
Institutional and Product Development Risk Management Toolkit



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List Of Acronyms

ALCO	Asset/Liability Committee
ARP	Action Research Partner
ATM	Automated Teller Machine
BOT	Bank of Tanzania
CAMELS	Capital adequacy, Asset quality, Management quality, Earnings quality, Liquidity, and Sensitivity to interest rates
CEO	Chief Executive Officer
CGAP	Consultative Group to Assist the Poorest
COO	Chief Operating Officer
DQA	Domicile Quick Account
EBS	Equity Building Society
EXCO	Executive Committee
FAQ	Frequently Asked Questions
FINCA	Foundation for International Community Assistance
HO	Head Office
HR	Human Resource
IT	Information Technology
KSh	Kenya Shilling
LAN	Local Area Network
MBP	Microenterprise Best Practices
MD	Managing Director
MDI	Microfinance Deposit Taking Institution
MFI	Microfinance Institution
MIS	Management Information System
NBC	National Bank of Commerce
NGO	Non-Governmental Organization
NUM	National Union of Mineworkers (South Africa)
OCC	Office of the Comptroller of the Currency
POS	Point of Sale
PRA	Participatory Rapid Appraisal
ROU	Regional Operating Unit
SACCO	Savings and Credit Co-operatives
SAKO	Savings Account Key Offer
SAS	ShoreBank Advisory Services
SEP	Small Enterprise Partnership
SIEM	Sistema Especializado en Microcredito
SME	Small and Medium Enterprise
SPD	Strategic Process Development
T-Bill	Treasury Bill
TPB	Tanzania Postal Bank
TPC	Tanzania Post and Telecommunication Corporation
TPOSB	Tanganyika Post Office Savings Bank
TSh	Tanzania Shilling
US	United States
USAID	United States Agency for International Development
WAN	Wide Area Network

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Foreword And Acknowledgements

Proactive risk management is essential to the long-term sustainability of microfinance institutions (MFIs). This tool-kit presents a framework for anticipating and managing risk in microfinance institutions with a particular emphasis on new product development. The discussion is tailored to senior managers who play the most active role in setting the parameters and guidelines for managing risk.

There are four parts to this toolkit. Parts 1-III lay out a general framework for identifying, assessing, mitigating and monitoring risk in the MFI or bank as a whole. The document emphasises the inter-relatedness of risks and the need for a comprehensive approach to managing them. The authors¹ believe that establishing a comprehensive risk management control structure in a financial institution is a necessary precondition to effectively managing risks related to new product development and rollout.

Part IV focuses on risks inherent to new product development and suggests tools to help manage the process. The authors' approach to managing risk in new product development and rollout is, by intent, conservative and time-consuming. However, we recognise that sometimes it will be necessary to fast – track certain steps or maybe even take the risk of leaving some steps out for the hope of a greater gain down the line. We caution against too much haste in rolling out new products. Being first in a market with a new product is not a sustainable competitive advantage. We recommend following and/or adapting *all* the steps in *MicroSave's* product development process to suit your organisation's needs, and complementing it with the risk mitigation tools provided in this manual. Managers should always weigh the costs of leaving out particular steps against the benefits that they might yield in preventing unnecessary cost and product failures, or increasing opportunities for new product successes down the line.

Part V reflects on the challenges in institutionalising risk management within financial institutions. It will develop as *MicroSave's* experience in introducing institutional and product risk management extends.

The authors would like to thank *MicroSave* and their Action Research Partners for their input and feedback beginning with field visits and our workshop held in Nairobi on December 4, 2002. In particular, we are grateful to the institutions that hosted our initial visits and helped us explore the risk management strategies in their respective organisations: Equity Building Society in Kenya; FINCA in Uganda; Tanzania Postal Bank and Teba Bank in South Africa. We are especially appreciative of the feedback and experience gained from the Action Research Partners who participated in a pilot test of these risk management strategies over the course of a three month period, beginning in May 2004: FINCA-Tanzania, Kenya Post Office Savings Bank, and Tanzania Post Office Savings Bank. We also thank the following microfinance and/or banking experts that we interviewed: Michael McCord, Tom Condit, Marguerite Robinson and Guy Winship. Marguerite Robinson also prepared a written input, which is attached as an appendix. Finally, we would like to acknowledge the following ShoreBank senior managers who practice risk management on a daily basis in their work and provided us with valuable insights: Gary Fishleigh, George Surgeon and Frances Toomey.

We view this toolkit as a work in progress, which *MicroSave* has committed to continue to refine with practitioners in the field, based on their feedback and experience. We look forward to learning from your experiences.

¹ The authors of the first edition of this Toolkit were Lynn Pikholz (lpikholz@sasbk.com), President, ShoreCap Exchange, and Pamela Champagne, Senior ShoreBank Advisory Services Team Consultant. www.shorebankadvisory.com. This second edition has been edited, and extended by Trevor Mugwang'a, Madhurantika Moulick, Graham A.N. Wright and David Cracknell of *MicroSave*.

Part I: Framework For Institutional Risk Management Overview

Introduction

The focus of this toolkit is on managing risks associated with the introduction of new products in microfinance institutions.² But until one has embraced risk management at an institutional level, there is very little chance that adequate product-level risk management strategies can succeed. We begin this toolkit with Part I, which provides tools and processes to analyse the nature and occurrence of risks in financial institutions more broadly. While guides and tools are provided throughout Part I and Part II, the more comprehensive risk management tools are located separately in Part III-IV.³ Part V introduces some of the challenges involved in institutionalising institutional and product risk management within a financial institution.

Why Risk Management?

A key management responsibility is to provide reasonable assurance that the bank or MFI's business is adequately controlled. Rather than focusing on current or historical financial performance, management and regulators now focus on an organisation's ability to identify and manage future risks as the best predictor of long-term success. For financial institutions, effective risk management has several benefits:⁴

- Early warning system for potential problems: A systematic process for evaluating and measuring risk identifies problems early on, before they become larger problems or drain management time and resources. Less time fixing problems means more time for production and growth.
- More efficient use of capital: A good risk management framework allows management to quantitatively measure risk and fine-tune the capital adequacy ratio to match the on and off balance sheet risks faced by the institution, and to evaluate the impact of potential shocks to the financial system or institution.
- More cost-effective treasury (or funds) management: As MFIs seek to maximise earnings from their investment portfolios while minimising risk of loss, they sometimes need to use more complex financial strategies for treasury and funds management (e.g., interest rate and currency swaps, letters of credit and other credit enhancements); they become more sensitive to interest rate and currency shifts and need to better forecast operating cash needs
- More successful new product development and roll-out: Benefits of systematically addressing the risks inherent in new product development and roll-out can include: enhanced corporate reputation; improved loyalty of existing customers; easier cross-selling of existing services; improved internal knowledge for developing future new services; and ability to attract new customers to existing service offerings more easily.

The increased emphasis on risk management reflects a fundamental shift among bank managers and regulators to better anticipate risks, rather than just react to them. This approach emphasises the importance of "self-supervision" and a pro-active approach by board members and managing directors to manage their financial institutions. Historically, banks have waited for external reviews by regulators to point out problems and risks, and then acted on those recommendations. In today's fast changing financial

² For the purposes of this paper, we use the terms banks and MFIs interchangeably to mean financial institutions engaged in the business of microfinance.

³ See Part1: Tools on Page 25.

⁴ All bullets on this page, except the last, are drawn from: A Risk Management Framework for MFIs by J. Carpenter and L. Pikholz, ShoreBank Advisory Services and A. Campion, MFN. Published by GTZ, July 2000. The source of the last bullet is: Product Development for the Service Sector by Cooper and Edgett. Perseus Books, 1999.

environment, regulators are often left analysing the wreckage only after a bank has had a financial crisis. To foster stronger financial institutions, the revised CAMELS approach among US regulators emphasises the quality of internal systems to identify and address potential problems quickly.⁵ According to the Federal Reserve Bank, comprehensive risk management are practices designed to limit risk associated with individual product lines and systematic, quantitative methods to identify, monitor, and control aggregate risks across a financial institution's activities and products.⁶ Over the last few years the banking industry has been moving towards the implementation of risk-based prudential management as encapsulated in the Basel II guidelines and agreement.

For MFIs, better internal risk management yields similar benefits. As MFIs continue to grow and expand rapidly, serving more customers and attracting more mainstream investment capital and funds, they need to strengthen their internal capacity to identify and anticipate potential risks to avoid unexpected losses and surprises. Creating a risk management framework and culture within an MFI is the next step after mastering the fundamentals of individual risks, such as credit risk, treasury risk, liquidity risk and all the risks associated with new product development that cut across these categories. **A comprehensive approach to risk management reduces the risk of loss, builds credibility in the marketplace, and creates new opportunities for growth.**

The key to fulfilling the responsibility of providing reasonable assurance to stakeholders that the bank or MFI's business is adequately controlled is the development of a comprehensive system of management controls, accounting and internal controls, security procedures, and other risk controls. Financial institutions need a risk control structure, which defines the roles and responsibilities of managers and board members with respect to managing risk.

⁵ US Federal Reserve uses the CAMELS analysis, citing Capital adequacy, Asset quality, Management quality, Earnings quality, Liquidity, and Sensitivity to interest rates. For more on CAMELS see the section Detecting Signs of Financial and Management Stress using CAMELS below.

⁶ Susan Phillips, *The Federal Reserve's Approach to Risk Management*, 1996, pp. 30-35.

What Happens If We Ignore Risks

Providing financial services is all about identifying, understanding and managing risk. If the risks are managed the financial institutions is more likely to suffer shocks that may even bring the institution to its knees.

If financial institutions ignore the ever-changing risks they face, it is almost inevitable that they will eventually see one or more of the following consequences:

- Poor service delivery resulting in loss of clients and market share;
- Declining profitability;
- Erosion of capital;
- High borrowing costs from banks / public debt; and/or
- Deteriorating institutional reputation.

Two real examples suffice to illustrate this:

1. An African Bank

An African bank had operated profitably for many years. It was, in terms of numbers served, a market-leader in savings products, although its loan products were less well developed. As a result An African Bank was largely dependent on investing in T-Bills. In 2001 the T-Bill rate began falling precipitously and An African Bank took the strategic decision to expand its lending operations. However, as a result of the pressure on its profits, An African Bank chose not to invest in the necessary expenditure on pilot-testing, IT systems and credit administration capacity to support the massive expansion and diversification of its credit portfolio. As a result An African Bank's loan portfolio quality deteriorated rapidly. The summarised results for 2002 and 2003 were as follows:

Figure No. 1

	2002 USD \$'000	2003 USD \$'000
Operating profits before provisions for bad debts	700	(100)
Provisions for bad debt	(500)	(350)
Profit after provision	200	(450)
Core Capital	4,450	4,000

The erosion of the capital base meant that An African Bank's prudential norms/ratios were increasingly under pressure. In particular, the decline in the fixed assets to core capital ratio forced the bank to defer important capital expenditure on fixed assets, branch refurbishment and expansion etc.. Furthermore expenditure to support the bank's basic business – including training and marketing was cut back to boost reported profits, thus reducing both current and future performance. As a result An African Bank soon found itself less able to respond to the competition and with its reputation as a leading bank in the market under question.

2. A Transforming Micro-Credit Organisation

A Transforming Micro-Credit Organisation was taking advantage of the new legislation to transform into a non bank financial institution that could accept deposits from the public. However, their history, institutional culture and brand, as well as their physical infrastructure and MIS were geared exclusively towards and identified with micro-credit.

A Transforming Micro-Credit Organisation faced a wide variety of risks as it transformed. These included:

- *IT Risk:* Re-engineering or replacing its MIS so that it could act as a fully-fledged banking system to manage deposits and generate the reports required by the central bank.
- *Operations (Infrastructure) Risk:* Re-locating much of its branch infrastructure away from residential areas at the edge of towns to commercial areas near the markets and bus terminals in order to optimise access for customers.
- *Capital Risk:* Increasing its capital to ensure that it was adequate to meet prudential norms and to invest in the MIS and infrastructure necessary to offer deposits.
- *Competition/Market Risk:* A Transforming Micro-Credit Organisation was entering a market place into which several of the commercial banks had already entered, offer low minimum balance, rapid access accounts through ATMs – this represented significant competition and a real challenge.
- *Operations (Human Resource) Risk:* Years of offering (group-based) micro-credit only, has focused the staff of A Transforming Micro-Credit Organisation on micro-credit. Significant culture change was a pre-requisite to serve (as opposed to discipline!) customers and focus on the very different way of running the business as a full-fledged financial intermediary.
- *Strategic (Corporate Image) Risk:* A Transforming Micro-Credit Organisation was associated above all with providing small loans to large groups of women sitting under mango trees. This credit focused history and image was a significant deterrent to potential depositors. Some potential customers did not believe that A Transforming Micro-Credit Organisation offered savings services and those that did were unsure how safe their deposits would be with a “micro-credit organisation”.
- *Ownership and Governance Risk:* Many of A Transforming Micro-Credit Organisation’s directors lacked the skills and experience to provide the oversight and governance necessary to monitor and guide a successful financial intermediary. Furthermore the Central Bank insisted on a diversification of the ownership of the institution to meet its prudential norms and regulatory requirements.
- *Liquidity and Treasure Management:* Offering deposits brought a whole new range of liquidity challenges for A Transforming Micro-Credit Organisation – it had never seen how quickly funds were withdrawn from an intermediary just before Christmas and (in the rural branches) during the period running up to harvest.

A Transforming Micro-Credit Organisation initiated its transformation process with little appreciation of these risks – by the time its transformation was complete the organisation had learnt perhaps more than it wanted about the risks above and several others too!!

Basel Committee on Banking Supervision
International Convergence of Capital Measurement and Capital Standards
A Revised Framework (Basel II)

In Basel II, supervision of capital adequacy is approached from a risk-sensitive perspective to promote the adoption of stronger risk management practices in banks. The Framework is constructed around three pillars: minimum capital requirements, supervisory review, and market discipline. It is in the second pillar, supervisory review, that encourages banks to develop and use better risk management techniques in monitoring and managing their risks.

The key principles of the second pillar are risk management guidance and supervisory transparency. Basel II explicitly places responsibility on bank management to ensure that banks have adequate capital to support their risks, as well as a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels. This is accomplished in five steps:

1. Board and senior management oversight
 - a. Bank management is responsible for;
 - understanding the nature and level of risk and being taken by the bank and how this risk relates to adequate capital levels;
 - ensuring that the formality and sophistication of the risk management processes are appropriate in light of the risk profile and business plan.
 - b. The bank's board of directors has responsibility for:
 - setting the bank's tolerance for risk;
 - ensuring that management establishes a framework for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies; and
 - adopting and supporting strong internal controls and written policies and procedures and ensures that management effectively communicates these throughout the organisation.
2. Sound capital assessment

Policies and procedures designed to ensure that the bank identifies, measures, and reports all material risks; a process that relates capital to the level of risk; a process that states capital adequacy goals with respect to risk, taking account of the bank's strategic focus and business plan; a process of internal controls, reviews and audit to ensure the integrity of the overall management process.
3. Comprehensive assessment of at least these risks: Credit, operational, market, interest rate, liquidity, other (strategic, reputation)
4. Monitoring and reporting: Board and senior management receive reports on the bank's risk profile and capital needs.
5. Internal control review: The bank should conduct periodic reviews of its risk management process to ensure its integrity, accuracy, and reasonableness.

CAMELS⁷

One of the main functions of classical risk management is to protect and help ensure the financial viability and managerial soundness of an organisation. The North American bank regulators adopted the CAMELS methodology to review and rate six areas of financial and managerial performance: Capital Adequacy, Asset Quality, Management, Earnings, Liquidity Management, and Sensitivities. If any of these six areas are not managed adequately, risk to the financial and managerial soundness of the financial institution is threatened. For example, not managing the loan portfolio (the biggest asset base of MFIs) results in credit risk. Poor cash flow planning increases liquidity risk.

MFIs should use CAMELS, not only for their regulators (if applicable), but as a tool to help monitor and manage risk in the organisation. It is one of the most valuable tools from the formal banking sector that MFIs could integrate into their organisations. It relies on accurate financial statements, budgets and cash flow projections, portfolio aging schedules, information on funding sources, the board of directors, operations and staffing and macroeconomic information.

CAMELS is certainly a risk management tool that MFI senior managers and directors should concern themselves with, especially if they ever want to raise capital from commercial markets. The main elements are explained below:

- 1) *Capital Adequacy*: The objective of capital adequacy is to measure the financial solvency of a MFI by determining whether the risks it has incurred are adequately offset with capital and reserves to absorb potential losses. Can the MFI support both the growth of the loan portfolio and a potential deterioration in assets? Can it raise equity in case of losses? What are its policies to establish reserves against the risks inherent in its operations?
 - a) One indicator is leverage, which illustrates the relationship between the risk-weighted assets of the MFI and its equity.
 - b) Another indicator, ability to raise equity, is a qualitative assessment of a MFI's ability to respond to a need to replenish or increase equity at any given time.
 - c) A third indicator, adequacy of reserves, is a quantitative measure of the MFI's loan loss reserve and the degree to which the institution can absorb potential loan losses.
- 2) *Asset Quality*: For a regular bank, the objective of asset quality analysis is to identify, measure and manage/control the quality of existing and potential credit risk associated with the loan and investment portfolios, other real estate owned, and other assets as well as off balance sheet transactions. For a MFI, the analysis of asset quality is divided into three components:
 - a) *Portfolio quality* includes two quantitative indicators: *portfolio at risk*, which measures the portfolio past due over 30 days; and *write-offs/write-off policy*, which measures the MFI's adjusted write-offs based on CAMELS criteria.
 - b) *Portfolio classification* system entails reviewing the portfolio's aging schedules and assessing the institution's policies associated with assessing portfolio risk.

⁷ This section is almost exclusively from ACCION CAMEL Technical Note, published by Sonia Salzman and Darcy Salinger of ACCION International, September 1998. Sensitivity has been broadened from the Federal Reserve definition to be more appropriate for MFIs.

- c) Under *fixed assets*, one indicator is the *productivity of long-term assets*, which evaluates the MFI's policies for investing in fixed assets. The other indicator concerns the institution's *infrastructure*, which is evaluated to determine whether it meets the needs of both staff and clients.
- 3) *Management*: Five qualitative indicators make up this area of analysis:
- a) *Governance* focuses on how well the institution's board of directors functions, including the diversity of its technical expertise, its independence from management, and its ability to make decisions flexibly and effectively.
 - b) The second indicator, *human resources*, evaluates whether the department of human resources provides clear guidance and support to operations staff, including recruitment and training of new personnel, incentive systems for personnel, and performance evaluation system.
 - c) The third indicator, *processes, controls, and audit*, focuses on the degree to which the MFI has formalised key processes and the effectiveness with which it controls risk throughout the organisation, as measured by its control environment and the quality of its internal and external audit.
 - d) The fourth indicator, *information technology system*, assesses whether computerised information systems are operating effectively and efficiently, and are generating reports for management purposes in a timely and accurate manner. This analysis reviews the information technology environment and the extent and quality of the specific information technology controls.
 - e) The fifth indicator, *strategic planning and budgeting*, looks at whether the institution undertakes a comprehensive and participatory process for generating short- and long-term financial projections and whether the plan is updated as needed and used in the decision-making process.
- 4) *Earnings*: Three quantitative and one qualitative indicators are chosen to measure the profitability of MFIs:
- a) *Adjusted return on equity (ROE)* measures the ability of the institution to maintain and increase its net worth through earnings from operations.
 - b) *Operational efficiency* measures the efficiency of the institution and monitors its progress toward achieving a cost structure that is closer to the level achieved by formal financial institutions.
 - c) *Adjusted return on assets (ROA)* measures how well the MFI's assets are utilised, or the institution's ability to generate earnings with a given asset base.
 - d) CAMELS analysts also study the MFI's *interest rate policy* to assess the degree to which management analyses and adjusts the institution's interest rates on microenterprise loans (and deposits if applicable), based on the cost of funds, profitability targets, and macroeconomic environment.
- 5) *Liquidity Management*: The MFI's ability to accommodate decreases in funding sources and increases in assets and to pay expenses at a reasonable cost is evaluated using the following indicators:

- a) *Liability structure*: Review the composition of the institution's liabilities, including their tenor, interest rate, payment terms, and sensitivity to changes in the macroeconomic environment. The types of guarantees required on credit facilities, sources of credit available to the MFI, and the extent of resource diversification are analysed as well. This indicator also focuses on the MFI's relationship with banks in terms of leverage achieved based on guarantees, the level of credibility the institution has with regard to the banking sector, and the ease with which the institution can obtain funds when required.
- b) *Availability of funds to meet credit demands* measures the degree to which the institution has delivered credit in a timely and agile manner.
- c) *Cashflow projections* evaluate the degree to which the institution is successful in projecting its cash flow requirements. The analysis looks at current and past cash flow projections prepared by the MFI to determine whether they have been prepared with sufficient detail and analytical rigor and whether past projections have accurately predicted cash inflows and outflows.
- d) *Productivity of other current assets* focuses on the management of current assets other than the loan portfolio, primarily cash and short-term investments. The MFI is rated on the extent to which it maximises the use of its cash, bank accounts, and short-term investments by investing in a timely fashion and at the highest returns commensurate its liquidity needs.

Sensitivity: Sensitivity refers to planning for the 'what if' scenarios. For example, what if the interest rate goes up by a percentage point? What happens to the liquidity and credit risk etc.? What happens to earnings? So let's start identifying, analysing and managing those risks.

This toolkit introduces tools to help MFIs better identify, analyse and manage their risks at an organisation-wide level and continues on to apply the process of risk management to new product development. First, we will start with some definitions.

Figure No. 2

Risk is the possibility of an undesirable outcome or the absence of a desired outcome disrupting your organisation or project.

Risk Event is the undesirable outcome.

Risk Driver is the causal factor that results in the risk.

Risk Management is the activity of *proactively* identifying and controlling undesired project outcomes.

Risk Management Framework or Control Structure is a guide for MFI managers to design an integrated and comprehensive risk management system that helps them focus on the most important risks in an effective and efficient manner.

Exposure is a condition or set of circumstances where a risk event could result in a loss.

Frequency is the probability or likelihood of the risk event occurring or number of times a risk event is likely to result in a loss.

Severity or Impact is the degree of damage that may result from an exposure.

Who is Responsible for Risk Management?

Senior management and the Board of Directors are responsible for risk management, but the actual administration of a risk management programme is delegated. It is a line function within the MFI's structure. Someone must be responsible for monitoring the risk management programme, that risk owners and high level monitors are reviewing their risks at the intended frequencies, that the reviews in response to trigger events or special events are in fact performed, that risk measures are performed, that risk policies and procedures are documented and updated, that risk owners are sensitised and trained, in short, that the risk management feedback loop steps occur.

Figure No. 3

Risk Category	Policies By The Board	Management Responsibility
Credit Policies	■ Permitted lending activities ■ Portfolio diversification (e.g. % of capital to one product, maximum exposure to any borrower, etc.) ■ Reserve requirements and reserve ratios	■ Detailed underwriting guidelines or procedures ■ Portfolio monitoring and reporting on asset quality ■ Operational procedures designed to mitigate transaction and credit risk
Investment Policies	■ % in cash or cash-equivalents ■ Risk parameters for portfolio (e.g. % in treasury bills, equities, bonds, credit risk of individual instruments) ■ Maximum currency exposures ■ Maximum asset and liability mismatch (usually as % of capital)	■ Investment management guidelines and procedures ■ Test the portfolio's sensitivity to interest rate changes ■ Balance risk of loss of principal with income
Liquidity Policies	■ Minimum cash reserves equal to a certain percentage of deposits (for client cash withdrawals) ■ Maintain cash balances or lines of credit equal to cover new loan demand and potential cash losses from delinquency ■ Maintain operating reserves equal to 2-3 months operating expenses	■ Choose how cash management will be centralised or decentralised among branch offices; ■ Choose short-term investment instruments (treasury bills, staggering terms, etc)
Capital Adequacy	■ Minimum capital adequacy ratio (sufficient cushion if the loss occurs)	■ Consider effect on capital adequacy in decision-making for major purchases

Who should be responsible depends on the size of the organisation. Larger organisations that face a complexity of risks should have its own Risk Manager, in a separate unit, department or group, who reports to the CEO and to the Board of Directors. The Risk Manager is a senior position within the organisation. At Teba Bank, there is a Risk Committee of the Board of Directors. A Management Risk Committee reports to the Board Risk Committee. The Risk Manager reports to the Management Risk Committee, and is responsible for watching the bank's risks and administering its risk programme.

In smaller organisations, the Risk Manager may not be a full time job, but vested within an existing department of the bank. The question is what is a suitable department? Credit has often been the repository of risk management, and consequently has been focused on just credit risk with respect to the loan portfolio, not even credit risk in its broader implications. In some organisations, internal audit is responsible, as audit

is concerned with risks and covers all aspects of the organisation. While internal audit is knowledgeable about risks, it is also required to act independently and objectively; this it cannot do if it is responsible for the risk management function. The tables below illustrate the distinction between Risk Management and Audit and the differing roles of Internal Audit and the Risk Manager. Another often-found solution is with the Finance Department, or within the Planning Department. Wherever it is domiciled, the risk management function must be a comprehensive programme that includes all risks to the organisation, and someone must be named responsible.

Figure No. 4

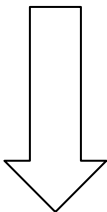
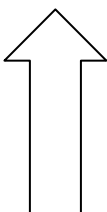
Distinction Between Risk Management and Audit		
Activity		Manager Responsible
Authorises and monitors proactive risk management plan		Board of Directors
Determines risk strategy and implements risk management system		CEO and Senior Management
Execute risk management as an integrated part of the MFI's controlling and control processes		Risk Manager
Reports to the CEO all significant risks, tactics to control risks, and indicators to measure risk		Risk Manager
Reports to the CEO risk exposures and recommendations for controlling risks		Internal Audit
Observes, audits the risk management system on behalf of the CEO and Board		Internal Audit
Supervises the risk management system's compliance with risk-related legislation from outside the bank		External Audit

Figure No. 5

Roles of:	
Risk Management	Internal Audit
• Monitoring of Risks • Line function responsibility • Administers Process	• Identification of weaknesses with risk Management process • Independent of all business processes • Reports directly to the Board of Directors

Many MFIs are evolving institutions, so risk ownership is fluid. An example would be MFIs who are transforming to become deposit-taking institutions. Significant changes such as this require that the structure of risk management be reviewed frequently so that it is commensurate with the changes within the organisation. Institutionalising risk management is driven from the top levels of the organisation, within an appropriate structure, and will most likely involve a culture change so that managers and staff see themselves as risk owners. Most managers know their problems and the risks they face, but they do not address these

from the perspective of a risk owner. Once they have the ownership, they need the tools to help them manage their risks, in other words, to put the theory into practice.

Once the MFI establishes where responsibility for risk management will reside within the organisation, the MFI must:

1. Select the individual who will become the risk manager. The decision should be based on what qualities the MFI thinks they need in a risk manager, and what the duties of a risk manager are. Sample responsibilities are shown in the box below.

Figure No. 6

Responsibilities of a Risk Manager	
	• Initiate and manage the process of establishing a risk management function • Recommend risk strategy and policy • Lead the process of developing a risk manual • Ensure compliance with the procedures set in the Risk Manual, particularly with respect to the reporting by the respective Risk Owners • Document risk assessments and supervise thresholds • Initiate responses when thresholds are exceeded, or when the risk trend is increasing towards the threshold • Regularly oversee possible risk areas and annually update the overall risk assessment of the MFI

2. Formulate a risk management policy
3. Document the risk management processes in the Risk Manual. The manual describes what has to be done within the bank to assess its risk position appropriately, and identify which processes are necessary if the MFI exceeds its risk threshold. The Institutional Tools at the end of this section, and the tools to manage New Product Development risk specifically, are designed to help MFIs take this step.

Figure No. 7

The Risk Manual	
Provides:	• Accountability • Compliance • Basis for assessing risk management system
Defines:	• Principles of MFI's risk strategy • Risk categories and types • Methods of risk identification and valuation • Responsibilities in all phases of the Risk Management Feedback Loop • Risk reporting

How to Operationalise a Risk Management Framework

While many MFIs already have excellent risk management procedures at the branch or head office level for specific product lines like credit, traditionally there has been less focus on comprehensive risk management. There are some basic, tried and tested, guidelines for setting up a successful risk management process. These are broadly as follows:

- Lead the risk management process from the top
- Incorporate risk management into process and systems design
- Keep it simple and easy to understand
- Involve all levels of staff
- Align risk management goals with the goals of individuals
- Address the most important risks first
- Assign responsibilities and set monitoring schedule
- Design informative management reporting to board
- Develop effective mechanisms to evaluate internal controls
- Manage risk continuously using a risk management feedback loop

Four Programme Components

There are four essential components to any risk management programme:

- 1) **Risk:** It is important here to understand the:

Risk event

- Risk exposure; and
- Risk driver or cause of the risk

Without understanding the cause or multiple causes of the risk event, it is very difficult to develop a strategy to mitigate it. (See Part III: Product Risk Assessment Tool).

- 2) **Strategies:** There are four generally accepted strategies to mitigate risk:⁸ (See Step 3, under Using the 5-Step Risk Management Feedback Loop, for definitions.)

- **Accept** or retain the risk
- **Avoid** or eliminate the risk
- **Transfer** the risk to another party
- **Control** the risk

- 3) **Controls or Tactics:** These are actions or processes inside your organisation that you take to mitigate and manage risk.

- 4) **Roles:** This involves assigning of responsibility to identify, mitigate, manage and monitor the risk. The person who *manages* risks on a daily basis should be different from the high level person or authority that *monitors* that this risk is being effectively managed. Thus for any one risk that is identified, an operational person and a higher-level body or person should be identified.

Using the 5 PLUS 1 Step Risk Management Feedback Loop

MicroSave uses a 5 plus 1 step approach for the risk management feedback loop. The 5 steps comprise the risk management feedback loop. The additional “plus 1” step reminds us to maintain the oversight and management and institutionalise the risk management feedback loop to ensure it works on a continuous basis.

The risk management feedback loop has five key components⁹:

1. Identifying, assessing, and prioritising risks. (See Institutional Risk Assessment Tool). The assessment of these risks is approved by the board of directors. This step requires the board and management to determine the degree of risk the MFI should tolerate and to conduct assessments for each risk of the potential negative impact if not controlled.
2. Developing strategies to manage risks. (See Institutional Risk Mitigation Tool). The board approves policies for measuring and tracking risks and monitors the MFI’s adherence to them. Management identifies key indicators and ratios that can be tracked and analysed regularly to assess the MFI’s exposure to risk in each area of operation. Management sets the acceptable range for each indicator,

⁸ Ibid.

