
<tr>
<td>Adjusted Cost per Client</td>
<td><strong>Adjusted Operating Expense</strong>&lt;br&gt;Average Number of Active Clients</td>
<td>The adjusted ratio usually increase this ratio when the affect of subsidies are included.</td>
</tr>
<tr>
<td>Term</td>
<td>Formula</td>
<td>Explanation</td>
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<tr>
<td>Borrowers per Loan Officer</td>
<td>Number of Active Borrowers / Number of Loan Officers</td>
<td>Measures the average caseload of (average number of borrowers managed by) each loan officer.</td>
</tr>
<tr>
<td>Active Clients per Staff Member</td>
<td>Number of Active Clients / Total Number of Personnel</td>
<td>The overall productivity of the MFI's personnel in terms of managing clients, including borrowers, voluntary savers, and other clients.</td>
</tr>
<tr>
<td>Client Turnover</td>
<td>( \frac{\text{Number of Active Clients, End of Period} + \text{Number of New Clients During Period}}{\text{Average Number of Active Clients}} )</td>
<td>Measures the net number of clients continuing to access services during the period; used as one measurement of client satisfaction.</td>
</tr>
<tr>
<td>Average Outstanding Loan Size</td>
<td>Gross Loan Portfolio / Number of Loans Outstanding</td>
<td>Measures the average outstanding loan balance per borrower. This ratio is a profitability driver and a measure of how much of each loan is available to clients.</td>
</tr>
<tr>
<td>Adjusted Average Outstanding Loan Size</td>
<td>Adjusted Gross Loan Portfolio / Adjusted Number of Loans Outstanding</td>
<td>The adjusted ratio incorporates the Write-off Adjustment.</td>
</tr>
<tr>
<td>Average Loan Disbursed</td>
<td>Value of Loans Disbursed / Number of Loans Disbursed</td>
<td>Measures the average value of each loan disbursed. This ratio is frequently used to project disbursements. This ratio of R17 can be compared to (N12) GNI per capita.*</td>
</tr>
</tbody>
</table>
Annexure 2 – Mapping Stakeholders’ needs

Stakeholders Mapping for Microfinance

- Regulators
- Specialised Agencies and Other Donors
- MFI with Branches/ Federations and/or Clusters
- Staff
- Govt ...
- Wholesalers (Financial Institutions) / DFIs
- Bankers
- Other Stakeholders

Groups

Clients

MicroSave – Market-led solutions for financial services
Annexure 3 – Common symbols used for Process Mapping

This symbol is used to indicate both the beginning and the end of the program.

Identifies an activity or task in the process that changes an output. Usually the name of the activity or task is written inside.

Manual Operation. If it is important to indicate that an operation is manually performed, this can be used instead of the square Operations Process symbol.

Document: indicates a physical paper on which information is recorded.

The document symbol, superimposed on itself, indicates the presence of multiple copies of a document. At left, for example, a document in triplicate is shown. When a document is shown in this manner, usually the destination of each copy is traced.

Identifies a decision or branching point in the process. The decision is written inside. Each path emerging from the Decision Diamond is labelled with the appropriate options, usually “yes” or “no.” Decision diamonds must post a question. Questions should be worded as specifically and objectively as possible, so that everyone will interpret them in the same way.

Indicates when something must wait or is placed in temporary storage. This could be batching of documents. The symbol is used as a ‘flag’ at the top of the process.

Indicates movement of the output between locations.

Indicates that an output is in storage. Storage differs from delay based on the duration of the wait and the need for some type of authorisation to retrieve the item.
An On-Map connector indicates that an output from this process is continued elsewhere on the process map. It is used to reduce awkward or confusing lines across a map. In order to help the reader follow the path, the same letter is used in a corresponding connector posted where the process resumes.

Off-Page connector: This indicates that the flow continues on another process map. The page index (H) and the connector number (6) are recorded inside the symbol to show where the reader will pick up the flow. Conversely, on the continuation map, the page index (C) for the previous map is recorded, but the same connector number is used (6) so that the reader can follow the path.

Card: indicates card, used where each customer uses a card to access his or her account or other services.

Cash: this symbol is used to indicate the flow of cash through the process.

Indicates where data is stored or retrieved from a computer system. A standard MIS symbol.

The symbol for documents moving between people/departments is used to show the movement of documents from one person to another. These hand offs are often the cause of inefficiencies in processes.
Annexure 4 – MIS Software Evaluation Scoring Sheet

<table>
<thead>
<tr>
<th>Functionality and Expandability</th>
<th>Weight</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional completeness, appropriateness, and integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Accounting package</td>
<td></td>
<td></td>
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<tr>
<td>- Portfolio tracking</td>
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<tr>
<td>- Deposit monitoring</td>
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<tr>
<td>- Customer information system</td>
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<tr>
<td>Expandability and institutional growth</td>
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<tr>
<td>Flexibility</td>
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<tr>
<td>- Customer-centric vs. account-centric</td>
<td></td>
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<tr>
<td>- Institutional types</td>
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<td></td>
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<tr>
<td>- Lending methodologies</td>
<td></td>
<td></td>
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<tr>
<td>- Loan interest types</td>
<td></td>
<td></td>
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<tr>
<td>- Savings and deposit account types</td>
<td></td>
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<tr>
<td>- Deposit interest types</td>
<td></td>
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<tr>
<td>- Payment types</td>
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<tr>
<td>- Payment frequencies</td>
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<tr>
<td>- Multiple branches or regions</td>
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<tr>
<td>- Multiple languages</td>
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<tr>
<td>- Multiple currencies</td>
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</tbody>
</table>

| Usability                                                           |        |        |
| Ease of use and user-friendliness                                   |        |        |
| User interface                                                      |        |        |

| Reporting                                                           |        |        |
| Reports                                                            |        |        |
| Report generation                                                   |        |        |

| Standards and Compliance                                           |        |        |
| Accounting soundness and standards                                  |        |        |
| Governmental and supervisory adherence                              |        |        |

| Administration and Support                                         |        |        |
| Security                                                           |        |        |
| Backup and recovery                                                |        |        |
| Fault tolerance and robustness                                     |        |        |
| End-of-period processing                                           |        |        |
| Support infrastructure and maintenance                             |        |        |
| Version control and upgrade strategy                               |        |        |

| Technical Specifications and Correctness                           |        |        |
| Technology and architecture                                        |        |        |
| Performance                                                        |        |        |
| Number and date handling                                           |        |        |

| Cost                                                                |        |        |
| Pricing and costs                                                  |        |        |