

4

Water, Sanitation and Microfinance Toolkits
**WASH Finance Process Mapping,
Risk Management, Pricing, Internal
Audit and Controls**



COLLABORATIVELY
CREATED BY

MicroSave
Market-led solutions for financial services

 water.org™

Acknowledgments

Thanks to the support and vision of our generous partners, we are providing the tools necessary to jump start financial institutions and others within the sector to create access to water and sanitation loans for the world's poor. These partnerships are supporting the creation of scalable and sustainable models that will accelerate access to safe water and sanitation throughout the developing world. Collectively, our work is transforming the future with the most basic of needs – water and a toilet.



Toolkit 4 Contents

List of Acronyms	iv
Preface	v
1. Process Mapping for WASH Financial Products.....	1
Introduction to Process Mapping in WASH Finance	2
Steps in Process Mapping	6
Key Processes to be Mapped for WASH Financial Products	18
2. Key Risks in Delivering WASH Financial Products.....	27
Understanding Risk	28
Classification of Risks	30
Strategies to Manage Risks	34
Risk Trade-offs	38
3. Pricing WASH Loan Products.....	39
Pricing Policy, Objectives, and Methods	41
WASH Pricing Strategies	44
4. Internal Controls and Internal Audit in WASH Finance..	53
Introduction to Internal Controls and Audit	54
Internal Controls	55
Internal Audits	61
Internal Audit Checklist	63
References	68

Table of Figures

Figure 1: Example of a Simple Process Map.....3

Figure 2: Key Questions During Process Mapping Exercise 4

Figure 3: Examples of WASH Finance Processes.....9

Figure 4: Sambandh Sanitation Loan Processes.....10

Figure 5: Sources of Data Process Mapping.....11

Figure 6: Examples of Operational Risks in WASH Finance 14

Figure 7: The “As Is” Process Map.....16

Figure 8: The “Could Be” Process Map..... 17

Figure 9: Part One of Client Acquisition Process20

Figure 10: Part Two of Client Acquisition Process21

Figure 11: Credit Appraisal Processes..... 24

Figure 12: Sample Risk Event for WASH Financial Products..... 29

Figure 13: Examples of GUARDIAN’s Risk Mitigation Strategies.....37

Figure 14: Properties of Pricing Modes..... 43

Figure 15: The Pricing Stack.....44

Figure 16: Internal Control Structure..... 54

Figure 17: Control Points for WASH Loans.....58

Figure 18: Sample WASH Portfolio Internal Audit Checklist..... 63



List of Acronyms

CI: Credit Investigation

FI: Financial Institution

ICT: Information and Communication Technology

IGA: Income-Generating Activity

MFI: Microfinance Institution

MIS: Management Information Systems

MNO: Mobile Network Operator

NGO: Non-Governmental Organization

PAR: Portfolio at Risk

SHG: Self-Help Group

SMS: Short Message Service (Text Message)

WASH: Water, Sanitation and Hygiene



Preface

Overview of the Water, Sanitation and Microfinance Toolkits

Water.org and *MicroSave* have jointly developed a series of water, sanitation and hygiene (WASH) microfinance toolkits to provide the information and tools necessary for financial institutions (FIs) to develop products for financing WASH investments. The toolkits present essential information, principles and practices for successful development of WASH financial products and are designed to be applicable across a variety of markets, lending methodologies and business models.

Toolkit 1: Introduction to Opportunities in WASH Finance

Provides global WASH context and information on household WASH needs and demands for WASH financing; introduces the major WASH systems prevalent among low-income populations and explains which are suitable for loan products; provides an overview of WASH stakeholders with which FIs might collaborate to support their WASH financial products; and identifies potential challenges and keys to success.

Toolkit 2: WASH Financial Product Development

Explores the product development process for researching, designing and launching successful WASH financial products, including market research, product design and pilot, and preparation for product rollout.

Toolkit 3: WASH Financial Product Marketing

Explores different marketing strategies and tools to ensure effective demand generation, particularly given high latent demand for WASH financing in the developing world; helps FIs create a marketing plan and explores the cost benefit of a marketing campaign.

Toolkit 4: WASH Finance Process Mapping, Risk Management, Pricing, Internal Audit and Controls

Provides the tools for FIs to design effective processes for product delivery, introduces the concept of process mapping and helps FIs identify the process risks in delivering WASH products. This toolkit also includes pricing a WASH loan product and instituting audit and control measures for WASH finance.

Toolkit 5: WASH Portfolio Management

Discusses keys to managing sustainable WASH products, including staff incentives, portfolio monitoring and delinquency management. It also includes methodology for assessing a client's ability to repay WASH loans.

Structure of the Toolkit

WASH Finance Process Mapping, Risk Management, Pricing, Internal Audit and Controls is the fourth of five toolkits developed by Water.org and *MicroSave* to strengthen and expand the financial sector's capacity to offer sustainable products designed to finance WASH investments. The content draws heavily from Water.org's practical experience, providing technical assistance to FIs over the past decade through its WaterCredit initiative, and MicroSave's work providing consulting services to FIs. This toolkit builds on the previous three and aims to strengthen the capacity of the staff, management and board members of FIs in the development of WASH financial products. The objectives of this toolkit are to:

- Describe process mapping and explain how it can be applied to WASH finance
- Discuss the potential process and operational risks that can occur in delivering WASH financial products
- Illustrate the critical importance of pricing decisions for WASH financial products and
- Explain the different strategic objectives for determining the pricing strategy for WASH products
- Present recommended internal control systems used to manage WASH financial products
- Provide a framework for internal auditing of a WASH portfolio

This toolkit is divided into 4 chapters:

Chapter 1 introduces the concept of process mapping and how it can be applied to WASH financing. It also presents the key processes to be mapped.

Chapter 2 analyzes the potential risks inherent in WASH finance.

Chapter 3 discusses the importance of pricing decisions for WASH financial products. It dissects different pricing methodologies and assess their suitability for application to WASH financial products in different scenarios. This chapter additionally reviews different FI objectives that play decisive roles in determining a pricing strategy.

Chapter 4 gives an overview of the internal audit and control requirements for WASH finance. It provides an overview of the necessary policies and procedures across various functions of a financial institution offering WASH loan products, the implementation of internal audits, internal audit check points, internal controls with regard to human resources, and partnerships and collaborations with other FIs and other entities.

About Water.org

Water.org is a non-profit organization that has transformed the lives of more than two million people in Africa, South Asia, Central America and the Caribbean by providing access to safe water and sanitation. Founded by Gary White and Matt Damon, Water.org pioneers innovative solutions, such as WaterCredit, to help solve the global water crisis, giving women hope, children health and communities a future.



WaterCredit by Water.org

WaterCredit is a microfinanced-based solution that first began in Bangladesh in 2003 and has since expanded to nine countries. Under WaterCredit, financial institutions have the flexibility to use their existing lending methodologies to develop products that finance locally appropriate WASH facilities. To date, WaterCredit loans for water access have financed network connections, protected wells and boreholes, water pumps, rain water harvesting systems, and storage tanks. Loans for sanitation access have financed toilet and latrine construction, septic tank installation and sewage network connections. Learn more at <http://water.org> and <http://watercredit.org>.

About MicroSave

MicroSave is a consultancy organization that offers practical, market-led solutions to financial institutions and corporations focused on bringing value to the base of the pyramid. *MicroSave* is at the forefront of efforts to move financial services from a product-led to a market-led approach. The market-led approach focuses on putting customers at the center of the business, improving customer loyalty, establishing more profitable organizations and ensuring greater developmental impact. *MicroSave* works with investors, donors, financial institutions, private foundations, corporate businesses and regulators to enable them to deliver the high-quality, affordable financial services that are essential for sustainable and inclusive growth. The organization's expertise includes strategy development and governance, product and channel innovation, organizational strengthening and risk management, investment and donor services, research, training and dissemination of information and best practices. *MicroSave* has implemented projects across Africa, Asia and Latin America. Learn more at <http://www.microsave.net/>.



1

Process Mapping for WASH Financial Products

This chapter introduces the principles and purpose of process mapping and its applicability to financial institutions with WASH portfolios. The chapter has three sub-sections:

- » Introduction to process mapping in WASH finance
- » Step-by-step instructions for running a process mapping exercise
- » Key processes to be mapped for providing WASH financial products

Introduction to Process Mapping in WASH Finance

This section introduces the concept of process mapping and its application to the delivery and risk management of WASH financial products.

What is a process map?

A process map is a graphical representation of the tasks and procedures followed over the course of any operational activity. Process mapping is a simple yet powerful method for examining functional activities, such as marketing and accounting. It creates a snapshot showing the specific combination of functions, steps, inputs and outputs for any activity. It allows the financial institution (FI) to document and improve the way a process or department works. It enables us to peel away the complexity of an institution's organizational structure and focus on the processes that are truly at the heart of a business. It does so by making workflow visible, thus enhancing communication and understanding. Process mapping is a valuable planning and analytical management tool that is used across industries.

What is the role of process mapping in WASH finance delivery?

The ultimate objective of process mapping is to understand and dissect a given process as it is currently performed in order to improve it. For example, a manager wishing to decrease customer complaints about long delays in the disbursement of water tank loans could use a flowchart to document current customer service pathways and identify practices that could be causing bottlenecks. In this situation, a process map could help identify actions that will reduce loan application appraisal and disbursement time.

It is important to mention that FIs should conduct a process mapping of all the major processes involved in offering WASH loan products to its clients. An FI should not only document field operations processes but also that of other support functions such as finance, internal auditing and administration to ensure smooth delivery of WASH loans.

What are the organizational benefits of process mapping?

In general, the benefits of process mapping to an FI are:

- Increase in customer satisfaction due to reduced time required for the process cycle, decreased defects and lowered costs
 - Increase in efficiency, market share and profitability
-

- Creation of a sustainable, competitive advantage through efficiencies gained by process improvements

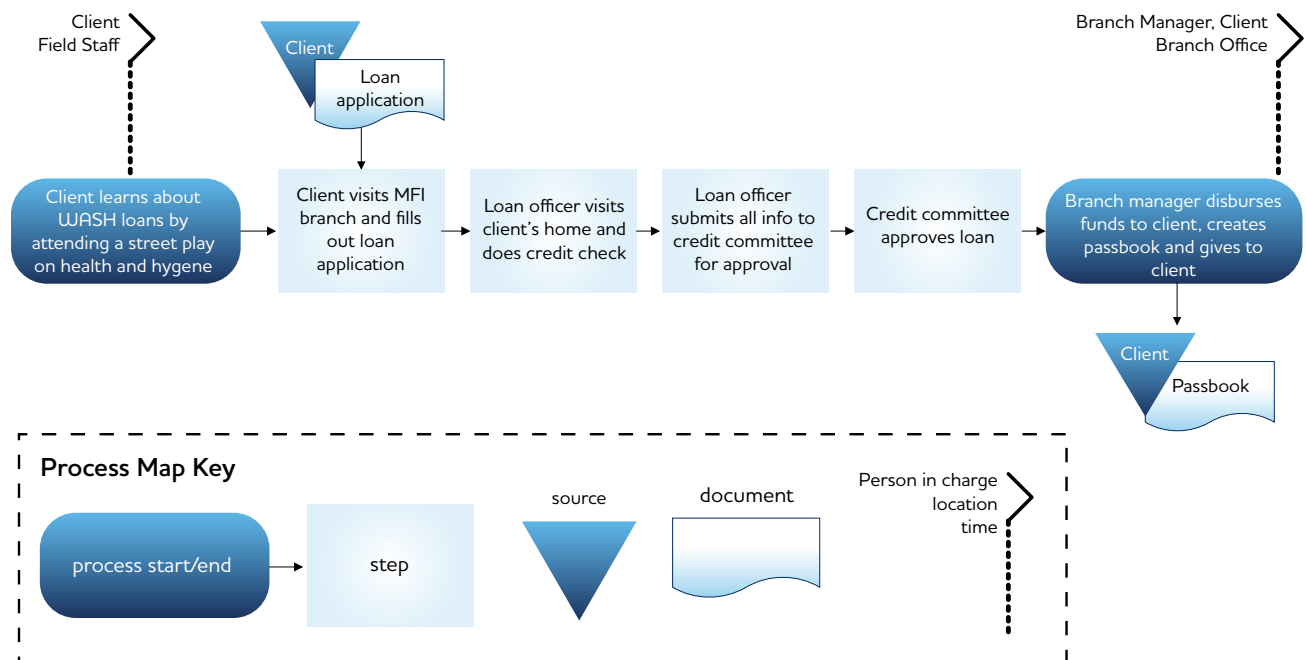
Additional benefits:

- For FIs developing new WASH loan products, process mapping can be an effective method to help management carefully think through the product
- For most FIs, WASH loans are a side-offering, provided to a select group of clients. Being a “non-core” product exposes WASH loans to the risk of being neglected at the expense of the FIs core products. If WASH loan delivery has gone through the process mapping exercise, its roll-out tends to be more organized and integrated into the FIs overall portfolio, which better facilitates scale-up of WASH lending over time.

What does a process map look like?

Since a process map is a visual illustration, it can depict how WASH FIs conduct their business more clearly than written procedures. The visual representation helps to quickly identify bottlenecks and issues that could be creating operational problems (such as failed construction, fraud, or poor quality of customer service) and guide management to identify how these issues can be improved.

Figure 1: Example of a Simple Process Map



[Figure 1](#) presents, in a very simplified sketch, how a process map may look. From the start to the end, every step of a procedure must be isolated and chronologically linked to other process steps using symbols and arrows. The persons, locations and documents involved in the process, as well as the estimated timing of all the steps, must be identified and illustrated.

For each step of the process, the lines and symbols are accompanied by concise wording that tells the reader exactly what happens at each step. The steps are identified by asking some basic questions, as illustrated in [Figure 2](#).

Figure 2: Key Questions During Process Mapping Exercise



A well-prepared process map should meet the following requirements:

- Communicate process-related information in an effective visual form
- Identify actual or ideal paths, revealing problems, risks and potential solutions
- Break processes down into steps using consistent, easily understood symbols
- Allow for immediate identification of any step of the process
- Show intricate connections and sequences clearly
- Give employees, through participation in its creation, a better understanding of the entire process being mapped
- Aid in critical business communication, problem-solving and decision-making

When should a process mapping exercise be conducted?

Process mapping requires input from representatives of all involved departments. The mapping exercise should be carried out by a task leader in consultation with the department representatives. The investment in designing robust process maps delivers sustained returns in terms of cost-savings from efficient operations and lower risks. Given the resources required, process mapping is only conducted when one of the following conditions exist:

- Launching of a new product or offering
- Strategic or policy-level changes requiring a change in processes
- Discovery of a risk which can be mitigated by changing a process (i.e. identified operational inefficiencies)
- Entry of new competitor in the market

It is recommended that a process map be reviewed and updated at regular intervals.

How do you conduct process mapping for WASH finance?