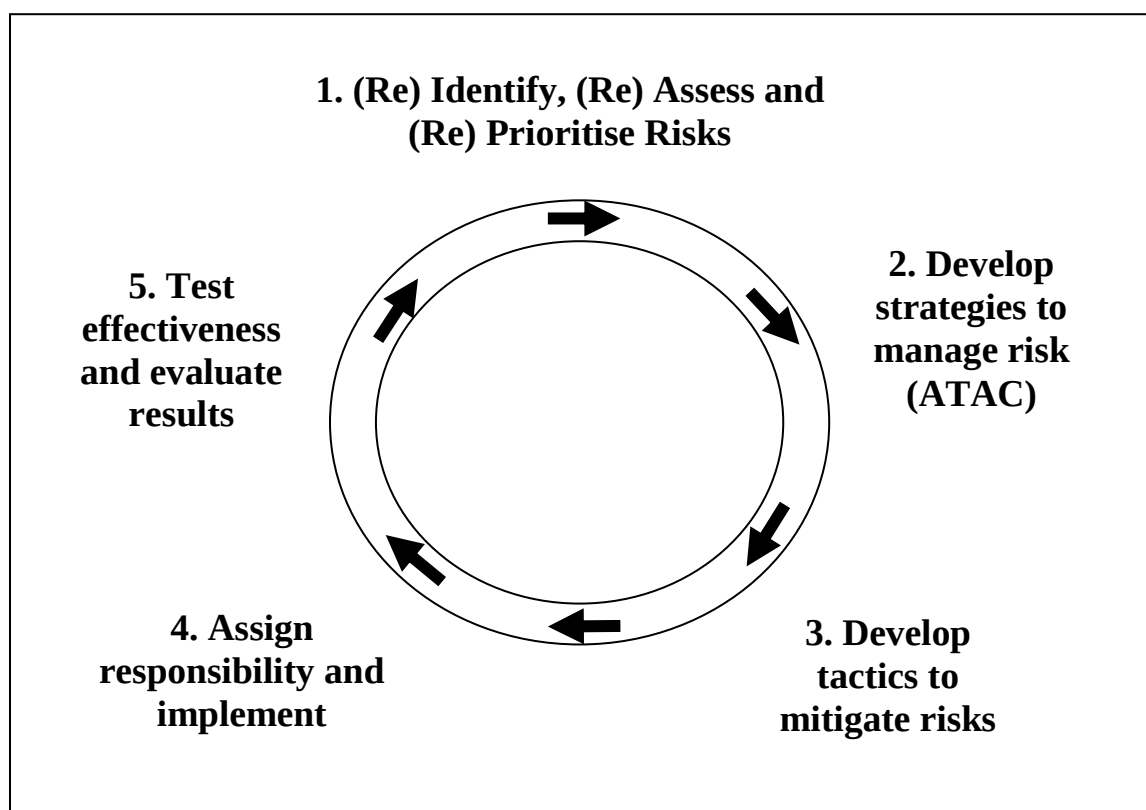
⁹ Source: Adapted from A Risk Management Framework for MFIs by ShoreBank Advisory Services and MFN. Published by GTZ, 2000.

outside of which would indicate excessive risk exposure. Management also determines the frequency with which each indicator should be monitored and analysed.

3. Develop tactics to mitigate risks. (Institutional Risk Mitigation Tool). Management develops sound procedures and operational guidelines to mitigate each risk to the degree desired. Sound policies and procedures clearly instruct employees how to conduct transactions and incorporate effective internal control measures.
4. Implementing and assigning responsibilities. (See institutional Risk Mitigation Tool). Management selects cost-effective controls and seeks input from operational staff on their appropriateness. The MFI assigns managers to oversee implementation of the controls and to monitor the risks over time. Ideally, each major risk area has an identified 'risk owner' who is responsible for managing and monitoring the identified risks that fall into his / her work area.
5. Testing effectiveness and evaluating results. (E.g. See the Post Pilot Risk Assessment Tool in Part IV for evaluating the results of the pilot). The board and management review the operating results to assess whether the current policies and procedures are having the desired outcome and whether the MFI is adequately managing risk. Some indicators require weekly or monthly monitoring, while others require less frequent monitoring. Results may suggest a need for some changes to policies and procedures and possibly identify previously unidentified risk exposures. In these cases, management designs new risk control measures and oversees their implementation. After the new controls are implemented, the MFI tests their effectiveness and evaluates the results.

Risk Management Feedback Loop¹⁰

Figure No. 8



¹⁰ Ibid.

Step 1a: Identify the Risks

A useful first step is to get the top managers of all key departments to identify all the risks in the functional area for which they are responsible. Ideally, managers will involve their operational staff in the identification of specific risks pertaining to their work area.

There are many ways to identify and categorise risk. *MicroSave* suggests three categorisations below:

1) *Standard forms of environmental/market risk (PEST)*

- Political risk
- Environmental risk
- Social risk
- Technical risk

2) *Standard forms of MFI Risk:* Sample risk events for each risk area are given in Attachment 9.

1. Credit risk
2. Interest rate risk
3. Liquidity risk
4. Management risk
5. New industry risk
6. Ownership and governance risk
7. Subsidy dependence risk
8. Operational risk
9. Strategic risk
10. Legal/compliance risk

3) *New Product Development Risks*

1. *Motivation risk:* What is the strategy behind the new product introduction?
2. *Management/Board commitment risk:* Does it have high-level commitment?
3. *Staff availability risk:* Are sufficiently skilled staff available to lead its development?
4. *Orphan-product risk:* Will the new product be main-streamed or left orphaned?
5. *Demand risk:* Will there be insufficient demand for the product in the market place?
6. *Positioning risk:* How will this product affect the MFI's brand/positioning in the marketplace?
7. *Product mix risk:* Does the new product add, complement or cannibalise existing products?
8. *Competition risk:* How and how fast will the competition react?
9. *IT systems risk:* Are new systems needed? Can the old systems support the new product at scale?
10. *Delivery systems risk:* Does the MFI have the infrastructure/capability to deliver?
11. *Communication risk:* Will the MFI be able to communicate/market the product internally and externally?
12. *Staff incentive systems risk:* Will the new product distort existing staff incentive systems?
13. *Fraud risk:* How does the new product provide opportunities for fraud?

US Federal Reserve Risk Categories

The US Federal Reserve Bank focuses on seven major risk categories listed below.¹¹ Bank management and regulators review these risks in light of a) the institution's potential exposure to loss, b) the quality of internal risk management and information systems, and c) the adequacy of capital and cash to absorb both identified and unidentified potential losses. In other words, management determines whether the risk can be adequately measured and managed, considers the size of the potential loss, and assesses the institution's ability to withstand such a loss.

Bank examiners in the US Federal Reserve System focus on the following risks:

1. *Credit risk*: The risk of financial loss resulting from a borrower's late or non-payment of a loan obligation or that a guarantor will fail to meet the obligation. Credit risk applies to lending and investing activities.
2. *Liquidity risk*: The risk of loss arising from the possibility that the MFI may not have sufficient funds to meet its obligations or be unable to access adequate funding.
3. *Market risk*: The risk that an institution's financial condition will be adversely affected by changes in market prices or rates (including interest rates, foreign exchange rates, or equity prices).
4. *Operational risk*: In the simplest definition, this is risk of loss that arises directly from service or product delivery, resulting from human or systems errors. It is a risk that arises on a daily basis as transactions are processed. Operational risk transcends all divisions and products of a financial institution. This includes the potential that inadequate information systems, operational problems, unforeseen external events, or breaches of contracts (including fraud) that result in unexpected losses. Risks associated with human resources, governance, and information technology is included in this category.
5. *Legal and compliance risk*: Losses arising from failure to follow relevant legal and regulatory requirements.
6. *Reputation risk*: The risk to earning or capital arising from negative public opinion, which may affect the institution's ability to sell products and services or to access other funding.
7. *Strategic risk*: The risk to earnings or capital arising from adverse business decisions or improper implementation of those decisions. This risk is a function of the compatibility of the organisation's strategic goals, the business strategies developed to achieve those goals, the resources deployed against these goals, and the quality of management capacities and capabilities.¹²

In the banking world, more and more attention is being paid to operational risk as a major reason for business failure.

Note on Counterparty Risk

Counterparty Risk: In this section we are considering counterparty risk broadly. Counterparty risk includes credit risks – where someone will not pay you and legal risks, for example, such as the lack of legal power for the firm to enter into a contract with the MFI. We use the term counterparty risk here to mean the risk that other organisations with whom the MFI has joined forces might fail to perform in some way that is harmful to the MFI. This can range anywhere from failure to deliver a stationary order on time to engaging in unlawful practices that through association bring disrepute to the MFI.

There are several appropriate reasons for a MFI to engage in counterparty risks. For example, the MFI may find it less costly to have its need outsourced rather than trying to establish the infrastructure in-house to fill the need. Often, outsourcing has the advantage of transferring the risk of mission drift (whereby the MFI

¹¹ Federal Reserve System, "Bank Holding Company Supervision Manual," p.2124.

¹² Categories of risk as defined by the Comptroller of the Currency (OCC), U.S. Department of Treasury.

becomes “distracted” from its main products and services) and risks associated with venturing into uncharted waters for the MFI, to counterparty risk.

Circumstances that give rise to counterparty risk include:

- Outsourcing tasks to enable the MFI to provide the desired service, product, delivery outlet, or expertise. Examples include: agency relationships to provide services for example where post offices provide services for Postbanks; software packages (versus in-house development); contracting marketing services; money transfers through Western Union; ATMs; debit and credit card services through Visa; settlement of services for Western Union or Visa, for example, through another bank; leased line dependency for telecommunications; employers who must remittance payroll deductions as part of a savings product etc..
- Inherited risks: Some counterparty risks are “inherited” with the institution, such as post offices retaining savings bank services with the divestiture and/or privatisation of a governmental postal service.
- Transferred risk: Transferring risk from the MFI to the third party, such as in the case of some insurance products. In this instance, one risk is traded off for another risk, i.e., actuarial risk is replaced by reputation risk.

In any event, whether sought, inherited, or transferred the MFI bears the reputation risk for whatever is produced by the counterparty in the name of the MFI. Using other parties can result in severe losses to the MFI depending on who retains the risk of failure or non-performance in the relationship.

MFIs that choose to have some counterparty risk because of their use of outside agencies often do so in an effort to mitigate more serious risks (e.g. fraud) or simply because they do not have the skill (e.g. to operate telecommunications software for their new WAN system). In other words, the cost of controlling a risk event to minimise fraud risk to acceptable levels may be greater than the benefit derived or the cost of transferring the risk to a third party (e.g. through insurance or security systems), with all its attendant risks. For example, in order to improve customer service by faster transaction processing that calls for minimising controls at the many points in the transaction cycle, a MFI may elect to obtain a blanket bond insurance coverage, which protects the MFI against loss due to employee dishonesty. Other risks to consider, when deciding whether to engage a third party, are listed in the checklist below.

Counterparty risk checklist when choosing third parties/vendors:

- Does the MFI know exactly the legal counterparty entity (legal risks)?
- Has the MFI clearly defined its requirements to the vendor?
- How have the vendors demonstrated they can do what the MFI requires?
- What is the reputation of the firm with whom your MFI is considering doing business? Consider conflict in missions.
- What is the financial condition/stability of the third party?
- What factors prompted selection of this vendor over other vendors? Consider risks of undisclosed problems/issues if selected vendor is significantly different in pricing, extent and quality of services from other vendors’ tenders.
- Is there a formal written agreement between the MFI and the vendor indicating each party’s responsibilities and liabilities?
- Has agreement been reviewed by MFI’s legal counsel?
- Does the agreement call for payment of any remedies in case of failure to meet terms of agreement?

- Does the vendor have satisfactory warranty over key vulnerabilities?
- What assurances does vendor provide to support warranty work with regard to timeliness and protection against business interruption?
- What type of on-site or in-town service is the vendor capable of providing?
- If vendor does not have a local presence, how can the vendor compensate in an off-site mode?
- Does vendor pricing as an add-on to MFI's pricing requirements still make product competitive in market place?
- Does vendor pricing as an add-on to MFI's pricing requirements still make product attractive/affordable to target market?
- Does vendor have any conflict of interest with MFI's interests? Consider services provided to competitors, ownership in vendor by any MFI staff or other parties with vested interests.
- Does vendor have resources to meet MFI's needs within prescribed time frames?
- Are vendor's time frames realistic?
- Will vendor provide customer references to MFI?
- Has MFI contacted vendor references to verify vendor's representations?
- Is the vendor willing to make any customisations to its product or services to be responsive to MFI's needs?
- Are there any regulatory or compliance issues that bear directly on the MFI?

Assess and Prioritise the Risks

Once the risks are identified by each manager responsible for the relevant risk area, or by a committee designated to identify the risk, you are ready to assess and prioritise risks. Again, this could be done by the relevant senior manager with his / her staff. The results of this process then become an input for a meeting of all senior managers in the organisation where high-level risks can be mapped out on a matrix, such as the one shown below.

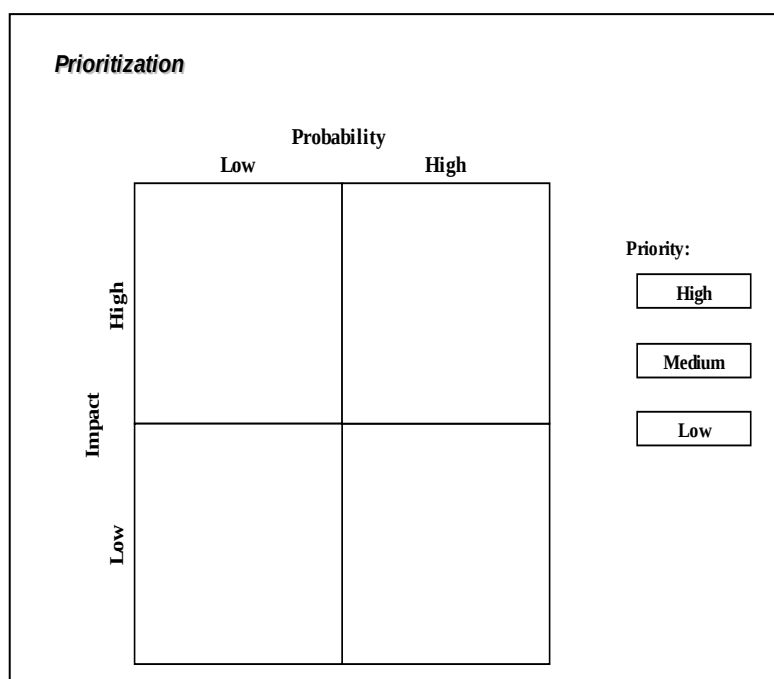


Figure No. 9
Error!

Examples of risks categorisations that we viewed in the MFIs we visited include:

- High Frequency (Probability), High Impact: Losses from high risk business loans in one sector
- Low Frequency (Probability), Low Impact: Teller overs; Refunds of service charges errors
- High Frequency (Probability), Low Impact: Typical loan losses; Petty fraud
- Low Frequency (Probability), High Impact: Fires, Natural disasters, wire transfer fraud, computer crime.

Interrelationships Between Risks

An important part of assessing and prioritising risks is developing an understanding of the interrelationships between them – particularly how the frequency or impact of a particular risk event impacts on other aspects of the MFI's business. The process described above as well as some of the tools that follow deal with different risks as if they are discrete entities with little bearing on one another. In reality, the opposite is true. We illustrate these interrelationships later in the Cross Product Risk Overview Tool when we looked at the impact of a liquidity crunch on different products across a MFI. We also demonstrate examples of significant events that should trigger a reassessment of risks across the entire MFI (i.e. across functions and product lines) exactly because of the interrelationships between different risks and the multiple impacts that a single event can cause.

In completing some of the product tools in this toolkit, you will see that there is oftentimes more than one driver or more than one risk mitigation tactic that relates to a risk event. Collectively, mitigation tactics control and provide reasonable assurance that certain processes will occur within acceptable risk tolerances¹³. Changes to some processes may impact on previously controlled or mitigated risk events and change that risk event's dimension (profile). Changes in methods of controlling one risk usually introduce other risks. Some risks may pervade other types of risk, too. For example, human resource risk may very well be an element of strategic, operational, reputational, fraud, and credit risks. One operational risk can lead to another. Some operational risk events cause financial loss directly; others lead only to reputational damage since the problem can be fixed before direct financial loss occurs. But reputational damage is itself an operational risk event, which can lead to financial loss. Financial losses can put customers' interests at risk, which is why examiners are concerned with reputation as well as the causes of reputational damage. In this respect, risks are multi-dimensional, and the mitigation tactics need to address this multiplicity by examining the people, processes, product design characteristics and performance measures.

Examples of interrelationships:

- 1) A MFI is introducing voluntary savings in response to client demand as well as to fund its loan products. Ceasing to use outside funding, which is generally more costly than on-lending savings deposits, is seen as a strategic move to improve the MFI's profitability. However, the MFI must also consider not only the loan side of the equation in the MFI's source of funds, but also the new liquidity risk of being able to meet client demand for savings withdrawals; not being able to meet client withdrawal requests represents reputational risk.
- 2) A MFI faces possible extinction if it does not roll out new products. In the push for new product development, the MFI has a human resource risk, that staff is being spread too thin. As a result, ongoing jobs are not effectively performed, and may, for example, lead to increased credit risk through deterioration in loan portfolio quality.

¹³ Dermot Turing, 2000. "Risk Management Handbook: A practical Guide for Financial Institutions and Their Advisers", pg 2.

- 3) A push by senior management for a new product to be on market for competitive reasons may very likely result in MFI staff cutting corners in the process. The New Product Development process is in itself a risk mitigation strategy. Attempts to mitigate the competitive risk in turn increases operational, reputation, credit, and interest rate risks.

Risk Trade Offs

Risk trade-offs occur when one type of risk is substituted for another, usually, but not necessarily, for the purpose of reducing the MFI's risk exposure in some way. The new risk may have the same frequency and severity indices as the risk being traded off, but the cost/benefits of controlling the new risks may be less than controlling the initial risk. The driver of the risk may change, but it is the change in the risk assessment (probability and impact), that will change the degree of risk (risk profile) and thus the risk management strategy. When the degree of risk is not reduced by the trade off, then it is usually the mitigation strategy that prompts the trade, as certain mitigation tactics may be better performed by the MFI than others, or vice versa. Risk management is about converting unacceptable risk into acceptable risk either by reducing the exposure to risk, or by converting one form of risk into another.

Examples of trade-offs:

- 1) By outsourcing transfers to Western Union, the MFI shifts from operational risk to counterparty and reputation risk, and reduced operational risks.
- 2) In selecting an insurance company to administer your MFI's insurance product, you are shifting the actuarial and operational risks from the MFI, and are in turn accepting counterparty and reputation risk. In this instance, the MFI can probably more easily mitigate counterparty and reputation risk in the selection process of the insurance company, than it can mitigate actuarial and operations risks, in which it has no expertise.
- 3) By deciding to take security for your credit exposures you convert credit risk into operational as well as market risk.
- 4) Trying to eliminate human error by computerisation is replacing one form of operational risk with another.

Once the risks have been assessed and prioritised, the next step is to decide what to do about them.

Step 2: Develop Strategies to Manage the Risk

Once all the risks are identified and prioritised, the bank or MFI needs to choose one of four strategies: accept, avoid, transfer or mitigate (control) the risk.

- **Avoid the risk:** If the consequences of a particular risk could be devastating, and the MFI does not have the funds to mitigate it sufficiently, the MFI could choose to avoid such a risk event entirely. A good example of this is a MFI that decides to offer voluntary savings to the public before it has the systems, culture, and competencies to do so. Such a step could completely ruin the reputation of the MFI, dragging down even its profitable business lines. (When you wish to avoid risk drivers for a risk event, you are in fact controlling or mitigating the risk event).
- **Transfer the risk:** If the consequences of a risk can be severe, but the occurrence is very unlikely (e.g. a fire on the MFI's premises), it often makes sense to transfer the risk to a third party, rather than bearing the cost of controlling the risk in-house. (Be aware that in doing so, you are changing one risk, such as operational, to a credit risk, i.e., that the insurance company will in fact pay you for damages in the event of a fire). Another example of transformed risk is where the financial institution appoints or becomes an agent to conduct some part of its business where it feels it has

inadequate expertise (for example an MFI that has been offering insurance services and then elects to transfer these to a formal insurance company and act as its agent).

- **Accept the risk:** If the probability of occurrence and the impact of a particular risk are minor relative to the cost of controlling it, the MFI could choose to accept such a risk. For example, by allowing tellers to process certain transactions within limits, the MFI accepts the risk of any loss for those transactions under the stated limits.
- **Control or mitigate the risk (in-house):** When risk events have a high likelihood of occurrence, it is often becomes cost-effective to manage the risk in-house (e.g. managing credit risk). Also, when risks relate to the core business of the MFI, they are mostly controlled internally (e.g. risks associated with making loans or taking savings deposits).

Step 3: Develop Tactics to Mitigate the Risk

The following tool is helpful in thinking through the risk event/exposure, the degree of mitigation, what controls or mitigation tactics could be implemented, and the roles of specific individuals in managing the risk.

Figure No. 10

Proposed Solution Exposure: _____ Strategy: Accept Mitigate/Control Eliminate Transfer _____ Controls: _____ Roles: _____
--

Risk Mitigation Criteria

There are several basic criteria/pointers to ensure effective development of risk mitigation tactics. These are broadly as follows:

- Assign Risk Owner to implement tactic.
- Define trigger points that start preparations and actions.
- Estimate time and resources required to support tactics.
- Estimate how much the probability/frequency estimates for the risk event and impact will decrease if the plans are successful.
- Assess cost effectiveness of proposed risk reduction tactic.
- Decide how to monitor plan to know whether it is achieving its objective.
- Make actions specific.

WHEN TO CONDUCT RISK ANALYSIS

Periodic Risk Management Reviews

As part of the MFI's risk management programme, the MFI should recognise and monitor indicators key to its well-being. Changes in these indicators can be due to certain stresses the MFI is experiencing. Effective risk management and appropriate risk mitigation strategies can frequently help recognise and even anticipate

signs of stress in an organisation before risks get out of control. However, signs of stress can also indicate the failure of risk mitigation strategies and risk planning.

Figure No. 11

Examples of Signs of Stress	Could Indicate
High rates of dropout	- Client dissatisfaction with services - Increased competitive options available to clients - Delivery of inappropriate products - Inappropriate staff incentive scheme
High default rate	- Poor selection of clients - Poor systems - Poor credit control, inappropriate follow up - Inappropriate loan officer incentives
High rate of staff turnover	- Lack of job satisfaction - Conflict and stress - Lack of leadership - Dissatisfaction with compensation - Overworked staff with low morale
Increase in Average Cost per Client or Per Loan Ratio	- Increased inefficiency in component of product delivery - Poor loan officer/resource management - Small loan sizes
Decrease in Bank Efficiency Ratio	- Breakdown in cost control measures - Poor Product pricing/costing on new products - Decrease in revenue collection
Increased Reliance on subsidised funding	- Poor financial resource mobilisation - Poor utilisation of assets - Improperly costed products and services - Higher loan losses
High incidence of system failures	- IT staff does not have expertise to support system - Poor system design leads to data corruption - System no longer meets MFI product requirements - System capacity exceeded
Increased incidences of fraud	- Poor staff selection - Failure to maintain ethical culture within MFI - Poor systems - Inadequate procedures
Increase in number of customer complaints	- Poor customer service - MFI capacity/resources at maximum utilisation - Lack of market research - Insufficient training for managers <i>and</i> staff
Mismatched asset/liability structure	Long term loans and short term savings
Product not profitable	Problems in account size distribution (are there enough funds in large accounts so that the average account size is sufficiently large for profitability despite large numbers of small accounts?)
High budgetary variances	- Cost overruns - Inaccurate/outdated assumptions - Lack of control methodologies
Missed deadlines	- Inadequate management and co-ordination - Inadequate internal supervision

Examples of Signs of Stress	Could Indicate
Erratic cash management	■ Poor liquidity management ■ Logistical problems with transportation of cash
Security lapses and problems	■ Inadequate management and communication ■ Logistical stresses to poor physical layouts ■ Poor security staff screening ■ Conflict between internal security staff and security companies/police
Change in a vendor	■ Failure of vendor to deliver as required ■ Vendor payment of kickbacks ■ Change in vendor pricing

Special Event or Significant Change Triggers

Significant changes within the MFI should trigger MFI management to perform an updated risk analysis for the organisation. Because these events cause changes that may well be intrinsic to the very essence of the MFI, a new institutional wide, cross-functional risk assessment should be performed.

Note: The examples below are for illustration purposes only. For some MFIs, there are likely to be other significant events. The point is to recognise key events that have an impact across your MFI or bank, and to re-evaluate and assess the changes in risk and risk management that the 'new event' necessitates. The Institutional Risk Assessment, Institutional Risk Mitigation and Cross Product Risk Overview tools in this toolkit can be used to identify new risks and re-assess old ones.

Examples of Special Event Drivers for Risk Management Review

Figure No. 12

Event	Example
Changed operating environment	■ Regulatory change, either deregulation or increased regulation: becoming a bank, becoming an MDI, privatising
New personnel/losing personnel	■ Unusually high turnover ■ New senior executive with different vision
New or revamped information systems	■ Breakdown in controls under tight time constraints
Rapid growth	■ Breakdown in controls when operations expand significantly and quickly: purchase of a number of new branches
New technology	■ WAN's require modifications to internal controls and reporting
New lines, products, activities	■ Microcredit MFI expanding into savings product
Corporate restructurings	■ Down-sizing
Foreign operations	■ Opening a branch in another country
Unexpected results	■ Made far higher than projected return on investment ■ Made far lower profit
Changed external environment	■ New government; Subsidies to farmers eradicated
Market changes	■ Loss of major customers
Governance changes	■ Resignation of a number of board directors
Competitive environment	■ New competitor in market

WHEN IS THE LEVEL OF RISK MANAGEMENT SUFFICIENT?

Some broad techniques for managing risk are shown in the table below. These techniques will help you brainstorm various tactics from different perspectives to effectively control risk.

Techniques to Manage Risk¹⁴

Figure No. 13

• Limits	Only certain individuals may be authorised to carry out a particular transaction
• Diversification	Spread risks within investment portfolio among different kinds of investment; Diversify credit risk by taking guarantees (spreading risk from just borrower to borrower as well as guarantors)
• Conversion	Turning one risk into another, for example: insurance turns operational risk into credit risk
• Reporting and testing	Ensuring procedures are adhered to and that the procedures work
• Enforcement	Disciplinary action for offenders

Mitigation Tactics

Once the list of possible risk events, frequency, impact and mitigation strategy is completed, the Risk Owner and Product Team brainstorm mitigation tactics. When these tactics are internal to the MFI, in other words, controlled by the organisation, the term *internal control* is used. Common internal control measures inherent in policies and procedures are itemised below. These controls are built into daily operations to minimise risk before it occurs. These controls are frequently applied to manage credit and transaction risks in MFIs. Controls are most effective when they are built into the systems, rather than added on at a later time. Sample Internal Control Questionnaires are included as Attachment 7. These questionnaires may help identify the types of activities that the MFI might wish to control and suggest what control activities the MFI may wish to implement.

Figure No. 14

Common Internal Control Measures¹⁵

Segregation of Duties

The separation of responsibilities for two or more tasks that could result in error or encourage dishonest behaviour if only handled by one employee.

Limits

Caps as guidelines to define normal behaviour, such as maximum cash on hand at a branch.

Signature, Approval, and Authorisation Requirements

These protect MFI from unauthorised transactions.

Verification and Reconciliation

Ensures timely and proper settlements and postings.

Documented Procedures

Clear descriptions of who and how processes are to be performed

¹⁴ Dermot Turing, op. cit., page 67

¹⁵ Improving Internal Control, A Practical Guide for Microfinance Institutions, Microfinance Network with GTZ, Technical Guide No. 1, Anita Campion, 2000.

Physical Controls

Measures taken to verify the existence of assets reported in MFI financial statements.

Crosschecks

To check that policies and procedures are followed, such as: client visits by regional managers to verify loan officers followed proper lending procedures.

Dual Controls

Requires at least one other employee to check or approve a transaction.

Computer-related Controls

- **Integrity Risk Controls:** Creating levels of access and unique passwords to permit staff to access items in the computer that are directly related to their scope of work, that the system can track and report by individual staff.
- **MIS Risk Controls:** This helps mitigate the risk of losing key information from the database, by creating backup files and storing them off-site.

Control systems need to control assets coming into the MFI, assets leaving the MFI, assets held by the MFI, continuing MFI liabilities, and obligations entered into by the MFI. Control systems are to ensure that:¹⁶

- the MFIs business is prudently planned and carried out;
- transactions are entered when authorised;
- assets are safeguarded and liabilities are controlled;
- losses from irregularities are minimised and identified when they occur;
- accounting records are complete, accurate, and timely;
- capital adequacy, liquidity, profitability and asset quality can be regularly monitored, and monitored on a timely bases;
- risks of loss be can identified, assessed, quantified, monitored, controlled and provided for;
- regulatory returns can be produced.

How do you know when you have managed your risks to the desired degree? The **impact and frequency** assessments of the nature of the risk to your organisation, as seen in the risk management tools at the end of this section, are separate considerations from how well you are addressing that risk. Performances measured by selected indicators and compared with desired thresholds tell you how well you are managing that risk. If you do not manage a risk well, the impact and frequency assessment will point out how important it is to the MFI to bring the risk exposure within limits acceptable to the organisation. (See Step 6, Oversight and Management, Using the Six-Step Risk Management Feedback Loop).

Factors can be identified that cause a risk event to occur, which we call **risk drivers**. In order to manage a risk, you must first determine what can cause the risk event to occur. Your risk tactics should be focused on eliminating or controlling the ability of these factors to exist within the MFI. You will find that a great deal

¹⁶ Demont Turing, op. cit., pg. 111

of emphasis is placed on the identification of risk drivers in the tools as a critical step in effectively managing risk, however controls must be cost effective. (See Step 3, Using the Six-Step Risk Management Feedback Loop).

Not to be confused with risk drivers, **risk events** are symptoms that a risk is not being well managed. For example, congestion in banking halls is a condition, or symptom, that usually solicits negative customer reactions, a reputational risk. However, the reasons for this congestion can be quite varied: teller absences, understaffing, inefficient processes coupled with understaffing, inadequate facilities to allow increased staff expansion, seasonal activity (such as payment of school fees), run on the bank, loitering, closure of a competitor's branch, new product offering etc..

These may all represent more than reputational risk: liquidity risk, operational risk, new product development risk, for example. It is therefore important to understand what is causing, or driving, this condition in order to know how to deal with it. The alternative risk events may include: insufficient liquidity to meet customer demands; inadequate IT systems create long processing time; incompetent/underperforming staff; product demand exceeds operational capacity. These risks require very different responses and failure to correctly identify the risk driver will result in tactics that are not effective or possibly even harmful. If you haven't identified the right driver, you won't be able to manage that risk event. When a risk is being managed, it is likely that the symptoms, or conditions that evidence the risks, will subside. In this manner, the symptoms can become indicators that risk exposure is reduced. While this is reassuring, it does not answer the question, have we managed this risk sufficiently?

The use of indicators is extremely helpful in answering this question. Without data capture, you cannot manage risk and you cannot devise appropriate effective controls. Risks can be measured quantitatively and/or qualitatively, and both types of measurements are needed in order to provide balance. The indicators must be relevant to what it is you want measured. You should know why you want to measure an activity, and what exactly it is that you want measured. You need to define who will measure the activity, where will it be measured, and how it will be measured. The measurements selected should be objective, verifiable, and valid. Data that is routinely and automatically collected as a by-product of the activity is the most accurate. Data generated by anecdotal methods will probably not yield objective or valid results. If there is not a quantitative measure available that is a valid means of measuring the effectiveness of tactics to control risk, then the MFI should consider developing a research study in order to assess how well the risk is being managed. This would most likely be needed in order to understand customer-related risk events.

To help foster the thinking process for appropriate measures, a table of sample indicators and their possible correlations to risk areas is shown below. One indicator may be applicable to more than one risk area, and one risk area may have more than one indicator. In the case of possible multiple indicators for a risk event, select only the most relevant and meaningful indicators. The indicators should be clearly stated to show their relevance to the risk event.

Risk Indicators and Measures

Figure No. 15

Indicator Description	Potential Risk Area Measure
No. of customer complaints	Credit, Operations, Reputation
Queuing time	Operations, Reputation
Increased no. of customers	Strategic, New Product Development, Credit
Increase in balances (rate of portfolio growth)	New Product Development, Credit, Liquidity, Strategic
No. of suspended/rejected transactions	Operations
No. of overdrawn accounts	Operations, Credit
Error rate	Operations
No. of repeat jobs	Operations
Cost	Operations, Credit, Strategic, New Product
Sales growth (%)	Strategic, New Product, Credit, Liquidity
Market share (%)	Strategic, New Product, Credit, Liquidity
Revenues	Operations, Credit, Strategic, New Product
Timely reports	All areas
Accurate reports	All areas
No. Instances of fraud	Operations, Credit
No. of transactions/teller	Operations, Reputation
No. of transactions/branch	Operations, Reputation
Speed of decision-making (days)	Credit, Strategic, Credit, New Product
No. of staff complaints	Human Resource
No. of closed accounts	Reputation, New Product, Operations
% Budget variances	Finance, Strategic
Arrears, PAR, delinquency rate	Credit
Product profitability	New Product, Strategic, Finance
System downtime	IT, Reputation, Strategic, Operations
System response time	IT, Reputation, Operations
No. of manual processes	Operations
Return on Equity	Strategic, Finance
Efficiency ratios	Strategic, Operations
Internal audit results	Operations, Credit, Strategic, Finance
Teller cash shortages	Operations
External auditor results	Strategic, Governance, Operations, Finance
Staff turnover	HR
Processing time	Credit, Operations
Faults reported	IT
Emergency repairs/repairs	Operations, IT
No. of investigations	Operations, Fraud
No. of disciplinary cases	HR
Fee expense	Operations
No. of staff training achievements	HR
Amount of uninsured losses	Operations, Credit
No. of losses	Operations, Credit
Capital Adequacy ratio	Strategic, Finance
Client drop out rate	Credit, Reputation, Strategic
No. of early matured investments	Liquidity
Attendance rate at group loan meetings	Credit
Application turnaround time	Credit, Reputation
Average loan size	Credit, HR

Once you have decided on the appropriate measure(s), you have to set the threshold for your MFI's risk tolerance. Remember, controls have a cost/benefit component. You may accept risk exposures to approach specified levels, but at a predetermined level, the threshold, you must take further corrective action. For example, a common measure of credit risk is the portfolio at risk (PAR) ratio. If your MFI's credit risk tolerance is a PAR 30 of 4%, and the PAR 30 now measures 4.2%, then you will start taking a hard look at the credit risk drivers and delve more deeply into the causes, perhaps by sector, geography, loan officer, region, client payment patterns, in order to revise your tactics to produce the desired results – reducing the PAR 30 to under 4%.

If you find that your risk trend is not decreasing and is still operating outside of the desired thresholds, then you must re-examine the identified drivers. You may in fact have not identified the real cause (driver) of the risk event, which means your tactics are not effective in controlling the risk event, and consequently your symptoms are not subsiding.

If you are establishing the indicators and thresholds for the first time, you will need to measure your current exposure. This becomes the baseline for the indicator from which you can tell if the exposure is going up or down, or staying stable. As your risk programme matures, you can modify the thresholds so they become the desired measure, not the actual measure.

Assess the Costs and Benefits of Mitigating Risks

Risk management can be overdone. Effective risk management requires that you make explicit choices and decisions and that you revisit these choices and decisions repeatedly during the course of doing business.

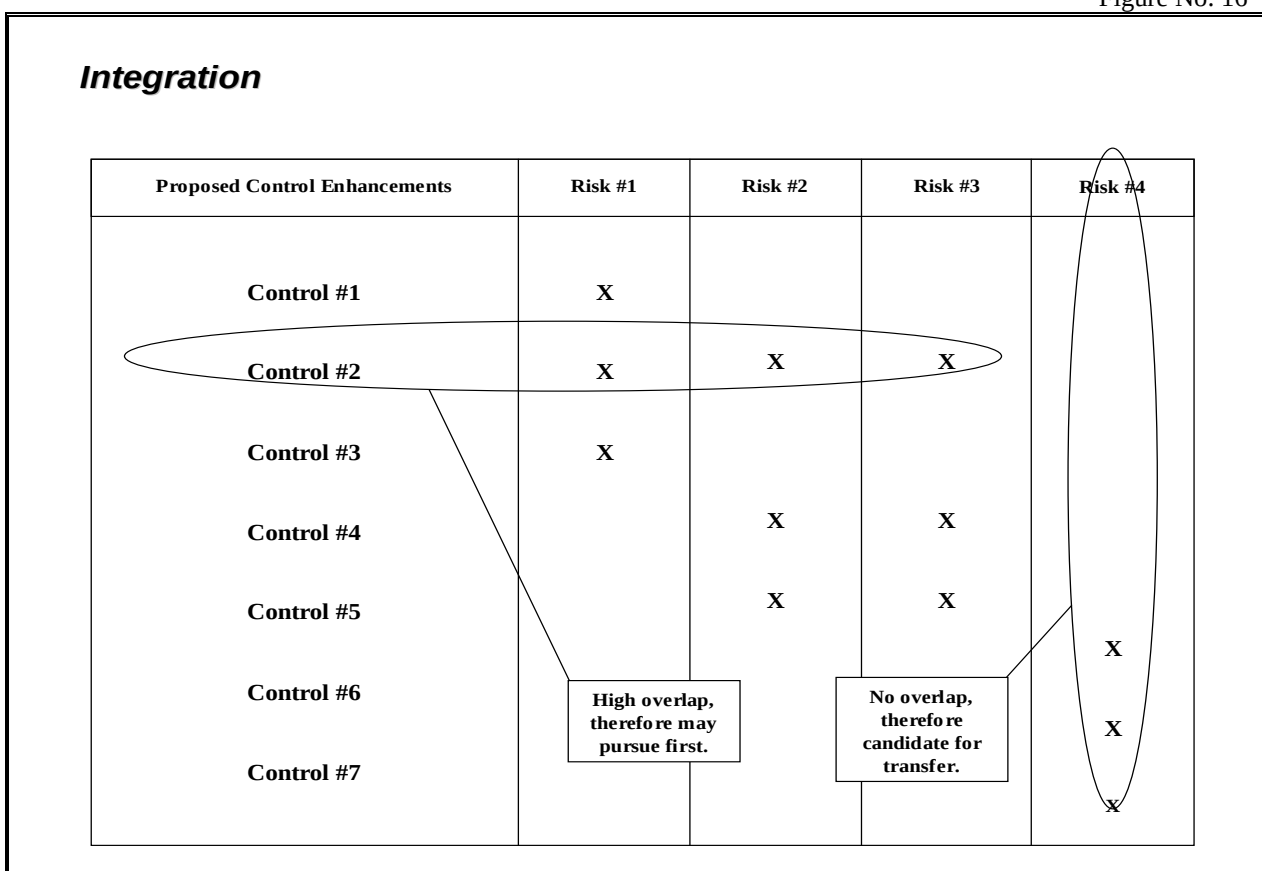
One decision making tool which MFIs might find useful is to analyse how a particular control or set of controls can be used across different risks. Whereas the cost of introducing a particular control like a new software package might not be justified from a cost-benefit point of view for addressing one risk, it could be justified if it is able to address many other risks at minimal marginal cost.

The matrix tool below helps the manager's understand the benefit of implementing and/or prioritising a particular control or risk management system, relative to its costs, and to map out the risks and controls as in the chart below. If a particular control measure (like control # 2 in Figure No. 16) can help reduce a number of high priority risks in the organisation, it probably makes sense to introduce it.

For example, in our fieldwork we noted that one bank introduced a new software system as a control measure to help it reduce risks on several fronts. A single software control tool has helped Teba Bank mitigate its risks associated with transaction errors; fraud; flouting of retail banking procedures, and delinquency. It is helping the bank manage these risks because of three additional associated controls that the bank has introduced:

- 1) Someone has set-up effective risk control parameters in the software system to send warnings when the risk reaches a certain level.
- 2) Someone has responsibility for monitoring the results and for taking action.
- 3) The software is set-up to track whether the risk level is increasing or decreasing.

Figure No. 16



As part of the process of identifying mitigation tactics, or internal controls, the MFI must thus ensure that the controls it chooses are not more costly than the potential cost to the MFI if no controls were put in place. It is common sense that only cost-effective internal controls should be selected. Cost-effective controls are those measures that offer the maximum risk reduction for the least cost.

The steps and calculation below are tools to assist the MFI in balancing the anticipated benefits of reducing identified risks with the cost of controlling them.

Steps in selecting cost-effective controls:

- 1) For each risk event evaluate the potential loss to the MFI.
- 2) Identify potential mitigation tactics (controls) to reduce or eliminate the risk.
- 3) Assess direct costs as well as indirect costs (opportunity costs of foregone business) to implement tactic.
- 4) Compare costs of implementing controls (3) with the anticipated benefits (1).
- 5) Select and implement tactics that add the most value relative to the composite costs.

A second methodology to test the cost/benefit of a mitigation tactic is to calculate the risk reduction leverage, where:

$$\text{Risk Reduction Leverage} = \frac{\text{Expected Loss (Before)} - \text{Expected Loss (After)}}{\text{Cost}}$$

If the leverage calculated is less than 1.0, then the cost is more than the benefit. The MFI can choose one of two options:

- 1) Do nothing, i.e. accept the risk, or
- 2) Continue looking until another tactic whose benefits exceed its costs of implementation is found.

If more than one alternative tactics are available, and if the leverage for both is calculated to be greater than 1, unless there are extenuating circumstances, the MFI would choose the plan with the greatest leverage.

Note: Sometimes the cost of implementing and executing the tactic may be expressed in monetary terms, but the benefit may be expressed in time. To proceed, convert the time units to a monetary equivalent.

Step 4: Assign Responsibility and Implement Controls

This step is for management to integrate policies, procedures and controls into operations and assign managers to oversee them. Just as there are multiple drivers or causes of risk, there are multiple forms that controls can take to mitigate risks. Ideally, the controls are built into the design or the product features as well as into the processes used to deliver them. The boxes below illustrate the various forms that controls can take, i.e.: product based; policy and procedure based, human – resources based and performance based controls.

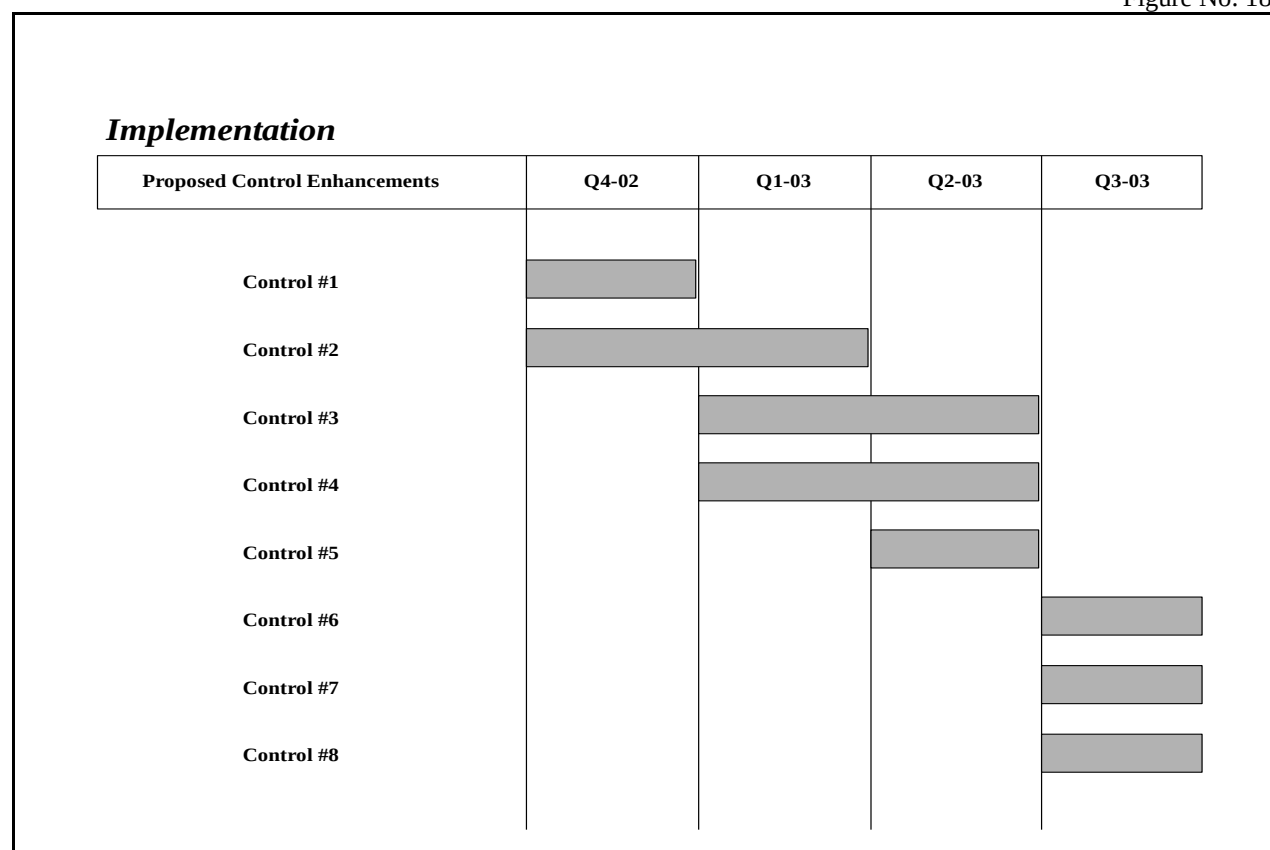
Figure No. 17

<u>Product Design Controls</u>	<u>Policies, Procedures and Process Controls</u>
Weekly repayments	Detailed Credit Policy and Detailed Procedures: e.g.
Short-term loans	Borrower selection procedures specified
Existing businesses only (no start-ups)	→ Concentration limits; Monthly Cash Flow Projection Analysis; Debt-Service Coverage Ratio of 1.5
Prompt payment incentive	Parameters set in IT system to prevent rescheduling of loans; large loan sizes; disbursement to person with poor credit
First loan size specified	Reconciliation of accounts and loan data
Penalty for late payments	Regulatory controls
Larger repeat loan	Centralising payment collections by clients and depositing at formal financial institution
Peer lending	Varied loan terms
<u>Human Resources Controls</u>	<u>Performance Measurement Controls</u>
Staff selection guidelines	Portfolio at risk reporting by loan officer and by branch
Clear job description	→ Agings
Staff training module	→ Concentrations
Staff incentives for good loan quality	Ratio Analysis
Job rotation (prevent fraud)	Trend Analysis
Mandatory leave (prevent fraud)	Internal Audit

In the implementation process, management should seek input from operational staff on the appropriateness of the selected policies, procedures and controls. Operational staff can offer insight into the potential implications of the controls in their specific areas of operation. If it is possible that the control measure will have an impact on clients, then management should speak with line staff to understand the potential repercussions. In addition, MFIs can use client surveys or interviews to understand clients' reactions to a new operational procedure or internal control measure.

It is crucial in this step to assign responsibility to an individual to oversee the implementation of a control according to a particular timeline in managing the risk. The chart below sketches out a timeline for introducing or modifying specific controls in the MFI. Controls to mitigate risk events with higher risk levels should be introduced first.

Figure No. 18



Step 5: Test Effectiveness and Evaluate Results

Senior managers must determine the Risk Owners responsible for monitoring the risk and should ensure that the right senior managers (or board directors) receive relevant and useful information, and that specific personnel will be held accountable for implementing changes. (See Part IV: Institutional Risk Mitigation Tool, and Figure No. 25). The MFI should establish key indicators to monitor (Figure No. 15), and the frequency with which they should be monitored.

The designated person must be accountable to the board and senior management and must have the authority to implement changes, as needed. Management must regularly check the operating results to ensure that risk management strategies are indeed minimising the risks as desired. The MFI evaluates whether the operational systems are working appropriately and having the intended outcomes. The MFI assesses whether it is managing risks in the most efficient and cost-effective manner. By linking the internal audit function to risk management (Figures No. 4 and 5), the MFI can address these questions systematically.

Trend and ratio reporting is the most efficient way for directors or senior managers to absorb large amounts of information quickly. Following trends allows the institution to “manage by exception.” Managers can scan the trends in key ratios and focus on those areas where the trends are not positive or where there has been a change, thereby focusing their limited time on the most important issues. Ratio analysis is one of the most useful tools in managing financial institutions, since the *relationships* between different numbers are often more important than the absolute numbers. This is especially true for large scale or quickly growing MFIs.

With this information, senior management should be asking questions about whether the MFI is anticipating risk sufficiently, identifying risks adequately, or managing them aggressively enough. For example, are loan losses in line with the reserve policy, and if not, why not? Should the reserve policy be adjusted to better

match operating experience, or is there a market or operational reason that explains the mismatch? If the financial performance of the investment portfolio was very good in the certain period, was it due to a higher risk profile in the portfolio or did interest rates move as anticipated? By sharing this information with directors, senior management can gain additional expertise and experience on tough issues and potentially spot previously unidentified risks. Based on the summary reporting and internal audit findings, the board reviews risk policies for necessary adjustments. The new procedures designed as a result of the necessary adjustments would require to be reassessed, re prioritised and follow the five steps of the risk management feedback loop.

MFIs are increasingly adapting and adding new products to offer customers more choices and to differentiate their products from the competition. With new products and product changes come new credit risks, operational risks, liquidity risks, and reputation risks, which require dedicated risk management strategies to be implemented and monitored following the risk management feedback loop

Part II: Project Management and Process Mapping

PROJECT MANAGEMENT AS A RISK MANAGEMENT TOOL

New product introductions rarely fail due to the lack of realistic opportunities, creative and practical solutions and funding.

They fail often because key managers do not take responsibility for supporting the product development process. Without the necessary people actively engaged, and the setting up of a process that has their buy-in, product development risks cannot be proactively managed, and the chances of product failure increase dramatically.

Probably our most striking finding across both MFIs and banks that we have reviewed is that the process of successfully managing the introduction of new products conforms widely to best practice project management methodologies. In many organisations worldwide, successful projects (new product introductions) depend heavily on:

Figure No. 19

- A high-level project sponsor driving the process. This project sponsor can appoint a technical expert to be the **product champion**. The product champion coordinates the necessary inputs from the various technical and marketing / human resources departments under the guidance of the sponsor.
- A skilled project facilitator. Ideally, the process facilitator is a separate person from the project sponsor. The project sponsor demonstrates credibility and commitment from the top. The facilitator is concerned with moving the process along per the schedule, resolving conflicts, and ensuring the optimal allocation of resources in the interests of the company.
- Cross-functional teams supported by key managers.
- A well structured and facilitated process
- Ongoing performance measurement against goals.

Reasons Key Managers Do Not Buy-In

- Don't feel action is necessary.
- Disagree with the problem diagnosis.
- Have been singled out as a target.
- Are concerned that the project will disrupt normal business.
- Are uncomfortable with change.
- Lack confidence that the effort will succeed.
- Believe that change is good for the bank or MFI, but it is not in *their* best interest.

The Project Office

The project management function deals with the process-side complement to the technical design and delivery of new products. In fast growing, multi-project organisations, it is useful to have a project office to force senior managers to prioritise projects, and hence allocate resources which are in the company's interests, rather than the interests of individual managers.

The project planning and mapping process, through the project office, enables organisations to see which project elements can happen concurrently, and which need to wait for critical events or benchmarks before they can proceed. For example, having the marketing office embark on an advertising campaign for a product that is not fully tested, will add pressure to do the roll-out before the pilot is complete, thus greatly increasing the risk of product failure.

Not having a project office with someone specifically dedicated to allocating people and resources to higher priority areas, probably means that people are not being put to the best use. It is also becomes more difficult to predict the ‘crunch times’ and gaps that need to be filled.

Tasks to identify and mitigate risks form part of the project planning process and are monitored on an ongoing basis.

Finally, the project management team meetings are another forum for cross-functional input from key players, which is vital to the project’s success. Attachment 10 is an illustrative simple project management process.

PROCESS MAPPING AS A RISK MANAGEMENT TOOL

This is a graphic representation of the process under review, allowing for process description, the risks inherent in the event, and procedures that control those risks. This allows Risk Owners to identify not only missing controls, but redundant controls as well that sub-optimize customer service and operational efficiency goals. For each new product or business activity (e.g. savings transaction processing), conduct the following:

- 1) Map out the flow of processes that take place from the moment that there is customer contact.
- 2) Design your procedures, as they should be performed.
- 3) Design a solution to mitigate the risk, e.g. adding or modifying a step, adding a control, or reordering the workflow.

Process Mapping is not a quick exercise; it requires time, thoroughness, and thoughtfulness. One of the most difficult aspects of Process Mapping is not the mapping exercise itself, but the analysis of the map, looking for what is *not* there and *should be* there. Careful attention to the design of workflows and control points to eliminate bottlenecks in customer transaction processing, as an example, will pay big benefits when operationalising the pilot and improving chances of a successful pilot test.

Process Mapping during the Pilot Test Stage looks at two conditions:

- 1) The “as-is” state is how the work is currently being performed. This map is most useful to derive in Step 10 of the Pilot Test, to see how the conceptualised procedures have been modified and interpreted in practice.
- 2) The “should be” state consists of the formally recommended state of performance. Typically the “should be” is what is documented in the Policies and Procedures manuals developed and distributed by the MFI’s Head Office. One output of the Pilot Test Phase is the formally recommended procedures for inclusion in the MFI’s procedures manuals.

As a new process is being evolved, it is desirable to conduct the risk analysis in conjunction with the process map. When you develop a procedure from a risk perspective it is helpful to brainstorm at all levels, including the intended Risk Owner, all the types of risks inherent in that process. In order to develop procedures for a new savings 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 become steps within the process. In this manner, controls are being built into the process, rather than tacking them onto a process.

Building controls into a process integrates controls within the process, and is proven to be far more effective and efficient than adding controls onto an existing process. When controls are added at a later time, they are often susceptible to erosion, or are “peeled” off, when a process becomes subjected to performance

pressures, such as customer waiting time. The control activities, then, should be commensurate with risk tolerance, and answer the questions, “What do we do about this risk?” The steps in the process can be viewed to examine why each step is being performed and then evaluating them from a risk perspective as well as the value of that step in terms of customer service, efficiency, and economy. (Refer to Step 3 in Part I, Using the Five-Step Risk Management Feedback Loop, for tools to help evaluate cost/benefits of controls). To assist with identifying control activities for incorporation into the processes, refer to Attachment 7 for internal control questionnaires covering several core MFI activities.

Look at the sample Process Map shown in Figure No. 21. The map consists of four tiers:

- Flow Chart – Tier I
- Description of Process Outlined in Flow Chart (Tier II, Below Flow Chart)
- Risks Associated with Process (Tier III, Below Description)
- Internal Control/Risk Management (Tier IV, Below Risks)

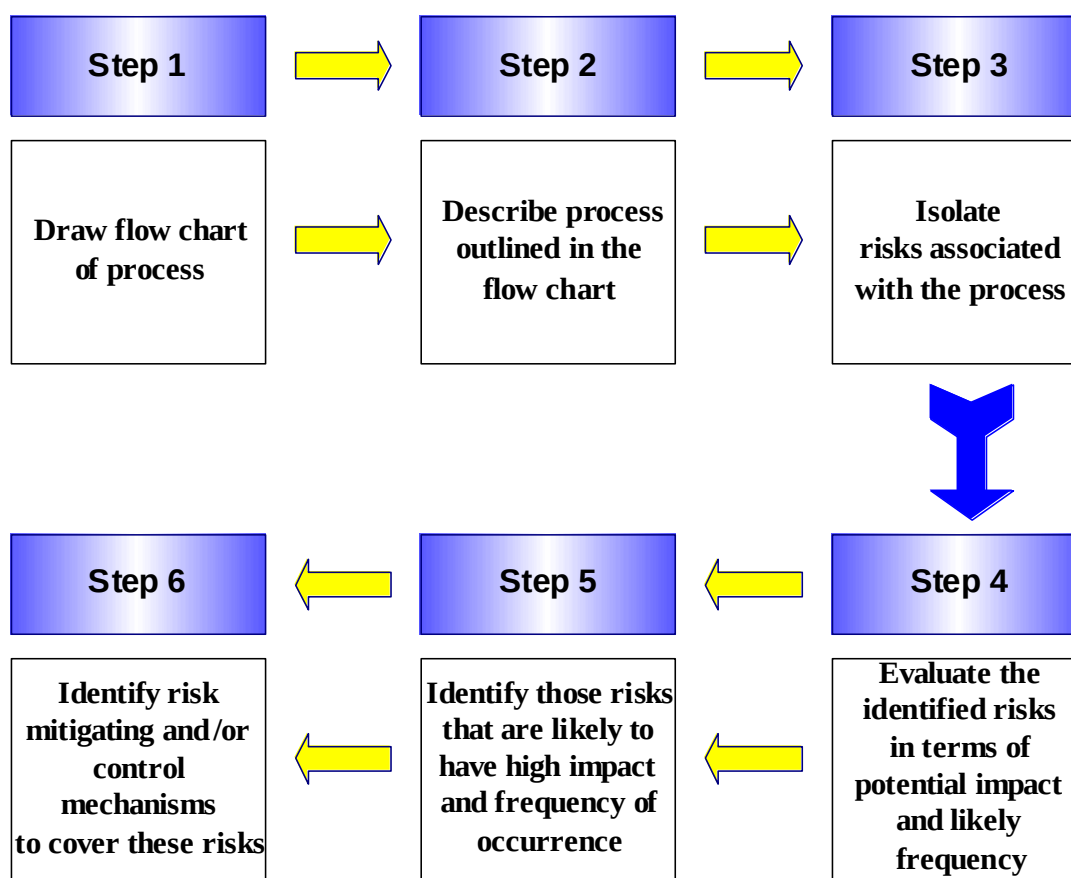
The top two tiers are for general use by all staff, and serve to document procedures. These two tiers then serve as the basis for training manuals for front-line staff who will be involved in the pilot test. All four tiers would be used by senior management and others directly involved in the MFI’s risk management programme, such as Internal Audit for risk analysis and procedures-compliance analysis, as well as for training senior management.

Management can clearly see the impact of a new directive on a process, or understand why a certain step in a process is being done, from a risk perspective. At Teba Bank, for example, Internal Audit uses process mapping as a technique for evaluating controls built into procedures designed to implement delivery of new products.

By adding the Risk and Control tiers to the process maps, there is a compelling need to regard the processes in a new perspective by asking, “What can go wrong?” Once the risks that are associated with the process are clearly identified, the extent to which the MFI wants to mitigate these risks can be assessed. The risks identified through process mapping can also serve as a basis for the risks listed in Product Risk Assessment Tool.

The diagram below illustrates how process mapping techniques can be integrated with risk analysis techniques and tools.

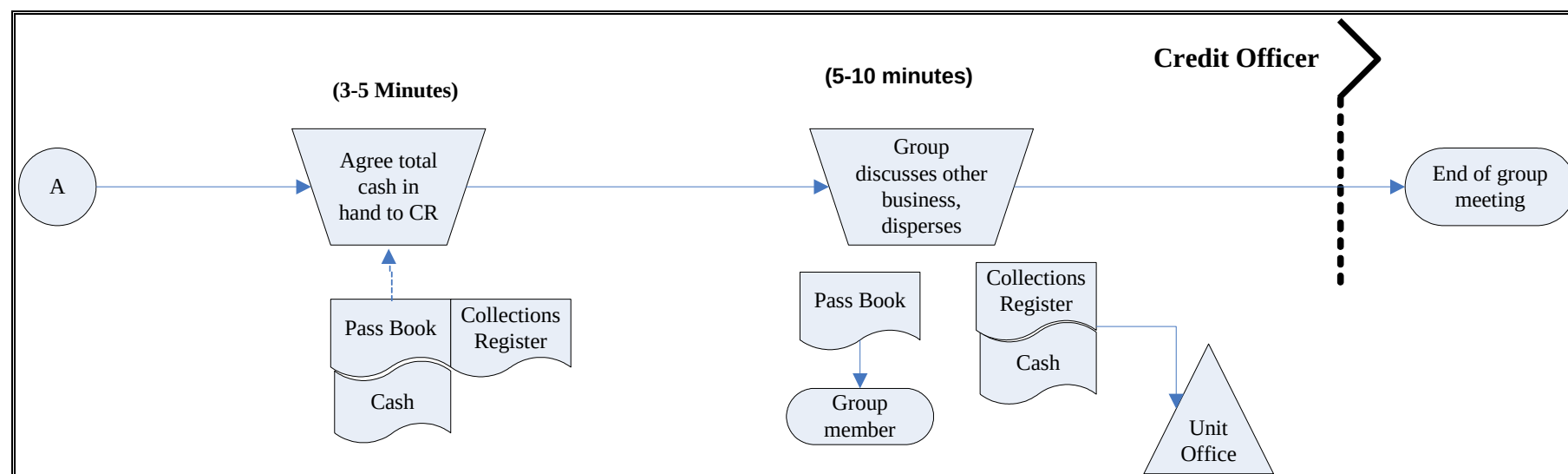
Figure No. 20

Integrating Process Mapping And Risk Management

The Product Risk Assessment and Product Risk Summary tools are used for the above Steps 3 through 6. The Product Risk Assessment tool (see Attachment 3), provides a methodology for capturing the risks that are identified, then asks for the evaluation of the impact of that risk on the MFI, what events could cause the risk to occur, then what action steps might be taken in response to that risk event.