WASH products require special attention due to their unique nature. In addition to disbursements and repayments, which are similar to other types of loan products, WASH loans must include internal WASH expertise within the FI and community health and hygiene education for clients. Successful delivery of WASH loan products requires a few additional steps beyond the standard loan process and involves more verification visits and partnership agreements. However, the steps for conducting a process mapping exercise are similar for all types of industries and activities. A process mapping exercise should produce three maps:

- An **“as is”** map that identifies how a process is currently performed,
- A **“should be”** map that shows the process as it is described in the organization’s policies and procedures manuals, and
- A **“could be”** map that suggests methods to improve the current process toward more efficient practices.

By mapping an “as is” process and comparing it to the “should be” map, existing deviations can be identified. Once deviations are known, an attempt can be made to analyze their causes. FIs entering WASH finance for the first time would begin by designing “could be” maps as there would not be any existing processes. After the product is launched, FIs should undertake periodic internal review to further improve product processes.



CAUTION: Change is always easy on paper. Creating a “should be” or “could be” process should have a significantly positive impact on a financial institution’s bottom line, but process is just one of five critical strategic areas that determine how an organization functions. The others are structure, leadership, people, and performance management. All of these elements are interdependent. If an attempt is made to improve a process without considering personnel issues (such as training and culture) or performance-management issues (such as compensation), there is a risk that the efforts could fail.

Steps in Process Mapping

Process mapping is a very powerful tool which can drastically improve the operational efficiency of WASH lending, but it is important that it is implemented correctly. This toolkit describes the complete process mapping exercise in 10 steps, as per MicroSave’s methodology. Descriptions of the steps are limited to the essentials, and the authors advise the reader to refer to MicroSave’s publication, “A Toolkit for Process Mapping for MFIs,” which provides more in-depth methodology on conducting process mapping. In case of a new organization or an organization with no existing processes for WASH finance, “should be” and “could be” processes will be the starting point. Organizations with existing processes will need to start with “as is” maps and then proceed to “should be” and “could be” maps.

Step 1: Identify and Prioritize Operational Gaps and Challenges

FIs providing WASH loans can identify operational gaps in WASH finance processes using:

- **Market research data:** For example, if the market research data suggests the need for a process for raising awareness on health and sanitation issues, the FI should define this process for its field staff charged with promoting WASH finance products to the target segments.
- **Client satisfaction surveys:** When the loan term is coming to an end, client satisfaction surveys may be conducted to identify if clients faced challenges or problems throughout the loan process, if the loan had been properly used as per the stated purpose, etc.
- **Information from process mapping of similar loan products:** Existing WASH finance products are likely to have similar lending processes as general loan products of FIs. For example, Sambandh Financial Services, an FI based in Orissa, India, has adopted the lending

List of Steps:

1. Identify & Prioritize Operational Gaps
2. Choose Processes to be Mapped
3. Select Team & Prepare
4. Define Process
5. Collect Data
6. Construct “As is” and “Should be” Maps
7. Construct “Could-be” Maps
8. Analyze “Should-be”/ “Could-be” Maps
9. Summarize & Disseminate Findings
10. Test New Processes

methodology of its general microfinance loan products for its sanitation loan product. However, under WASH finance, a few key processes, such as awareness generation and loan utilization checks are significantly different.

- **Experience from competitors in WASH finance:** FIs may refer to market research on competitors offering similar products, estimate the processes that might suit the local conditions and learn from their experience and challenges.
- **Staff feedback on processes:** Staff from different departments can be interviewed to identify challenges or constraints

As a first step, FIs must identify any existing operational gaps. This effort will help to give the entire process mapping exercise a sense of mission and purpose.

Step 2: Choose Processes to be Mapped

If done correctly, Step 1 will result in a draft list of the processes necessary for WASH financial products, and key operational gaps associated with these processes. From this list, the FI must choose the process to be mapped first based on priority. For example, if an FI realizes that the delivery of its WASH finance products differs from its income-generating loan products only with respect to the pre-disbursement processes, it should map only pre-disbursement processes, unless the FI is experiencing some operational inefficiency in its existing delivery system.

RGVN (NE), an FI based in the northeast region of India, faced challenges in scaling up the demand for its WASH loan product. One year after the product launch, it was only able to gain a handful of WASH loan clients. The FI's senior management team realized that the field processes for WASH loans was significantly different from other loan processes and, consequently, saw a need to have process maps for all the field processes. In absence of defined loan processes for WASH loans, the staff did not feel confident offering the loans. [“Key Processes to be Mapped for WASH Financial Products” on page 18](#) will elaborate upon what processes are most important to map in WASH financing.

Step 3: Select Team and Prepare for Process Mapping Exercise

Careful composition of the process mapping team is important – they must have the skills, knowledge, experience, willingness, time, and position to positively influence the exercise. The team should include people directly involved in operations at different levels of the organization (for example, field staff, branch heads, WASH program officers, WASH technical staff, senior operations staff, and regional and head office staff). The team must be

empowered to make significant changes in workflow, and must be given not only the responsibility but also the authority and flexibility to implement or change processes.

Step 4: Define the Process

This involves three steps:

- 1. Name the processes to be mapped:** There are three basic levels of mapping: systematic (e.g. institutional level), macro-processing (e.g. lending activities, branch monitoring, and internal audits), and micro-processing (e.g. identification of suitable WASH vendors). Maps at these three levels will resemble each other in format but provide information at different levels.
 - For example, an institutional map will depict different departments and their routine interactions between each other (flow of client files, MIS data, etc.) while a macro processing map will focus on one particular process and depict it in more detail. Micro-process maps cover a smaller portion of a larger process or a separate small standalone process.
 - Each level has its own purpose and utility; therefore, an institutional-level map for top management to monitor overall operations, or macro-process maps for process improvements and risk management. Micro-process maps are generally useful for specialized trainings.
- 2. Specify process mapping objectives:** The appropriate level of detail required depends on the objective of the process, and some objectives require more details than others. Mapping all processes is not feasible as it could consume hundreds of hours and take staff away from other duties. Therefore, it is important to set clear objectives in order to identify the processes that are the highest priority to map. Objectives, for example, could include any of the following:
 - Problem solving for specific bottlenecks
 - Identify process improvement opportunities
 - General understanding of work flow
 - Evaluate, establish or strengthen performance measures
 - Orient and train new employees
 - Establish and document best practices
 - Create detailed and easy-to-follow policy and procedures manuals
 - Identify “quick-win” opportunities
 - Document risks and develop risk management strategies

- Reduce specific types of risk, including reputational risk, fraud, operating errors, human-resource-related risks, system failures, etc.

3. Outline key processes to be mapped:

- Identify start and end points (this helps to prevent overlapping steps between two processes)
- Define inputs into the process
- Specify outputs from the process
- Identify the suppliers and clients involved in the process
- Identify the principal steps that occur between the start and end points of the process

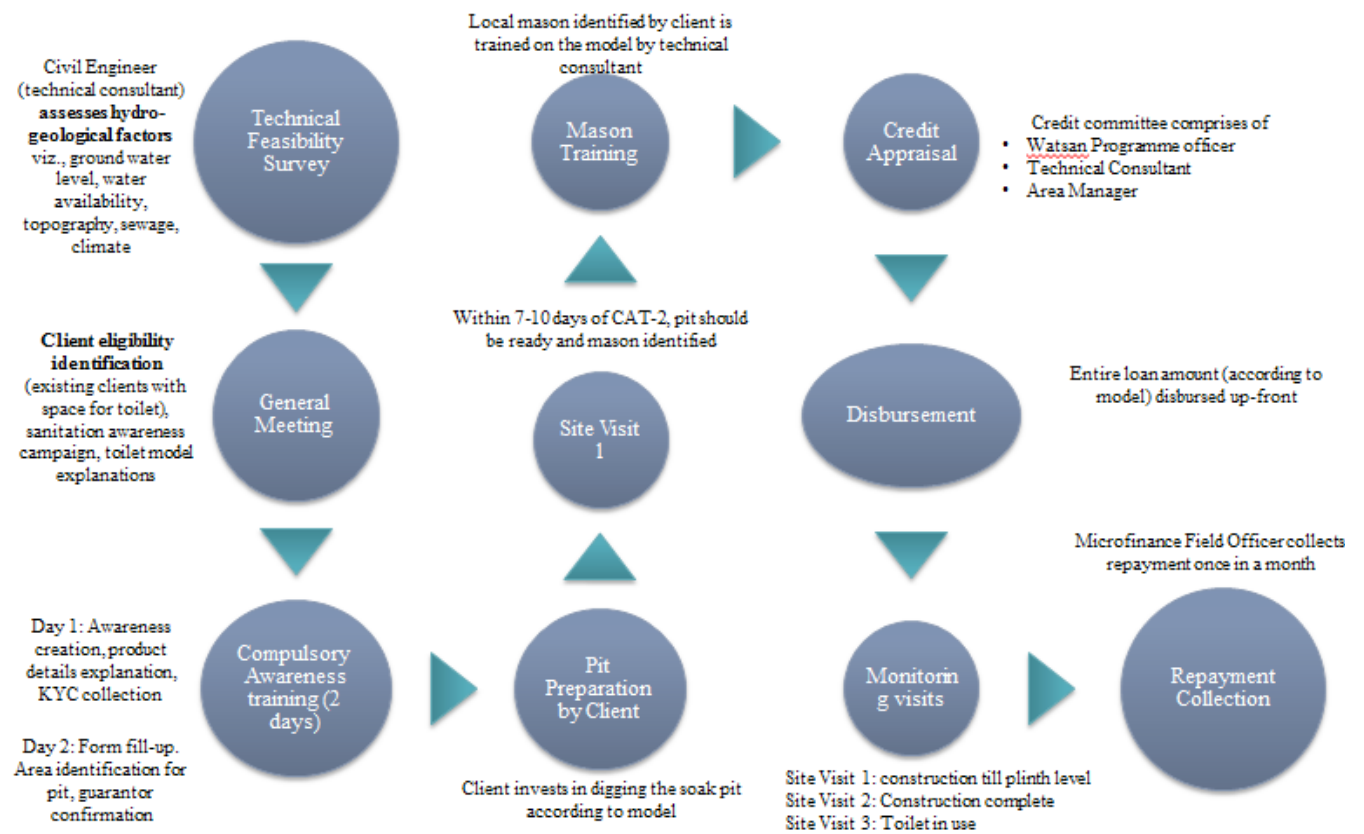
Below is an example of WASH loan processes and their objectives, start points and end points:

Figure 3: Examples of WASH Finance Processes

Name of the Process	Objective	Start Point	End Point
Selection of geographies for WASH financing	To select districts or blocks where there is demand for water and sanitation infrastructure.	Area manager conducts research of the area to identify the WASH requirements of the population.	Area is identified for WASH financing.
Conducting awareness campaigns	To tap latent demand by conducting social awareness activities on health and hygiene for target population.	Health and hygiene staff visit the identified areas along with materials and audio-visual aids as per a pre-determined schedule.	Health and hygiene staff distribute pamphlets describing the WASH loan products and other services offered by FI.
Loan appraisal	To check the creditworthiness of the client.	Field staff visits the household and business premises of the client to initiate the loan appraisal.	Field staff leaves the client premises along with loan application and appraisal form.
Loan disbursement	To disburse the loan to the client.	Client visits the branch office along with loan processing fee and identity card.	Client receives the loan in the form of cash or check.

Figure 4 presents the macro-process for Sambandh’s sanitation loan product, from the technical feasibility survey to the final payment collection. Each of these steps can then be deconstructed into more detailed analyzes (micro-processing), with persons involved, locations, decision boxes, etc., as will be explained in Key Processes to be Mapped for WASH Financial Products.

Figure 4: Sambandh Sanitation Loan Processes



Step 5: Collect Data

There are three basic methods of collecting the process information necessary to create an “as is” map:

- **Self-generation:** If the work process is already clear, a map can be drawn by the person initiating the mapping process and then others who perform or interact with the process can be asked to review it. This method produces a map quickly, but its usefulness is limited by the amount of work-process knowledge that the initiator possesses.

* “Watsan” refers to water and sanitation

** “CAT-2” refers to Compulsory Awareness Training – 2 days

- **Interviews:** A series of one-on-one interviews with suppliers, performers, and customers of the work process will facilitate the creation of a rough draft of the process map. This map can then be shared with those who have been interviewed and others who are knowledgeable about the process, asking them to review it for completeness and accuracy. Alternatively, a group interview can be conducted whereby relevant individuals are invited to work together to generate the map. This process works best with a skilled facilitator.
- **Observation:** Observation of the particular process can be used to confirm understanding of the data gathered from a self-generated map or interviews. By observing processes in action the map can be corrected to better reflect the “as is” reality.

To conduct process mapping of a WASH financial institution’s operations, the following potential data sources can be used.

Figure 5: Sources of Data Process Mapping

Data Sources	Methods of Collecting Data
WASH FI staff	Conduct in-depth interviews with key management team members, branch managers and loan officers already implementing WASH financing (if applicable).
Potential or existing WASH client interviews	Conduct one-on-one or group interviews with existing FIs.
Major Stakeholders (NGOs/WASH suppliers/Donor agencies)	Interview key officials from partner institutions offering support/products/ services under the WASH finance project. For example, if an FI has a partnership with an NGO for creating awareness on WASH issues, interviewing key officials from the NGO and knowing about its methodology will be the basis for designing the process.
Manuals	Review manuals on credit methodology and internal operational processes for existing (non-WASH) microfinance products.
Management Information System (MIS)	Verify any figures, timings or ratios that can be matched with data in the MIS
WASH vendors	Conduct one-on-one interviews with vendors to understand WASH infrastructure, supply and demand, processes for contacting and paying vendors, prices, etc.

It is essential to cross-validate data gathered: information should be collected from at least three sources before it is considered to be representative of reality. If one hears or observes significant differences across the three data points, it is important to continue inquiring until the situation is fully understood in enough detail.

Step 6: Construct the “As is” and “Should be” Maps

This step is for FIs which have existing WASH financial products. An FI entering into WASH finance for the first time will not have any existing processes except the processes that are common to both WASH finance and generic microfinance products. Therefore, those new to WASH finance should directly move to Step 7 to create a “could be” map.

For FIs that have an existing WASH financial products, developing an “as is” and “should be” map is the starting point. Begin by making a rough draft of processes to be mapped, define boundaries and focus on the key elements of the process (e.g. suppliers, inputs, tasks, outputs, and customers).

“As is” process maps can be constructed by following Step 5 and by answering questions given in [Figure 2](#).



SOFTWARE FOR CONSTRUCTING PROCESS MAPS

Most flowchart symbols are available in Microsoft Word, but the software does not allow moving all related lines, arrows, and symbols at once when making changes to a portion of the flowchart. This problem is overcome in many flowchart-specific software applications, such as Microsoft’s Visio. If a computer-based map is not a possibility for an FI, it can always be created manually using pencil and paper.