After risks have been identified in Product Risk Assessment Tool, you need to sit back and assess priorities. It is not always cost effective or desirable from many perspectives, not the least of which is customer service, to completely remove all risk possibilities from the processes.

However, by creating a profile of the impact and likely frequency of the various risk events, the MFI's attention and resources can be focused on those areas that are of greatest importance to the organisation. The Product Risk Summary Tool (see Attachment 4), is designed to profile all the risks identified in the Product Risk Assessment Tool on a scale of high, medium, or low impact and frequency. Those risk events appearing in the high frequency, high impact box would be the priority activities the MFI intends to control.



Process Description	On completion of all transactions, Credit Officer sums the total cash deposited (net of withdrawals) as recorded in the Collection Register and agrees this to the total cash in-hand.	When deposits and withdrawals net total agrees to the total cash, the Credit Officer returns the Passbook for safekeeping and takes Collection Register and cash to next meeting/Unit Office.
Risks	- Transaction Risk that there will be a computational error in Collection Register or cash counting error. - Fraud Risk that all or some of the cash will be pocketed by Credit Officer.	- Transaction Risk of math error that cannot be verified/traced at a later date. - Fraud Risk of alterations to Member records and Collection Register to cover cash shortfall pocketed by Credit Officer
Risk Mitigation Strategy	Cash is balanced to Collection Register at time of payment processing and signed off by both Cashier and Credit Officer in Collection Register.	- Cash must tally with accounting record (Collection Register) prior to dispersal of cash to next meeting/Unit Office. - Member retains control over Pass Book as receipt and accounting record of all transactions - Central Accounting at MFI confirms total onward deposit to banking institution to total in Collection Register.

Part III: Institutional Risk Tools

Getting Started

Implementing risk management begins with the Institutional Risk Assessment and Mitigation Tools. It is the responsibility of the risk management team to complete the tools. Tools are aids; they will need to be modified and updated to be effective over time. Product Risk Assessment begins in the same manner, identifying all risks. This begins with two tools: The Cross Product Risk Overview and Product Risk Assessment Tools. The table below summarises the integration of the tools by institutional and product risk analysis with the 5-Step Risk Management Feedback Loop. Refer to each of the in-depth descriptions for each of the five steps presented at the beginning of Part I, Using the 5-Step Risk Management Feedback Loop.

Figure No. 22

Risk Management Feedback Loop Step	Institutional Tool	New Product Tool
1. Identify, assess, and prioritise all risks	Institutional Risk Assessment Cross Product Risk Assessment	Product Risk Summary
2. Develop strategies to measure risks	Institutional Risk Mitigation	Product Risk Assessment
3. Design policies and procedures to mitigate risks	Institutional Risk Mitigation	Product Risk Assessment
4. Implement & assign responsibilities	Institutional Risk Mitigation	Product Risk Assessment & Post Pilot Risk Assessment
5. Test effectiveness and evaluate results	Institutional Risk Mitigation	Post Pilot Risk Assessment

Identify all risks

The first step of the Risk Management Feedback Loop is to identify all your risks. The Institutional Risk Assessment Tool is a method and means of cataloguing all the risks within your organisation by area of risk. Because risks cross-departmental boundaries within an organisation, the Institutional Risk Assessment Tool suggests you identify risks by areas of risk, rather than by departments. While our research¹⁷ concluded that risk owners know their risks and what they manage, a change in thinking must take place so that department heads and managers first see themselves as risk owners, then rethink their strategies in terms of the effect of their activities from a risk perspective.

¹⁷ Pamela Champagne and Lynn Pikholz, *MicroSave's Briefing Note No. 32, Implementing Risk Management at MicroSave's Partner Microfinance Institutions*, September 2004. Available on MicroSave's website www.MicroSave.org in the Briefing Notes section.

A good starting point for identifying all risks is the risk owners themselves, whether they see themselves as such or not. Initially, risk owners will present their current problems as risks. The Institutional Risk Assessment Tool must go beyond just current problems to identify risks that the organisation faces that are not visible, perhaps because they are well-managed, or they are currently of a lesser concern than the existing problems. Other sources for identifying risks include the MFI's strategic plan, Planning and Research Department, ALCO, past external as well as internal audit reports, reports to the Audit Committee of the Board of Directors, consultant reports, donor project evaluation reports, as well as this Toolkit (See Step 1: Identify the Risks, under "Using the Five-Step Risk Management Feedback Loop"), references cited in "Suggested Resources" at the conclusion of this Toolkit, and Attachment 7, Internal Control Questionnaires, and Attachment 9, Sample Risk Events by Risk Area.

Another source, as you refine your catalogue of risks in the Institutional Risk Assessment Tool and Product Operational Risk Events in the product Risk Assessment Tool, are risk events noted during various process mapping exercises. These will provide additional insights into risks and assist the risk identification process (See Part II). While process mapping often relates to specific products, it can also be used for higher-level reviews, from which the higher-level risks can be derived.

Special projects/events (Figures 11 and 12) affect your risk profile and should be examined for new risks that exist during the course of the project, inherent in the project, or influence existing risks in some way. These are usually derived from the Strategic plan or interviews with the CEO.

Assess The Impact & Frequency Of Each Risk

A risk event can impact an organisation in one of two ways: impact and frequency. Together these form the risk level for that risk.

When using the Institutional Risk Assessment Tool, you are assessing the impact and frequency based on the merits of the risk to the MFI, in other words, what is the inherent level of impact and frequency in that risk. This is quite different from assessing the impact and frequency after you have applied mitigating tactics. For example, placing fire insurance coverage, having fire drills, installing fire extinguishers and periodically testing these extinguishers may mitigate the risk of fire, but the impact remains high and the frequency remains low. Assigning the High, Medium and Low ratings to frequency and impact is a judgmental exercise. A High rating is not assigned because it is currently a problem – the problem aspect comes to light in assigning the timing (immediate or ongoing) and in the current indicator measurement, whether it is above the threshold. The High, Medium and Low ratings are relative to the other risks across the entire organisation. This assessment comes with experience and time. Remember that these tools are dynamic, and results are subject to change with each review.

Using the Risk Dimension table shown below as a guide, decide which of the four primary risk strategies you plan to apply to each risk event on the Institutional Risk Assessment Tool.

Risk Dimensions

Figure No. 23

Frequency (Probability)	Severity (Impact)	Guideline For Mitigation Strategy
High	High	Avoid
High	Low	Control
Low	High	Transfer
Low	Low	Retain/Accept

Transfer the priority risks you plan to mitigate to the Institutional Risk Mitigation Tool. As a guide, transfer all risks to Institutional Risk Mitigation Tool if the answer to the question, “Are these risks managed now?” is “No”.

Risk Symptoms

Understanding the nature of a risk event, risk driver, and symptom is critical to the process of managing risk. “Problems” may be any of the three, but are more often than not symptoms or conditions that are visible. The risk event is the condition that leads to the actual risk of an adverse impact or failure to achieve a desired outcome. It answers the question: “What puts you at risk?” There is a tendency for events to be too broadly stated, thus encompassing more than one risk event and showing it as one risk. Different components may have different drivers, or the Impact/Frequency assessment may be different for each component. If you find you are making distinctions when assessing the risk and/or identifying the risk drivers, the chances are good that you have, in fact, more than one risk event. For example, one ARP stated a credit risk as: “Clients pay late or default”. When examining the issue of late payers, the ARP noted that clients who habitually pay late, but do eventually pay, increase revenues through increased interest charges and/or late fees. These increased revenues may or may not be offset to some extent by increased recovery costs and opportunity cost, which may or may not, upon analysis, be a high level risk. The more serious, high-level risk is the risk of clients who do not pay at all.

Risk drivers are the factors that allow this risk event to exist. For example, losing market share will put your MFI at risk – of not only not achieving a desired income in the form of growth, but a loss of customers represents a loss of revenues. What has happened at your MFI to allow this loss of market share? Perhaps you have not introduced new products that meet clients’ needs, perhaps your marketing strategies have not been appropriate, poor customer service, or maybe a competitor has undercut your pricing. These are the risk drivers. You need to know what it is that triggers a risk event, because those are the conditions that you must address in order to manage the risk.

If you do not correctly identify the drivers, your attempts to manage the risk will be unsuccessful or even harmful, and may lead to other risks. In our example above, if you identify a driver for the loss of market share as the competition’s undercutting of your prices, and you respond by reducing your prices, you will reduce your profitability, or perhaps even be running the product at a loss. When you notice that the market share is not increasing, and in fact is still decreasing, you will need to re-evaluate your driver. This time, you conduct market research and discover that poor customer service is the reason. You develop tactics to improve customer service, but now you are still left with the problem of running the product at reduced prices. It is much more difficult to raise fees than to reduce fees. Because you did not correctly address the driver initially, you are now left in a potentially worse position than when you started. This tells us to do two things:

1. Brainstorm all possible risk drivers
2. Conduct appropriate research and tests to be sure you have identified the correct drivers for the risk event.

The table below illustrates that there can be more than one driver per risk event. Conversely, one driver may be a factor or cause of more than one risk event. In other words, there is not a one-to-one correlation between risk events and risk drivers. In this table, there is one indicator for the risk event; however it is possible to have more than one indicator for risk event (See “When is Risk Sufficiently Managed?”).

Figure No. 24

Risk Event	Possible Risk Drivers	Possible Tactics	Indicator/Threshold
Client does not pay	Poor monitoring process	Credit Officers prepare a site visit report once during loan cycle	PAR 30 less than 4%
	Poor recovery methods	Daily reporting of arrears by credit officer	
	Failure to collect from guarantors	Offset delinquent payments to guarantors after one week	
	Client dies/health problems	Introduce life/health insurance on loan	
	Poor appraisal process	Introduce cash flow analysis into appraisal process	

When To Use The Tools

Figure No. 25

The Institutional Risk Assessment, Institutional Risk Mitigation and Cross Product Risk Overview tools provide an easy framework for managers to work with their staff at the various levels to identify, assess, control and monitor risks. It is important for managers to ensure that the risks that their subordinates are asked to manage are within their control. For example, setting higher-level controls (like credit policies and procedures) are appropriate for the credit manager, but not for the loan officer. The tools, as defined below are designed more for the senior management level. Senior managers, however, might want to flesh out particular aspects with their staff at a more detailed level.

Institutional Risk Assessment Tool

The Institutional Risk Assessment tool is a dynamic tool, and is the first tool used to implement your MFIs risk management programme. This tool represents the catalogue of all the risks that your organisation could face. Having identified risks initially does not mean you can now put this aside. The tool should be updated periodically as conditions change within your MFI (see: When to Conduct Risk Analysis), and certainly be subjected to an annual review. The annual review of risks should comprise similar steps to those undertaken

to identify the risks in the first place. However, once you have identified your risks, or updated your list of risks, you must assess each risk for its impact and frequency (likelihood) of occurrence.

The Institutional Risk Mitigation Tool

There are two scenarios for using this tool.

1. *Institutional Level* the Institutional Risk Mitigation Tool is completed for the priority risks identified in the Institutional Risk Assessment Tool. This means all risks that you want to actively manage, not just those risks assigned HH (High Frequency and High Impact). As such, this tool forms the working document that implements actual risk management by assigning responsibility for risk ownership, high level monitoring, specifying the frequency of monitoring, identifying what is to be monitored, and most importantly, assessing whether the risk is being managed to the MFI's satisfaction. This tool allows risk managers to focus on priority risks based not only on risk assessment (level of frequency and impact), but also on the variance between the Indicator Threshold and the Current Measure, whether the risk trend is deteriorating, and whether the risk timing is immediate or ongoing. If a risk exposure is outside of the MFI's tolerance level, and the trend is upward, then the timing to address the risk is immediate. When the risk falls within tolerance levels, the timing may be changed to ongoing.
2. *Product Level* In Cross Product Risk Tool, the presence of the major risk areas is assessed for each product. The product Risk Assessment Risks focuses primarily on the risks that may arise during the actual operation of the product. The product, however, may be susceptible to risks in the other major risk categories, as shown in the Cross Product Risk Overview Tool. High susceptibility to these risks should be examined more fully. To do this, use the Institutional Risk Mitigation Tool for the product in question, listing the high-level risk areas, identifying the risk events, and completing the analysis of these product-specific risk events by filling out the remainder of the columns on the tool.

Cross Product Risk Overview Tool

The Cross Product Risk Overview Tool is a powerful annex to the Institutional Risk Assessment and Mitigation Tools, as it drills down to the MFI's core business, its products, to identify what risks affect each product and to what degree. If an MFI is suffering from a liquidity shortage, quick reference to this tool will bring to light all products with this risk element, so that management, in the throes of dealing with the obvious aspect of the liquidity crunch, will not overlook product-specific elements. As mentioned above, this tool also serves as a platform for drilling down, through the Institutional Risk Mitigation Tool, to the nature, drivers, and risk management components for each priority risk area present in a product.

This tool is used in three ways:

1. As a component in establishing the initial institutional risk framework, and is reviewed whenever the Institutional Risk Assessment and Mitigation Tools are reviewed.
2. When a new product is developed, its risk profile with respect to broad risks facing the organisation should be assessed using the Cross Product Risk Overview Tool. The higher risk levels are then evaluated by transferring them to the Institutional Risk Mitigation Tool.
3. Periodic product risk analysis reviews across all products, or specific product risk reviews in response to Special Event Drivers or Signs of Institutional Stress (Figures 11 and 12).

The Product Risk Assessment Tool and the Product Risk Summary Tool

The Product Risk Assessment Tool is product specific. During new product development, the Product Risk Assessment Tool is developed at the very beginning of the pilot phase of the new product development cycle.

The Product Risk Summary Tool is then used to profile the risk events, so that the focus, and consequently the resource allocation, is on the higher risk events first.

Post Pilot Risk Assessment Tool

This tool is initially a restatement of the Product Risk Assessment Tool, where all risk events listed in the Product Risk Assessment Tool are carried forward to the Post Pilot Risk Assessment Tool. The tool is used at the end of the pilot test step in the new product development cycle, for the purpose of documenting whether the risks initially identified in the Product Risk Assessment Tool have been managed satisfactorily, or if not, what else needs to be done to manage these risks. It is also possible that new risks have emerged as a consequence of the pilot test; these must now be catalogued and analysed. Product procedures must then be modified based on the new control tactics to manage risks not satisfactorily controlled and the newly identified risks.

This tool can be completed more than once during the pilot period, not just at the end of the pilot, especially if it is a long pilot period and changes have been made. Subsequent reviews prior to the end of the pilot allow the revised tactics to be tested before rollout, and to ensure that these tactics have not introduced new risks.

Pre-Rollout Risk Assessment Tool

Immediately upon completion of the pilot test step and the Post Pilot Risk Assessment Tool, the Pre Rollout Risk Assessment Tool is completed in advance of moving to the final stage of the new product development cycle, product launch and rollout.

As with the other tools, the Pre Rollout Risk Assessment Tool can and should be used for other periods of review, as changes occur in the environment, or as part of a periodic product review (Figures 11 and 12), or part of the annual risk programme review.

INSTITUTIONAL RISK ASSESSMENT Tool (Step 1)

Objective: To identify, assess and prioritise risks across the organisation.

Use: Use tool to identify *all* risks in *all* categories. Then use tool to *choose* the priority risks with your organisation. Use H(igh), M(edium), L(ow) to indicate priority. Only the risks that MFI or bank wants to take an action on or actively manage should be transferred to the Institutional Risk Mitigation Tool. The Institutional Risk Assessment Tool should be updated once a year.

Note: This tool is not specific to new products. It outlines the risks across the organisation as a whole. The examples given below are illustrative.

AREA OF RISK	RISK EVENT (<i>Examples for illustrative purposes</i>) (For effective use of tool, list all risk events in each category.)	FREQUENCY (H, M ,L)	IMPACT (H,M,L)	RISK LEVEL	RISK MITIGATION STRATEGY	RISK MANAGED? Y(ES)/ N(O)
Credit	Concentration in Loans to Tea Farmers	H	H	HH	Control	
Interest Rate	Mismatch between asset and liability pricing structure of bank's balance sheet	M	M	MM	Control	
Liquidity	Bank is unable to meet financial commitments: run on savings deposits; as and when obligations they fall due; at an acceptable price ; required for new business and growth; reliance on deposits which are short term in nature	L	H	LH	Control	
Finance	Assets moved around without tracking	M	M	MM	Control	
Operations	Policies and Procedures around Cash Handling flouted	H	H	HH	Control	
-- Transactions Errors -- ATM Systems, POS -- Information Technology -- Human Resources -- Management -- Governance -- Fraud	Fill in examples here for your organisation					
Compliance Risk	Loan to directors' companies default	L	H	LH	Avoid	
Strategic Risk	Loss of major funding source	L	H	LH	Control	
Reputation Risk	Bad publicity due to seizure of assets Brokers take pin and card on behalf of customer	M H	L M	ML HM	Accept Control	
Foreign Exchange Risk	Foreign Exchange Exposure on Loans	H	H	HH	Avoid	
Exogenous Risk	Political Riots	L	H	LH	Transfer	

Definitions for The Institutional Risk Assessment and Mitigation Tools

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Risk Event:	Describe precisely the risk that will occur.
Risk Driver:	Describe precisely what the cause of the risk is and this will assist you in developing a mitigation strategy.
Time Component:	Decide whether the risk is time sensitive or whether it is ongoing. I = Immediate Risk; O = Ongoing Risk.
Frequency:	Decide the probability of the risk occurring, where H=High, M=Medium, and L=Low.
Impact:	Decide the severity of the loss, where H=High, M=Medium, and L=Low.
Impact Description:	Describe the severity of the loss (dollars or work days, for example)
Risk Level:	Is the Combination of the Frequency Multiplied by the Impact (HH risks are the most serious).
Risk Trend:	Is the Risk Level getting worse U(p), getting better D(own), or remaining S(table).
Risk Owner:	Should be the person who is Operationally Responsible.
Mitigation Strategies:	Accept; Transfer; Control; Avoid.
Mitigation Tactics:	Operational actions to mitigate risk.
High Level Monitor:	Usually the CEO, COO, Board or Executive Committee.
Method of Monitoring:	Usually written reports. The reports should be done by the Risk Owner or the manager in charge and should be monitored by a higher level person or committee (e.g. EXCO, CEO or Board).
Indicator:	The relevant measure that, when measured, will inform Risk Owners and High Level Monitors the risk trend.
Threshold:	Tied to the Indicator, this is the target measurement set by policy. A condition worse than this target requires corrective action.
Current Measurement:	The actual level of risk as measured for the given indicator as of the most recent reporting date.
Completion Date:	Date Proposed Mitigating Tactics have been put in place.

INSTITUTIONAL RISK MITIGATION TOOL (Steps 2-5)

Objective: To analyse and mitigate the priority risks for your organisation.

Use: 1) Use tool to *choose* how to deal with the priority risks from the Institutional Risk Assessment Tool. Use this tool to identify who is responsible for managing and monitoring the risk. This tool should be updated on a weekly basis for some risks (e.g. ALCO related) and on monthly or quarterly basis for others. 2) Use tool to choose how to deal with the priority risks from the Cross Product Risk Overview Tool for each product.

Area Of Risk: Treasury And Finance (This exercise should be completed for each major risk category)

Risk Event (Examples for illustrative purposes)	Risk Driver	Time (I, O)	Risk Level	Risk Trend U, D, S	Impact Description	Risk Owner	Risk Strategy	Risk Mitigation Tactics / Corrective Action	High Level Monitor and Frequency	Indicators / Threshold as per policy **	Current Measure	Date Completed
Liquidity: Bank unable to meet obligations	Crises in Banking Confidence	I	LH	U	Central Bank Intervention Curatorship; Profit down	ALCO Mgr	Control	Lines of Credit; Excess Reserve; Long Term; Short Term Investments	Board Weekly			
Funding: Unable to fund growth	Reliance on Short Term Corporate Deposits	O	HH	S	Loss of Corporate Depositors when run on bank	ALCO Mgr	Control	Marketing strategy to mobilise long term deposits; Nurture depository relationships	EXCO Monthly			
Interest Rate: Mismatch of Asset and Liability Pricing of Balance Sheet	Unexpected Interest Rate Change	I	MM	S	Profitability Suffers Cash Flow Crunch	ALCO Mgr	Control	Weekly Gap Analysis Develop Dynamic Liquidity Model	EXCO Weekly			
Capital Adequacy below requirement	Unexpected Credit Losses	O	LM	S	Central Bank Intervention; No access to debt	Finance Mgr	Control	Set Minimum Limits above requirement	Board Monthly			
Assets move around without tracking; Unauthorised old assets swapped.	Absence of asset verification system	O	MM	S	Loss of Assets; Obsolete Assets on books	Internal Audit	Control	Set up asset verification system; Monitor during internal audit	EXCO Quarterly			

** The higher level monitor of the risk (i.e. the Board or Executive Committee) might want to specify minimum or maximum goals or thresholds relevant for particular risks. We have included an indicator column for this purpose.

CROSS PRODUCT RISK OVERVIEW Tool

Objective: To analyse how particular risks have potential to affect different products simultaneously should a particular risk event occur.

Use: Use tool to 1) develop an understanding of how risks across different product lines can interact with one another, greatly increasing the impact on the organisation. This tool is deliberately simple and is meant only to highlight the sensitivity of a particular product to particular risks. 2) to analyse high level risks, transfer risks to Institutional Risk Mitigation Tool.

Example: If there was a run on deposits followed by an interest rate hike, and the bank was concerned that it would not be able to meet its obligations, we might expect a bank to analyse its risk levels across products something like the following, depending, of course, on its controls:

Example Of Risk Level Across Products

Risk Area	Short Term Individual Credit	Long Term Individual Credit (Larger Loans)	Group Credit	Ordinary Savings	Long Term Contractual Savings	Funeral Insurance (Handled By Third Party)
Credit Risk	Medium	High	Medium	-	-	-
Liquidity Risk	Medium	Low	Low	High	Medium	-
Interest Rate Risk	Low	High	Low		High	-
Reputation Risk	High	High	High	High	High	Low
Transaction Risk	Low	Low	High	High	Low	-
Fraud Risk	Low	Low	Medium	High	Low	-
Strategic Risk	High	High	High	High	High	Low
Compliance Risk	Medium	Medium	Medium	High	Medium	-
Counterparty Risk	Medium	Medium	-	-	-	Medium

Part IV: Risk Management Tools For New Product Development

Overview

Having addressed risk management in Parts I and II in concept and at the institutional level, we are now ready to move to the specifics of risk management as it pertains to the development and rollout of new products. We begin by identifying problems encountered with the new product development process to serve as a reference for what can go wrong if not managed. We then present two significant tools to assist MFIs in managing new product development to minimise risk: 1) Project Management, a powerful risk management tool to apply to the new product development process. 2) *MicroSave's* Five-Step New Product Development Process. In this section, we introduce several product-specific risk management tools and integrate these tools into the process.

Each of the five steps of the product development process is dealt with in terms of the project management concept, with risk management tactics identified in “Risk Check Lists” at the end of each step. The Product Team, including all the cross-functional risk owners (e.g. the Credit Manager and the Treasurer etc.) formally decide that the pre-defined criteria of ‘success’ for the current step of the product development process have been met before they proceed with the next step. These important decision points at the end of each step are a risk management strategy in and of themselves.

Please note that in designing these tools we have been conservative in listing the different processes and decisions that senior managers need to make when choosing to actively manage risks related to new product roll-outs. We recognise, though, that to be efficient and competitive, managers may need to take some short cuts. We provide these tools as a package for you, as senior managers of MFIs and banks, to use and adapt to your specific organisations and new product development challenges.

Below is a matrix to help you understand the way the balance of this tool-kit is structured, and the tools available to assist managers in the various stages of analysing risk during new product development and roll-out.

Figure No. 26

Tools Available To Assist With Risk Analysis Within Context Of New Product Development Process		
New Product Process	Tools	Objective
1. Evaluation and Preparation	Institutional Risk Assessment Tool Institutional Risk Mitigation Tool Cross Product Risk Overview Tool	To identify, assess and prioritise risks across the organisation. To analyse and mitigate the priority risks for your organisation. To analyse how particular risks have the potential to affect different products simultaneously should a particular risk event occur.
2. Market Research	Market Research for MicroFinance Toolkit	<i>MicroSave</i> : To assist MFIs in improving their product development skills by developing MFIs' capacity in market research, and by providing the qualitative skills and tools that are critical for a successful MFI in: ■ Developing new products and modifying old ones, ■ Understanding clients and their perceptions of the MFI and its services/products, ■ Developing/refining marketing programmes, ■ Analysing clients' risks/vulnerability opportunities and how people use (formal and informal sector) financial services, ■ Understanding the "financial landscape" or environment within which the MFI is operating, ■ Analysing problems such as drop-outs and growing trends loan default, ■ Impact assessment and evaluation, and ■ Analysis of relative depth of outreach.
3. Concept/ Prototype Design	Costing and Pricing of Financial Services Toolkit	<i>MicroSave</i> : The costing of products is essentially a management tool for product pricing, cost control, and product appraisal.
4. Pilot Testing	Product Risk Assessment Tool Product Risk Assessment Product Risk Summary Tool Pilot Testing Toolkit Process Mapping Toolkit Post Pilot Risk	To provide a framework for MFIs to identify specific operational risks for the product under development, assess the consequences of each identified risk, assign a mitigation strategy, and then prescribe appropriate controls to achieve the strategy. These controls are then incorporated in the refinements of product design, policies, procedures, product costing, and training. Summarises and profiles the risks identified to focus attention on the riskiest areas to insure sufficient mitigation tactics have been identified. <i>MicroSave</i> : To measure the worth of a new product on a limited scale and scope so that the results of the test guide management decision-making about a broader rollout of the product. By pilot testing a new product before rollout, the MFI avoids errors on a large scale that could be corrected based on the lessons from the small-scale test. Graphic illustration of procedures as a tool to assess whether required control activities have been identified. To insure that pilot test experiences and results are captured as they relate to risk management, and that modifications to risk assessments or

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Tools Available To Assist With Risk Analysis Within Context Of New Product Development Process		
New Product Process	Tools	Objective
	Assessment Tool	newly identified risks are formally addressed with individual responsibility assigned for incorporating as required in the appropriate product segment/process prior to rollout.
5. Rollout	Pre Rollout Risk Assessment Tool	To ensure that limitations necessarily imposed during the pilot phase and additional stress indicators predictably present during a rollout are identified and the impact of removing these limitations is assessed prior to actual product rollout.
	Product Rollout Toolkit	<i>MicroSave</i> : the whole process of moving a product (new or restructured) from the successful conclusion of the pilot test, to the point where it is fully operational in all desired locations, and has an established continuous feedback loop providing data for management decision making. Rollout includes the preparation leading to the launch, the launch itself, and product management after the launch.

Why Focus on New Product Development Risks?

Failure to identify and manage risks proactively during the process of developing and rolling out new products can yield disastrous results. In hindsight, outcomes were predictable, with management asking, “How could we have failed to see this outcome?” Many of the most common and serious risks are related not to products – as is often assumed by about-to-be-regulated microcredit institutions – but rather to ownership, management, and institutional capacity to deliver products.¹⁸ To promote foresight and to take advantage of hindsight, the “top 10” below recaps some of the more critical lessons learned from other new product rollouts.¹⁹ You will see how these lessons are incorporated in the New Product Development Process outlined below.

¹⁸ Introducing Voluntary Savings from the Public in Regulated Microcredit Institutions: What are the Risks? by Marguerite S. Robinson, November 2002

¹⁹ New Product Development for Microfinance, Technical Note No. 1 by Nhu-An Tran, Development Alternatives, Inc., based on a seminar presentation by Monica Brand, ACCION International, at the February 2000 conference on “Advancing Microfinance in Rural West Africa” in Mali. This publication is a joint product of Development Alternatives, Inc. and Weidemann Associates, Inc., through the USAID-funded Microenterprise Best Practices Project and MicroServe Indefinite Quantity Contract, October 2000.

Matrix Of Risks By Product Development Cycle Stage

This table illustrates how components of risks cannot be disregarded once addressed initially. Some aspect of each risk may be present or need to be evaluated for impact at more than one step.

Figure No. 27

New Product Development Step	New Product Development Risks	Institutional Areas of Risk
1. Evaluation and Preparation	Motivation Risk Management/Board Commitment Risk Staff Availability Risk IT Systems Risk Delivery Systems Risk Orphan Product Risk	All major risk areas must be considered
2. Market Research	Demand Risk Positioning Risk Product Mix Risk Competition Risk Delivery Systems Risk	Reputation Risk Strategic Risk
3. Concept/Prototype Design	IT Systems Risk Delivery Systems Risk Staff Availability Risk	Operation Risk Credit Risk Liquidity Risk Compliance Risk Interest Rate Risk
4. Pilot Testing	Orphan Product Risk Fraud Risk Communication Risk Staff Incentive Systems Risk IT systems Risk Delivery Systems Risk Staff Availability Risk	Operational Risk (especially transaction & fraud risks) Credit Risk Liquidity Risk Reputation Risk
5. Product Launch and Rollout	Competition Risk Orphan Product Risk Positioning Risk Product Mix Risk	All major risk areas must be considered for any changes since Step 1, prior to Launch & Rollout

Why Organisations Fail in Managing Risk in New Product Development

Although there are many fundamentals to managing risk well, we draw attention to two that are particularly important with respect to new product development: *Proactive Management* and *Cross-functionality*.

Proactive Management

Proactive risk management means:

- Clarifying what the risk event is.
- Clarifying the probability of the occurrence of the risk.
- Understanding the consequences or impact if the risk event happens.
- Determining what drives the risk. The **risk driver** is the set of factors that influence its magnitude or likelihood of occurrence.

Typically development teams make two timing mistakes regarding risk management.

- 1) One is to wait until late in the project when many of the risks start occurring. This creates three problems:
 - i) Because the cost of making changes rises greatly during a project, late attention to risks often leads to expensive re-works.
 - ii) Late discovery of potential problems precludes solutions that would have been available earlier.
 - iii) Late surprises are more disruptive to the schedule, due to the more limited timeframe to develop adequate means of resolution.
- 2) The other timing mistake is to let risk management lapse. People are often very diligent at identifying and listing all the risks and building in some risk management deliverables into the early stage of the project. They are then very quick to go on with their ‘real work’ of developing the product. When risks occur, they are caught in the same position as those who never identified risks. Using the tools in this manual to monitor risks on a regular basis, and/or the Stress Checklist and Special Event Drivers when a trigger event or new event demands that an ad hoc risk evaluation should be done, are both powerful tools to help management proactively manage risk.

Cross-Functionality

Because a lot of the effort that goes into a product is technical and systems driven there is a tendency to ignore non-technical risks. Products are often ‘developed’ in the narrow confines of a particular department like Research and Development. However, the factors that drive new product success depend on having unique, superior and differentiated products with a strong market orientation and product definition. Truly cross-functional teams are necessary to achieve this as opposed to ‘artificial’ *cross-functional* teams who meet but with no department taking responsibility for their functional contribution.

Both of these issues are addressed by using the tools provided at the phases prescribed within the new product development process.

Integrating Risk Analysis into *MICROSAVE*’S New Product Development Cycle

By applying a risk management approach and project management techniques, MFIs can mitigate new product risks on many fronts. The *MicroSave* New Product Development Process is in itself a risk mitigation tactic, implicitly addressing risks and pitfalls that MFIs may encounter in rolling out a new product. This toolkit now refocuses that process by applying proactive risk management techniques to the various phases. The risk management process and tools introduced in this toolkit are integrated with the new product development process.

By breaking out the new product development process into discrete steps, there is a decision point, Go/No Go, before proceeding to the next step. Each step costs more than the preceding one. As the amount of money at stake increases, risk is managed by ensuring that the uncertainties of the project decrease: Do we have the capacity for this product? Do our clients want this product? Will our systems, pricing, and procedures work? The process is deliberately designed to drive uncertainties down at each successive step, so that by the time you have completed Step 2 you are much wiser than you were at the completion of Step 1.

Risk Management for specific new products is not effective if the MFI does not already have a risk management perspective. MFI Management should have completed the Comprehensive Framework Tools

prior to proceeding with new product development. The MFI should have a clear understanding of its motivation and capacity for introducing new products, as described in *MicroSave's* Briefing Note #9, Key Questions that Should Precede New Product Development²⁰, shown below.

Figure No. 28

1. Motivation	Are we starting product development to make our MFI more market-driven?
2. Commitment	Are we setting about product development as a process?
3. Capacity	Can our MFI handle the strains and stresses of introducing a new product?
4. Cost Effectiveness and Profitability	Do we fully understand the cost structure of our products?
5. Simplicity	Can we refine, repackage and re-launch existing product(s) before we develop a new one?
6. Complexity and Cannibalisation	Are we falling into the product proliferation trap?

Five Phase Product Development Cycle²¹

I. Evaluation and Preparation

- 1.1 Analyse the institutional capacity and “readiness” to undertake product development
- 1.2 Assemble the multi-disciplinary product development team, including a “product champion”

II. Market Research

- 2.1 Define the research objective or issue
- 2.2 Extract and analyse secondary market data
- 2.3 Analyse institution-based information, financial information/client results from consultative groups, feed back from frontline staff, competition analysis etc.
- 2.4 Plan and undertake primary market research

III. Concept/Prototype Design

- 3.1 Define initial product concept
- 3.2 Map out operational logistics and processes (including MIS and personnel functions)
- 3.3 Undertake cost analysis and revenue projections to complete initial financial analysis of product
- 3.4 Verify legal and regulatory compliance

²⁰ Briefing Note is reproduced in its entirety as Attachment 1. It is well worth the read, or re-reading it.

²¹ *MicroSave*, Briefing Note #14, The Systematic Product Development Process, Graham A.N. Wright

- 3.5 On the basis of the above plus client feedback sessions, refine the product concept into a product prototype in clear, concise, client language.
- 3.6 Finalise prototype for final quantitative prototype testing or pilot testing, according to the risk/cost nature of the product

IV. Pilot Testing²²

- 4.1 Define objectives to be measured and monitored during pilot test, primarily based on financial projections
- 4.2 Establish parameters of pilot test through the pilot test protocol, including sample size, location, duration, periodic evaluation dates etc.
- 4.3 Prepare for pilot test, install and test systems, draft procedures manuals, develop marketing materials, train staff etc.
- 4.4 Monitor and evaluate pilot test results
- 4.5 Complete recommendation letter documenting the results of the pilot test, comparison with projections, lessons learned, finalised systems/procedures manuals etc. and the initial plans for the roll out

VI. Product Launch and Rollout

- 5.1 Manage transfer of product prototype into mainstream operations
- 5.2 Define objectives to be measured and monitored during roll out based on financial projections
- 5.3 Establish parameters of pilot test through the pilot test protocol, including sample of product prototype into mainstream operations
- 5.4 Define objectives to be measured and monitored during roll out based on financial projections
- 5.5 Establish parameters of rollout through the rollout protocol including schedule, location, tracking, budget, process
- 5.6 Prepare for rollout, install and test systems, finalise procedures manuals, develop marketing materials, train staff etc.
- 5.7 Monitor and evaluate rollout process and results

²² These steps are refined and expanded in *MicroSave*'s Pilot Testing Toolkit to ten steps.

Step 1: Evaluation and Preparation

Two critical steps occur at this stage: Identifying institutional readiness and assembling the Product Team.

- **Institutional Readiness.** An institution should determine whether and how the new product idea helps promote its mission, its competitive strategy, its financial goals, and its social impact. Once the MFI decides that the product idea would not detract from these goals and objectives, it must then assess its capacity to handle an additional product. Major factors that should be considered in this evaluation include staff skill level, delivery channels, management information systems, and training procedures. In addition, the institution should assess how the introduction of a new product would affect its overall portfolio risk and liquidity level. Such risk management considerations should be viewed in relation to the added customer benefit and profit gain from portfolio diversification. A MFI should have an established core product and ensure that all the “fundamentals” are in place before moving on to offer additional products. These fundamentals include:

Governance structure and control. The MFI should have a board of directors that has a clear strategic vision for the institution, is committed to market-driven strategies, and is able to provide the level of oversight needed to hold management accountable for performance.

Organisational structure. The institution should have an open communications channel to allow ideas to flow vertically between management and the field, as well as horizontally across departments. The corporate culture should be an environment where innovation and experimentation are rewarded through properly designed incentives.²³

Systems and operational procedures. The MFI should have in place an appropriate management information system to handle its information and reporting requirements. The management information system should be able to record and track client data, portfolio performance, and cost structures. Policies and procedures for field and branch staff should be well defined, and appropriate internal controls should be in place to minimise the risk of fraud, waste, and abuse.

Evaluating an organisation’s level of institutional readiness for introducing new products is often underestimated. Many MFIs tend to focus on the technical and systems aspects of product design, and forget about the institutional culture, staffing and systems that are necessary to support the new product. Substantially different products or markets bring substantially different risks to the MFI. The following risks should all be assessed during the Evaluation and Preparation Phase (Step 1):

²³ New Product Development for Microfinance, Technical Note No. 1 by Nhu-An Tran, Development Alternatives, Inc., based on a seminar presentation by Monica Brand, ACCION International, at the February 2000 conference on “Advancing Microfinance in Rural West Africa” in Mali. This publication is a joint product of Development Alternatives, Inc. and Weidemann Associates, Inc., through the USAID-funded Microenterprise Best Practices Project and MicroServe Indefinite Quantity Contract, October 2000.

Figure No. 29

- **Product Risks:** When venturing into new areas, such as credit, savings, insurance, and/or product diversification, the major risks are that 1) you don't get the methodologies right and, 2) you don't get expert advice at the level or time you need it.
- **New client or target market related risks:** For example, newly-regulated microfinance institutions taking public savings will need to collect savings not only from the poor, but also from better-off individuals and businesses, as well as from associations and institutions that are based near their branches. Banks going down-market will have to learn the microfinance market. In both cases, the institution must learn to serve clients who are different from their traditional customers.²⁵
- **Growth Risk:** Does the MFI have a change management perspective and process?
- **Institutional buy-in risk** if high level commitment to the new product has not yet taken place.
- **Human resources risk (numbers)** that ongoing operations will be adversely impacted by pulling resources into new product work. Assembling a new product team early in the process is useful, both to identify the risks, and to identify the constraints to the development and roll-out of the new product.

EXAMPLES OF ISSUES FOR SERVING NEW KINDS OF CLIENTS²⁴

- Does the institution know how to design and deliver products for a wider variety of clients than they have previously served?
- In the case of institutions that have previously served only poor groups of women, can the staff explain the products and services clearly and effectively to potential clients who are men? To middle-income clients? To organisations and institutions operating in their service areas?
- Do their staff members know how to approach and talk with these clients?
- Larger savers tend to demand individual loans. Has the newly-regulated institution designed individual loan products, and does their staff know how to assess the creditworthiness of individual borrowers and their enterprises? Do they know how to collect individual loans?
- In the case of banks and other regulated institutions serving up-market clients, have they learned the microfinance market, products, pricing, etc. Are they willing to change their management and organisational structure to accommodate large numbers of microfinance clients?

²⁴ Introducing Voluntary Savings from the Public in Regulated Microcredit Institutions: What are the Risks? by Marguerite S. Robinson, November 2002

²⁵ Interview with Marguerite Robinson

Figure No. 30

Note On System Selection Risk

Having the proper computer systems to support your services is a confusing and expensive undertaking. Most MFIs will not have in-house expertise to tackle the complexities of this task. Generally speaking, expertise is required at time of acquisition and conversion. The same level of expertise will probably not be needed in-house full-time on an ongoing basis.

Expert advice should be sought to explore options as to required functionality and capacity as well as capabilities for configuring the system. Configuration components include hardware, telecommunications and software and it usually involves different outside vendors for the three, plus an outside expert to manage the process. When the MFI has a problem, the telecommunications vendor will say it is a software problem, and the software vendor will say it is a telecommunications problem, and the MFI is left with the potential risk of sitting in the middle without the expertise or know how to sort it out.

Telecommunications is a separate project from systems, but the two must be managed concurrently as they must merge at a given point in time, initially for the purposes of selection, then testing, piloting, and rollout.

Sample considerations for integrating the three configuration components are listed below to help you start thinking about each phase. Each issue in itself has a subset of issues depending on choices made that cannot possibly be listed here. The point is to recognise the complexity of risk and failure points.

MFIs need to establish early on in the process what will work and what will not to avoid costly mistakes. Remember, the further the processes advance, the more costly it will be to turn back and embark on a different direction. For example, if the software cannot be demonstrated to run satisfactorily on the proposed telecommunications system, does the MFI embark on another software selection exercise to meet compatibility requirements of available telecommunications technologies as well as to meet MFI system functionality requirements? Or does it explore other telecommunications options that will suit the software, if the software is the critical element and cannot be changed? Ideally, the MFI should keep its options open with regard to both systems and telecommunications until compatibility issues are resolved and the optimum configuration can be assessed.

Figure No. 31

Questions for the Information Systems and Telecommunications Selection Process
■ What is the capacity/suitability of existing hardware for new system? ■ What upgrades must be made to each location's electrical and cabling configurations? ■ What are the transaction bandwidth requirements for purposes of remote processing? ■ What is data accessibility by 3rd party software such as report generators? ■ Does the software run on the proposed telecommunications configuration elsewhere? The MFI should obtain and check references. ■ Can the telecommunications vendor demonstrate how your system will run on its configuration? ■ Has the MFI explored the different telecommunication options for LANs with end of day transmission to a central database, vs. a WAN with real time updating? ■ What are the hardware and software costs, upfront, and ongoing operating costs for the two scenarios? ■ How is data corruption detected and controlled? ■ In a WAN, what provisions are made in the software if a processing centre goes off-line? Can this be demonstrated to the MFI? ■ In a WAN, what level of support can the telecommunications vendor provide in the event a processing center goes off-line? ■ What is required of the MFI's IT staff to support the software system and telecommunications systems? Does the IT staff have this capability? ■ Have all the relay points in the telecommunications system been included in the test in order to evaluate actual processing? ■ Have both transaction processing and reporting been included in the simulation tests?

Role of the Product Team²⁶

The Product Team is a *cross-functional* team, headed by the Product Manager or Risk Owner.²⁷ The Product Team considers such resources as human resource skills needed versus what is on hand, systems support availability, and budgetary support, and performs various tasks associated with these resources as parallel activities during each step.²⁸ The team as a whole holds review meetings, which serve as Go/No Go and prioritisation decision points. All relevant decision makers attend the meetings, and they make the decision together. In this manner, the *process* drives alignment among the functional heads. The functional heads “own” the resources required for the project to move ahead. They have authority to approve spending decisions and resource allocations. Thus, the meetings are the quality control checkpoints in the process. Each meeting has specific outputs: a decision to continue or not (Go/No Go/Hold/Recycle), an approved

²⁶ Product Development for the Service Sector, Lessons from Market Leaders, Robert G. Cooper and Scott J. Edgett, Perseus Books, Cambridge, Mass. 1999.

²⁷ Earlier we referred to the Risk Owner in a functional sense, e.g. the risk owner of credit. Here, we refer to the risk owner as the person who is the Product sponsor or champion – the person who is ultimately taking responsibility for championing the new product through the various phases of the roll-out, and ensuring the necessary resources are brought in when needed.

²⁸ In organizations that are using a project management process with a project office, the project office would do the allocation of resources as per the directive of a senior management steering committee. A product team would still be created to do the technical work associated with the product preparation, design and roll-out.

action plan for the next step (complete with people required, estimated costs and person-days budget, and time schedule) and a list of deliverables prior to embarking on the next step. The Product Team meetings should be minuted.

At all decision points, the Product Team determines that certain criteria must be met in order to proceed:

- Strategic alignment: Does the project support the bank/MFI's missions and objectives?
- Technical feasibility: Is the project doable (with respect to both systems and operations)?
- Marketing feasibility: Does it satisfy a need? And are the selling/distribution resources available?
- Opportunity: Will it yield sales and margins that make it an attractive opportunity?

In addition to the must meet criteria, the Product Team prioritises the following “should-meet” requirements:

- Strategic fit
- Synergy (leverages core competencies)
- Competitive advantage
- Market attractiveness
- Customer reaction, and
- Payback period

Risk Check List for Step 1

Have you . . .

- Prepared your Risk Management Analysis (Institutional Risk Assessment, Institutional Risk Mitigation, Cross Product Risk Overview Tools) to assess institutional readiness?
- Answered the six key questions preceding product development?
- Has the MFI management committed to the new product, so that there is institutional buy-in to the process?
- Determined what your system requirements will be?
- Assembled your Product Team and given the requisite authorities to the Risk Owner?
- Has the Product Team specifically decided to proceed with the new product development, and is this decision formally documented?
- Has the Product Team set an action plan in terms of person-day budget, time schedule, people required, and budget for Step 2?

Step 2: Market Research

With any new product introduction, it is likely that the MFI will be faced with competition risks and risks associated with delivering products that meet market needs. The *MicroSave* Market Research for MicroFinance Toolkit provides guidance in conducting market research to address both of these risks. Risk mitigation tools include: Completing a Competition Matrix (Attachment 2); conducting various Participatory

Rapid Appraisal techniques to understand market needs; and using focus groups for more in-depth market feedback. All these strategies are relatively inexpensive ways of low level testing to help mitigate market risk. Data gathering activities during this step should include the following:²⁹

- **Selecting Your Target Market.** To address customer needs, an institution needs to get close to and understand its clients. Market segmentation is the process by which an institution can gather information about its clients and their needs. A market can be segmented by geography, demography (e.g., age, income, gender), business size, financing need (e.g., working capital versus fixed assets), and customer behaviour (e.g., clients who care about price versus those who care about the quality of the service). Segmenting the market can identify niches where product needs are not being met and where clusters of clients exist that could serve as the target market for the prototype.
- **Mining Your Institutional Knowledge.** The MFI itself, especially line staff such as loan officers and credit managers, represents an invaluable source of information about client needs. Studying current product offerings also can inform the MFI about customer preferences and behavior, such as which clients are price sensitive or which prefer certain loan features. In addition, company documents such as loan files, especially those who were declined, also can provide insight about potential market opportunities.
- **Knowing What the Competition Is Doing.** The new product development team should pay close attention to price, packaging, and placement of competitive products in designing a prototype. Knowing what the competitor is offering, how the product is delivered, and how it is perceived by customers can help the institution shape its product in a way that differentiates it from the rest of the market.
- **Receiving Client Input.** Soliciting direct client feedback on the prototype provides a reality check for the institution before it starts the next phase of the new product development process, the pilot test. A variety of methods exist to obtain input, including one-on-one interviews, focus group discussions, participatory rapid appraisals, sample surveys or questionnaires, and action research. Although these methods of primary data gathering provide valuable feedback, they also are labour- and cost-intensive. The MFI thus should ensure that adequate resources are allocated to this stage of the process.

Risk Check List for Step 2

Have you . . .

- Conducted appropriate secondary data analysis?
- Mined your own institutional knowledge (from management to front-line staff inclusive)?
- Completed the Competition Analysis Matrix?
- Conducted primary research including Focus Group Meetings/PRA sessions?
- Has the Product Team analysed market research results and specifically decided to proceed with the new product development, and is this decision formally documented?

²⁹New Product Development for Microfinance, Technical Note No. 1 by Nhu-An Tran, Development Alternatives, Inc., based on a seminar presentation by Monica Brand, ACCION International, at the February 2000 conference on “Advancing Microfinance in Rural West Africa” in Mali. This publication is a joint product of Development Alternatives, Inc. and Weidemann Associates, Inc., through the USAID-funded Microenterprise Best Practices Project and MicroServe Indefinite Quantity Contract, October 2000.

- Has the Product Team set an action plan in terms of person-day budget, time schedule, people required, and budget for Step 3?

Step 3: Concept/Prototype Design

Primary risks addressed at this stage include: Operational, Credit (if credit product), Liquidity, Compliance and Regulatory risks. The product prototype is designed, based on the decision that the product is compatible and complementary to MFI goals and objects as outlined in Step 1, and results of market research, as determined in Step 2.

During this step, the MFI adds another significant component, that is, the pricing and costing of the product. The MFI cannot properly allocate resources if it does not know how much it will cost, and the income streams that it will produce to offset those costs. The *MicroSave* Costing and Pricing of Financial Services Toolkit is a valuable tool to use to mitigate risks associated with not knowing how to cost and price a product. Not only are product costs and revenues analysed, but projections are made using a model that allows the MFI to place value amounts of these projections into liquidity/GAP spreadsheets. This allows the MFI to assimilate the financial impact of the new product in order to address the degree of risk for some areas that are not readily apparent, namely, profitability and liquidity.

Additional project components must be determined at this step. One component is the verification of product compliance with any regulatory requirements. The MFI must not only consider compliance within the narrow scope of the product, such as being able to accept savings deposits, but also the wider-reaching effects of the product. For example, based on liquidity projections calculated with the model, the MFI should be able to ascertain whether it will be in compliance with statutory liquidity reserve requirements, cash reserve requirements, and capital adequacy requirements. Another component is the systems and human resource logistics, as these will also bear on the costing and pricing of the product.

Finalising the prototype design will involve balancing cost and profitability considerations with customer service, competitive strategy, and risk. This can help the MFI determine the return goals and the type of information needed from the pilot test, the next phase of the product development process.

Risk Check List for Step 3

Have you ...

- Completed the product prototype design in accordance with institutional goals and market research results using Concept Design Matrix?
- Mapped out systems, MIS, and human resource logistics and processes?
- Identified the regulatory and compliance issues, and integrated compliance in the logistics, design, and costing (if applicable) of the product?
- Performed financial modelling in accordance with the Pilot Testing Toolkit
- Finalised prototype for pilot testing after testing the concept with clients.
- Has the Product Team analysed pricing and costs projections, liquidity projections, and other financial impacts, and specifically decided to proceed with the new product development, and is this decision formally documented?
- Has the Product Team set an action plan in terms of person-day budget, time schedule, people required, and budget for Step 4?

Step 4: Pilot Testing

During the pilot testing stage, the Risk Owner(s) focus on reputation, credit, operation/transaction, and liquidity risks. There is reputation risk if the product does not perform, if the pricing changes adversely, or if staff sell it in a way that is different than it actually works. Some risks are product specific. For example, credit risk exists whenever a credit product is introduced. However, given the interrelationships of risks, certain risks may be increased or reduced with the introduction of other products like savings. Operational risk, especially transaction risk and fraud risk are relatively high during the pilot period since procedures that have not yet been tested, are applied for the explicit purpose of working out the bugs and closing any loopholes. The effects of introducing the new product on the MFI's balance sheet will yield some liquidity risk. However, since the pilot project is of limited scope, the Risk Owner needs to be attuned to and sensitive to the slightest changes in liquidity to determine the relationship of any changes to the introduction of the new product.

The Pilot Test Stage is an umbrella for tests of many subsets: systems, policies and procedures, training, customer acceptance, product pricing, etc. Each of these sub-tests within this stage represents risk reduction tactics.

Guidelines and Tips for Risk Reduction Tactics for Tests

- Test at the lowest level possible (e.g., a pilot test as opposed to a full-scale rollout).
- Where possible, test components and subsystems before testing a complete product. For example, use a simulator to see if your software will run on a certain WAN telecommunications system before installing a complete system.
- To focus testing, design test to address one hypothesis. If you need to check two hypotheses, consider using two tests.
- There is less risk of financial loss if risks are reduced earlier on in the process rather than later.
- Failures provide valuable information, so failures are not always to be avoided.

The *MicroSave* Pilot Testing Toolkit outlines ten steps to the Pilot Test Stage of the New Product Development Process. While following these steps is in itself a risk mitigation tactic, there are additional proactive risk management tools to apply to the process. The box below shows how these tools are integrated in the ten pilot test steps, followed by a discussion of each of the steps involving a Risk Management Tool (i.e., Pre-Pilot, Steps 2, 4, 6, and 10).

Pre-Pilot

Before you begin any of the pilot test steps, the Risk Owner(s), along with relevant Product Team members (not the Pilot Test team) brainstorm the product risks, by asking:

- What risks are inherent in this particular procedure or process?
- What is the weakest link?
- What can go wrong?

The Risk Owner spearheads the collective effort to complete the **Product Risk Assessment**, followed immediately by the **Product Risk Summary**. The first page of both of these tools is illustrated below. The full sample listing possible risk events for a generic savings, credit and insurance product can be found as

Attachment 3. The Risk Owner may use the sample as a guideline for brainstorming risk events, however he/she is responsible for completing the template with risk events specific to the MFI and the product being developed. As discussed in Step 6 below, process mapping is also a significant risk assessment tool, and risks identified during this exercise can be carried forward into the Product Risk Assessment Tool.. Process maps can be derived either before or after the risk analysis. If there are existing maps, the results of the brainstorming session and risk analysis can be added to the process maps, thus illuminating opportunities to improve the process, either by fixing loopholes, or eliminating redundant or non-essential steps.

Note that tool the product Risk Assessment Tool, the Product Risk Mitigation Tool and the Post Pilot Risk Assessment tools are also appropriate to use as part of an institutional review of all products and the MFI's system of internal controls. *We recommend that MFIs perform this exercise for all existing products, as well as, for new products going forward.*

Figure No. 32

Pilot And Post Pilot Test Risk Management Tools	
Pre-Pilot	Product I Risk Assessment Tool Product Risk Summary Tool; Internal Control Questionnaires (Attachment 7)
1. Composing the Pilot Test Team	
2. Developing the Testing Protocol	Pilot Site Selection Risks
3. Defining the Objectives	
4. Preparing All Systems	System Parameterisation Risks (Figures No. 30 & 31)
5. Modelling Financial Projections	
6. Documenting the Product Definitions and Procedures	Process Mapping “Should Be” Attachment 7, Internal Control Questionnaire
7. Training the Relevant Staff	
8. Developing Marketing Plan	
9. Commencing the Pilot Test	
10. Monitoring and Evaluating the Test	Pilot Test Monitoring Tools ³⁰ Post Pilot Risk Assessment Tool; Go/No Go decision box; Process Mapping “As Is”

PRODUCT RISK ASSESSMENT TOOL

This tool is used at the very beginning of the Pilot Phase of the Product Development Cycle.

Objective: To provide a framework for MFIs to identify specific operational risks for the product under development, assess the consequences of each identified risk, assign a mitigation strategy, and then prescribe appropriate controls to achieve the strategy. These controls are then incorporated in the refinements of product design, policies, procedures, product costing, and training.

³⁰ See McCord Michael et al., “Planning, Conducting and Monitoring Pilot Tests: Savings / Loan Products”, *MicroSave*, Nairobi, 2003

Use: Use the table below to help determine the degree of risk mitigation the organisation should consider. As a guideline, as severity or impact and frequency or probability increases, you should move from accepting the risk to transferring and ultimately avoiding the risk. This table does not dictate the mitigation strategy; it only suggests. If your frequency and severity ratings indicate a mitigation strategy that does not seem appropriate, you may need to first review the considerations that went into establishing the ratings, and then modify the rating itself.

Risk Dimensions

Frequency	Severity	Guideline For Mitigation Strategy
High	High	Avoid
High	Medium	Avoid or Control
High	Low	Control
Medium	High	Control or Transfer
Medium	Medium	Control or Transfer
Medium	Low	Control or Transfer
Low	High	Transfer
Low	Medium	Transfer or Accept
Low	Low	Accept

A new blank Tool Sheet is used for each new product. For illustrative purposes, product risk events have been proposed below for a savings product, a credit product, and an insurance product. These are necessarily general; yours should additionally identify product-specific risk events (what can go wrong?) in the spaces provided after each product.

For each Product Risk Event, there is a causal factor that results in the risk, i.e., the driver of the event. Possible drivers for each event should be identified to produce focused mitigation tactics. Sample drivers are provided for a couple of risk events to demonstrate the task. It is likely there will be more than one tactic per risk. Tactics or controls used will relate to people, processes, product design characteristics and performance measures. See Attachment 3 for full version of the Product Risk Assessment Tool below. When completed, proceed to the Product Risk Summary Tool.

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
SAVINGS (Use Product Name)								
1	Cash theft by tellers	M	L	Poor procedures; poor staff selection				
2	Cash theft from vault	L	H	Poor procedures;				
3.	Etc. etc.							

PRODUCT RISK SUMMARY

This tool is used immediately after completing Product Risk Assessment tool.

Objective: This tool summarises and profiles the risks identified to focus attention on the riskiest areas to insure sufficient mitigation tactics have been identified.

Use: The Event Number assigned to each Risk Event in the product Risk Assessment Tool is plotted in the matrix below according to the Frequency Rating and Impact Rating assigned to that event. When all product risk events have been plotted, confirm that risk mitigation tactics for the riskiest areas have been satisfactorily identified. The risk ratings for the first two Savings Product Risk Events are plotted in the matrix for your reference. Event 1 had a medium probability of occurring, and if it did occur, would have a low impact. Event 2 had a low probability of occurring, and if it did occur, would have a high impact.

Note: In developing mitigation strategies for each of the risks, the more risky events should be dealt with first.

Savings Product			
	High Impact	Medium Impact	Low Impact
High Frequency			
Medium Frequency			1
Low Frequency	2		

After completing the Product Risk Summary Tool, the Risk Owner and Product Team review the resulting risk profile, and allocate human and financial resources to the risk events that have the highest risks. The mitigation of these highest risks is tracked closely by the Risk Owner to assess whether the risk has in fact been mitigated to acceptable levels. Whether the risk is at an acceptable level is judgmental on the part of the MFI. Established benchmarks, such as what is a maximum acceptable portfolio at risk ratio, provide guidelines in making such judgments.

Pilot Test Step 2: Developing the Testing Protocol

The *MicroSave* Pilot Test Toolkit defines several activities in this step, all of which are important in limiting risks. We have given the pilot site selection special attention in this section as this is the actual testing ground for the product. The risks in not selecting appropriate pilot test sites may skew the pilot results in either an unfairly negative or overly optimistic manner. The chart below highlights possible risk events in the site selection process and offers suggested mitigation tactics to guide the MFI in avoiding foreseeable mistakes.

Figure No. 33

PILOT SITE SELECTION RISKS		
Risk Event	Result(s)	Mitigation Tactic(s)
Non-representative sample size	Distortions that mislead rollout results	Pilot in one branch without restricting customer participation
Too large a sample size	Too much strain on Product Team staff resources May be seen as a rollout Operational problems uncovered are of a larger, less manageable scale May be perceived as a rollout If product features are unprofitable, losses are larger than need by since must honour product agreement with customer	Limit number of customers in pilot if can't limit by branch boundaries. Accept loss
Too small a sample size	Distortions that mislead rollout results	Pilot in 2-3 branches
Disparate markets between the Mafia's many branches	Lack of expected take up/much greater than expected take up during rollout	Pilot in 2-3 branches
Simultaneous testing	Spreads Product Team too thin; May effectively become an early rollout	Stagger test start dates
Reputation Risk	Problems more visible than need be to public's eye	Don't do Main Office as pilot
Selecting an agency office	Inability to maintain direct control over site <i>and</i> staff	Put pilot in own branch
Inadequate infrastructure	External frustrations with enough space, long queues, poor equipment performance detract from product feature acceptance	Select site with required space requirements (e.g., teller cabin), electricity, communications
Lack staff buy-in	Poor, unrepresentative sales results	Select branch with enthusiastic, competent staff
Site has superior staff	Won't be representative of problems encountered by other branches	Select a typical and representative branch
Branch is currently piloting another product	Branch loses focus on core, existing products and customers; Staff become spread too thin (become tired, stressed) meeting specialised demands for each product	Select another branch with similar characteristics, or Delay second pilot until first pilot is well-established
PILOT DURATION RISKS		
Seasonality of customer savings or lending behaviours	Inaccurate interpretation of test results	Avoid known seasonal periods at beginning of test
Insufficient testing period	Fails to take peak and low periods into consideration;	2 x product cycle (in months) if < 6 months; 9-15 months if cycle >6 months; Undefined cycle: until acquire critical mass of customers
Too long a pilot testing period	Competition beats you to market	Avoid MFI peak periods at beginning of site test

Pilot Test Step 4: Preparing all Systems

A word about off-the-shelf software systems: - Software can be key to a system of internal controls and an important way of mitigating of risk. Software packages, for ease of vendor support, have been developed to be very flexible. Users can adapt many features to their circumstances through the use of parameter tables. This degree of parameterisation, while desirable for ease of system maintenance and changes to support new product features, also poses many risk issues, such as:

- Operations personnel tend to opt for very flexible parameters, leaving many system capabilities to control activities or impose conditions unused.
- Granting of authority to request parameter changes, and insuring IT responds only to designated authorities.
- Ability to track parameter changes in system, report changes, and monitor changes at a sufficiently knowledgeable and high level to authorising document.
- Are parameter changes copied to Internal Audit to insure that control designs are not countermanded?
- Are parameters set to effectively control/enforce key product features and pricing?
- How are exceptions to product standards tracked, reported, and monitored at the transaction level?

Pilot Test Step 6: Documenting the Product Definitions and Procedures

Well-designed procedures are a control. Very often, procedures are inadequately defined and are not written from a process perspective. This opens opportunities for both error and fraud. In addition, certain processes and procedures should themselves be examined for risk. The risk owner for the savings product should look at every procedure and ask: What can go wrong? Is this level of risk acceptable? If not, how can I mitigate it? One way is through Process Mapping³¹

Pilot Test Step 10: Evaluating the Test

In the Post Pilot Risk Assessment Tool, the Risk Owner identifies:

1. Previously identified risks whose importance has risen above the threshold for having mitigating tactics (i.e., a mitigation strategy of: Accept/Retain Risk), and
2. Just-identified risks which, when rated for risk frequency and impact, indicate they require mitigation tactics.