Step 7: Construct the “Could be” Map

After the “as is” and “should be” process maps are developed, the team should focus on a two-stage analysis of a) process improvements and b) risk mitigation. This will further improve the map by identifying and correcting inefficiencies and risks in the process. FIs starting WASH finance for the first time can proceed directly to the “could be” map.

Analysis and brainstorm on process improvements

Process improvement reduces loan process time and cost and enhances productivity. The first step is to analyze activities and classify as value adding or non-value adding and redundant or non-redundant.

Once this categorization is completed, many options are available:

- **Eliminating non-value-added and redundant steps:** For example, an FI based in north India disburses WASH loans in tranches, and a tranche is released only if the previous loan tranche was utilized for the intended purpose. Since the loan is released after confirming loan utilization, the organization can eliminate a separate loan utilization process conducted after the disbursement of the last tranche.
- **Reorganizing the process by moving some steps into another process:** For example, the client identification process can be started immediately following a WASH loan marketing event (i.e. during the same visit), rather than conducting a separate visit to the area to identify the clients.
- **Automating/mechanizing formerly manual steps:** ICT-based financial solutions can be used to make the loan repayment process faster and more efficient. For example, Cashpor Micro Credit based in northern India uses mobile-based ICT technology to enable frontline field officers to access the loan accounts of customers. They also update the repayment transaction data in the field itself. The deployment of ICT-based solutions has helped to make field operations more efficient and less risky.

Analysis and brainstorming on risk mitigation and control

When developing or evaluating a process from a risk perspective, it is helpful to brainstorm the types of risks inherent at all levels of the process. After risks have been identified, the team should prioritize the risks based on their frequency (or likelihood of occurrence) and impact. It is not always cost effective or desirable to completely remove all risk possibilities from the processes. The following table contains some examples of risks associated with processes for WASH finance. These risks are for illustrative purposes, and the table is not exhaustive. The risks may vary by institution, product/service offered, methodology employed, and market-related factors.

Figure 6: Examples of Operational Risks in WASH Finance

Name of Processes	Risks
Conducting awareness campaigns	Field staff conducts the same number of awareness campaigns throughout the operational area irrespective of the people's awareness level. The number of and focus of awareness campaigns should depend on the awareness level of the people in the area and the specific WASH infrastructure required.
Technical assessment of geological and hydrogeological conditions in the area to determine appropriate infrastructure	The FI should have trained staff able to identify suitable infrastructure in any particular area. Types of technology used will depend upon factors such as water availability and quality, availability of sewer connections, vendor availability and availability of space.
WASH loan appraisal	Poor loan appraisals may lead to over- or under-financing of clients. If staff are not trained on how to do loan appraisals of WASH loan clients, it can result in erroneous estimation of creditworthiness. In cases of over-financing, a client may use the loan funds for unrelated purposes. In cases of under-financing, the client may take out loan from another source to complete the project, which can lead to over-indebtedness.
Skimming of loan money for non-WASH uses	If proper checks are not in place, clients can use the WASH loans for non-WASH purposes like consumption or income generation activities
Issues in delivery by collaborating partners	FIs sometimes collaborate with WASH service providers (for example: water tank suppliers, or masons to construct toilets), and there may be a number of operational risks inherent in working with these service providers (e.g. long delays in construction, poor quality of service). These risks need to be analyzed by the FI and appropriate control mechanisms must be put in place.

By creating a profile of potential risk events based on impact and frequency, the FI's attention and resources can be focused on those areas that are of greatest importance to the organization. Process maps can be derived before or after a risk analysis. If there are existing process maps, the results of the brainstorming session and risk analysis can be added to the maps, thus illuminating opportunities to improve the process either by fixing loopholes or eliminating redundant and non-essential steps. If a new process is being developed, it is better to conduct the risk analysis before generating a process map. In order to develop procedures for a WASH finance product, for example, it is important to identify not only what the risks are, but also what is to be done about them. The intended actions to control the risks will become steps within the process.

Step 8: Analyze “Could be” map

At this point, a closer review of the fine-tuned process map needs to be completed. Use a smaller group of process experts within the organization for this second stage of brainstorming. The required analysis should be repeated, starting from Step 7. The questions to be asked at this stage are:

- Can the process be further optimized?
- Are there still uncovered risks that need to be minimized through redesign of the process?
- How can implementation be further enhanced?

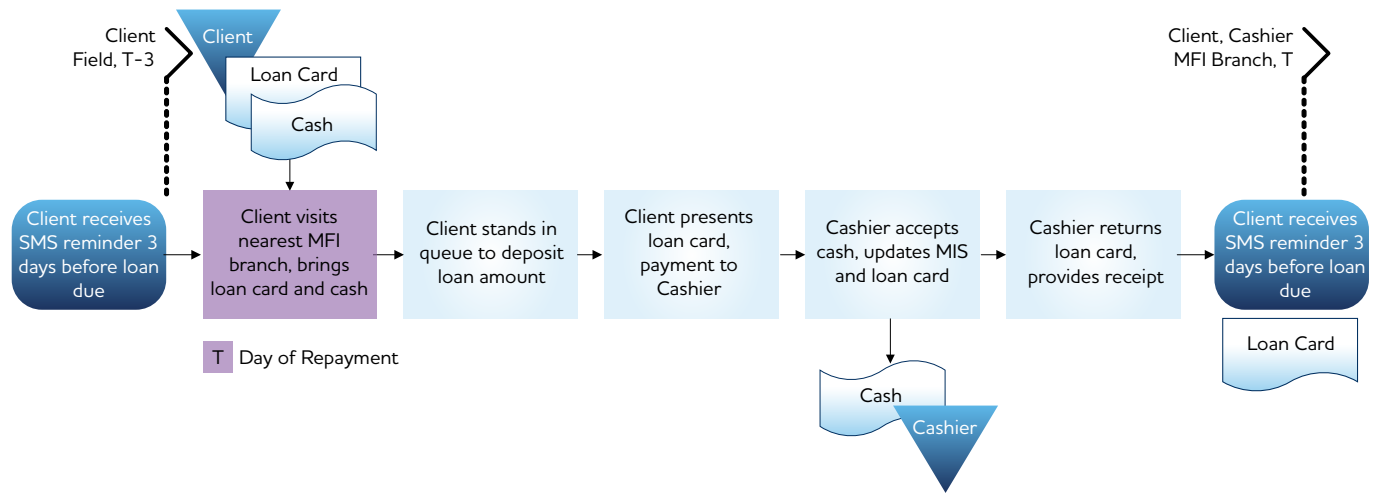
The map should then be refined using feedback from the analysis. After all possible actions have been identified, the group should agree on a set of final action steps, and a map prepared on how the process could look. Some of the solutions identified during the brainstorming session, while not feasible given current constraints, may become possible if those constraints are modified or removed.

The example below shows how creating a “could be” map can be utilized to improve the repayment process of a hypothetical FI.

Existing process (“as is”)

The process of loan repayment is very cumbersome for clients of the FI. Clients must travel 10-15 kms to reach the nearest FI branch to deposit loan installments. A sample process map of the loan repayment is presented in [Figure 7](#) below.

Figure 7: The “As Is” Process Map



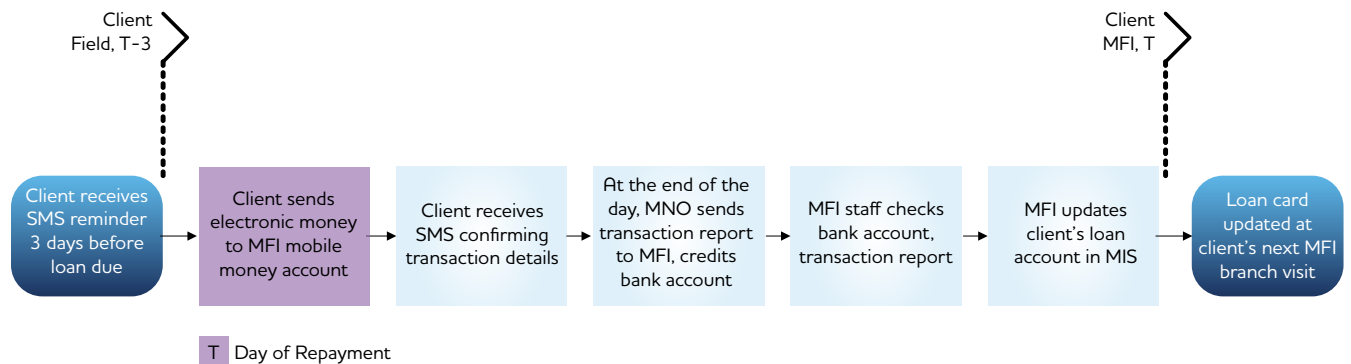
1. WASH loan client receives SMS reminder 3 days before the due date of WASH loan repayment.
2. Client visits the nearest FI branch with their loan card and cash on or before the day of loan repayment
3. Client stands in a queue to deposit the loan amount
4. Client presents loan card and payment to the cashier
5. Cashier accepts the cash and updates the MIS and loan card
6. Cashier provides receipt and updated loan card to the client
7. Client receives SMS reminder 3 days before the due date of WASH loan repayment



Improved process (“could be”):

To improve the speed of customer service and efficiency of its operations, the FI collaborates with a mobile network operator (MNO) to be added as a biller. The FI motivates clients to open an account with the MNO and recharge their account with e-money. Thereafter, client sends e-money to the MNO account of the FI. This helps the client to save on transportation expenses and the opportunity cost of one day. At the end of each day, the MNO makes a bank settlement with the FI and the FI updates the loan accounts of its clients in its MIS. The revised map might look like the one shown in the [Figure 8](#):

Figure 8: The “Could Be” Process Map



1. WASH loan client receives SMS reminder 3 days before the due date of WASH loan repayment.
2. WASH loan client sends electronic money to the FI’s mobile money account
3. WASH loan client receives instant SMS from MNO confirming transaction along with details.
4. At the end of the day, MNO sends the transaction report to FI and credits FI bank account
5. FI staff checks bank account and transaction report
6. FI updates the loan accounts of clients in their MIS

After updating a process map, it must be proofread and analyzed as carefully as when it was first created to insure that new errors have not been introduced by failing to fully update all process descriptions and procedures. The “as is” map should be finalized with the option of creating either a “could be” map or both “could be” and “should be” maps. The decision should be made based on factors such as bandwidth of the process mapping team and availability of time. Creating “should be” maps may require additional time but it gives the FI the most idealistic scenario to try and achieve in long run by eliminating the existing restrictions. The date should be indicated on the final version of the process map as well as the names and positions of the people who developed it.

Step 9: Summarize and Disseminate Findings

To ensure that maximum benefits are derived from the work, it is important to distribute the findings in a clear, well-organized format. When the “as is,” “should be,” and “could be” maps are finalized, a summary of the problems noted and the recommendations to improve the process should be prepared. The summary should clearly present the benefits of implementing the recommendations. The inclusion of excessive detail about the process should be avoided in the summary as that information will be provided in the maps. The “as is” map and the “should be” and “could be” maps should be presented to the FI’s decision-makers, showing the impact the proposed solutions could have on the process, along with the completed summary.

Step 10: Test the New Processes

It is important to create action steps with specific timelines including a testing period for implementing, monitoring changes, and gathering feedback from the testing. The people responsible for test implementation should be clearly identified. The pilot test changes should be monitored and evaluated, and the feedback should be integrated to finalize the process, its map, and other documentation. After this, the process should be rolled out through an implementation plan that has specific timelines, people (specific names), and locations identified.

Key Processes to be Mapped for WASH Financial Products

This section details all the processes involved in WASH finance and provides sample maps for each of these processes. The standard process flow assumed is as follows:

- Loan origination process
 - Loan appraisal and approval process
 - Loan disbursement process
 - Loan repayment process
-

Loan Origination Process

Loan origination includes two key phases: Marketing and Client Acquisition.

1. Marketing

The marketing process for WASH finance is structured around two mechanisms: communication and demand creation. Whereas communication around products is commonly undertaken for any type of product offering, the demand-creation part of it is something that is intrinsically linked to WASH finance alone. As described in Toolkit 3: WASH Financial Product Marketing, WASH finance marketing requires an intensive demand creation exercise, which should be initiated with prior assessment and analysis of WASH infrastructure needs in a particular community or geography and assisted with WASH trainings (see box below).

The most common promotional materials for WASH Finance marketing are:

- Brochures explaining WASH loan products
- Signs or wall paintings with WASH messages

WASH Trainings

In addition to not being familiar with microfinance products in general, many potential clients may not be familiar with safe water and sanitation practices and might not perceive WASH facilities as a priority investment. WASH awareness training can educate potential clients on the ill effects of poor water and sanitation practices and the benefits of improved household WASH facilities. These trainings play an important role in tapping into the latent demand for WASH financing. The vast majority of WASH financing service providers interviewed stressed the importance of coordinating WASH finance promotion with hygiene-awareness campaigns. Research also shows that in villages where no such campaigns have been conducted, demand for WASH loans was lower.

A WASH infrastructure needs assessment can be carried out in a sample of both prospective and existing clients of an FI, and can conveniently lead to the next generation of WASH borrowers. In terms of assessment and continued client acquisition, an FI can group clients into the following two categories:

- Existing (or former) clients: These clients are known to loan officers. They have successful credit histories and are usually familiar with requirements of the FI. Loan appraisal of a WASH financing product for existing customers can be completed within a short timeframe based on previous experience, personal knowledge, and collateral already provided.
- New clients: These clients may be identified through referrals, regular visits, or loan marketing campaigns conducted in villages. These could also be existing clients of other FIs or financial institutions who need WASH financial products.

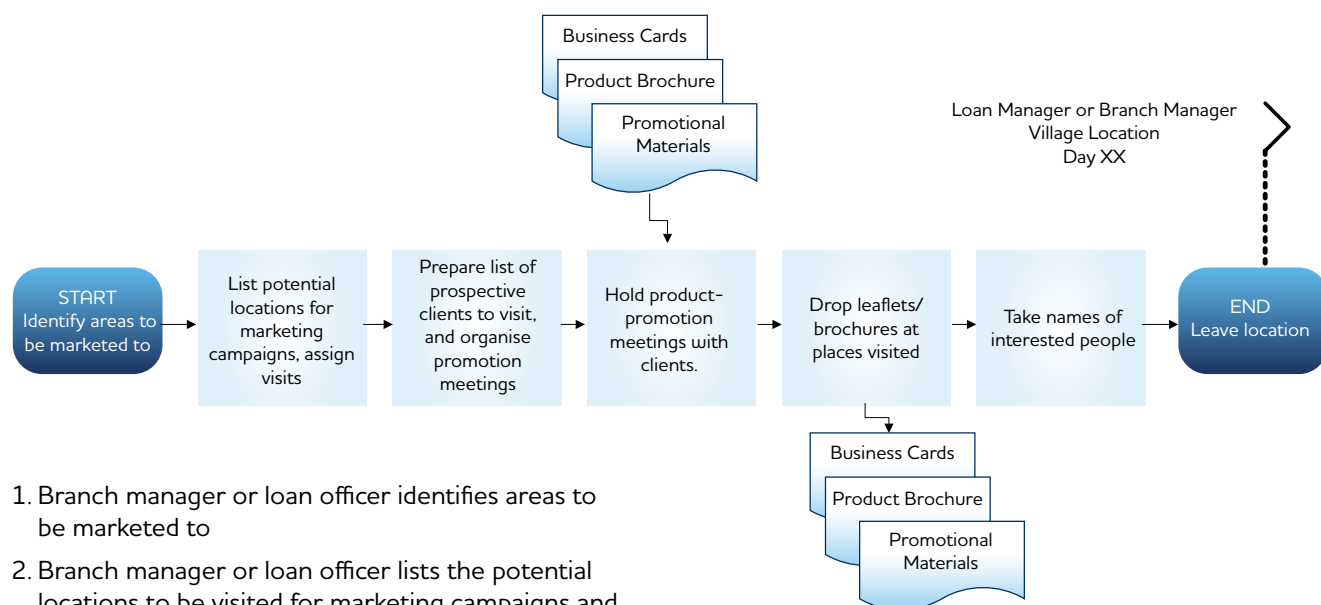
2. Client Acquisition

The next phase of loan origination is client acquisition. The client has been convinced by the marketing campaign and wants to avail a WASH finance product. The acquisition process usually includes two key steps:

- Loan officer or branch manager visits the client to conduct a preliminary interview and documentation check
- A customer acquisition form is completed and documents collected required by regulatory requirements and credit appraisal needs.

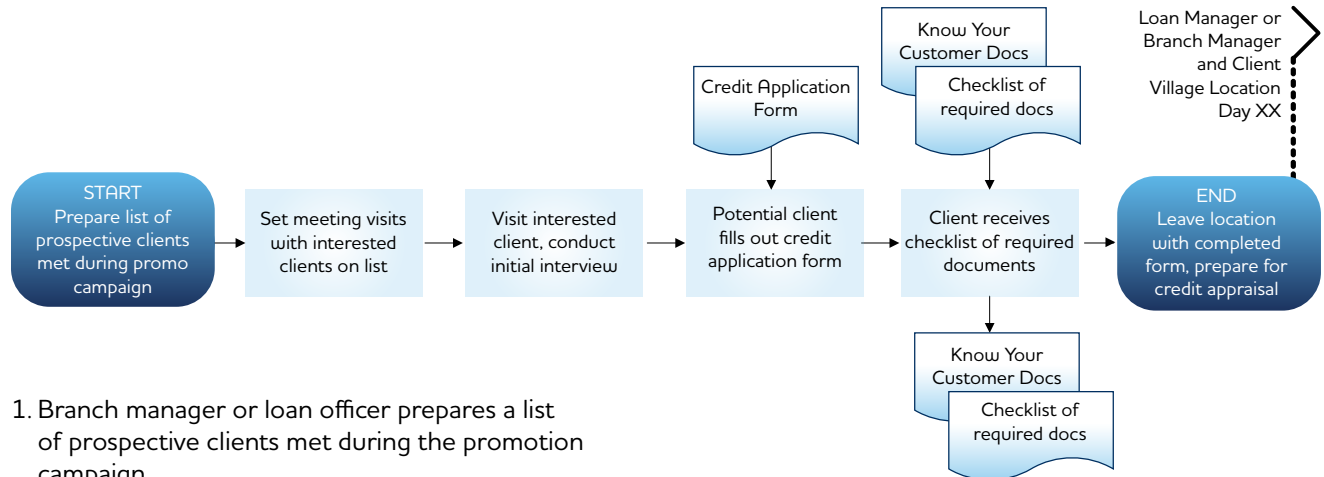
To learn how the process of marketing and client acquisition can be depicted in a process map, consider the following example: An FI has launched a WASH loan product that only existing clients will be able to access. Before launching the product, the FI plans to map the flow of its loan-origination process, including direct marketing, WASH awareness campaigns and client acquisition processes. The process is illustrated in the flowcharts below.

Figure 9: Part One of Client Acquisition Process



1. Branch manager or loan officer identifies areas to be marketed to
2. Branch manager or loan officer lists the potential locations to be visited for marketing campaigns and assigns visits
3. Branch manager or loan officer prepares list of prospective existing FI clients to be visited (this procedure is called “prospecting”) and organizes promotion meetings
4. With promotional material (e.g. product brochures, WASH finance promotional material, etc.) branch manager or loan officer visits the assigned locations, meets clients and holds product-promotion meetings.
5. Branch manager or loan officer drops leaflets and brochures at public places and with clients visited
6. Branch manager or loan officer takes down the names of people interested in WASH loans
7. Branch manager or loan officer leaves the location

Figure 10: Part Two of Client Acquisition Process



1. Branch manager or loan officer prepares a list of prospective clients met during the promotion campaign
2. Branch manager or loan officer refers to the list and sets up meetings with interested clients
3. Branch manager or loan officer visits interested clients, conducts initial interviews, and notes the type of loan product they are interested in. The initial interview is usually the first detailed discussion with the client about possible WASH loan products. Branch manager or loan officer can find out basic facts about the household and/or business to get first impressions.
4. Potential client fills out a credit application form with help of the branch manager or loan officer.
5. The client receives a checklist of required documents and “Know Your Customer” documents. This list contains all documents the client should submit in order to complete the loan application. Upon completion of all necessary documents the client delivers the documents to the FI.
6. Branch manager or loan officer leaves customer location and prepares for next steps (described in the Loan Appraisal and Approval section below).

Loan Appraisal and Approval Process

The loan appraisal and approval process includes three key steps:

1. Technical feasibility check
2. Credit investigation
3. Credit appraisal and approval

1. Technical Feasibility Check

FIs may hire or contract with civil engineers to conduct feasibility checks at the prospective clients’ houses. Alternatively, the assessment may be conducted by the WASH service provider directly (water utility company, toilet mason, etc.). This will assess if it is technically feasible to construct a WASH structure, as well as determine the type of structure and the estimated cost of construction.

For example, with respect to the construction of a toilet, the following issues require consideration:

- A pour flush latrine with a single or dual pit would be suitable for areas not prone to flooding and where the water table is quite low.
- A toilet with a septic tank is preferred in densely populated or flood prone areas or areas with a high water table.

Similarly, with respect to water infrastructure, some important considerations include:

- Shallow bore-wells may not be suitable in areas with high salinity or other types of ground water contamination
- Loans for piped water connections are feasible only in areas which have an existing network of primary water supply lines
- Loans for piped water connections may not be feasible during drought seasons when municipal water supplies are stressed

In the case of a negative report, the loan proposal may have to be dropped. In the case of a positive report and recommendation to grant a loan, the next step would be a credit investigation.

2. Credit Investigation

A credit investigation (CI) is the process of gathering information regarding the applicant's character, capacity, capital, and conditions which need to be validated and evaluated. It is used as a tool to determine the applicant's credit worthiness. The objectives of a CI are to:

Verify if the information supplied by the applicant on her/his loan application is accurate. During the CI, the loan officer must validate the information provided by the applicant in the loan application form to confirm if s/he really meets the borrower eligibility criteria to avail a WASH loan. For example, a field officer of RGVN (NE) must visit the premises of a potential loan client who has applied for a WASH loan to construct a concrete well. As per their organizational policy, the client must already have a non-concrete well if s/he is applying for a loan for the purpose of a concrete well. During the visit, the loan officer verifies if the loan applicant already has a well before generating the loan application.

Other factors that need to be verified include determination of the character of the client, credit history, background, and capacity to pay back the loan.

Possible Processes in a WASH Credit Investigation to Map

The key steps that may need process mapping in a CI for a WASH loan include:

- An interview of the applicant, using the CI form as a guide, to verify things like whether the applicant is indeed the owner of the house and the address as provided on the application form is correct and true. Additionally, a check with family members for consensus about constructing WASH infrastructure in the home is important and can be done during this step. Staff must confirm if the spouse or the co-borrower knows and supports the loan application.
- An assessment of the general financial condition of the applicant through a cash-flow analysis based on business income or salary/wages.
- Due diligence interviews with self-help groups or joint liability group members, local businesses, residential neighbors, major suppliers (if the client owns an business), employers, agencies, and creditors. In the case of self-employed applicants such as farmers or entrepreneurs, a credit investigator may interview the applicants' business contacts.
- An assessment of the applicant's credit record with the bank and other financial institutions in the area. A credit investigator should verify internally as well as from other FIs whether the loan applicant has had previous loans with the FI and whether her/his repayment performance was good.

3. Credit Appraisal and Approval

The credit appraisal and approval is the process by which an analysis of a borrower's capacity to pay, character, collateral coverage, and intent to utilize the loan for the stated purpose are assessed, as is the technical feasibility of constructing WASH infrastructure at the clients home.

Figure 11: Credit Appraisal Processes

Criteria	Detail	Sources for Information
Capacity to Pay	In the case of a self-employed applicant owning a business, the source of income (e.g. sales, collection of receivables, salary, allotment, financial support) must be clearly established and evaluated. Alternative or secondary sources of payment must also be identified. In the case of employed or wage-labour income, the number of days worked should be cross-checked with employer.	Cash Flow Analysis Financial Statements Pay slips
Character	The borrowers past payment performance with any financial institution should be reviewed. Any adverse experiences (e.g. past dues, mishandling of deposit accounts, etc.) should be disclosed and explained. The client’s social character should be checked for involvement in any anti-social activities.	Background investigation Neighbor check Check with suppliers/ business partners
Condition	The borrower’s age and health condition must be considered. Also, the number of earning family members that provide a financial cushion in case of unforeseen circumstances.	Medical records Proof of age CI visit
Technical Feasibility	The technical feasibility of building a WASH structure at borrower’s house must be checked. In the case of a non-feasible or high cost site the loan may be disapproved.	Technical feasibility report
Intent	The borrower’s intent to utilize the loan explicitly for WASH infrastructure must be verified. Her/his intent for better health and standard of living must be confirmed.	Interview by credit investigator Neighbor check

Loan Disbursement Process

Disbursement will only occur if all requirements regarding documentation, appraisals, signatures of guarantors and terms and conditions are fulfilled. In the case of WASH financing, disbursement of a loan is additionally subject to:

- Capital available by the FI for WASH loans
- A positive report from the technical feasibility check
- For loans involving construction of WASH infrastructure, the FI may choose to disburse loan funds in tranches based on the phases of construction. In this case, each phase of construction will have to be verified before subsequent tranches are released.



- If a WASH product involves the delivery of a product by an manufacturer (e.g. water filter), disbursement of the loan might be contingent on delivery.

The disbursement method can be of three types:

- Direct payment to the client in full: Once the loan is approved, the FI may provide the full loan amount to the client. The payment can be directly paid in cash or can be transferred to the client's bank account.
- Direct payment to the client in tranches: Once the loan is approved, the FI may provide loan in tranches to the client. The payment can be directly paid in cash to the client or can be transferred to the bank account. Disbursements should be aligned with the construction phases of the WASH infrastructure. The FI should develop a tranche-release and site visit plan based on the stages of construction.
- Part payment to supplier and client: The FI may choose to partner with WASH service providers or materials suppliers and transfer the funds directly to the supplier in tranches based on the material requirement in each construction phase. The supplier can then release the material to the client. The supplier can provide receipt/acknowledgment of funds to the FI for claiming the bills. The finance or accounts department can then directly deal with the supplier for transfer of funds rather than involving a loan office. The FI may also provide part of the loan funds to the client for other expenses such as payments for labor. The payment can be transferred to client's bank account or direct cash payment can be considered.

Site visits

One of the key differences on how the monitoring and administration of WASH financing products are different from other loan types is the continuous monitoring and loan utilization checks that need to be carried out along each phase of construction. The loan utilization check is an integral part of the WASH financing product because a) there is a risk that the loan may be utilized for consumption purposes, thus leading to delinquencies and/or non-construction of WASH infrastructure; and b) the FI's engineering staff or consultants need to ensure the quality and long-term sustainability of the asset created.

Loan Repayment Process

Selection of the loan repayment process should be focused on keeping the process well-aligned with the collection process of other financial products. The very nature and small ticket size of the WASH loan products allows the repayment amount to be easily collected in fortnightly or monthly payments that organically align with standard microfinance payment schedules. Other process requirements such as passbooks or record books with details of payment, duly signed receipt of payment, and details of interest and principle remain the same as they are with other loans.

2

Key Risks in Delivering WASH Financial Products

Any lending operation carries an inherent risk of loss. To address key risks related to WASH financial products, this chapter will focus on the following topics:

- » Understanding risk
- » Classifications of risk
- » Strategies to manage risk
- » Risk Trade-offs

Understanding Risk

Risk managers are expected to weigh the probability of the occurrence of opportunities and threats and decide whether a risk is worth taking. Risk events are symptoms that a risk is not being managed well, and in order to manage risk, one must determine what might cause a risk event to occur. Risk management should focus on eliminating or controlling the ability of these factors to exist within an FI. Factors that cause a risk event to occur are called risk drivers, and risk hazards are the factors that influence the risk drivers. One risk event can have many risk drivers, and one risk driver can have many hazards as illustrated in [Figure 12](#) below.

WASH financial products have no exception to the risks that plague other forms of lending. The small size of WASH loans in comparison to other types of loans, combined with the technical expertise and additional monitoring costs required, bring a unique set of risks to WASH lending. For example, sanitation loans offered by an FI may be confused by borrowers with subsidized loans sometimes offered by governments as a welfare measure to enable poorer families to build toilets. If such programs and/or perceptions persist in a community, WASH loans offered by FIs are likely to carry significant credit risk because borrowers may not believe they need to repay. In parts of India where local governments offer subsidies for toilet construction, FIs often work with communities to help borrowers access the subsidy and then offer a loan to cover additional costs.

Risk Terminology¹

Risk	The possibility of an outcome that could affect achievement of desired objectives
Risk Event	An incident that could affect achievement of desired objectives
Risk driver/peril	A causal factor that results in the risk
Hazard	Factors which influence the outcome due to a peril
Risk Indicator	A relevant measure, when measured, quantifies the level of risk
Risk Owner	A person responsible for managing a particular risk
Risk Exposure	A condition or set of circumstances where a risk event could result in a loss/gain
Frequency	The probability or likelihood of the risk event occurring or number of times a risk event is likely to occur
Severity/Impact	The degree of damage or gain that may result from an exposure

1 The glossary is adapted from MicroSave's "Institutional and Product Development Risk Management Toolkit" (Pikholz 2005).