As a point of reference, this tool is a methodology for implementing Step 5, Revise Policies and Procedures, of the Risk Management Feedback Loop. Refer to the diagram in Part 1 of this tool kit.

The Risk Owner assembles the Product Team and Pilot Team as well, to revisit the operational risks of the new product based on the results of the pilot test. Any risk events that fall into “AVOID” strategy (e.g., high frequency, high severity) are re-examined to insure they are in fact avoided. For risk events with “Transfer”

³¹ Process mapping is discussed under the section in this toolkit called “Process Mapping As a Risk Management Tool” , and is discussed in detail in MicroSave’s “Process Mapping Toolkit”.

as the mitigation strategy, insure these risks have been effectively been transferred. Risk events to “Control” are reviewed to determine what has been done to control adverse outcomes, and answer the question: Are these effective?

Creating an “As Is” process map is useful to identify procedural deviations from those designed as a result of the pilot testing. Understanding how and why these deviations occurred will help determine what needs to be changed in the procedures as designed to make sure they are efficient and yet still provide the desired level of control over identified risks. The procedures as modified in practice, however, may introduce new risks; therefore care is needed in adopting user’s modifications without applying some risk analysis to understand the consequences of these changes. For example, a teller may decide to omit the step to obtain a prescribed authorisation because that causes too much of a delay. This control point in practice is not effective from management’s risk tolerance perspective because the process allows the control to be circumvented. The optimum procedure is one that is built into the process, such as system enforced authorisations. When “as-is” procedures that represent control tactics are not followed, the procedure should be modified so that the control is moved to another point in the process or a new control tactic is substituted.

The Risk Owner replicates all the risk events identified in the Product Risk Assessment Tool, on the Post Pilot Risk Assessment Tool. Based on pilot test experiences, the team completes this tool as indicated. New risks not identified in the pre-pilot step are now identified, added, and analysed for appropriate tactics.

Once this tool is completed, the policies and procedures, and “Should Be” process maps are updated to reflect the additions and/or modifications noted in the Post Pilot Risk Assessment Tool, as well as those made as a result of an analysis of the “as is” maps. Both the policies and procedures, and the process maps are then be reviewed and signed off by Internal Audit and/or the MFI’s external audit firm.

POST-PILOT RISK ASSESSMENT TOOL

As part of the post pilot evaluation and prior to product rollout, the effectiveness of the mitigation tactics for Risk Elements defined in the Product Risk Assessment Tool, are reviewed.

Objective: To insure that pilot test experiences and results are captured as they relate to risk management, and that modifications to risk assessments or newly identified risks are formally addressed with individual responsibility assigned for incorporating as required in the appropriate product segment/process prior to rollout.

Use:

- 1) Indicate Y(es) or N(o) if the tactics or controls countered risks to the degree intended. (Note: if a risk element was adequately controlled, to the point of excess, a No answer is appropriate, with a less costly or more practical tactic recommended).
- 2) As a result of the pilot, review the original assessment of the risk dimensions, both frequency and impact, for any modifications, and record the new rating: H(igh), M(edium), L(ow) / H(igh), M(edium), L(ow).
- 3) Add newly identified risks in spaces provided at end of product. Assign an event number sequentially from the Product Risk Assessment Tool, and add to the Product Risk Summary Tool.

If the answer to (1) above is No, or if a modification to a risk assessment is made (2), or if a new risk is identified (3), then:

- 1) Define the problem/state the reason for the change.
- 2) Formulate a revised mitigation strategy and/or tactic.
- 3) Assign a person who should be responsible (i.e., Risk Owner) for incorporating addition/modification as stated in 5).

Risk Elements (From the Product Risk Assessment Tool)	1. Risk Controlled	2. New Risk Assessment	If risks not adequately controlled or If risk assessment modified		
	Y/N	Freq/ Impact	4. Problem/ Driver	5. Solution (New Tactic)	6. Risk Owner
SAVINGS (Use Product Name)					
Cash Theft by tellers					
Cash Theft from vault					
Cash theft during transit					
Cash theft by customer					
Insufficient Liquidity within MFI					
Excess Liquidity within MFI					
Excess branch cash					

The last activity of evaluating the Pilot Test is to determine whether to proceed with the rollout. This is the culmination of all the risk analyses that have been performed, and the Risk Owner and Product Team draw

their conclusions and make the final decision as to product rollout. The table below summarises the potential outcomes of the pilot test phase using a Go/No-Go decision model.

Outcomes of Pilot Test³²

Figure No. 34

Option	Conclusions	Actions
NO	Market demand insufficient	Generate new product ideas/refinements
	Institutional resistance strong	Build organisational support for expanded product line
GO	Prototype well received	Proceed with commercialisation
	Positive institutional evaluation	

Risk Check List for Step 4

Have you . . .

- Completed the Product Operational Risk Assessment Tool and Product Operational Risk Assessment Summary Tool?
- Prioritised and allocated resources in accordance with the results of the Product Operational Risk Assessment Summary Tool?
- Completed the applicable Internal Control Questionnaires?
- Updated the Pricing and Cost Projections prepared in Step 3 to reflect results of Pilot Test?
- Analysed Process Maps for missing, weak and/or redundant controls?
- Completed the Post Pilot Risk Assessment Tool?
- Updated policies, procedures and process maps based on the Post Pilot Risk Assessment?
- Obtained sign off from Internal Audit or external audit firm on adequacy of systems and controls?
- Has the Product Team analysed pilot test results and specifically decided to proceed with the new product development, and is this decision formally documented?
- Has the Product Team set an action plan in terms of person-day budget, time schedule, people required, and budget for Step 5?

Pre-Step 5

Before beginning with Step 5, Product Launch and Rollout, you need to change your focus from the detailed operational features of the product and the limitations you imposed on the product during pilot testing, to take stock of your environment, both internally and externally, to determine whether there are any factors that you need to additionally take into account before rolling out the product, or determine whether

³² New Product Development for Microfinance, Technical Note No. 1 by Nhu-An Tran, Development Alternatives, Inc., based on a seminar presentation by Monica Brand, ACCION International, at the February 2000 conference on “Advancing Microfinance in Rural West Africa” in Mali. This publication is a joint product of Development Alternatives, Inc. and Weidemann Associates, Inc., through the USAID-funded Microenterprise Best Practices Project and MicroServe Indefinite Quantity Contract, October 2000.

any factors you had previously considered have changed that may affect your rollout plan, such as the introduction of a similar product in the market by a competitor, or a regulatory change in interest rates by the central bank that affect the pricing of your product. The Pre Rollout Risk Assessment Tool is designed to help you take as many factors as possible into your assessment.

PRE-ROLLOUT RISK ASSESSMENT

Objective: To ensure that limitations necessarily imposed during the pilot phase and additional stress indicators predictably present during a rollout are identified and the impact of removing these limitations is assessed prior to actual product rollout.

Use: Consider the impact of certain risk events and/or indicators present in new product development, but not taken to scale in pilot, and determine H(igh), M(edium), or L(ow) impact of each. Decide on the appropriate Mitigation Strategy. If a strategy other than “Accept” is selected, then consider appropriate Mitigation Tactics or controls, and assign responsibility to Risk Owner to implement the tactic. There may be more than one tactic / control to affect the strategy.

Examples of Possible Stress Indicators ³³	Impact (H, M, L)	Mitigation Strategy (Avoid, Accept, Mitigate, Transfer)	Mitigation Tactic(s)	Risk Owner
ENVIRONMENTAL				
Technological changes since pilot that effect/outdate product delivery/design				
Competition has brought same/similar product to market with similar or higher pricing				
Competition has brought same/similar product to market with lower pricing				
High profile union leader or community leader tells community that product is exploitative				
Results of PEST Analysis indicate adverse climate for rollout				
INTERNAL				
Human Resources				
Have issues of staff redundancy been planned and ready for implementation?				
Modalities of training staff not in place				
Introduction of incentive schemes results in less attention to existing products and increases demand for new product beyond pilot experience				
Insufficient Trainers to support rollout within time frames				

³³ Note: This list is for illustrative purposes only. Every MFI will have variants on the stress points that we have suggested.

Examples of Possible Stress Indicators³³	Impact (H, M, L)	Mitigation Strategy (Avoid, Accept, Mitigate, Transfer)	Mitigation Tactic(s)	Risk Owner
Insufficient on-site, trained support staff available during first stages of rollout at each site				
Lack of Change Management process				
Delivery Network				
Greater than anticipated demand results in inadequate stationary supplies available on time				
Rollout process will take longer than anticipated at each site				
Ability of staff/branch management in remaining sites to perform at pilot site staff level				
Physical resources required in other sites not yet in place				
Seasonality of product dictates timing of rollout				
Plan to roll out to other branches too demanding on resources				
Delivery networks developed during the pilot test not fully replicable to all branches where the product will be rolled out.				
Pilot is cut short because of competitive pressures and premature rollout likely				
Customer expectations for immediate rollout will not be met				
Promotional campaign promises products nation-wide that are not yet ready for roll-out				
Organisational Culture				
Weak Management commitment				
Lack of buy-in by other departments/staff				
Institutionalising product requires new Head Office department that needs to be staffed, trained, resourced so it can simultaneously support rollout at many branches				
Transition plan from Product Development Team to Home Department not in place, or Home Department not taking up on new product				
Lessons learned from pilot not identified,				

Examples of Possible Stress Indicators³³	Impact (H, M, L)	Mitigation Strategy (Avoid, Accept, Mitigate, Transfer)	Mitigation Tactic(s)	Risk Owner
modified, and integrated into rollout process				
Based on result of pilot test, likelihood that rest of staff will follow the formal procedures?				
Financial Viability				
Liquidity systems will be stressed if loan product demand exceeds projections, and cash funding may not keep pace with demand				
Effect of cannibalisation noted during pilot expanded to rollout greater negative impact than planned.				
Differences in target market acceptance from pilot site to remaining sites				
Budgetary overruns for Pilot demonstrated insufficient budget for remaining rollout				
Increased product pricing adjustments will lower demand for product and antagonise customers				
Communication infrastructure for data capture, reporting, asset / liability management, data retrieval by home department for product not in place				
New product impact on portfolio-at-risk, or savings volatility, not remained within acceptable limits (as per policy guidelines and the strategic plan)				
Institutional Strategy				
Product still fits within the MFI's strategy and objectives relating to product return				
Product meets objectives in terms of growth, customer satisfaction, and product quality?				
Board and/or CEO rush rollout by cutting corners in methodology				
Publicity is too early and too widespread				
Systems				
System not capable/not tested for capacity to handle scale (capacity and response time				

Examples of Possible Stress Indicators ³³	Impact (H, M, L)	Mitigation Strategy (Avoid, Accept, Mitigate, Transfer)	Mitigation Tactic(s)	Risk Owner
issues)				
IT problems noted during pilot not corrected and/or not sufficiently tested				
Audit department not signed off on the controls related to the system				

Once the MFI has formally made the decision to launch the product, it can then proceed with *MicroSave*'s Product Rollout Toolkit. Again, this toolkit is a mitigation tactic to help the MFI consider all the plausible if not all the possible steps and ramifications involved in rolling out a product. The MFI can avoid many pitfalls and mistakes by following these steps.

As noted in the Product Rollout Toolkit, the process is not complete once the product is introduced in the last branch. The Post Implementation Review is the final checkpoint in the process and serves to terminate the project. The focus is on results achieved and lessons learned. The project's performance is compared to projections, and the Continuing Assessment (Attachment 5) outlined in the Product Rollout Toolkit is performed. And the product is integrated into the MFI's overall Risk Management Programme.

Step 5: Product Launch and Rollout

Risk Management at this step begins with the Pre-Rollout Risk Assessment Tool . This tool helps the Risk Owner(s) step back from the minute details of the product itself to examine the consequences of scale.

As noted in Step 4, one of the risks you tried to mitigate during the pilot test was that test results were not representative of results that would be obtained with the rollout. Indeed, the pilot test itself was a risk mitigating strategy, and as such, was necessarily limited in scope in several aspects. The pilot test probably also covered several months, up to a year or even a bit more. Circumstances can change in that time, internally as well as externally. Now is the time to look around and see what the changes are, what the institutional readiness and capacity are, and all the other ramifications of going to scale.

Again, the Product Team identifies what the different risk events, or stress indicators, are, assigns a degree of severity (impact) to that risk, determines what can be done to mitigate those risks, and designates a risk owner to implement the mitigation tactics. The Product Team then formally makes the decision to proceed with the product launch.

Risk Check List for Step 5

Have you ...

- Completed the Pre-Rollout Risk Assessment Tool?
- Has the Product Team formally made the decision to proceed with the product launch?
- Followed the steps in *MicroSave*'s Product Rollout Toolkit?
- Conducted a post implementation review and is this fully documented for future reference?
- Performed the Continuing Assessment in the Product Rollout Toolkit?
- Integrated the product into the MFI's overall Risk Management Programme?

Part V: Institutionalising Risk Management

Benefits in risk management can occur as a result of a single review. However, the risk profile of a financial institution changes constantly, as new products are developed, new staff employed, as competitive pressures change, as the institution grows. Therefore, the only long-term mechanism to manage risks is to institutionalise risk management as a function within the financial institution.

The toolkit has already specified in Section I, who is responsible for managing risk management, the distinction between risk management and audit and the responsibilities of a risk manager. This section explores some of the challenges and constraints that are faced in trying to institutionalise the risk management function. It will be extended over time as *MicroSave's* experience in risk management develops.

Challenges in Institutionalising Risk Management

Basel II has brought a much greater focus on institutional and operational risks. It challenges banks to upgrade their risk management processes. However, although risk management is a familiar concept to banks, it is much less familiar to microfinance institutions. This lack of awareness of risk management results in a range of common challenges, these include:

Lack of involvement: Management of operational and product risk involves a much greater number and range of staff than traditional risk management. This implies that most microfinance institutions and some banks still have to understand and internalise the concept of risk management.

Avoiding reliance on a limited number of staff members: It can be difficult to identify appropriate members for the risk management team. The team has to be able to detect serious risks that occur or could occur across the institution. This means that the collective team has to have wide institutional knowledge and experience.

Smaller institutions: It is often difficult for a smaller institution to accommodate a dedicated and specialised Risk Manager in an institution's structure.

Lack of objectivity: In smaller institutions the risk manager can have a range of functional duties, which are then extensively analysed at the expense of other risks. In other cases a risk owner's performance is judged against reported risks, the risks may not be reported.

Quality of information: Risk management is heavily influenced by the quality and extent of information available in the financial institution. Where there is an advanced performance management system and careful measurement of institutional variables, both quantitative and qualitative, risks are likely to be identified much more quickly. In part this is because the "signs of stress" are much more apparent where there is good information. In turn performance measurement at any level requires information systems that can report exceptions, trends, unusual items.

Cooperation: A risk management structure assumes cooperation from all identified risk owners. This may be difficult where a risk owner has an unacceptable level of risk and would be seen by colleagues as not managing or be able to properly manage the risk concerned. In the worst cases risk owners can actually drive high levels of risk, this can occur where risk owners have a much greater personal tolerance of risk than the institution for which they work.

Technical Issues

Accurate identification and a good understanding of the drivers of various risk events as well as choice of appropriate indicators lie at the heart of risk monitoring and inform the design of effective risk mitigation strategies and tactics. These require a generally good internal control environment and adequately high level of management skills across the organisation.

Having identified risk indicators, risk tolerance thresholds need to be set in the risk management policies as yardsticks, which guide operations by aligning mitigation efforts to achieve desired indicator measures. Setting tolerance thresholds is a duty normally vested in a institution's governing body, normally the board, and the challenge here is ensuring objectivity. Setting prudent targets is more challenging where there is poor separation of governance from daily management resulting in erosion of oversight over risk owners. Another challenge to objectivity faced by many young MFI's is a lack of adequate skills in the board to understand the business's operating environment and its impact on the scope for risk minimisation.

Measurement of risk indicator levels is highly contingent upon being able to generate timely, reliable and accurate reports. The relatively low end management information systems deployed by many microfinance institutions are traditionally oriented providing preformatted basic management and financial accounting reports; There is little flexibility for users to conveniently design other reports for monitoring operational indicators as and when the need arises.

Effective risk management requires proactive monitoring of risk indicators and responding appropriately in a timely manner. A weak risk management feedback loop and unduly long periods between formal reviews result in late triggers for corrective action and ineffective risk mitigation. The greater challenge in this regard is likely be faced by institutions that cannot afford to have the risk management vested in a fully-fledged risk management department. It is important for such institutions' governance to ensure continuous monitoring of risks is incorporated as part of management's daily function

Good project management (e.g. product development) includes explicit risk identification and mitigation tasks at every stage

The increasing emphasis on risk management in financial institutions reflects a fundamental shift among bank managers and regulators to better anticipate risks, rather than just react to them. This approach emphasises the importance of "self-supervision" and a "pro-active" approach by board members and managing directors to manage their financial institutions. Historically, financial institutions have waited for external reviews by regulators to point out problems and risks, and then acted on those recommendations. In today's fast changing financial environment, regulators are often left analysing the wreckage ONLY AFTER a financial institution has had a financial crisis. To foster stronger financial institutions, financial institution regulators emphasise the quality of internal systems to identify and address potential problems quickly.

Risk Management at Equity Bank

Risk Governance Structure: A management Asset Liability Committee (ALCO) oversees Risk management at Equity Bank. Members of the management ALCO include the Chief Executive Officer and key functional heads (Operations, Finance, Credit and Treasury). The management ALCO reports to the full Board, as does the Board's own ALCO and risk management committees. These committees comprise the Chief Executive Officer and two board members with a key functional head as its secretary.

The members in the Board's ALCO and risk management committees have the technical skills to guide both the Board and management. They enable the Board of Directors to discharge their responsibilities for risk management oversight. The Board's Audit Committee assesses the effectiveness of all risk management initiatives.

Risk Governance process: The management ALCO committee is responsible for risk management on a day-to-day basis. Key risks mitigated include credit, operational and compliance risks. Financial and market risks are managed by optimising the balance sheet in terms of funding mix, maturity profiling, capital adequacy and exposure to foreign exchange and interest rate fluctuations. The management ALCO consults regularly with the board's ALCO and risk management members to implement the policy set by the board.

Risk Appetite: Equity's Board sets the risk thresholds for all aspects of bank's operations and exposures. The board ensures that these meet or surpass applicable and explicit statutory prudential requirements set by the Government, Central Bank and the Ministry of Finance.

Risk Reporting: The management ALCO meets weekly to assign and review individual responsibilities members along their functional duties. The ALCO submits monthly reports to the Board's ALCO and risk management committee and produces a quarterly report for deliberation by the full Board.

Risk Management at Teba Bank

Risk Governance Structure: Teba Bank have established a risk management structure that includes a General Manager for Risk, with a risk manager who reports to the General Manager. At Board level risk is reflected in the Audit Committee, a dedicated Risk Committee and a Directors' Affairs / Strategy Committee. The asset-liability committee and the credit management committee report to the risk committee.

Risk Governance Process: Teba Bank's Board is ultimately responsible for the risk management process, the Risk Committee is appointed to assist the board to fulfil their responsibility. The Board reviews and approves risk strategies and policies developed and recommended by management. The Board Risk Committee approves the Enterprise Risk Management Framework, through this framework the ownership of key risks are allocated to the most appropriate senior official. Senior management sign off on the Risk Management Framework as the risk owners. Risk management is a continuous and evolving process, involving monthly risk assessment.

Risk Appetite: Teba Bank's Board sets the risk appetite of the institution, this is similar to setting major risk thresholds. The risk appetite is the degree of uncertainty that Teba Bank is willing to accept to reach its goals. It covers, products, markets, treasury limits, lending etc.

Risk Reporting: The Board receives quarterly reports covering the top ten risks, the risk register and the risk watch report. Management receives these reports monthly.

COSO – ERM Framework: Teba Bank uses the COSO Enterprise Risk Management Framework, which allows it to align risk appetite and appropriate strategies, enhance risk responses, reduce surprises and losses and to identify and manage multiple and cross enterprise risks. It also improves the deployment of capital by identifying capital requirements. The COSO Enterprise Risk Management Framework components are broadly covered in this toolkit.

FINAL NOTE

This toolkit has been conservative in approach, offering a highly risk-averse perspective to new product development. Circumstances will warrant your MFI to shorten the process, which of course means cutting corners. Then, we hope this toolkit will help you make informed decisions as to what corners to cut to mitigate your risks!

Suggested Resources

Prior to Starting	- Wright, Graham A. N., Monica Brand, Zan Northrip, Monique Cohen, Michael McCord and Brigit Helms. "Looking Before you Leap: Key Questions That Should Precede Starting New Product Development", <i>MicroSave</i>, Nairobi, 2002 - Wright, Graham A. N., "Market Research and Client Responsive Product Development", <i>MicroSave</i>, Nairobi, 2004.
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Roll out	McCord Michael et al., "Product Rollout: A Toolkit for Expanding a Tested Product Throughout the Market"
Useful websites	<i>MicroSave</i>: www.MicroSave.net - CGAP: www.cgap.org - MBP: www.mip.org - AIMS: www.mip/component/aims.htm - Bank Akademie: www.international.bankakademie.de

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Attachments

Attachment 1: Key Questions That Should Precede New Product Development³⁴

Graham A.N. Wright, Monica Brand, Zan Northrip, Monique Cohen, Michael McCord and Brigit Helms

Introduction

Many MFIs are looking at new product development as a way of responding to their clients' needs. However, they often do not understand the complexity and cost of product development. This note suggests six essential questions to ask prior to setting about new product development.

1. Motivation: Are we starting product development to make our MFI more market-driven?

MFIs profess many motivations to undertake product development, and it is essential that the Board, management and staff involved in the process of product development clarify their motivations. The less convincing reasons for initiating product development include getting access to the growing plethora of "innovation funds" available from donors and the current interest in product development.

Effective product development is driven by an MFI's desire to become client responsive. Those MFIs developing products for reasons other than a commitment to responding to the market and becoming demand-driven may well discover that they have entered into a more complex and time/resource-consuming process than expected. On the other hand, MFIs have to live with the products they deliver and the investment in developing client-responsive services may well be the most important and cost-effective one they will ever make.

2. Commitment: Are we setting about product development as a process¹?

Under the prevalent top-down model that characterises most MFI's approach to product development, there is little or no market research, inadequate costing/pricing of the new product, no attempt to describe the product in clear, concise client-language, no pilot-testing and no attempt at a planned roll-out of the new product. A top-down approach to product development can have expensive consequences – as many MFIs that have introduced products without following a systematic process have discovered.

Problems have arisen in such diverse areas as:

- Limited demand for the new product (in some extreme cases, additional client drop-outs);
- Poor profitability of (or more specifically losses generated by) the new product;
- Management information systems unable to monitor/report on the new product; and
- Staff inadequately trained to market and deliver the new product.

Experience has repeatedly shown that investing small amounts up front in a systematic process of product development can save large amounts and/or generate larger amounts of business in the future. One step of the product development process leads to and informs the next ... and provides a disaster/reality check that insulates the MFI from subsequent problems. A proper process also provides the MFI an opportunity to correct problems or respond to issues while they are limited by the confines of each step.

3. Capacity: Can our MFI handle the strains and stresses of introducing a new product?

The process of product development consumes time and money. It often highlights opportunities or needs to change central elements of an MFI's systems. MFIs should therefore carefully consider before jumping into product development the questions: "Are we really ready?" "Do we have the resources?" and "Are we really committed to this?" As a first step to answering these questions, the MFI should

³⁴ MicroSave's Briefing Note # 9.

conduct a thorough institutional analysis, reviewing strategy, financial viability, organisational structure and philosophy, human resources, marketing and systems.

In *summary*, an MFI should already:

- Practice the level of tracking and management required of a new product;
- Understand the capacity issues in all relevant departments;
- Have the will and full commitment of management and the Board behind the process;
- Have the capacity to train all relevant staff; and
- Possess or have available staff and systems that can manage, implement, and develop the new product before significant funds are expended on the new product development process.

4. Cost Effectiveness and Profitability: Do we fully understand the cost structure of our products?

In view of increasing professionalism of MFIs and the competition in the MFI market place, it is essential that MFIs understand exactly how much each part of their operations costs to facilitate informed management decisions. Key decisions include how to increase profitability by cutting costs and/or increasing income, how to assess product-level performance, and if necessary modify the price of existing products, whether to accept and implement new products, and how to price new products.

Product costing on a simple allocation basis is a relatively straight-forward exercise which provides the MFI with a wealth of information, while more complex activity based costing provides additional information on how and why costs are incurred.

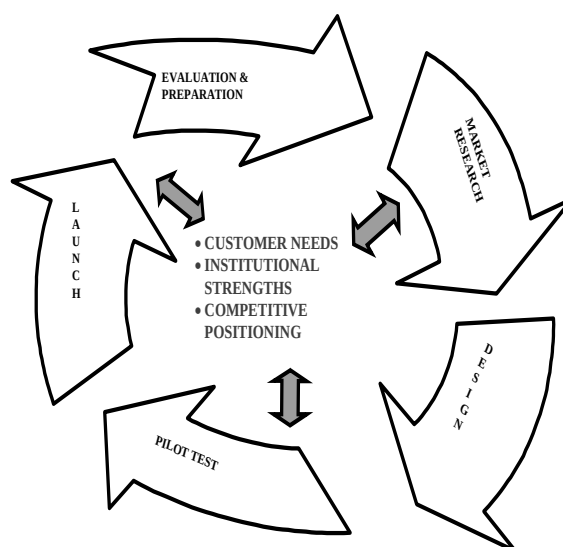
5. Simplicity: Can we refine, repackage and re-launch existing product(s) before we develop a new one?

Product refinement fine-tunes or adjusts existing products, often with limited effect on the existing systems – for example by changing the interest rate or marketing strategies of an existing product.

New product development is the process of developing a brand new product – for example a housing loan or a contractual savings product. Prior to starting the process of *new product development*, MFIs should give careful consideration to options for refining, repackaging or re-launching their existing products.

Product refinement is considerably less expensive, time-consuming and disruptive than new product development. Opportunities for product refinement can arise from *both* the front- and back-office aspects of the existing product. In the front-office, the way staff talk about, and market, a product can yield valuable benefits. In the back-office, increasing the efficiency of the staff or systems can have a significant effect on the demand for the product and the retention of clients. Re-engineering back-office systems is as much of an innovation as developing a new product, a fact that should be clear to those administering donors' innovation funds.

Systematic Product Development Process



6. Complexity, and Cannibalisation²: Are we falling into the product proliferation trap?

Product proliferation is increasingly common amongst some MFIs that try to tailor products to respond to individual market segments with specific needs. These MFIs can find themselves offering many slightly different products. A multitude of products often results in:

- Confusion amongst front-line staff and clients;
- Complex delivery systems;
- Complicated management information systems; and
- Cannibalisation among products.

MFIs Cannot Do Everything! When evaluating the diverse needs of clients, the MFI should recognise that it cannot design a product to respond to each and every individual specific need. The MFI should group the most common and prevalent needs and develop products in response to them. One product can be marketed in many different ways to meet a variety of clients' needs.

Conclusion

Product development is an essential activity for market-responsive MFIs. As clients and their needs change, so the market-driven, demand-led MFI must refine its existing products or develop new ones. But product development is a complex, resource-consuming activity that should not be entered into lightly. Nonetheless, those MFIs committed to being market leaders and to responding to their clients must indeed conduct product development. More client-responsive products will reduce drop-outs, attract increasing numbers of new clients and contribute substantially to the long-term sustainability of the MFI.

¹ For more on the product development process see **Wright**, Graham A.N., "Market Research and Client Responsive Product Development", *MicroSave*, 2004 – available on *MicroSave's* website: www.MicroSave.net under Study Programme section.

² Cannibalisation is when the introduction of a new product diverts sales from a company's existing products and when revenue is displaced, rather than created.

Attachment 2: Examples of Product Competition Analysis Matrices³⁵

Product: Current Account	Our MFI	Competitor 1 MicroBank Ltd.	Competitor 2 Community Co- operative	Competitor 3 ROSCAs³⁶	Competitor 4 Itinerant Deposit Collectors
Product (Design)					
Opening Balance	Ksh. 500	Ksh. 5,000	Ksh. 250	Ksh.100 – Ksh. 1,000	Ksh. 50 – Ksh.500
Minimum Balance	Ksh. 500	Ksh. 5,000	Ksh. 250	N/A	N/A
Other Requirements	National ID	National ID Referral by 2 existing clients	National ID Share Capital of Ksh. 500	None	None
Deposit Policy	Any number at weekly meetings	Any number at all times (through safe deposit)	Any number in office hours	Daily/weekly/monthly	Daily
Withdrawal Policy	Maximum 3 per month at weekly meetings	Any number at all times (through ATM)	Maximum 2 per month	By rotation daily/weekly/monthly	End of the month
Price					
Interest Rate Paid	2.5% on balances > Ksh. 5,000	5% on balances > Ksh. 25,000; 6.5% on balances > Ksh. 100,000	None	None	- 36% (approx) see withdrawal fees below
Overdraft Interest Rate Charged	No overdraft facilities	Nominal 24% pa = 48% APR	No overdraft facilities	No overdraft facilities	2% per week = 104% APR
Account Opening Fees	Ksh. 150	Ksh. 500	Ksh. 50	None	None
Ledger/Statement Fees	None	Ksh. 150 per month	Ksh.100 per quarter	None	None
Deposit Fees	None	None	None	None	None
Withdrawal Fees	Ksh. 25	None	None	None	1/30 th of the amount deposited
Account Closing Fees	Ksh. 150	Ksh. 500	Ksh. 150	None	None

³⁵ While the above is more or less exactly as one MFI constructed it, this information is only for illustrative purposes and is not necessarily accurate.