Figure 12: Sample Risk Event for WASH Financial Products

Risk Event: Poor WASH Loan Portfolio Quality	
Risk Indicators: High PAR and increasing number of non-performing loans	
Risk Drivers	Hazards
Lending to inappropriate customers	<ul style="list-style-type: none"> Poor credit-selection system Lack of publicly-available credit information and no information-sharing by lenders Weak loan-appraisal system Inadequate credit staff (number, competence and experience) Staff not trained in WASH lending
Failure of WASH infrastructure created	<ul style="list-style-type: none"> Lack of technical visit by civil engineer or recommendations provided by engineer not followed Poor selection or design of technology used Poor selection of suppliers and construction agencies Inadequate training of construction agencies Inadequate funding
Poor portfolio management	<ul style="list-style-type: none"> Excessive concentration of loans by sector and location Poor reporting and loan monitoring systems
Fraudulent activities by staff	<ul style="list-style-type: none"> Poor internal control systems Lack of adequate monitoring
Willful default by customers	<ul style="list-style-type: none"> Influx of grants for WASH infrastructure from government agencies Inefficient legal systems with no recourse for FIs when borrowers default No enforcement of peer pressure among clients

Classification of Risks

The numbers, types, and categories of risks in the financial industry can seem virtually endless. However, for purposes of this toolkit we will focus on the common risks faced by FIs involved in WASH lending. To classify the most common types of risk that apply to WASH lending, we use a framework developed by the Basel Committee on Banking Supervision.¹ Risks covered in this section include operational risk, credit risk, market risk, and institutional/strategic risk.

Operational Risks

Operational risks arise within a business or organization through its daily operations. According to Basel, operational risk is defined as “the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events.”² In the context of WASH, these risks include concerns over misuse of loans, operational delays, fraud, error, and security, all of which can undermine the objectives which the FI wants to achieve through the WASH loans. Additional details about these major operational risks are given below:

LOAN MISUSE: Misuse of loan funds by clients for non-WASH purposes is one of the primary operational risks faced in WASH lending. Many times FIs work in markets with a large unmet demand for income generation or other consumption needs. Clients may apply for a WASH loan because this is the only loan available or the income generation loan given by the FI is inadequate to meet their needs.

PROJECT DELAYS: There can be multiple reasons for delays in the completion of the project:

- **Lack of available construction workers trained in WASH infrastructure:** The individuals and businesses that construct WASH infrastructure for clients are key to the success of WASH lending. For example, in rural areas well-trained masons can be in short supply, and if the FI or client does not plan in advance, the project can be delayed due to high demand for their services. Additionally, construction workers may also be unwilling to travel to remote areas for small jobs.
- **Insufficient loan size can be due to the FI not conducting market research or artificially holding down the WASH loan sizes due to fear of default by clients.**

1 Adapted from “A Risk Management Framework for MFIs” by J. Carpenter and L. Pikhholz, ShoreBank Advisory Services and A. Campion, MFN. Published by GTZ, July 2000 and MicroSave’s Toolkit on Internal Audit and Controls, Ruth Dueck Mbeba, MEDA, Aug 2007

2 International Convergence of Capital Measurement and Capital Standards, A Revised Framework, Basel Committee on Banking Supervision, June, 2004

- Mismatch between infrastructure planned by FI and borrower's desires: FIs generally set loan amounts for WASH infrastructure construction based on a set of cost assumptions, which they apply across all potential WASH clients. However, if individual clients wish to construct WASH infrastructure that costs significantly more than the loan size offered by the FI, there can be delays in construction. An issue that frequently occurs in India, for example, is that FIs set loan amounts for toilets to cover only low-cost, simple structures that meet minimum quality standards. However, borrowers who invest in building a toilet often wish to construct a bigger structure (possibly to include a bathroom, tile work etc.) at a much higher cost than the loan amount they receive. If they are not able to cover the additional costs above the loan amount, the toilet structure can remain unfinished for months as the family seeks additional funds.
- Climatic or other environmental factors – Poor planning on the part of the FI may lead to delays in construction activities due to rainy seasons or droughts.

FRAUD: Fraud is intentional or deliberate deception for personal gain. These deceptions often include manipulation of documents or the abuse of policies, procedures or office property. For example, in absence of a well-designed process for selection of a raw material supplier for the construction of toilets, operations staff can collude with dishonest suppliers and procure cheap, low-quality material at high rates, which could create infrastructure failures and lead to credit risk.

ERROR: Errors are typically unintentional and result due to lack of staff capacity and training, rapid growth, limited technical resources, or an inadequate number of staff. Errors in judgement or incorrect interpretation of policies, procedures, documents, or cash transactions can create problems for an FI. For example, a branch manager might make an error in the appraisal of a WASH loan client if s/he has not received training on WASH lending.

SECURITY: This refers to risk of cash or material theft. For example, for FIs that are involved in provision of construction materials, the storage of the materials and their delivery is a risk.

INEFFICIENCY: Inefficiency can result when the cost of initiating and managing a WASH loan is unnecessarily high. This often occurs due to slow scaling up of a WASH portfolio so that the FI is not able to take advantage of economies of scale. Risk is created when there is low staff productivity or ineffective management leading to loss of efficiency. For example, lack of training to field staff on WASH lending can result in poor uptake of loans and slow scaling of the WASH portfolio.

REPUTATION:³ An FI must be careful to ensure that they maintain a good reputation in the communities in which they work by developing relationships of mutual trust among clients and other stakeholders. A poor reputation may result in the FI losing its client base and portfolio quality, threatening its very existence. For example, staff of GUARDIAN, an FI based in southern India, facilitate the identification of suitable vendors for the construction of WASH infrastructure for their clients, but leave the decision of which vendor to work with to the individual clients themselves. In this way they are able to provide a service to their clients while maintaining brand and customer loyalty even if something goes wrong with the WASH infrastructure constructed by a vendor.

Credit Risk

Credit risk is commonly understood as the risk of lending money and not being paid back. There can be many possible reasons such as the appropriateness of loan products, client demand and preferences, external environmental factors (flood, drought, etc.), or asset failure (failure of WASH infrastructures). However, an assessment of credit risk also looks at whether the credit policies and procedures are correctly followed and administered by the FI staff. This includes reviewing whether credit transactions are properly recorded and summarized in the account tracking system and presented in the financial and portfolio reports. For example, an FI in the Philippines had a loan product tenure of three months even though loan sizes were quite high. Clients who were assessed to be qualified for a loan of PHP 15,000 (US\$340) ended up actually receiving nearly PHP 35,000 (US\$793) over the course of a year, through multiple loan cycles. This flaw in the loan product design resulted in large-scale delinquency problems with clients in the third and fourth loan cycles.

Market Risks

INFLATION – High inflation drives up the construction materials costs substantially. If FIs do not regularly review their loan sizes, the loan amount may not cover the cost of WASH infrastructure.

LIQUIDITY (Treasury or Refinancing) – Liquidity risk is a loss arising from the possibility that the FI may not have sufficient funds to meet its obligations or be able to access adequate funding. In other words, it is a shortfall in the current asset coverage of current liabilities (asset-liability mismatch). It is tempting for FIs to think that because WASH loans are for non-productive purposes, clients can be allowed longer loan terms to help ensure ease of repayment. However, longer loan maturities present liquidity risks, especially if the FI has a shorter maturity period for the debt that it has taken to finance the WASH loans.

3 Reputation risk is not included in the Basel's definition of Operational Risk

INTEREST RATE – This is the risk that occurs when the interest rate an FI charges for WASH loans is not high enough to sustain their WASH portfolio over time. For example, some FIs in India offer WASH loans at an interest rate of 14%, but this is below the cost of capital and operational expenses together, thereby causing an overall loss to FIs.

DEPENDENCY – There is a risk to the long-term sustainability of an FI's WASH portfolio if they become dependent on support from donor agencies to sustain routine operations. If an institution does not strive to attain operational self-sufficiency within their WASH portfolio, the portfolio may fail once donor support is withdrawn.

Institutional/Strategic Risks

It is important for FIs to make strategic choices about the future of the company despite uncertainties in the future. Strategic risk arises from adopting inappropriate strategic choices within an organization. Strategic choices decide an organization's future and the way in which it responds to various pressures and influences. The aim of these choices is to satisfy expectations of stakeholders by creating value in the context of actual or potential competition. The decision of an FI to start building a WASH portfolio is a strategic decision, and it should be made after careful consideration to mitigate institutional risks. The following risks should be considered when making this decision:

SUITABILITY – Suitability is concerned with whether a strategy addresses the mission, vision, values, and strategic position of an FI. And FI must assess the extent to which the creation of a WASH portfolio fits with the future direction of the organization and how the new portfolio will leverage the core competencies of the FI.

ACCEPTABILITY – Acceptability is concerned with the expected performance outcomes (such as the financial returns expected) of a WASH portfolio and the extent to which these would be in-line with organizational expectations.

FEASIBILITY – Feasibility is concerned with whether a WASH portfolio can work in practice. Assessing the feasibility requires an assessment of available resources and strategic capability.

Strategies to Manage Risks

Once the risks are identified, assessed, and prioritized, the next step is to develop strategies to manage them. This process includes a) developing policies to respond to identified risks, b) developing indicators for monitoring risks, and c) developing guidelines for each indicator (e.g. tolerance limits for each risk event within which management should operate) and tracking methods and monitoring frequency. The ATAC Strategy⁴ – Avoid, Transfer, Accept and Control – can be an effective way to respond to risk.

Avoiding Risk

If the probability of the occurrence of a risk is high, the likely impact of the risk event may also be high. If there are not sufficient organizational resources to mitigate the risk, the most common risk management strategy would be to avoid the risk. In this case, the FI has determined that a risk is only containable by terminating the activities to which the risk relates. Some common examples of risks to avoid in WASH lending are as follows:

PRODUCT-RELATED RISK – Not offering appropriate WASH loan products is a big risk for an FI. For example, not offering loans for toilets in areas where people’s accessibility to toilets is very low and the demand is high is a risk to an FI’s ability to scale up their WASH portfolio. Product-related risks can be avoided by good market demand research before development of WASH loan products.

CLIENT MISUSE OF LOAN FUNDS – FIs can avoid clients using WASH loan funds for other purposes by monitoring loan utilisation by field staff or disbursing loan funds in tranches. In the case of tranche disbursement, each tranche is released only after field staff confirm that the previous loan tranche was utilized by the client for intended purpose.

Transferring Risk

If consequences of a risk event are likely to be severe but have a low probability of occurring, and it is not cost-effective to attempt to control the risk in-house, the most common strategy would be to transfer the risk. In this case risk management is transferred to, or shared with, a third-party deemed to be better equipped to manage the risk. Although it is tempting to assume that a contract with a thirdparty fully transfers the risk to the third party, in reality most contracts place obligations on both parties. FIs should be aware that contracts with third parties are methods of controlling risk, and they can give rise to additional risks.

4 This note has been adapted from The University of Manchester Risk Management Toolkit

Some common examples of transferring risks in WASH lending are as follows:

- Cash-in-Transit insurance against theft of cash, by FI staff or others. If client loan payments are collected in the form of cash by FI field staff and carried to a branch office, this type of insurance can mitigate the risk of loss if cash is stolen.
- Group life insurance coverage for clients. Lenders often insure their clients with life insurance products to be able to secure payment of outstanding loans in the unfortunate event of a client's death.
- Hedging loan repayments in foreign currency can shield FIs exposed to currency fluctuations.
- Outsourcing market research or internal audit functions to external agencies can help compensate for lack of adequate internal expertise.
- Outsourcing awareness-building activities to an organization that has relevant WASH expertise. For example, Grameen Koota, an FI in India, outsources the execution of its social awareness programme to an NGO, Navya Disha.

Examples of Partnerships to Mitigate Risk

Partnership with WASH NGOs

Risk of low uptake of loan product and poor client selection is mitigated: As mentioned earlier, Grameen Koota operates under a partnership arrangement with Navya Disha, a non-profit organization that organizes social awareness programs and does community mobilization for Grameen Koota's water and sanitation program. Navya Disha also helps in identifying and recommending WASH clients. Grameen Koota provides financial services to families that qualify as being below the poverty line by government regulations, in the form of loans at concessional terms. The partnership with Navya Disha has helped Grameen Koota to efficiently conduct social awareness campaigns and identify the right clients, thereby mitigating the risk of low uptake of WASH loans and poor client selection.

Risk of high operational expenses and credit risk is mitigated: GUARDIAN has successfully collaborated with the WASH NGO Gramalaya, which is also its parent organization. GUARDIAN leverages "self-help groups" (SHGs) formed by Gramalaya to offer WASH loans. Gramalaya draws upon its brand and good reputation to conduct social awareness campaigns on water and sanitation on behalf of GUARDIAN. This has helped GUARDIAN mitigate the risk of high operational expenses. Finally, to prevent credit risks, GUARDIAN relies upon Gramalaya's long-term rapport with the community to facilitate collection of loan repayments.

Examples of Partnerships to Mitigate Risk, Continued

Risk of poor area selection and poor client selection is mitigated: GUARDIAN has also collaborated with other NGOs in geographies where they were offering WASH loan products but where Gramalaya did not have operations. GUARDIAN works with these NGOs to ascertain areas of high need and identify potential clients. The NGOs prepare a demand list of individuals in these areas in need of WASH services, and this list is shared with GUARDIAN. GUARDIAN then forms joint liability groups and begins the WASH loan process. These NGOs also provide support to GUARDIAN in the form of continuous monitoring and follow-up with the loan clients to ensure proper loan utilization.

Partnership with Product Manufacturers/Dealers

Risk of high cost and poor quality of WASH infrastructure is mitigated: An FI can make agreements with WASH manufacturers to supply infrastructure inputs such as water storage tanks, water filters and purifiers, water pipes, septic tanks, and materials for the construction of latrines. Through bulk purchasing contracts, FIs can negotiate for reduced prices and higher quality materials.

Risk of misuse of funds is mitigated: In India, a few FIs have entered into agreements with water filter manufacturers for water filter loans and FIs in Kenya have piloted some models around collaboration with water tank product manufactures. WASH manufacturers and dealers deliver WASH products to the doorsteps of the clients. The FI makes a direct payment to the manufacturer and avoids the risk of misuse of funds by loan clients.

Partnership with Technical Assistance Providers

Risk of designing inappropriate product is mitigated: Consulting companies can be contracted to develop WASH finance products based on the market research findings.

Risk of non-trained human resources can be mitigated: FIs can collaborate with WASH NGOs to train newly-recruited staff. The trainers for these subjects should be WASH technical experts, such as experienced staff of WASH NGOs, public health officers, or government officers working in the field of WASH.

Accepting Risk

If occurrence and impact of a risk is within an acceptable limit or the probability of loss is minor relative to the cost of controlling the risk, the most common strategy is to accept the risk. Acceptance means making the conscious decision to tolerate the potential consequences. Risk acceptance can be active (by developing a contingency plan for execution should the risk event occur) or passive (by accepting the consequences if the risk occurs). The exposure arising from a risk may be tolerable without any further action being taken. In many cases, risk will have to be accepted as the ability to do anything about some risks may be limited, or the cost of taking action may

be disproportionate to the potential benefit to be gained. If the option to accept a risk is taken, it may be possible to supplement such action by putting contingency plans in place to handle the the potential impacts of a risk event. However, when the decision is made to accept a risk, it should still be monitored and all relevant parties should be made aware of the risk and its potential impact.

An example of accepting a risk in WASH lending is when an FI recruits a civil engineer with little experience to control salary expenses. The risk can be accepted as the daily work of the engineer can generally be handled an engineer without a lot of experience, and the FI can contract with a more experienced engineer on a consulting basis as needed.

Controlling Risk

If the likelihood that a risk will occur is high but the potential impact cost of managing it internally is medium to low, the most common strategy would be to control or mitigate the risk. To mitigate a risk, actions are taken by the FI to reduce the likelihood of a risk event occurring and/or contain its impact on the FI to acceptable levels. This method of addressing risk is by far the most common approach. An example is provided in [Figure 13](#) below based on the experience of GUARDIAN, a WASH FI based in India.

Figure 13: Examples of GUARDIAN's Risk Mitigation Strategies

Risk	Risk Mitigation Strategy
Loan default by clients	Introduction of a staff incentive system linked to individual portfolio size and quality.
Poor rate of customer identification	Performance-linked allowance as an incentive for staff to increase customer identification
Misuse of loan funds by clients	Requirement that clients immediately repay the entire loan amount in the event s/he does not use it for the intended purpose within two months of loan disbursement
Death of a client	Group insurance mandatory for groups

Risk Trade-offs

Since FIs involved in WASH financing will face unique risks, unique tradeoffs have to be made to avoid or reduce risks. Some examples of possible risk trade-offs are:

- When implementing a WASH portfolio, FIs will face issues with service quality and availability of vendors for construction of WASH infrastructure. To mitigate this risk, an FI can offer training to a few local WASH service providers and may even choose to enter into a contract with them to carry out work for their clients to ensure better availability of service. However, working with WASH service providers in this way makes the FI responsible for ensuring service quality standards in the eyes of the clients.
- FIs may face credit risk in the event that any incident of structural or material failure occurs in WASH infrastructure. To avoid such situations, FIs may opt to collaborate with reputed suppliers in their service area. Such arrangements may require investment in more staff to ensure smooth operations and good service to clients.
- By linking clients to an insurance company, FIs can shift some credit, actuarial, and operational risks. In turn, however, they must be ready to accept or control reputational risk.

GUARDIAN Case Study: Risk Trade-Offs

GUARDIAN incorporated lessons learned from a pilot test before rolling out a WASH loan product and introduced changes in its approach and methodology. One significant step that GUARDIAN took was to implement a staff incentive system for field officers and branch managers to reduce the risk of loan defaults. However, the risk mitigation strategy gave rise to another risk: an increase in operational costs. GUARDIAN weighed the two risks and decided that the risks posed by increased operational costs would ultimately be less than the risks posed by potential portfolio loss in the event of loan default. GUARDIAN's staff incentive scheme is as follows:

Incentives for Field Officers:

Field officers receive INR 5 per group when her/his loan portfolio has an on-time repayment rate of 60–75% and INR 10 per group when her/his loan portfolio has an on-time repayment rate of more than 75%. However, a field officer will receive the incentive only if the entire outstanding amount of loan payments is collected within the month.

Incentives for Branch Managers:

Branch managers receive INR 2 per group when her/his loan portfolio has an on-time repayment rate of 75–99%. However, s/he only receives the incentive if at least 99% of the entire month's outstanding loan payments are collected within the month.

3

Pricing WASH Loan Products

Pricing WASH loan products is one of the most critical decisions taken by any FI entering into WASH finance. High prices run the risk of WASH loans being perceived as too costly to clients, while low prices might not cover capital and operational costs. This chapter explains the approach for WASH loan product pricing through the following topics:

- » Policy, objectives, and methods to put around a pricing framework
- » Pricing strategies for different goals

While there are issues common in pricing all products, several characteristics of WASH financial services add unique complexities, especially in new markets. These include:

- WASH financial products will often be benchmarked by customers against the flagship credit products of an FI in terms of pricing.
- WASH financial products are seldom a priority of customers, which increases the marketing costs required to promote WASH financial products, especially in the initial phases of product roll-out.
- Unlike other products, WASH credit delivery requires support from technical experts such as engineers and construction personnel, which increases costs.
- Customers are often not aware of the market prices for WASH infrastructure, which can impact their willingness to invest in a WASH credit product.

When developing pricing for WASH loan products, there are a number of pricing questions product managers will have to answer, such as:

What is the appropriate size of the WASH loan product?

- Should the size of WASH loans be equal to other loans?
- Should we reduce the interest rates and/or fees on WASH loans to make them more attractive to clients?
- Will we incur a loss at the existing rates? (Does the interest rate cover all costs, including the cost for technical expertise and higher levels of monitoring?)
- Should we use a consistent loan amount throughout different client segments?

What should the terms be for WASH loans?

- Should we keep interest rates as low as possible but charge more through one-time payments like registration fees, service charges, loan processing fees, etc.?

Pricing is an essential decision which has to be taken whenever an organization develops a new product, introduces an existing product in a new geography, or wishes to change the positioning of its existing product in the same market.

Pricing Policy, Objectives, and Methods

David Cracknell from MicroSave described the pricing of financial products both as an art and a science. The “art” of pricing is in the communication and feedback from customers and staff to ensure that pricing messages are appropriately and correctly delivered. The “science” of pricing lies in ensuring that the product is competitive and (aside from a few specific loss leaders¹) sustainable.

Pricing Framework

What comprises a price mix?

Financial institutions have multiple options for charging their clients using a mix of one-time charges, periodic fees, penalties, and interest rates.

One-Time Charge

As the name suggests, this is a charge that is collected up-front, generally at the time of client registration, and it is one of the most popular and widely accepted ways to cover costs incurred when onboarding a new client (including staff time, paperwork, travel, etc.). This can be an effective pricing strategy for WASH loans, which typically include high up-front costs involving site inspection and construction appraisals by technicians.

Periodic Fee

This would be an amount collected from customers on a pre-determined, regular basis. This may not be appropriate for WASH lending since WASH loans do not typically have multiple cycles.

Compulsory Savings

With some credit products, FIs require clients to simultaneously contribute to a savings pool, and the FI may earn interest income by investing the savings. The savings may also act as a buffer in group lending that keeps the official PAR minimal. This approach may be most relevant in cases where WASH credit is offered through group-based mechanisms.

Penalties

Penalties are designed to encourage positive client behavior and prevent undesirable practices, like being absent from group meetings or missing scheduled payment installments.

Interest rate

This is the most important part of the price mix and it relates to the interest applied to the loan.

1 Products which are intentionally offered at a loss to attract new clients. The hope is that the client will opt for other, more profitable products in the future.

How does price impact customer behavior?

Although the different elements in the pricing mix combine to make up the total price of a financial product, the way they are designed has an impact on customer behavior and perception. For example, an FI entering into a saturated market may find it difficult to charge a high one-time registration fee as most potential clients are likely to have already paid such a fee to other FIs. In such a situation, the FI will have to keep its registration fee low.

Similarly, penalties should be decided carefully based on local factors. For example, a very high penalty may upset clients and result in higher dropout rates, while very low or no penalties could impact portfolio quality. Rewards can instead be offered to motivate customers toward more desirable practices. One Indian bank has implemented a system in which the last monthly payment is waived for customers who make all payments on time throughout the loan tenure.

An explanation of customer behavioral response comes from experiments conducted by Llwellyn and Drake in 2000. They categorize prices into three types: *explicit*, *implicit*, and *spread*. With *explicit* pricing, specific charges are made upon recipient of a service. Examples of explicit charges include fees on late payments and loan administration fees. However, many charges are *implicit*, or not directly communicated to clients. Examples include compulsory savings collected with loans with no interest rate. *Spread* pricing applies to the difference in the bid-ask price of securities. For the current discussion on FI pricing, we will restrict to explicit and implicit costs.

Llwellyn and Drake argue that different pricing modes have different effects on customer behavior. An explicit charge will directly impact the specific behavior to which it relates. An implicit charge will seldom have the same level of direct influence upon shaping customer behavior. [Figure 14](#) below summarizes the results of Llwellyn and Drake's research on behavioral responses to modes of pricing.

Figure 14: Properties of Pricing Modes

	Induces cost-reducing behavior	Implicit cross subsidies	Cost/revenue interest rate sensitive	Benefit to low volume transactions	Certainty of costs	Subsidy to large volume transactions	Transparency
Explicit transaction charge	✓			✓			✓
Fixed quarterly fee		✓			✓	✓	✓
Zero interest on balances		✓	✓	N/A	✓	N/A	
Minimum balance		✓	✓	N/A	✓	N/A	
Fixed quarterly fee including x transactions	*	✓	✓	✓	*		✓
Differential transaction charges	✓						✓
Rebates on basis of balances		✓	✓				

Adapted from Llwellyn and Drake (2000)

- ✓ Has impact
- * Can have impact under certain circumstances
- N/A Not Applicable

Llwellyn and Drake’s experiment was conducted from a bank’s perspective, yet it provides useful insight for all FIs interested in designing a high-impact pricing mix that synchronizes with their strategic objectives for their WASH loan products.

WASH Pricing Strategies

FIs have a wide range of pricing strategies available to them based on the market (e.g. competition, client product awareness level, etc.) and the internal goals of the organization. The most effective WASH financial product pricing strategies are discussed in detail in this section.

Cost-Plus Pricing

In cost-plus pricing, an FI sets the price of WASH loan products based on the total cost of delivering WASH loans to customers. The total cost of a financial product usually includes the cost of capital, operational costs, and loan loss provisions. It can be challenging to calculate costs for a specific loan product, particularly if multiple products are delivered using a common delivery channel. FIs should perform a detailed costing exercise to quantify cost categories and arrive at an overall delivery cost for an individual product.

Once the overall delivery cost has been calculated, the next step is to determine the margin. When making decisions about margin, it is important to keep both the market strategy and the competitive scenario in mind. For example, when an FI is entering a highly competitive market or if it has philanthropic objectives for its WASH loan products, it may choose to forgo the margin completely and offer the product at cost. This strategy allows the FI to offer the most competitive price for its WASH loan products without incurring losses. In instances when pricing for achieving a profit are required, the margin should be set above the overall cost. The decision about the size of the margin can be based on multiple factors, such as whether to keep the margin as a percentage of its cost or to set a target profit and divide it by the expected sales volume. There is no standard rule for deciding the appropriate profit margin, and it depends on various internal and external factors for an FI.

Setting product prices by using cost-plus pricing can be a good choice for WASH finance products in new markets where competition is not a factor and there is high demand for WASH loans. Cost-plus pricing is a useful approach for identifying the most competitive price to offer after covering all FI costs and margins.

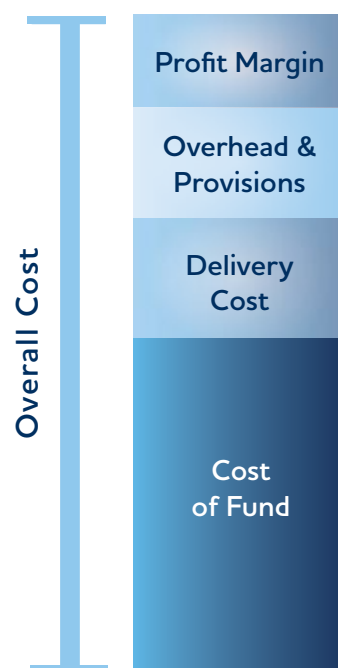


Figure 15: The Pricing Stack

Finding the overall cost

While some cost categories are easy to identify for a particular loan product (e.g. cost of capital), the challenge lies in identifying and allocating operational costs. Organizations typically utilize the following two costing methodologies²:

- **Allocation-based costing** is a method in which each line of the profit and loss account is allocated to different financial products on the basis of logical criteria. For example, staff costs can be allocated between a WASH loan product and a business loan product on an allocation basis by allocating staff time to each of the two products.
- **Activity-based costing** traces costs through the product delivery process. Delivering a WASH loan product or an income generating product is comprised of a number of separate processes such as loan application processing, loan disbursement, loan monitoring, and loan recovery. In activity-based costing, all staff and non-staff costs are allocated to these activities instead of directly to the loan products. Allocation of these combined activities is later made to the final products.

2 The details about these two costing options are available in the MicroSave's toolkit on costing and pricing: http://www.microsave.net/resource/toolkit_costing_and_pricing#.U6u4tvmSxMg

Allocation-Based Costing Method: The Case of MyMFI

To understand costing methods a little better, let's take the example of the fictitious Indian MFI, "MyMFI." Let's assume that MyMFI receives loan capital amounting to INR 1 million from a bank at a wholesale lending rate of 10%. Assuming that the bank is MyMFI's sole lender and that it has no access to other sources of capital, the cost of capital for MyMFI will be 10% irrespective of the product. In addition, MyMFI offers only two loans: an income-generating activity (IGA) loan for the amount of INR 10,000 and a WASH loan for the amount of INR 12,000. The loan capital of INR 1 million is shared equally between the two product types (INR 500,000 each), resulting in a maximum total of 50 customers for the IGA loan product and 40 customers for the WASH loan product. The overall remaining costs are as follows:

- Staff cost: 10% of portfolio
- Loan loss provision cost: 1% of portfolio
- Administrative & overhead costs: 3% of portfolio

Other operational data is as follows:

- PAR90 IGA = 1%
- PAR90 for WASH = 1%

MyMFI can allocate these costs between its two products as follows:

Staff costs: The most suitable allocation basis for distributing the staff cost is staff time utilized for the two separate products. Let's assume that time sheets for staff indicate that staff is utilizing 50% more time in WASH loan delivery and servicing than in IGA delivery and servicing. A 1:1.5 ratio (IGA:WASH) would be applied to staff costs.

IGA Loan Product

$$(1 / (1 + 1.5)) \times 1$$

$$(100,000 / 250,000) \times 100,000 = 40,000 \text{ INR}$$

WASH Loan Product

$$(1.5 / (1 + 1.5)) \times 1$$

$$(150,000 / 250,000) \times 100,000 = 60,000 \text{ INR}$$

Loan loss provision costs: The allocation basis of loan loss provision costs would be the PAR 90 values for the two products. Since we have assumed the two PAR 90 values to be equal and the loan capital is shared equally between the two products, the loan loss provisioning cost will be divided equally between the two products (.05 and .05).

IGA Loan Product

$$\text{Overall cost} \times 0.05$$

$$10,000 \times 0.05 = 500 \text{ INR}$$

WASH Loan Product

$$\text{Overall cost} \times 0.05$$

$$10,000 \times 0.05 = 500 \text{ INR}$$

Allocation-Based Costing Method: The Case of MyMFI (cont'd)

Administrative & overhead costs: The allocation basis for administrative and overhead costs is based on the number of loan accounts. For simplicity, we will assume this cost to be equal for an IGA and WASH loans. The total administrative and overhead cost (3% of portfolio or 30,000) is divided between the two products in proportion to the number of loans: 50/90 for IGA and 40/90 for WASH.