³⁶ Rotating Savings and Credit Associations

Product: Current Account	Our MFI	Competitor 1 MicroBank Ltd.	Competitor 2 Community Co- operative	Competitor 3 ROSCAs³⁶	Competitor 4 Itinerant Deposit Collectors
Promotion					
Marketing/Information Dissemination	At group meetings	None	At AGM	Word of mouth	Word of mouth
Advertising	Annual “Savings Week” campaign	Radio/newspapers	Notices in branch	None	None
Place	In weekly groups in Nairobi	ATM at branch in Nairobi only (City Market)	In weekly groups in Nairobi (City Market, Gymkhana Market, Eastlands) and Eldoret	In branch in Thika	In community throughout the country
Positioning					
Slogan/vision	“Flexible financial services for you”	“The solid bank”	“Co-operation for progress”	None	None
Corporate Image	The newcomer – fast, customer-responsive services	Professional bank – but the poor are not welcome	Slow but very cheap (loan) service – get it when you can! Savings are made just to get loans	N/A	Valued at-the- doorstep service
Product Image	The business-person’s current account: earns interest and charges depend on how much you use the account	The rich person’s savings account – high interest, high charges, fast service	Save to buy share capital to get loans – no interest paid and regular ledger fees “eat your money”	The communities’ own little savings systems – but make sure you trust your partners	The most convenient and efficient service in town... if you can find the right (trustworthy) collector
Physical Evidence	Clean new branch, clear, professional-looking passbooks	Smart cards, ATM, large, impressive branch	Increasingly shabby and run down	None – no paper work	Very simple deposit collection sheets
People	Welcoming, professional	Disdainful of poor people – not friendly at all	Most members are welcome	Our trusted friends and neighbours	The friendly mobile banker offering good service

Product: Current Account	Our MFI	Competitor 1 MicroBank Ltd.	Competitor 2 Community Co-operative	Competitor 3 ROSCAs³⁶	Competitor 4 Itinerant Deposit Collectors
Process	Quick and efficient but collections/withdrawals only through weekly groups causes many problems	High-tech and efficient	Lengthy queues on market days but friendly service	Fast and efficient but inflexible in times of need or when you have more to than the usual amount to save	Fast and efficient – doorstep/market stall collection

Attachment 3: Product Risk Assessment TOOL

This attachment should be on landscape, with the columns for Risk Event, Risk Driver, Mitigating Tactics and Risk Owner expanded.

This tool is used at the very beginning of the Pilot Phase of the Product Development Cycle.

Objective:

To provide a framework for MFIs to identify specific operational risks for the product under development, assess the consequences of each identified risk, assign a mitigation strategy, then prescribe appropriate controls to achieve the strategy. These controls are then incorporated in the refinements of product design, policies, procedures, product costing, and training.

Using the Tool

Use the table below to help determine the degree of risk mitigation the organisation should consider. As a guideline, as severity or impact and frequency or probability increases, you should move from accepting the risk to transferring and ultimately avoiding the risk.

Risk Dimensions

Frequency	Severity	Guideline For Mitigation Strategy
High	High	Avoid
High	Medium	Avoid or Control
High	Low	Control
Medium	High	Control or Transfer
Medium	Medium	Control or Transfer
Medium	Low	Control or Transfer
Low	High	Transfer
Low	Medium	Transfer or Accept
Low	Low	Accept

A new blank Tool Sheet is used for each new product. For illustrative purposes, product risk events have been proposed below for a savings product, a credit product, and an insurance product. These are necessarily general; yours should additionally identify product-specific risk events (what can go wrong?) in the spaces provided after each product.

For each Product Risk Event, there is a causal factor that results in the risk, i.e., the driver of the event. Possible drivers for each event should be identified to produce focused mitigation tactics. Sample drivers are provided for a couple of risk events to demonstrate the task. It is likely there will be more than one tactic per risk. Tactics or controls used will relate to people, processes, product design characteristics and performance measures.

When completed, proceed to the Product Risk Summary.

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
SAVINGS (Use Product Name)								
1	Cash theft by tellers	M	L	Poor procedures; poor staff selection				
2	Cash theft from vault	L	H	Poor procedures; inadequate physical security				
3	Cash theft during transit			Poor security training; collusion between staff /police and robbers				
4	Cash theft by customer			Inadequate security at teller cabins				
5	Insufficient Liquidity within MFI			Improperly defined liquidity reserve ratio; greater than anticipated demand for withdrawals				
6	Excess Liquidity within MFI			Withdrawals greater than anticipated; lack of liquidity management tools.				
7	Excess branch cash			Deposits greater than anticipated; weak procedures for banking cash				
8	Insufficient branch cash			Withdrawals greater than anticipated; lack of tools to reflect cash movement cycles/levels				

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Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
9	Misposted Amounts							
10	Misposted Accounts							
11	Paid to wrong client (false or wrongly identified)							
12	Paying against uncleared effects							
13	Accepting stolen/forged cheques for deposit							
14	Interbranch deposits not promptly or correctly posted							
15	Interbranch withdrawals not promptly or correctly posted							
16	Suppression of deposits							
17	Fraudulent customer claims for transaction errors							
18	Inability to determine legitimacy of customer claims for transaction errors							
19	Excessive transaction processing time							
20	Account opening fails to properly identify legitimacy of client (fake ID, or improper non-personal account documentation)							
21	Tampering with MFI signature / identification documents							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
22	System cannot handle product features							
23	Inability of MFI and client to periodically confirm agreement in account balance							
24	Loss due to collusion between staff or between staff and customer							
25	Incorrect interest calculations							
26	Incorrect withholding tax calculations / remittances							
27	Failure to properly collect product fees & commissions							
28	Failure to provide confidentiality of client's account							
29	Alteration of account and customer data in database							
30	Failure to detect counterfeit notes							
31	Unable to locate customer							
32	Unauthorised fee waivers							
33	Fraudulent activation and transactions on dormant customer accounts							
34	Illiterate clients are disadvantaged							
35	Creation of							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
	“dummy” accounts							
35	Loss of transaction accounting vouchers							
CREDIT (Use Product Name)								
1	Loan officers exceed their authorities							
2	Underwriting standards not met							
3	Concentrations of credit by sector							
4	Concentration of credit by borrower							
5	Loans at preferential rates							
6	Wrongly valued securities							
7	Inability to liquidate securities due to non-existence, or not owned by client							
8	Delinquency (PAR and arrears) tolerances exceeded							
9	Delinquencies not tracked by responsible loan officer, branch, product, sector, etc.							
10	Product(s) fail to meet client needs re: amount, term							
11	Increase in drop-out rates over tolerances							
12	Pricing does not cover costs on							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
	an allocation or activity based costing system							
13	Loss of market share							
14	Rescheduled loans not tracked separately in loan portfolio							
15	Suppression in reporting of delinquencies							
16	Delays in payment postings							
17	Diversion of payments							
18	Payments posted to wrong account							
19	Payments posted for wrong amounts							
20	Removal/ alteration/loss of securities from MFI vaults/ safes							
21	System does not produce adequate MIS							
22	System cannot handle product features							
23	Product design does not control credit risk							
24	Credit Manager/ Committee not sufficiently experienced to make wise credit decisions or monitor portfolio quality							
25	Abuse of discretionary powers of loan officers							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
26	Written off loans cease to be recovered							
27	MFI not in legal/ regulatory compliance for loan agreements, collateral documents, and guarantor agreements							
28	Non-payment by guarantors							
29	Failure to apply proceeds from sold collateral to outstanding loan balances							
30	Failure to offset non-payment from borrower's other accounts as allowed by right of set-off							
31	Loan approval process too lengthy							
32	Failure to collect loan fees							
33	Failure to stop income accrual on non-performing loans							
34	Unauthorised waiver of penalty fees							
35	Loan disbursements not paid to correct client							
36	Loan disbursements not made for correct amount							
37	Loan disbursements made prior to approval,							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
	perfection of loan and collateral documents							
38	Insufficient Liquidity to meet loan demand							
39	Insufficient cash in branch to make loan disbursements							
40	Fictitious (“ghost”) loans							
41	Cash payments to loan officers or other non-teller staff							
42	Loan officer pays loan on behalf of client and charges client interest							
43	Failure to observe cultural values							
44								
45								
INSURANCE (Use Product Name)								
1	Claims not paid timely							
2	Claims wrongly rejected							
3	Sales staff misrepresent/ misunderstand product features							
4	Clients coerced to buy by agents for sake of commissions / incentives							
5	Premiums not collected when due							
6	Claims paid when premiums not paid up							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
7	Theft/diversion of premium payments by staff							
8	Premium payments posted to wrong accounts							
9	Total of claims paid exceed total of premiums collected/reserves							
10	Size of insured pool too small to cover actuarial risk							
11	Coverage for risks for which chance of loss can't be calculated							
12	Specific risks covered apply to only a small segment of the insured pool at any given time							
13	Failure to limit or control Policyholders' ability to influence whether the risk actually occurs							
14	High-risk policyholders predominate the pool.							
15	Using insurance product inappropriately (i.e., client's risk may be more effectively safeguarded against through a savings or credit product)							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
16	Terms and conditions not clearly identified in agreement between MFI and insurance company							
17	Insurance company terms and conditions in contradiction to client needs per market research by MFI							
18	Insurance agent regulatory requirements not met							
19	Failure to maintain reserves required by regulators met							
20	Lack of expertise to make actuarial projections							
21	If partnered, MFI does not receive adequate commissions							
22	Poor reputation and/or financial stability of insurance company							
23	Claims procedure and forms cumbersome and/or misunderstood							
24	Marketing materials misleading							
25	Claims not verified prior to payout							
26	If life insurance,							

Event No.	Product Risk Event	Freq. H,M,L	Impact H,M,L	Driver(s) of Event	Mitigation Strategy	Proposed Mitigation Tactic(s)	Risk Owner	Completion Date
	lack of process to notify beneficiaries to make claim							
27	False, or incomplete client data on application							
28	Changes in the characteristics of the market and its portfolio, which may change the nature of the risk assumed							
29	On-lending of insurance premiums invested							
30	Premiums insufficient to cover inflationary costs							
31	Accounting system does not produces required MIS							
32	Premiums deducted twice by system							
33	Joint venture partner goes bankrupt							
34	Joint venture partner does not fulfil profit-sharing obligations							
35								

Attachment 4: Product Risk Summary TOOL

This tool is used immediately after completing Product Risk Assessment Tool.

Objective:

This tool summarises and profiles the risks identified to focus attention on the riskiest areas to insure sufficient mitigation tactics have been identified.

Using the Tool

The Event Number assigned to each Risk Event in the Product Risk Assessment Tool is plotted in the matrix below according to the Frequency Rating and Impact Rating assigned to that event. When all product risk events have been plotted, confirm that risk mitigation tactics for the riskiest areas have been satisfactorily identified. The risk ratings for the first two Savings Product Risk Events are plotted in the matrix for your reference. Event 1 had a medium probability of occurring, and if it did occur, would have a low impact. Event 2 had a low probability of occurring, and if it did occur, would have a high impact.

Note: In developing mitigation strategies for each of the risks, the more risky events should be dealt with first.

Savings Product

	High Impact	Medium Impact	Low Impact
High Frequency			
Medium Frequency			1
Low Frequency	2		

Attachment 5: Continuous Assessment

Analysis of:	Why:	By Whom:	How Often:
Systems (computerised)	To confirm data accuracy and proper performance of the systems	- Internal auditor - External auditor	- Within 2 months of rollout at each branch. - Annually by sampling
Policies and Procedures (documents)	To confirm validity of policies and procedures to the evolution of controlled efficiency and effectiveness of the product operations	Manager of product home department (issues are often noted by audit)	- Six and twelve months after rollout to second office (first after the pilot test branch), - Then annually two months before audit.
Policies and Procedures (adherence)	To confirm that controls are adhered to in a consistent manner throughout the institution.	- Internal and External Audit (formally), - Supervisory Staff (informally and continually)	- External audit annually. - Internal audit every rollout office six months after launch, then part of routine audits. - Supervisors review continually.
Product Satisfaction	To confirm client satisfaction with product	Research Department, (or staff trained in qualitative and quantitative research methods, a consultant)	- Within six months of launch institutionally for the product, - Then as part of the regular research schedule.
Competitive Position	To understand the product's positioning in the market relative to competitors (formal and informal where appropriate). An institution cannot expect competitors to stand still and thus they must understand what the competition is doing relative to their products.	- Marketing or - Research Department or - Consultant	Quarterly
Profitability	To make sure the product is moving towards / improving in profitability	Finance	Monthly, by branch, region, and institution
Product Objectives	To confirm progress towards objective satisfaction	- Branch managers, - Regional managers, - Manager of product home department	Monthly, by branch, region, and institution
Institutional Assessment	To identify and track the impact on staffing and system capacity as a result of the new product	- Manager of product home department - Finance, - Human Resources	- Quarterly for the first year - Then semi-annually after that.

Attachment 6: Introducing Voluntary Savings from the Public in Regulated Microcredit Institutions: What are the Risks?

Marguerite S. Robinson

November 2002

Becoming a microfinance intermediary and mobilising voluntary savings from the public is a complex effort, and it is not possible here to analyse all the risks. Therefore I have selected risks that I think are among the most important. It should be noted that many of the most common and serious risks are related not to products – as is often assumed by about-to-be-regulated microcredit institutions – but rather to ownership, management, and institutional capacity to deliver products.

I. COUNTRY RISKS

1. Is there a reasonably enabling macroeconomy, some degree of political stability and political will, and sufficient population density, monetisation, and basic infrastructure?

Risks will generally be high if savings are mobilised from the public by newly-regulated institutions or institutions new to the microfinance market:

- During periods of severe economic destabilisation.
- In emergency or immediate post-emergency environments.
- In areas characterised by very low population density, a low level of monetisation, lack of basic infrastructure, unstable populations, or severe security problems.
- In areas without a functioning financial system.
- In areas that are politically highly unstable, or where political interference in microfinance can be expected.
- In areas without an appropriate, functioning legal system.

2. Is there a reasonably adequate regulatory environment?

Commercial institutions that provide microfinance, intermediating between credit and savings mobilised from the public, need appropriate regulations (or deregulations) in a number of areas, including:

- Interest rates.
- Capital requirements for opening an institution.
- Capital adequacy ratios.
- Accounting and audit standards.
- Requirements for opening branches.
- Reporting requirements.

Without such regulations (that are well-implemented), institutions can fail and savers' money can be put at risk

3. Are microfinance intermediaries collecting public savings publicly supervised?

To be financially sustainable, microfinance institutions must mobilise savings from the non-poor as well as the poor – to raise the average account size to a level at which savings can be collected profitably, while also serving large numbers of poor savers with small accounts.

For the protection of their customers, especially savers, financial institutions that mobilise voluntary savings from the public should be publicly supervised. If this is not the case, both the savers and the institution are at risk.

- This does not mean relaxing supervising standards. It means applying high standards in ways that are appropriate for microfinance institutions.
- It also means ensuring that the supervisory body is able to monitor these institutions effectively.

However, it should be noted that in many countries today, the capacity for microfinance regulation and supervision and commercial microfinance institutions are evolving simultaneously.

4. Subsidy dependence: does the country have an appropriate poverty alleviation strategy?

If the country has massive credit subsidies from the government and/or donors, and if credit is supposed to reach the extremely poor, there is a high risk that subsidised microfinance institutions will not succeed in commercial microfinance intermediation. There is little incentive to mobilise voluntary savings if large amounts of cheap money are delivered regularly to the microfinance institution. Bangladesh is a case in point. There, a weak banking system combines with massive credit subsidies to ensure that, with very few exceptions, the demand for voluntary savings services among poor savers is left unserved.

- Credit is appropriate for the creditworthy among the economically active poor – people with the ability to use loans and the willingness to repay them.
- Subsidised poverty alleviation tools are appropriate for the very poor who have prior needs – tools such as food, shelter, medicine, skills training, and employment. When such people become economically active, they will then be able to make use of commercial microfinance institutions.

But when subsidised credit is provided to extremely poor people who cannot use it effectively, and to economically active poor people who could pay commercial interest rates, the conditions are set for:

- Large unmet demand from poor savers.
- Large unmet demand from poor borrowers (because credit subsidies are rationed).
- The absence of commercial microfinance intermediation.

Institutions that go ahead despite severe country risk (and are not stopped by regulatory authorities because of weak financial and regulatory systems) face high risk.

II. INSTITUTIONAL RISKS

1. Does the institution have an appropriate ownership and governance structure?

If the answers to the questions below are not positive, the risks to savers who entrust their savings to microfinance intermediaries (and to the institutions) can be substantial.

- Is there clear, accountable ownership of the institution, and does the institution have a transparent structure of responsible governance?

- Have the owners and the board members passed an internationally accepted ‘fit and proper’ test?
- Does the institution have a clearly stated mission and realistic goals, and are its owners and board capable of, and committed to, implementing these?

2. Does the institution have managers who have skills and experience in financial intermediation among numerous small sub-branches, and who have substantial knowledge of microfinance demand and clients?

Few microfinance institutions meet these criteria. But all financially self-sufficient commercial microfinance intermediaries meet them.

The risks of introducing commercial microfinance intermediation without skilled, knowledgeable management are so high that an institution without such management should table plans for providing microfinance intermediation until it has the necessary managers in place and thoroughly familiar with the institution and the country environment.

Management risks can arise in different ways in different kinds of institutions. But the risks share the same components.

- NGOs that become regulated institutions usually do so to mobilise public savings and become financial intermediaries. They have a tendency to be characterised by diffuse ownership, to bring onto their new boards unqualified members of their NGO boards, and to move managers without financial skills from the NGO to the regulated institution. This is a very high risk scenario (and often difficult to turn around).
- Credit unions and cooperatives usually have experience with savings mobilisation from various kinds of savers, as well as experience in lending to borrowers. But management and default risks can be high in some member-owned institutions where the most influential members are (de jure or de facto) both the institution’s managers and its largest borrowers. The result tends to be high loan defaults. Some member-owned institutions are well managed, but many are not. Management risk can vary greatly from one institution to another.
- Regulated financial institutions going downmarket are often pushed into microfinance by intense competition for prime customers. And they may be pulled into microfinance by the profits that can be made. Banks, finance companies, and other regulated non-bank financial institutions generally have experience in financial intermediation, and their managers have financial skills. But they usually do not know the microfinance market. And they typically do not understand that it is, in some important ways, a different market from that which they currently serve – in products, pricing, management and staff recruitment and training, etc. Banks whose managers do not take the time and effort to learn international best practices in microfinance face substantial risk in entering microfinance intermediation.

The provision of simple, appropriate products to a large number of microfinance clients spread over a large area, with profitable intermediation between savers and borrowers, may look simple to an observer of a sub-branch with a small staff. But large-scale microfinance is a complex effort at the head office, and it requires high-level, accountable, experienced, open-minded, and dedicated managers who understand both finance and microfinance demand. Without such managers the risk is high, regardless of institutional type.

3. Does the institution have appropriate technology and management information systems?

- Does it have an appropriate management information system that works well?

- Does it have the technical capacity to produce transparent, accurate reports that can be effectively used by managers in a timely manner?
- Are its managers able to use international best practice tools effectively for business planning and financial modeling, accounting and auditing, costing and pricing, etc.?

If not, the technical risk can be high.

4. *Does the institution have clear and appropriate human resource services?*

- Does the institution have a developed career path for employees?
- Does it have training programmes for managers and staff geared toward knowledge of clients, financial skills, responsibility, and accountability?
- Is its organisational structure adequate for the demands of large-scale microfinance intermediation (or is such a structure being put in place?)
- Are there performance-based incentives (monetary incentives, promotion procedures, and honorary awards)?

5. *Does the financial institution have a strong performance record and a good reputation?*

Microfinance institutions should have a strong track record of accountable ownership and governance, effective and efficient management, transparent reporting, accounting methods that adhere to international standards, and a track record of profitability and financial self-sufficiency *before* they are licensed to collect savings from the public and intermediate these. Such institutions should be financially solvent, with a high rate of loan recovery. Otherwise, there is considerable risk of institutional failure and loss of savings by clients.

6. *Can the institution meet substantial new challenges, and is it capable of absorbing many new clients quickly, safely, and profitably?*

Two examples of risks that are often not thought about (until too late):

- *Capacity for serving the public.* Microfinance institutions serving the public can control the number of loans they give, but they cannot control the number of savers they serve. If an institution's products and services are attractive, large numbers of savers may open savings accounts at the institution soon after it opens its voluntary savings services. In a few months the number of clients can double; in a few years it can have trebled or more.

Can the institution manage this rapid, and to a large extent uncontrollable, expansion?

Can the institution obtain sufficient qualified management and staff; internal controls, audit, and supervision; training; information technology; space; computers, furniture, and the like?

Can it handle asset-liability management, security, cash management, accounting and reporting, and so forth?

Can the institution keep its loan portfolio quality high while introducing voluntary savings to the public?

- *Serving new kinds of clients.* Newly-regulated microfinance institutions taking public savings will need to collect savings not only from the poor, but also from better-off individuals and businesses, as well as from associations and institutions that are based near their branches. Banks going downmarket will have to learn the microfinance market. In both cases, the institution must learn to serve clients who are different from their traditional customers.

Does the institution know how to design and deliver products for a wider variety of clients than they have previously served?

Do their staff members know how to approach and talk with these clients?

In the case of institutions that have previously served only poor groups of women, can the staff explain the products and services clearly and effectively to potential clients who are men? To middle-income clients? To organisations and institutions operating in their service areas?

Larger savers tend to demand individual loans. Has the newly-regulated institution designed individual loan products, and do their staff know how to assess the creditworthiness of individual borrowers and their enterprises? Do they know how to collect individual loans?

And in the case of banks and other regulated institutions serving up-market clients, have they learned the microfinance market, products, pricing, etc. And are they willing to change their management and organisational structure to accommodate large numbers of microfinance clients?

Overall, does the institution have the will, the knowledge, the resources, and the commitment to undertake the major institutional changes – in management, organisation, methodology, and attitude – that are needed for large-scale microfinance intermediation?

The primary institutional risk is that the microfinance institution looks at itself through rose-colored glasses. An institution that does not take a hard objective look at itself (and obtain outside ratings), and analyse carefully whether it is ready to mobilise and intermediate savings from the public, faces substantial risk if it enters commercial microfinance intermediation.

III. RISKS IN PRODUCT DESIGN, PRICING, AND PLANNING

Of the four general types of risks discussed here, risks related to product design, pricing, and planning are the easiest to manage. Successful microfinance products are not difficult to design, but they need to be planned, priced, and tested by people skilled and experienced in both demand research and financial analysis.

Of course if an institution promotes a product that requires a minimum balance of \$1,000, pays below-market interest, and limits withdrawals to one per year, it is unlikely to attract many poor savers. But savers around the world want the same things: security, convenience, confidentiality, good and friendly service, and a choice of a few products that offer different ratios of liquidity and returns – so that a saver can customise use of the products to meet his or her own demand. Institutions can easily design such products and test them for popularity and profitability, if they know how.

1. Does the institution know how to conduct demand research among a mix of clients (both genders, different income levels and occupations, different ethnic groups, etc.)?

The risk is that if the interviewers are not experienced and comfortable talking with respondents, the information collected is likely to be inaccurate (and the interviewers are unlikely to know this).

2. Is the institution prepared to set a spread between lending and savings interest rates that enables institutional profitability (and can it handle political fallout from critics on this issue?)

If not, the risk is either that the institution is unprofitable or that it becomes politicised (or both).

3. Have the managers and staff who will be involved in the pilot project been trained specifically for their new activities?

Risks commonly arise from skipping this step or from in-house training with unqualified trainers.

4. Does the institution have appropriate criteria for selecting a geographical site and a branch for a pilot project to test its first savings product(s) offered to the public? And do its managers understand how much scarce high-level managerial resources must go into a successful pilot project. (In my experience, very few institutions meet these criteria).

The risk here is that the institution does not know how to select a pilot site, how to train the staff of the pilot branch, and how to manage the pilot project. And an even greater risk is that owners, boards, or CEOs require many simultaneous pilot projects at the beginning – which cannot be effectively managed (and may not only fail but can also result in a decline in the quality of the loan portfolio).

5. Are there too many savings products planned for the pilot project?

Neophytes in microfinance intermediation sometimes think that to be successful they need to turn each suggestion uncovered in the demand research into a product. The purpose of the pilot project is to learn the priorities for products, to price them for profitability once there are hard data on account size distribution and labor costs, and to train managers and staff. The purpose is not to supply all (or even most) of the products requested by potential savers. It is too expensive to administer a large number of products, especially in the beginning. What is necessary is to design a mix of 3-4 products carefully, so that clients can customise their use of the products to suit their own needs.

The risks are that there are too many savings products that are costly to manage and to administer, and that there is too low an interest rate spread. The institution must be willing to raise interest rates on loans if this turns out to be necessary. If the institution offers too many savings products and is unwilling to make needed changes in its loan products (e.g., changing interest rates, providing individual loans), there is considerable risk that its microfinance intermediation may not be profitable.

The main risks in designing a mix of savings products are that the demand research has been faulty and the products are not attractive to savers; that the products have not been priced for profitability; that there are too many products offered; and that the large effort required for the savings work results in a decline in the quality of the loan portfolio.

IV. PRODUCT DELIVERY RISK

Institutions beginning commercial microfinance intermediation can easily fail in the delivery of savings products and in the accompanying financial intermediation required. They fail because they do not have the resources and skills to manage the product delivery or the financial intermediation, and because they do not follow an appropriate sequence of activities. Thus the coordination required among managers, staff, internal supervisors and auditors is not in place. As a result, financial management, organisational structure, information systems, training and incentive programmes, internal supervision, etc. may be inadequate, inefficient, not timely, out of sequence, and ineffective.

Both at the pilot project stage and later at the rollout, there are a number of risks. Most are directly related to risks mentioned earlier, but there is, at the product delivery stage, a risk of delivery breakdown because of a combination of individual types of risks (management risk, technical risk, human resources risk, product design risk etc.).

In my experience, most financial institutions entering commercial microfinance intermediation have difficulties with many of the delivery issues raised below, and the resultant risks can be high. Some examples:

1. Financial

- Has the institution's asset-liability management been revised to reflect the new circumstances?
- Have the transfer price mechanism and the cash management system been established well?
- Have the reporting and bookkeeping systems been adequately set up?
- Is the average account size large enough for institutional profitability?
- Is the interest rate spread adequate, and is the institution profitable?

2. Human resources

- Have the head office and branch managers demonstrated that they are capable of running the pilot and the rollout of the new products?
- Is there an effective, ongoing training system that trains all managers and staff in the institution's new approach to commercial microfinance intermediation?
- Do the staff know clearly how to operate the information systems?
- Is the internal supervision process working satisfactorily?
- Is an appropriate management and staff incentive system in place?
- Do the staff understand the different products, and can they explain them clearly to clients?
- Are there enough cashiers? (Borrowers will stand on long lines; savers will not).
- Is the information technology management and staff adequate?
- Is staff morale good?

3. Operations and logistics

- Is the management information system appropriate for the institution's needs?
- Is the space in the branch suitable for rapid expansion?
- Are transportation facilities adequate?
- Is the branch neat and attractive, with information about the new products clearly posted?
- Are the security arrangements adequate and working?
- Are there sufficient supplies of bankbooks, forms, brochures, and other supplies on hand?
- Is the reporting transparent, accurate, and timely?

4. Monitoring and analysing results.

- Is the loan portfolio quality being carefully monitored to make sure that savings is not taking so much staff time that the loan portfolio declines?
- Are careful cost analyses of the various products being carried out?
- Are staff talking to savers to get a first-hand view of their views about the new products and services?
- Is the management information system working as needed?
- Are the operations efficient?

- Are marketing efforts appropriate?

Many microfinance institutions do not meet even half these criteria when they propose to start mobilising savings from the public. And these are only examples of capacities that institutions need to have; there are many others.

If institutions cannot deliver the products and services they plan, the risks of failure can be high. Some warning signals to watch for:

- Inadequate management and coordination.
- Inadequate internal supervision.
- Insufficient training for managers and staff.
- Inappropriate incentives. (If incentives are provided only for savings, the loan portfolio can decline quickly, as staff turn their attention to finding savers).
- Security lapses and problems.
- Client complaints.
- Decline in the quality of the loan portfolio.
- Mismatched asset-liability structure (for example long-term loans and short-term savings).
- Problems in account size distribution (are there enough funds in large accounts so that the average account size is sufficiently large for profitability despite large numbers of small accounts?).
- Erratic cash management (is there enough available cash for savers who want to withdraw?).
- Overworked staff with low morale.
- Publicity about savings products that is too early and too widespread (may bring more savers than management can handle).
- Rushing the rollout. Once the pilot project (and subsequent pilot projects, as needed) have been analysed and rollout plans have been made, the rollout to all branches should proceed gradually, region by region. Training and troubleshooting by skilled (and scarce) managers needs to accompany the rollout in every region. The most serious (and most likely) problem is that the board or CEO tries to cut the process short to finance a growing loan portfolio. This is a common tendency that carries heavy risks, not only for savings but also for the quality of the loan portfolio.

The four types of risks discussed here are arranged in sequential order. Thus if the country risk is too high, the microfinance institution cannot or should not start mobilising savings from the public or intermediating until the country conditions are improved. Similarly, if the institutional risk is too high, the microfinance institution needs to work first on upgrading its ownership, governance, management, and performance.

The product design and delivery risks are often not taken as seriously as country and institutional risks. The product risk is low if the institutional risk is low (i.e., if experienced, well-trained managers are designing, pricing, and planning the products).

But the delivery risk, which is often ignored, can be high even when other types of risk are low. This is because even the best microfinance institutions are typically not accustomed to large-scale financial intermediation (among what may be a greatly increased number of customers) through many branches located far apart. This is a complex coordinating effort, requiring very high-level management skills. Delivery risk is high for most institutions beginning to collect savings from the public and entering commercial microfinance intermediation for the first time.

Attachment 7: Internal Control Questionnaire**Cash**

1. Is all cash kept in a locked vault or safe during non-banking hours?
2. Is the vault protected by an adequate burglary and/or robbery alarm system?
3. Is the vault opened at the latest and closed at the earliest practical time each business day?
4. Is the vault opening regulated by a time-lock mechanism?
5. Is the vault reserve cash assigned a special compartment protected by a dual locking mechanism?
6. Is the movement of vault reserve cash subject to joint custody and record keeping?
7. Is a record maintained showing denominations and amounts of reserve cash?
8. Does each teller have his or her own cash fund?
9. Is each teller supplied with his or her own vault compartment for overnight storage (of keys and stamps at least if cash is sold to the reserve at each end of day).
10. Does each teller's work space provide a locked storage facility to individually guard his/her cash supply during any and all absences?
11. Is each teller station protected by robbery alarms?
12. Is special security protection provided for the head cashier, cash courier, and large transaction stations?
13. Does teller management prescribe and enforce cash limits for each teller fund?
14. Is the cash total maintained at each branch kept to prescribed levels, and are levels reasonable?
15. Do tellers specially protect excess working cash?
16. Are inter-teller transfers made by vouchers verified by both tellers?
17. Is each teller's cash checked daily to a control total developed by the accounting system?
18. Is each teller's cash periodically verified on a surprise basis by designated individuals, and is a record of the count retained?
19. Are each teller's funds counted before the teller's leave and after an unexpected absence of more than one business day?
20. Do tellers place identification on all transactions and currency straps (if used)?
21. Do tellers provide receipts to customers for all transactions?
22. Are tellers required to turn over currency and coin inventories so that packages, bags, and rolls are not held indefinitely?