IGA Loan Product

Overall Admin. & overhead costs
x (number of IGA loans / total number
of loans)

$$30,000 \times (50 / 90) = 16,667 \text{ INR}$$

WASH Loan Product

Overall Admin. & overhead costs
x (number of WASH loans / total number
of loans)

$$30,000 \times (40 / 90) = 13,333 \text{ INR}$$

Total Costs

Staff Costs + Loan Loss
Provision Costs + Administrative
& Overhead

IGA Loan Costs = 57,167 INR

Staff Costs + Loan Loss
Provision Costs + Administrative
& Overhead

WASH Loan Costs = 73,833 INR

Total Cost as percentage of portfolio (before cost of capital)
= (Total Costs/Product Portfolio)

IGA Loan Product

$$(57,167 / 500,000) = 11\%$$

WASH Loan Product

$$(73,833 / 500,000) = 15\%$$

Total Cost as percentage of portfolio (with cost of capital)

Add cost of capital percentage to get total cost as percentage of portfolio.

IGA Loan Product

$$(11\% + 10\%) = 21\%$$

WASH Loan Product

$$(15\% + 10\%) = 25\%$$

This analysis shows the total cost of delivery of WASH loan product to be 6% higher than IGA loans. This finding will guide MyMFI to appropriately price its loan products. This finding may also prompt MyMFI to take measures to reduce the delivery cost of WASH loans through measures like increasing loan size or improving overall efficiency.

Competition-Oriented Pricing

Under competition-oriented pricing, loan prices are set after conducting a detailed investigation of the pricing structures and charges of major competitors. This approach is used when services provided are standard or there is a high number of large competitors in the market who effectively set the market price. Under competition-oriented pricing, FIs typically respond when competitors change their prices, particularly if prices are lowered. For example, in 2013, FIs in Kenya had to reduce interest rates by 2-3% to remain competitive. WASH competition-oriented pricing works best in places where markets are mature and multiple players offer WASH loan products.

In some cases, an FI may choose to offer WASH loan products at the same interest rate as their IGA loan products. However, FI operating expenses to offer WASH loans are often higher than operating costs to offer other loan products. ESAF, a large FI in southern India, is offered as an example below.

Profile of ESAF's WASH Loan Products

Average loan amount for Water:	6,000 INR	Loan term:	1 year for loans 6,000 INR or less; 2 years for loans 6,000 INR or more
Average loan amount for Sanitation:	12,000 INR	Repayment frequency:	Weekly/Fortnightly/ Monthly
Interest rate:	26%		
Loan processing fee:	1%		

ESAF offers WASH loans to SHG members at an interest rate of 26% (declining) with a 1% loan processing fee. Further details are presented in the profile below. ESAF has set this interest rate to correspond with its prices for other major loan products. ESAF does not offer WASH loans at a higher rate of interest because it believes that higher interest rates would reduce demand and hinder competitive position.

Demand/Value-Oriented Pricing

Demand/value-oriented pricing involves setting prices consistent with customer perceptions of value. Prices are based on what customers are willing to pay for the services provided. Prices must be adjusted to reflect the benefit of non-monetary elements to the customer. This approach is less popular with FIs as it requires an exhaustive study of the market to understand the target clients' pricing tolerances. For WASH financial products, this approach requires a clear understanding of the value that the target clients place on the ownership of WASH infrastructure, which is highly dependent on the level of public health and hygiene awareness.

Welfare-Oriented Pricing

The unique social and philanthropic nature of WASH financing may drive some FIs to follow a welfare-oriented pricing strategy. In this approach, an FI is not restricted to maintaining a certain margin or recovering the overall delivery costs. WASH lending may be subsidized by profits derived from other loan products or from donor funds.

Although welfare-oriented pricing allows FIs to offer WASH loans at low prices, it can make the organization dependent upon external funding for sustainability of the WASH portfolio. Therefore, this method of pricing has two major drawbacks: 1) it can seriously inhibit an FI's ability to scale WASH lending and reach large numbers of customers in need of WASH infrastructure, and 2) changes in organizational profits or in the flow of donor funds can impact the sustainability of the WASH portfolio.

RGVN-NE has a social objective to empower the marginalized sections of society. They offer WASH loans at a very low interest rate (14%) under a welfare loan product to clients who have completed their second loan cycle. RGVN also offers other major loan products (i.e. IGA loans) at an interest rate of 26%, even though the operational expenses of those products are less than that of their WASH loans.

Grameen Koota offers WASH at an interest rate of 20%, while IGA loans are offered at a 24% interest rate. The WASH loan terms are two years instead of one to further assist clients to repay the loan installments easily.

Profile of RGVN's WASH Loan Products

Average loan amount for Water:	5,000 INR
Average loan amount for Sanitation:	10,000 INR
Interest rate:	14% per annum (Declining Balance)
Loan processing fee:	none
Loan term:	1 year
Repayment frequency:	Weekly

Profile of Grameen Koota's WASH Loan Products

Average loan amount for Water:	5,000 INR
Average loan amount for Sanitation:	10,000 INR
Interest rate:	20%
Loan processing fee:	1%
Loan term:	2 years
Repayment frequency:	Weekly/Fortnightly/Monthly

To illustrate how the four different pricing strategies work, let's again look at the fictitious "MyMFI" (page 46) to identify variations in the final price when each strategy is employed.

Pricing a WASH Loan Product: MyMFI

From the exercise above (page 46), the overall annual cost incurred by MyMFI on its WASH loan is 26%. Below is an illustration of the changes to product pricing based on the pricing strategy adopted by MyMFI:

Cost-Based Pricing: Once the overall costs are identified, cost-based pricing is very simple to implement. The only decision remaining is the margin and the pricing mix offered to clients. The decision on margin will most likely be driven by profit margins and expected business volume (portfolio). Therefore, if MyMFI aims to realize a profit of 50,000 INR from their portfolio of 1 million INR, they will need to add 5% (5% of 1 million is 50,000 INR). Therefore, the price of WASH loan products will be 31% (26%+5%).

Competition-Oriented Pricing: Let's assume MyMFI operates in an area which is dominated by another FI offering WASH loan products at 30%. If MyMFI were to offer its WASH loan products at the same rate, it would be employing competition-oriented pricing. Under this pricing strategy, FIs try to either match or provide a more attractive offer than the competition. For example, MyMFI might choose to offer their WASH loan products at an interest rate of 28% if they wish to capture a higher market share.

Demand/Value-Oriented Pricing: If 26% is the minimum interest rate required for the organization to cover its costs and the market study suggests 30% is the highest amount of interest clients are willing to pay, MyMFI may decide on an interest rate in the range of 28-29% as the final price to offer clients.

Welfare-Oriented Pricing: Let's assume that MyMFI receives donor funding to cover its administrative costs (3%) and it considers WASH lending as a philanthropic activity with no profit motive. In this case, MyMFI may choose to price its WASH loan products at 23%, or 3% less than its other loan products.

Other Pricing Strategies

While the above mentioned strategies are the most common and frequently used by FIs with WASH portfolios, there are other strategies which are available and can be considered:

“Skimming the Cream” Pricing

Organizations using this method charge higher prices during the introduction of a new product to enable them to recover the initial investment quickly. This strategy has been successful in many cases due to the following reasons:

- Demand is likely to be less responsive to price in the early stages.
- Introducing a new product with a high price is an efficient device for dividing the market into segments that differ in price sensitivity. The initial high price serves to “skim the cream” of the market that is relatively insensitive to price.
- An organization may charge a higher price in order to restrict demand to a level it can easily satisfy.
- The higher initial price finances the cost of raising a product grouping. The organization may charge high prices and put back the excess profits into the business for further expansion.

Penetration Pricing

This strategy refers to setting prices at an artificially low level for a short period of time in order to penetrate an established market. This could be a useful strategy for FIs intending to launch WASH loan products in a mature market. It should be noted that this strategy requires the FI to have adequate internal funding to sustain initial losses.

Loss Leader Pricing

In this strategy, an FI offers an unprofitable loan product to attract new clients to their organization. The assumption is that once a new client is on board, the FI will be able to shift them to other profitable loan products either through cross-selling or future loans.

Keep-Out Pricing

This strategy involves setting prices below total cost of production in order to protect a particular market or market segment from competition. This strategy is used when existing FIs want to prevent new FIs from entering the market.

An FI's choice of pricing strategy should be governed by the market conditions as well as the organization's own internal goals and policies. Often FIs operate in environments which are not extremely competitive for WASH financial services. However, the lack of competition does not necessarily mean there would be an opportunity to use a strategy such as skimming the cream since charging interest rates that are too high can lead to clients postponing the decision to install WASH infrastructure. In geographies where health and hygiene awareness is low, demand for WASH loan products may also be low. Therefore, pricing is an important factor for clients who are deciding about whether or not to invest in WASH infrastructure. Generally, FI's entering into WASH lending will find that a cost-plus pricing strategy is the most appropriate place to start as it ensures costs are recovered and the margin can be set based on the willingness and ability of the clients to pay.

4

Internal Controls and Internal Audit in WASH Finance

The objective of this chapter is to give an overview of the internal controls and audit requirements specific to WASH lending. The section provides information about necessary internal controls, implementation of internal audits, internal audit check points, collaboration with outside entities, and recommended policies and procedures across various functions of an FI offering WASH loan products. This chapter will focus on the following topics:

- » Introduction to Internal Control and Audit
- » Internal Controls
- » Internal Audits
- » Internal Audit Checklist

Although there are many recommended internal controls and audit policies, practices, and documents currently available to cater the needs of general microfinance, there is little that is specific to WASH lending. WASH financing requires an additional level of control with regard to managing risk. Since WASH loan products, credit processes, and policies are different from that of other loan products, internal controls and audit procedures will need to be customized for an FI’s WASH loan portfolio. This toolkit highlights internal control procedures and internal audit systems specific to WASH lending.

Introduction to Internal Controls and Audit

The purpose of internal controls and internal audits are to mitigate operational risk through the establishment of specific policies, procedures and activities.

Internal controls are systems and procedures that seek to prevent institutional loss. The organization maintains and develops its internal control system with the ultimate aim of improving its business performance.

The internal audit function is a management tool used to monitor the implementation of internal controls. Internal audits may also be used to meet external regulatory requirements, but their primary function is to detect issues before they become destructive. Audits provide assurance and communication to management that its systems are in place, functioning, and building the FI’s capacity to deliver its products and services sustainably to the community.

Combined sound internal controls and regular internal audits create the basis for FIs to implement their risk management strategies. They help prevent potential problems, facilitate the early detection of actual problems when they occur, and facilitate the development of policies and procedures to avoid future problems.

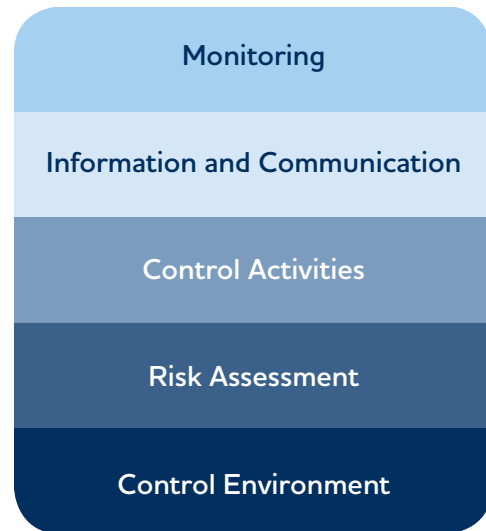


Figure 16: Internal Control Structure

Internal Controls

Financial institutions should focus on four broad areas to ensure effective controls in WASH financing:

- Human Resources
- Policies and Procedures
- Partners and Collaborators
- Information Systems

Human Resources

In WASH lending, market assessments, feasibility surveys, community mobilization, liaising with government departments, and training are some of the processes that need to be implemented by an FI to ensure success. These activities require human resources with specialized skills and experience, and these additional processes increase the overall risk to the organization. As part of their WASH loan portfolio development, an FI may need to recruit the following additional human resources:

- Staff with **ENGINEERING** expertise in the WASH sector. Activities may include:
 - Conducting feasibility or geological surveys and water quality testing
 - Assessing the infrastructural capacity for the construction of specific WASH assets such as pit latrines, piped water connections, rainwater catchment systems, etc.
 - Advising clients about the most appropriate model and design of WASH infrastructure within their available resources and for their geographical area
 - Training WASH service providers who will construct WASH assets for clients (e.g. mason training for toilet construction)
- Staff with WASH **COMMUNITY MOBILIZATION** expertise. Activities may include:
 - Developing audio visual aids, plays, pamphlets, and other tools or techniques to convert the latent demand for WASH products into loan applications
 - Customizing community mobilization techniques as per the requirements of the people in the operational area

- Staff with expertise in **MONITORING AND EVALUATION**. Activities may include:
 - Conducting regular monitoring of the construction to ensure the loan is used for the intended purpose and construction is completed; and
 - Conducting loan utilization confirmation visits within 30 days or as decided by the organization after loan disbursement.
- Staff with expertise interacting with **GOVERNMENT ENTITIES**. Activities may include:
 - Meeting with local government officials as necessary to ensure that clients are able to access the needed water or sanitation improvements
 - Liaising with relevant government departments to ensure that poor families are able to access any benefits of government WASH programs (e.g. “Total Sanitation Scheme”¹ in India).
- Staff with expertise in **MARKET RESEARCH** and **PRODUCT DEVELOPMENT**. Activities may include:
 - Conducting a market demand assessment; and
 - Designing WASH loan products to be offered.

In the event an FI does not have staff with the range of technical expertise as mentioned above, it will need to outsource the work to other agencies or consultants.

1 The Total Sanitation Scheme is an initiative run by Government of India. The government pays a certain subsidy amount for every toilet constructed by the poor in rural areas. However, the subsidy amount is never enough for building the entire toilet and as a result many beneficiaries are not able to make a toilet that fulfills their needs.

Policies and Procedures

Design of Appropriate Loan Products

Loan products offered must be designed to meet needs of clients in the target geographies of an FI. Therefore, loan products should be designed after conducting and analyzing the results of market research.

Understanding Client Needs

Market research conducted by Asomi in the Guwahati and Kamrup districts of Assam, India, included focus group discussions and personal interviews with 88 microfinance clients. The research revealed that there was a latent demand for WASH loan products in the two districts. It was discovered that the low-income population faced huge challenges in accessing safe drinking water, water purification, and sanitation. As a result, there was a sizable latent demand for concrete wells and pumps, water purifiers, and dual-pit pour flush latrines.

With regard to internal controls, several points must be considered by an FI when designing a loan product. In general, WASH loans are offered on discounted (yet sustainable) terms since they are not backed by an income-generating activity. The interest rate is usually lower and the loan tenure a little longer. Loan products should be designed so that the loan installment amounts are low enough to ensure good repayment rates. Loans must be insured to mitigate credit risks in the event of the death of a borrower and/or spouse.

Internal Controls in WASH Loan Processes

Controls embedded in credit processes have a key role in ensuring effective overall internal controls in a financial institution. These controls help ensure risk mitigation, especially related to the efficiency of operations and safeguarding the institution's profitability and reputation.

[Figure 17](#) lists processes, policies, and control points to ensure effective internal controls in a financial institutions offering WASH loan products. The control points mentioned are applicable to WASH loans and are **in addition to** the control measures for other types of loans offered.

Figure 17: Control Points for WASH Loans

Processes/Policy	Possible Control Points
Area/Village Selection	<p>The officer-in-charge makes a physical visit to the area and prepares an area assessment report. The report includes the current status of WASH facilities and potential for FI intervention.</p> <p>The report is verified by the supervisor and the areas of operation are selected.</p> <p>Engineer conducts a hydrogeological inspection of area to identify suitable WASH infrastructure models.</p>
Social Awareness Program	<p>The organization conducts social awareness programs on health and hygiene to create demand for sanitation infrastructure.</p> <p>Social awareness campaigns should be tailored to suite the local community's awareness level.</p>
Lending Methodology	<p>Many FIs follow a group lending methodology to disburse WASH loans to a target market.</p> <p>Self Help Group (SHG)/Joint Liability Group guarantee loans individual members – the group must repay if a member does not pay.</p>
Loan Eligibility Criteria	<p>Apart from normal loan eligibility criteria, WASH loans have these additional specific criteria:</p> <ul style="list-style-type: none"> • Potential WASH loan clients must own the property where the WASH asset is to be constructed, and the legal status must be verified prior to loan approval. • The household must have a sufficient amount of space to accommodate the WASH infrastructure.
Group Formation	<p>Loan officer visits the households of potential clients to ensure the group members' homes have the necessary requirements to build WASH infrastructure.</p> <p>Applicants' spouses show willingness to construct a WASH asset in the homes.</p>
Technical Assistance to Client and Project Cost Estimation	<p>Engineer suggests the space and design of WASH infrastructure to the client to ensure optimal utilization of resources.</p> <p>The loan amount is assessed and recommended by the engineer expert based on the design and type of WASH infrastructure. (For example, in the case of ESAF, the engineer determines the loan amount for a piped water connection based on the length of water pipe required to connect the household to the existing water supply.)</p>



Processes/Policy	Possible Control Points
Loan Appraisal	<p>In many cases, WASH loans will be given at the same time as income generating loans. If this is the case, the appraising officer needs to ensure that the client's cash flow is sufficient to take and repay both loans simultaneously.</p>
Loan Approval	<p>The loan approval committee should include a WASH technical expert in addition to other staff as per the organization's policy.</p> <p>The loan approval committee approves loan proposals based on the mutual decision of the committee.</p>
Loan Disbursement	<p>After loan is approved, funds are disbursed directly to the client, loan terms are explained and client is required to ensure construction of the WASH asset within a set time period after the loan disbursement (usually no more than 60 days).</p> <p>Some FIs release water and sanitation loan in tranches and link the disbursement with phases of construction to ensure the loan is utilized for the correct purpose. For example, an FI may release a toilet construction loan in three tranches: the first tranche before construction, the second tranche after phase 1 construction, and the third tranche after phase 2 construction.</p> <p>The FI can choose to collaborate with a product manufacturer to deliver or build WASH infrastructure at client's residence. In such cases, the FI avoids disbursing the loan directly to the client to help ensure loan utilization and quality control of WASH infrastructure. While this approach may reduce the risk of a loan being used for alternative purposes, it opens another set of risks in terms of product manufacturer integrity and reputational risk for the FI if the resulting structures are of low quality.</p>
Service Provider Training	<p>The engineer guides the service providers (e.g. masons for the construction of latrines) on the construction and design specifications of the WASH infrastructure to ensure optimum utilization of client's resources.</p> <p>The FI assists the client to connect with trained service providers for building the WASH infrastructure.</p>
Loan Repayment	<p>Loan repayment date and timing is decided in consultation with group members.</p>
Delinquency Management	<p>The FI maintains a WASH loan delinquency register at the branch office level, which clearly details the amounts delinquent, reasons for delinquency, dates of client follow-up and by whom, and any comments from visiting officer.</p> <p>The branch manager prepares a follow-up plan to address delinquent WASH loan client – this includes a description of who will visit, when the visit will happen, remarks of client, etc.</p> <p>The FI should maintain a blacklist register at every branch to include the names of wilful defaulters. This should be regularly updated in the FI's central database.</p>

Processes/Policy	Possible Control Points
Loan Utilization Check	<p>Field staff visit the client premises to check whether the WASH infrastructure as listed on the loan application has been constructed or installed.</p> <p>If the infrastructure has not been constructed within the specified timeframe, or if the loans funds were not used for the correct purpose, the field staff should question the client to find out the reasons and make arrangements with her/him to return the loan funds.</p>
Monitoring and Supervision	<p>The area manager is responsible for the monitoring and supervision required to ensure that the branch operations are conducted as per the policies and procedures of the organization.</p> <ul style="list-style-type: none"> • A supervisor must visit the houses of WASH loan clients selected on a sample basis to do a physical verification of clients and critical processes like group formation, loan application, loan appraisal, loan utilization check, etc. • The area manager carries a WASH loan monitoring checklist denoting the internal control points to be checked during monitoring visits. • The area manager should check the quality of WASH infrastructure. • A WASH loan monitoring register, which includes a checklist for the area manager as well as a compliance column for the branch manager, should be kept permanently at each branch office. The area manager writes her/his comments/recommendations on all the checklist items during her/his visit at branch and the branch manager inserts her/his comments in the compliance column of the register after complying with recommendations. Compliance reports are maintained at the branch and made available for inspection on request during visits of the area managers. <p>The area manager signs the client’s loan card with date at the time of centre visit.</p>

The Role of FI Partners in Internal Control

To ensure success of its WASH program, an FI may establish a multilevel partnership. As explained above, an FI may need to conduct specific activities (e.g. social awareness of the target group on health and hygiene, regular client monitoring, technical supervision by technical experts) for a successful WASH intervention. There are two options for an FI – either carry out these extra activities internally or outsource these activities to established partners. An FI should only outsource those activities if the risks can be better managed through partners than the FI itself.



Information Systems

Information systems for WASH loan products are similar to those of other loan products, but most FIs track additional indicators about WASH clients. In order to integrate WASH indicators into an existing MIS, FIs will need to do the following:

1. Identify WASH-specific indicators to track. Some common indicators include:
 - date construction of infrastructure was completed
 - quality rating of infrastructure
 - whether all of the client’s household members are using infrastructure (e.g. no longer openly defecating, or collecting water from an unsafe source)
 - water quality measurements
 - adequacy of water supply
2. Develop reporting formats for field offices to track and report data back to the MIS team
3. Develop functionality in MIS to enter and query new indicators
4. Update operational systems to ensure that WASH-specific data is collected, analysed and used to guide future strategies. This may include updating operational manuals, staff job descriptions, internal controls, and internal auditing procedures.
5. Train staff on data collection and MIS enhancements.

Internal Audits

Internal audits require the operation of proper internal controls by skilled human resources, and internal audit processes will vary based on the services offered by the FI. If an FI makes only incremental additions to its existing portfolio, there might not be any major changes needed to the internal audit process. However, if an FI decides to make a major addition (for example, adding not only WASH loans but also a savings² product), this will have to be planned for when the internal controls are developed and savings will have to be included in internal audits. The discussion in the following section assumes that an FI offers WASH products in addition to other credit products like IGA.

2 This assumes that the regulations within the country where the FI is located allow for deposit mobilization by an FI.

Human Resources Required for Effective Internal Audits

Trained staff is critical to carrying out the internal audit function at an FI offering WASH loan products. In order to conduct regular audits, the FI will have to plan for adequate auditing staff in advance. The staff requirements for the audit department will depend on four different variables:

- Number of branches (existing/planned)
- Number of audits conducted at each branch every year
- Number of auditors needed for branch audits
- Number of audits an auditor can conduct in a month

Based on the above parameters, the calculation for the number of auditors required can be determined by using the following formula:

$$\frac{\left(\text{Number of branches} \times \text{Number of audits conducted at each branch every year} \right)}{\text{Number of audits an auditor can conduct in a month}} \div 12 = \text{Number of auditors required}$$

Applying this formula, let's take MyMFI as an example:

- Number of branches (existing/planned): 120
- Number of audits conducted at each branch every year: 2
- Number of auditors needed for branch audits: 1
- Number of audits an auditor can conduct in a month: 5

$$\frac{\left(120 \times 2 \right)}{5} \div 12 = 4 \text{ auditors}$$

Internal Audit Checklist

During a branch audit, the auditor should use a checklist that includes items specific to the WASH loan portfolio. [Figure 18](#) provides a sample audit checklist:

Figure 18: Sample WASH Portfolio Internal Audit Checklist

✓	IA checklist items	Means of Verification	Sample Size
Area/Village Selection			
	Is there a market assessment report available?	Market Assessment Report	100% for all new WASH loan areas
	Is the geography selected for expansion eligible for WASH intervention?	Market Assessment Report	100% for all new WASH loan areas
	Did staff members conduct meetings with local leaders and the general public during the assessment process?	Interviews with local leaders	3 local leaders
	Are WASH loans being offered only in geographies approved by the head office?	Documentation signed by FI leadership	100% for all new WASH loan areas
Social Awareness Campaign			
	Have the social awareness programs on health and hygiene been conducted in the operational area as per the organizational plan?	Interviews with branch manager, field officers, and clients	Branch manager, all field officers, members of at least 2 client groups
	Was the social awareness campaign conducted as per WASH needs and people’s awareness level?	Interviews with branch manager, field officers, and clients	Branch manager, all field officers, members of at least 2 client groups
Group Formation			
	Are WASH loan terms and conditions explained to clients?	Interviews with clients	2 randomly selected client groups per field officer
	Are the necessary prerequisites for WASH loans being checked during household verification visits?	Interviews with branch manager, field officers, and clients	2 randomly selected client groups per field officer

✓	IA checklist items	Means of Verification	Sample Size
	Do family members of the WASH clients have any objections to the construction or purchase of WASH infrastructure?	Meeting with the family members	2 randomly selected client groups per field officer
	Are loan applicants eligibility (e.g. space availability, legal status of client, etc.) for WASH infrastructure being confirmed?	WASH loan application documents and client interviews	2 randomly selected client groups per field officer
Loan Application			
	Has the field officer fixed a regular day to collect applications?	Interviews with branch manager, field officers, and clients	2 randomly selected client groups per field officer
	Are the WASH loan applications completed in full?	WASH loan applications	2 randomly selected client groups per field officer
	Are the “Know Your Customer” documents collected?	WASH loan application	2 randomly selected client groups per field officer
	Are the engineers involved in suggesting the location and design of WASH infrastructure to the clients?	Interviews with engineer and clients	2 randomly selected client groups per field officer
Loan Appraisal			
	Have household verifications of all WASH loan applicants been done?	WASH loan applications and interviews with clients	2 randomly selected client groups per field officer
	Do loan appraisals include a cash-flow analysis, and is it being conducted at the business premise?	WASH loan applications and interviews with clients	2 randomly selected client groups per field officer
Loan Disbursement			
	Do field officers inform approved WASH loan clients 2-3 days in advance of the date of disbursement?	Interviews with clients	10% of all clients receiving loan disbursements during audit period

✓	IA checklist items	Means of Verification	Sample Size
	Do loan clients know the date of disbursement?	Interviews with clients	10% of all clients receiving loan disbursements during audit period
	On the day of loan disbursement, is an oral explanation of WASH loan terms and conditions repeated for the clients?	Interviews with clients	10% of all clients receiving loan disbursements during audit period
	Is a WASH loan repayment schedule is given to each client?	Interviews with clients	10% of all clients receiving loan disbursements during audit period
	Do receipts for loan processing fees, cash security, and insurance match the client details in the WASH loan file?	Receipts	Check all disbursements during a one month period
	Is the client group leader’s signature on all receipts?	Review of group documents	Check all disbursements during a one month period
	Do clients in the WASH loan disbursement register match the MIS and the loan files?	Loan disbursement register, print out from MIS, and WASH loan files	Check all disbursements during a one month period
	Are the loan agreements signed by clients?	Loan agreements	Check all disbursements during a one month period
Loan Utilization Check			
	Do field officers verify the WASH infrastructure has been completed?	Loan utilization report, interviews with clients	Check all disbursements during a one month period
	If there are delays in WASH structural completion, do the field officers record the reasons? Do they demand the client to repay the WASH loan in full if the excuses are not legitimate?	Loan utilization report, interviews with clients	Check all disbursements during a one month period

✓	IA checklist items	Means of Verification	Sample Size
Repayment			
	Do the field officers provide receipts for all the loan payments s/he collects?	Collection receipts	10% of all clients receiving loan disbursements during audit period
	Does the group leader update the repayment register for her/his WASH loan groups?	Repayment register	10% of all clients receiving loan disbursements during audit period
Repayment – Branch			
	Do the individual collections taken by the accountant match with the demand sheet?	Demand sheets and receipts	All transactions for one day
	Does the daily total for all collections at the branch match the receipts?	Demand sheets and receipts	All transactions for one day
	Do all collection receipts have client and accountant signatures?	Collection receipts	Randomly select 25 receipts
Repayment –Field Officer			
	Do all collection receipts have client and field officer signatures?	Collection receipts	Randomly select 25 receipts
	Does the total of all collection receipts match the bank deposit?	Collection receipts and bank deposit slip	Randomly select bank deposit slips from all field officers on at least 3 different collection dates, and match the amounts with the total collections of each field officer for the day
	Does the daily collection total match the cash book total for the day?	MIS and collection receipts	Randomly select collection receipts from all field officers on at least 3 different collection dates, and match the amounts with the MIS



✓	IA checklist items	Means of Verification	Sample Size
	Do daily entries match the MIS and the receipts of the field officers?	MIS and collection receipts	Randomly select collection receipts from all field officers on at least 3 different collection dates, and match the amounts it with the MIS
Delinquency Management			
	Is a WASH loan delinquency register maintained at the branch?	WASH loan delinquency register	Check all the entries in the register since last audit
	Does the branch manager prepare a follow-up plan for the delinquent WASH loans?	Verification at the branch	Interview with branch manager and check follow up plan documents since last audit
	Is the blacklist register maintained and updated?	Verification at the branch	Check all the entries in the register since last audit
Monitoring and Supervision			
	Is the WASH loan monitoring register updated or maintained properly by the branch manager?	Verification at the branch	Check all the entries in the register since last audit
	Is the compliance section of WASH loan monitoring register being updated?	Verification at the branch	Check all the entries in the register since last audit
	Is the branch manager implementing the recommendations of her/his area manager and updating the WASH loan monitoring register accordingly?	Verification at the branch	Check 10% of the implemented recommendations since last audit
	Does the area manager visit the households of WASH loan clients selected on a sample basis?	Interviews with clients	Check all the entries in the register since last audit
	Does the area manager check the quality of WASH infrastructure?	Interviews with clients	Randomly select clients from at least 2 groups per field officer

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*On the cover:
A girl washes her
hands as she fills
containers in Haiti.*



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