23. Do tellers participate in a structured training programme that provides guidelines for handling all types of transactions?
24. Is there a policy against tellers holding a fund of cash from overages to offset shortages?
25. Are minimum aptitude, experience, and character qualifications required for teller employment?
26. Are tellers closely supervised, assisted, and trained on the job?
27. Are tellers rotated?
28. Is a two-week leave or absence rule enforced?
29. Are tellers prevented from having access to accounting records, once processed?
30. Are teller duties restricted to teller operations?
31. Are teller differences cleared daily?
32. Are differences attributable to each teller recorded and accumulated?
33. Is the cash difference record reviewed by management?
34. Are tellers instructed to keep cash out of reach of customers?

ATMS and PINs

1. Is daily access to the ATM under dual control?
2. When maintenance is performed on an ATM, is a bank/MFI representative required to be present?
3. Are combinations and keys to ATM's controlled?
4. Do the location, lighting, and construction of the ATM provide adequate security for customers and servicing personnel?
5. Are customers PINs mailed/delivered separately from ATM cards?
6. Are bank personnel who have custody of cards prohibited from having custody of PINs?
7. Are captured cards placed under joint custody of persons not associated with bank card operations or PIN issuance?
8. Are blank plastics and magnetic stripe readers under joint custody or dual control?

Interoffice/Interbranch Transactions

1. Are the suspense accounts for interoffice/branch transactions reviewed daily by a designated person?
2. Are items that have been cleared by the originating office scrutinised closely?
3. Are the transactions recorded on two-part forms that identify the sending and receiving offices and the party initiating the transfer entry?

4. Is there a definite procedure, supported by bank/MFI policy, to send out tracers on a timely basis?
5. Is the reconciliation activity performed at a central location by a person or group with no authority to originate interoffice/branch transactions or handle cash?
6. Is the reconciliation activity reviewed periodically by someone other than the person who regularly performs the function?

Due from Bank Accounts (Nostro Accounts)

1. Are only designated officers allowed to draw on due from bank accounts?
2. Are only limited balances kept in accounts that may be drawn upon by drafts?
3. Are all drafts prenumbered, and is a separate series used for each bank?
4. Are drafts outstanding for six months placed under special controls?
5. Are due from bank advices, paid drafts, and statements sent directly to an independent reconciling unit within the bank/MFI?
6. Are reconcilers denied the authority to draw on due from bank accounts?
7. Are reconcilers prohibited from other cashing or authorisation duties such as handling cash, or securities, or making vouchers to the general ledger?
8. Are all due from bank accounts reconciled regularly in accordance with an established frequency schedule?
9. Is a separate general ledger account or individual subsidiary account established for each due from bank account?
10. Are bank statements satisfactorily reconciled on a timely basis with individual difference items, identified by date and amount?
11. Are bank statements examined for alterations, and do reconcilers compare paid drafts individually or in total with such statements?
12. Are adequate reconciliation records maintained?
13. Are the reconciling items clearly described and dated?
14. Are the bank's/MFI's policies with regard to due from bank activities formalised and approved by the board of directors?
15. Are approved depositories designated?
16. Are guidelines established for average balances to be maintained at each depository?
17. Are the identities of authorised personnel and the limits of their authority specified?
18. Is the officer or supervisor responsible for timely and accurate reconciliations specified?

19. Are guidelines established for the write-off of old reconciling items?
20. Is the write-off policy reviewed annually?

Credit Products

1. Is the bank's/MFI's loan policy formalised and approved by the board of directors?
2. Does the loan policy specify lending limits for various ranks of officers and loan committees?
3. Has management set guidelines for:
 - a. Board review of significant loans and renewals?
 - b. Allocation of credit by general categories (products) of loans?
 - c. Defining the bank's/MFI's primary market area?
 - d. Setting rates of interest and fees?
 - e. Setting a range of acceptable terms for the various credit products?
 - f. Defining, reporting and following up of non-performing loans?
4. Are deviations from loan policy approved by the proper authority?
5. Are there procedures for periodic reporting of concentrations of credit?
6. Are all loans serially numbered and recorded?
7. Are notes/loan agreements protected during banking hours and housed in the vault overnight?
8. Are all notes/loan agreements initiated by the approving loan officer?
9. Is there an adequate audit trail of loan proceeds disbursed, such as disbursement by cheque or deposited to the borrower's account?
10. Is there a signed application on file for each loans?
11. Are credit files set up for each borrower?
12. Do the credit files contain:
 - a. A statement regarding the purpose of the loan
 - b. A statement of the disposition of proceeds?
 - c. Planned repayment schedule?
 - d. Current financial statements?
 - e. Memoranda of discussions with borrower?

13. Are loan accounting records prepared and posted by someone who does not handle cash or issue official cheques or drafts under his/her own authority?
14. Are loan records posted and reconciled with the general ledger control accounts daily?
15. Are reconciling items investigated by someone who does not handle cash?
16. Are loan balance/payment inquiries handled by someone who does not handle cash?
17. Are paid notes/loan agreements and related documents returned promptly to borrowers and canceled or marked “paid” where appropriate?
18. Are past due account reports prepared by someone other than a teller or cash handler?
19. Is there a systematic and progressively stronger follow-up procedure for past due loans?
20. Is there a systematic procedure for reporting special condition loans (such as single payment, loans in arrears, problem loans, such as those requiring rescheduling, etc.) to the board of directors?
21. Is the bank/MFI’s compliance with all pertinent laws and regulations enforced, documented, and reviewed?
22. Are data processing personnel prohibited from making or adjusting entries to borrower’s accounts?
23. Is an exception report produced and reviewed by operating management to cover loan extensions granted, renewals made, or any other factors that result in a change in the status of the borrower’s account?
24. Does a status change for a borrower require two authorised signatures?
25. Are delinquency lists generated on a timely basis?
26. Does the board regularly receive statistical reports describing the overall performance of the loan portfolio?

Collateral/Securities

27. Is all collateral (securities) receipted with multi-copy, prenumbered forms that provide a customer receipt, credit file receipt, and vault receipt?
28. Is all collateral/security held under joint custody, and do the collateral forms provide for the initials of the joint custodians on all collateral movements?
29. Are the receipt and release of collateral handled by someone who is not involved in the joint custody operation and who does not make entries in the collateral register?
30. Are pre-numbered “out” tickets used to control securities temporarily removed from safekeeping?
31. Are adequate procedures in effect to monitor the value and condition of all collateral?
32. Are adequate procedures in effect to protect and perfect the bank’s/MFI’s security interest in all collateral?

33. Are adequate procedures in effect to ensure that the bank can promptly liquidate its collateral if necessary?

Interest and Fees

34. Has the bank/MFI established definite loan rate and fee policy guidelines for various credit products?
35. Are rate and fee terms for large loans recorded in the minutes of the loan committee that approves the loan?
36. Are the exact terms (basis of interest and fee computations, rate, and amount of fees) stated in every loan agreement?
37. Do changes in terms require the formal approval of the person or group authorised to grant the loan?
38. Are customers provided formal receipts for their loan payments that are dated and identify the persons receiving the payments?
39. Is the accrual of interest and loan fees performed by persons who do not perform loan authorisation and payment collection duties?
40. Is there a definite policy established for determining at what point of delinquency interest accrual will be stopped?
41. Are the rates and amounts of loan income expected for the year and for each month set down in a formal budget, and are variances analysed and corrective action taken?

Loan Losses

42. Has a formal policy been adopted for writing off assets?
43. Does that policy specify write-off criteria, procedures for periodic review, and collection efforts to be undertaken?
44. Are all write-offs reviewed and approved by the board of directors or their designee?
45. Does management evaluate the adequacy of the general reserve at least quarterly? And does this review consider past loan loss experience, lending policy effectiveness, changes in the character of the loan portfolio, current economic conditions, and status of problem loans?
46. Are notes/loan agreements representing written-off loans placed in joint custody and is supporting collateral adequately protected?
47. Are written-off loan records prepared and posted by someone who does not handle cash or issue official cheques/drafts under his/her own authority?
48. Are the record keeping and collection functions segregated?
49. Are collection efforts reasonable and effective?

Fixed Assets

1. Does the MFI's/bank's inventory control system provide controls over access to movable property?

2. Are signed receipts required for the removal of equipment?
3. Are subsidiary records maintained for all assets?
4. Do these records contain asset descriptions, serial or tag numbers, cost, insured value, estimated life, and residual value?
5. Do the asset records, or separate depreciation records, also contain a history of the accumulated depreciation balances and the net book values?
6. Are the subsidiary records posted by someone who does not have sole custody of property?
7. Are the purchase of real estate and all other major purchases approved by the board of directors?
8. Are items ordered and purchased using consecutively numbered requisitions?
9. Are purchasing and sales activities segregated from the bill paying function?
10. Does the bank/MFI's policies and procedures preclude conflict of interest or self-dealing in the selection of vendors, servicers, and insurers?
11. Is a physical inventory of fixed assets taken annually?
12. Are the property records balanced to the general ledger control accounts at least annually by someone who does not also have sole custody of property.

Savings Deposits

1. Are the Rules and Regulations governing savings deposits established, approved by the board of directors, and published?
2. Are new accounts personnel prohibited from performing teller and accounting duties?
3. Are signature cards and other appropriate account opening identification obtained and filed when accounts are opened?
4. Are special resolutions obtained designating the authorised signatories for organisation accounts?
5. Are account numbers assigned in an orderly and controllable fashion?
6. Are original passbooks pre-numbered?
7. Are reserve supplies of passbooks maintained under joint custody?
8. Do teller supervisors maintain physical control over working supplies of blank passbooks?
9. Do supervisors maintain a log of blank passbooks issued, including account number?
10. Do tellers issue receipts for all deposits, including date, amount of deposit and teller identification?
11. Are tellers prohibited from holding customer passbooks?
12. Are tellers prohibited from holding over savings transactions from one business day to another?

13. Do tellers stamp the date and a teller identification number on all transactions accepted?
14. Are subsidiary controls reconciled to the general ledger daily, and are reconciling items investigated by persons who do not handle cash or post savings transactions?
15. Are reconcilements reviewed by an independent officer?
16. Are reconciliation duties rotated on a formal basis?
17. Are customer differences and complaints handled by someone who does not receive, process or post savings transactions?
18. Does the control system provide for placing holds on accounts requiring special attention (e.g., dormant accounts, deceased owner accounts, lost passbook accounts, accounts pledged as loan collateral, accounts requiring further data, etc.)?
19. Do overrides require supervisory intervention and approval?
20. Is each override recorded and reported in special exception reports?
21. Do withdrawals over a certain amount require supervisory approval?
22. Is a closed account report generated and circulated to designated officers?
23. Are signature cards on closed accounts transferred immediately from the active to the closed file?
24. Are accounts with no activity for a specified period transferred to dormant status and placed under dual control?
25. Are signature cards on dormant accounts removed from regular files and placed under joint custody?
26. Is interest calculated and credited to customer accounts independently? Is this done by persons free from teller, account opening and general accounting duties?
27. Are employee account transactions specially classified, reported, and reviewed?
28. Are negative savings balances reported as exceptions?
29. Are interest accrual adjustments specially approved and reported?
30. Is savings interest expense accrued and budgeted and are variances analysed?
31. Are interest journals reviewed by independent personnel and are large amounts reviewed/recalculated?
32. Are exception reports reviewed by a control person who does not receive, process or post savings transactions?

Fixed Deposits

33. Has the MFI/bank established a formal policy, approved by the board of directors, governing the fixed deposit function?

34. Is each depositor required to complete and sign an application in which penalty provisions for premature redemption are disclosed?
35. Are blank supplies of fixed deposits subject to joint custody?
36. Are supervisory checks made periodically to ensure that all fixed deposits in recent numerical sequences are accounted for?
37. Are all fixed deposit contracts countersigned by an independent bank/MFI official?
38. Is special approval required for premature redemption?
39. Are all fixed deposit receipts cancelled as redeemed?
40. Are certificates transferred to a non-interest bearing demand deposit general ledger classification at maturity?
41. If a matured fixed deposit continues unredeemed and the owner cannot be contacted, are dormant deposit controls instituted?
42. Is the interest expense on fixed deposits accrued and budgeted, and are budget variances (both volume and rate) analysed?

Security

1. Do the windows permit a clear view of the MFI's/bank's interior and are they kept reasonably unobstructed?
2. Have exterior lights been installed to illuminate all darkened or shadowed areas around the bank/MFI?
3. Is the vault area illuminated at night?
4. Is there an emergency lighting source?
5. Are the locks on exterior doors and windows temper-resistant?
6. Are doors and windows equipped with steel bars or other burglar-resistant materials?
7. Are door and window hinges securely fastened so that they cannot be easily broken or forced?
8. Are all unusual entrances (air conditioner intakes, manholes, skylights, etc.) protected by an alarm, steel bars, etc.?
9. Is there a regular procedure for securing side and back doors while the bank/MFI is open for business?
10. Are all entrances to the teller work area locked while the bank/MFI is open and/or while customers are in the bank/MFI?
11. Is there a documented procedure for opening and closing the building and vaults that protects against attacks?

12. Are armed guards on duty in the lobby during banking hours?
13. Do police periodically check the bank/MFI during non-business hours?
14. Are regularly scheduled meetings held with local law enforcement representatives?
15. Are there alarm activating devices at lobby teller stations?
16. Can these activating devices be operated unobtrusively?
17. Is the alarm system tested periodically?
18. Is there an emergency power supply for use if the regular supply fails?
19. Are vaults made of steel-reinforced concrete?
20. Are vaults equipped with a dial combination lock, a time lock, and a substantial lockable day gate?
21. Are safes too heavy for relatively easy removal, and are they securely anchored to the premises?
22. Are safe doors equipped with a combination lock?
23. Are the vault walls, floor, ceiling and door protected by an alarm system?
24. Is the vault equipped with an alarm or telephone so that an employee locked in the vault can sound an alert?
25. Is opening of the vault under dual control?
26. Is there a standard operating procedures for the safe transit of cash not needed at each office?
27. Are precautions taken to prevent theft of all un-issued forms, cheques, drafts, etc.?
28. Are tellers and other lobby personnel regularly trained in robbery and post-robbery procedures?

Emergency Preparedness

29. Does the bank/MFI have a formal emergency preparedness plan that has been reviewed and approved by the board of directors?
30. Does the plan provide for alternate physical facilities in the event that the MFI's/bank's headquarters or other vital facilities are destroyed?
31. Are vital records protected by duplication and safe off-premises storage?
32. Is there a plan for continuity of management?
33. Does the plan provide for the personal safety of employees and customers?
34. Is a training programme for dealing with emergencies provided to all employees?

Insurance

35. Has the bank's/MFI's policy with regard to insurance been approved by the board of directors?

36. Does it call for formal analysis and consideration of all insurable risks and types of coverage?
37. Are professional risk-management consultants used in deciding amount available carriers, coverages, and limits?
38. Does the bank/MFI retain all insurance policies in an orderly file, and are all riders and endorsements attached to the policies?
39. Are policy expiration dates properly diarised to assure prompt payment of renewal premiums?
40. Are competitive proposals evaluated in choosing carriers and policies?

Computer Processing³⁷

1. Is there a steering committee reporting to the board that sets priorities, allocates resources, and oversees status of projects?
2. Are major system and equipment changes approved by the board of directors or steering committee?
3. Are key IT positions filled by qualified people?
4. Is the financial viability of a major software or systems provider reviewed periodically?
5. Is eating and drinking at workstations prohibited?
6. Is access to the server room restricted to identified personnel?
7. Is access to the server room controlled for cleaning or repair personnel?
8. Are housekeeping procedures adequate to provide reasonable assurance against accidents and fire to server room?
9. Are computer operations performed where they cannot be seen by the general public and unauthorised visitors?
10. Does the server room have heat or smoke detectors, temperature/humidity control equipment, water sensors, and alternate power supply (UPS system)?
11. Are electrical panels properly labelled to indicate computer related equipment?
12. Is power for air conditioners separate from power supply for computers?
13. Are emergency plans for computer processing included in the bank's/MFI's emergency preparedness plans?
14. Do emergency plans include procedures for the safe storage of data files and documents?
15. Do emergency procedures include power-off procedures, restart, and recovery procedures for equipment failure?

³⁷ EDP Auditing Guide, Gordon Morris Associates, Bank Administration Institute, Illinois, 1991.

16. Does the contingency plan specify conditions for off-site processing?
17. Are contingency plans periodically tested?
18. Is there a policy for retention of back up data files to ensure that adequate recovery capability exists?
19. Is back up data secured daily or sent to an off-site location with suitable storage conditions?
20. Are there operating manuals for the system and users, including error messages with appropriate responses, restart and recovery procedures?
21. Is there a maintenance agreement on computer equipment? If so, is maintenance performed according to a predetermined schedule and is it documented?
22. Are programmers prohibited from running test programmes against live production files?
23. Have controls been established for each source of data entering the automated system?
24. Is output reconciled to input by persons not responsible for the data entry?
25. Are all new account and file maintenance transactions in writing, with originator identified, and bear supervisory approval?
26. Are new image files reported for review, and are these reviewed by a person not responsible for their data entry?
27. Are parameter changes properly approved, documented, and tested?
28. Are parameter changes reported and reviewed by an appropriate officer?
29. Is access controlled by user IDs and passwords that are tracked by the system and reported?
30. Are changes to access levels reviewed by an appropriate officer not responsible and without ability to initiate such changes?
31. Are user passwords periodically changed? Does system enforce password changes?
32. Are access levels at a sufficient level to allow person to perform duties, but no more?
33. Are controls in place for vendor supplied changes to insure proper installation?
34. In a network environment, are there terminal controls, such as ID numbers, locks, etc.?
35. Is there a separation of duties between programmers and computer operators?
36. Are all installation disks safeguarded?
37. Is there a recovery procedure when a new version of a tested programme fails to work in production?

Attachment 8: Case Studies: Common Issues/Lessons Learned

What follows is a summary of our findings from our visits to four *MicroSave* Action Research Partners (ARPs). Separate confidential reports were prepared for each individual ARP and have been given to *MicroSave* under separate cover.

1) Overview

Based on our terms of reference from *MicroSave*, our field work was directed towards four of ARPs that are facing four different product development challenges:

- a) Tanzania Postal Bank (TPB), historically a savings bank, is currently diversifying into credit products
- b) Teba Bank is diversifying into a wide variety of credit, savings and insurance products while simultaneously introducing major systems changes.
- c) FINCA-Uganda, a village banking programme with compulsory weekly savings requirements for members, is diversifying into voluntary savings products
- d) Equity Building Society (EBS) is growing very fast, introducing modifications to existing products, and is currently doing the ground –work to diversify into unsecured microcredit lending.

All four ARPs are introducing new products at the same time as undergoing other major organisational changes. Together, they are:

1. Diverting resources away from the new product development processes; or
2. Diverting too many resources to the new product development process (e.g. risk event is slippage of internal controls at branches, which results in an increase in fraud)
3. Diverting resources away from their core business (Teba – mining; Finca –village banking).

Individually, the major organisational changes are:

- Finca is transforming into a MicroFinance Deposit Taking Institution
- EBS is experiencing very high growth (50% - 100%)
- TPB is expecting to be privatised in the near term
- Teba Bank was formed in 2000, and is preparing its infrastructure for expansion into new markets with new products.

Despite our search for differences in the challenges facing savings organisations moving into credit (e.g. TPB, EBS), or credit organisations moving into savings (e.g. Finca), what we found, more often, were striking similarities in the challenges faced by all.

This should hardly be surprising, as microfinance expert Marguerite Robinson writes:

“It should be noted that many of the most common and serious risks are related not to products – as is often assumed by about-to-be-regulated microcredit institutions – but rather to ownership, management, and institutional capacity to deliver products.”³⁸

Each of the above three circumstances (rapid growth; new market and new product introductions; and major organisational and structural changes (e.g. dealing differently with agency organisations; transformation) should trigger an institutional risk analysis. We noted, however, that risk management is either not present, or is a fledgling process in most organisations and as yet, risk management is not addressed at appropriate intervals in the new product development process. As a result, not all risks are fully identified and mitigated.

What follows is a brief discussion of some of the common findings and lessons across the cases visited.³⁹

2) Organisational Change

The four ARPs visited are dealing with growth, organisational change, new markets, new products, and a multitude of projects in variety of ways:

- Hiring additional consultants
- Employing tried and tested consultants
- Bringing in outside company help (where there are international ties)
- Using cross-functional teams
- New staff hires
- Employing a Project Management Process

We found the Project Management Process used by Teba Bank to be a particularly useful tool to help fast growing, resource –short organisations schedule multiple tasks and projects concurrently, prioritise human resources and manage growth. Having all projects inside one project office helps senior managers to prioritise and allocate resources appropriately. Risks are better managed when there is a clear line of responsibility to a particular individual. The project management process also helped facilitate proactive management of product or project risks.

3) Proactive Risk Management

Typically project development teams make two timing mistakes regarding risk management. We saw elements of both of these mistakes in our field work.

The one mistake is to wait until late in the project when many of the risks start occurring. This creates three problems:

- Because the cost of making changes rises greatly during a project, late attention to risks often leads to expensive work arounds.
- Late discovery of potential problems precludes solutions that would have been available earlier.

³⁸ Introducing Voluntary Savings from the Public in Regulated Microcredit Institutions: What are the Risks?, Marguerite S. Robinson, November 2002.

³⁹ Note that our field visits were on average three to four days long – far too little time to do an in-depth institutional and product related risk review. Each participating organization has, however, been presented with a 10-page confidential report outlining some of our preliminary findings.

- Late surprises are more disruptive to the schedule, due to the more limited timeframe to develop adequate means of resolution.

The other timing mistake is to let risk management lapse. People are often very diligent at identifying and listing all the risks and building in some risk management deliverables into the early stage of the project. They are then very quick to go on with their ‘real work’ of developing the product. When risks occur, they are caught in the same position as those who never identified risks. Using the tools in this manual to monitor risks on a regular basis and/or the Stress Checklist when a trigger event demands that an ad hoc risk evaluation should be done, are both powerful tools to help management proactively manage risk.

A well managed project management approach that explicitly recognises risk identification and mitigation tasks as one of the components at each step of the process is once again useful in that it:

Establishes dates for completion of major tasks and steps (including risk management); and

Identifies interrelationships and dependencies of major tasks and steps.

4) Counterparty Risk

We found counterparty relationships at variance with organisational cultures and missions: Tanzania Postal Bank delivering its core savings product through inefficient postal agencies; Finca Uganda’s efforts to be market responsive constrained by Finca International; and Teba Bank, delivering its core savings product through Teba Ltd.

In two cases, agency agreements were negotiated or renegotiated between the banks’ and their agencies in an effort to mitigate risks and enforce compliance. These agreements generally occurred far too late in the process, with a lot of damage already done. In other cases, the problem is recognised, but insufficient action is being taken to change the behavior of key individuals who could influence the process.

It is important to identify stakeholders and third parties’ that can have a strategic and often detrimental impact on your business’s profitability and reputation early in the process. This risk should be identified with strategies developed to mitigate it at an institutional level, and should be revisited quarterly.

It is likely that Counterparty risk will increase as MFIs and Banks increasingly become reliant on others – sometimes even for elements of their core business.⁴⁰

5) Staff/Human Resources Findings / Lessons

First and foremost, it takes people, not systems, to bring new products to market. Systems can only do what people design: from focus group definition of product needs, to product design, marketing, testing, decision-making, training, and eventually rollout. Different people have different skills and responsibilities. These skills need to be merged with systems.

Across all four field visits, we noticed that issues to do with staff skills, recruitment and other human resource functions were neglected until far too late in the product development process, putting extraordinary pressure on budgets and the training department. Sometimes products were introduced without staff having the necessary training. Organisations placed their focus on either the technical aspects or the market product drivers, ignoring human resource issues until too late. The fact that

⁴⁰ We have included a note on Counterparty Risk in our Tool Kit.

there are risks associated with human resource management was also overlooked by Human Resource Managers. Examples of such risks include:

- a) Risk Event: Insufficient/mismanaged staff resources available for new product development. The pulling of staff for project/product development makes ongoing tasks difficult, causes stress to individual and organisation. Risk: Lose focus on your organisation's core products and customers.
- b) Risk Event: Insufficient staff skills. New products often require skills not available in-house. Risks: 1) Hiring from without places existing pay scales at risk, 2) Using external expertise may not build in-house capacity.
- c) Risk Event: Flood of new hires. Significant increase in numbers of new staff to bring into corporate culture and methodologies. Risk: these new staff members bring prior incompatible and/or undesirable cultures and methodologies with them.
- d) Risk Event: Loss of key staff. Risk: Losing a key staff member involved in the new product development process obviously places the process in jeopardy.

We noted the existence of the first 3 risks in our field work, and all ARPs are subject to the fourth risk, the loss of key staff. Mitigation strategies observed included: hiring of consultants to do short term assignments who were then hired as full-time staff; applying a project management process (see below).

6) Product Development

a) Cross-functionality Findings

Because a lot of the effort that goes into a product is technical and systems driven there is a tendency to sometimes ignore non-technical risks. We noticed that products are sometimes 'developed' in the narrow confines of a particular technically or systems driven department. However, the factors that drive new product success depend on having unique, superior and differentiated products with a strong market orientation and product definition.

We also noticed the opposite to be true in other more customer and market led organisations. These organisations paid far less attention to operational procedures and system issues.

Truly cross-functional teams (as opposed to "fake" *cross-functional* teams who meet but with no department taking responsibility for their functional contribution) are necessary to provide the necessary soft and hard skill components to the product development process.

b) Product costing and pricing absent or inadequate.

Only two of the four ARPs visited did product costing. Risk: Without any profitability analysis, how do you know how to allocate resources against projected income streams?

- c) Absence of sufficient expenditure control for products.
- d) Communication inadequate across organisation:

Our findings varied across organisations. The most serious communication gaps relate to a lack of integration between the technical and marketing sides of the organisation. In

one organisation, the IT and Accounting departments did not know that a new product was being introduced.

- e) Too much reliance on the pilot process to identify risks that should have been identified earlier
- f) Too much reliance on Internal Audit to find and resolve all risks. Operational managers are not viewing themselves as risk owners.
- g) Too little attention to policies and procedures as a risk mitigation strategy. In many cases, they are simply absent.
- h) All ARPs visited are in the process of introducing several new products at a go, and learning the product development process at same time. Because of pressures to get products on the market, several lessons have been learned:
 - In general, *MicroSave*'s pilot testing methodology works to mitigate risks in introducing new products, and is especially effective in addressing the major risk of entering a new market with an untested product. We noted in all of the organisations, that when the model was not used or due to pressures to put the product on the market, corners were cut, resulting in problems-problems with product features, counterparties, and operations. In one ARP, when the pilot model was used, it was the only product with no problems reported by any of the departments interviewed.
 - Prototypes do not replace pilot tests for new products
 - Organisations do not take the step to centralise lessons learned from pilot projects. This is an important step in institutionalising the pilot project methodology. None of the ARPs visited have institutionalised the process.
 - Products in some regions of the country don't necessarily transplant as well to other regions, nor do some marketing materials.
 - Some product assumptions based on existing markets are erroneous when used for markets new to institution. While these may be the only basis upon which to formulate assumptions for purposes of costing and pricing, it is important to recognise very early on in the pilot stage that the assumptions require revision.
- i) Having said that the pilot test process has not yet been institutionalised, we found that more attention appears to be paid to the pilot phase, and less on the actual roll out. There are risks specific to the roll out process that are not addressed in the pilot phase, due to the necessary limitations of scale in the pilot phase.

7) Credit

- a) All ARPs are struggling with credit products, primarily with introducing an individual lending product that is unsecured and demands 'real due diligence.' Individual loan products to date have methodologies that exhibit little in the way of underwriting skills. Most ARPs visited use group and/or salary/income based lending methodologies. The risk is that the institution is still not meeting market needs in its products and clients will pursue other financing options.
- b) The MIS in most cases does not focus on key portfolio quality indicators, namely portfolio at risk and tracking of rescheduled loans. The risk is that deteriorating portfolio quality will not be recognised and dealt with in a timely manner.
- c) In general, and across product lines, reports are poorly designed as a monitoring tool for higher level managers to monitor risks.

8) Training

After stressing the challenges to do with fast growth, interviewees named Training as a key weakness in the new product development processes at their organisations. The need for effective training for new products, customer care, and sales focus for sales staff coupled with sales management (soft skills) for managers were the most frequently identified components. A valuable lesson learned was that training via policies and procedures manuals was not adequate. Training needed to be participatory, hands-on sessions where staff learn how to manage processing issues and customer questions.

9) Systems

- a) All organisations are dealing with both systems and telecommunications issues. The optimum goal of operating WANs with real time processing to a centralised database is a common thread amongst the organisations. This configuration has high up front capital costs, requires outside expertise, and project integration. The reliance on external expertise and vendors leads to counterparty risk, as well as financial and reputation risk.
- b) In general, there is too much focus on the software component and far too little emphasis on its compatibility and functionality with the telecommunications system. It is precisely this absence of focus that has caused major problems across several MFIs in East Africa.
- c) One risk identified by an ARP was that of being system-driven rather than product-driven (as per market research). He noted this could happen whether software is developed in-house or off-the shelf-software.

Attachment 9: Sample Risk Events by Risk Areas

Below are some risk events commonly found amongst MFIs listed by categories. This list is not meant to be all-inclusive, but is meant rather to serve as a guide to help you think through risk events that could be present in your MFI for inclusion on the Institutional Risk Assessment Tool. Because a risk event is currently not visible in your MFI does not mean it should be eliminated from your risk events listed in the Institutional Risk Assessment tool; if it is possible for the risk event to occur, it should be included to ensure that it is not overlooked, as part of a proactive risk management approach.

Risk Areas	Risk Events/Considerations
Credit Risk	
1. Credit Products	-Concentration of loans by sectors make MFI vulnerable to nonpayment of loans due to drops in market prices
	-Concentration of loans by sectors make MFI vulnerable to nonpayment of agricultural loans due to crop failures
	-Failure of borrower to pay
	-Failure of guarantor to pay
	-Late payments result in opportunity cost and high monitoring costs
	-Security documents do not exist, or are fraudulent, preventing realisation of debt from sale of security
	-Credit is extended to non-creditworthy and/or non-existent borrowers
	-Concentration of investments in one type of debt instrument
	-Interest and/or default on investments
	-Late payments result in increased monitoring costs and opportunity cost of funds not available to invest
	-Relaxed credit standards and/or preferential terms for loans to insiders and related parties
	-Bank failure of Nostro
	-Accepting LCs with documentary errors
	-Default of advance against LC
	-Default on a guarantee issued
	-Failure to continue collections on charged off loans
	-Unreimbursed staff advances
	-Lending below market rates (subsidised rates)
	-Managers do not understand credit process because they have been trained in social work
2. Settlement Risk	-Delay in settlement is an opportunity cost
	-Failure to settle
3. Counterparty	-Delivery of products occurs at non-MFI outlets
	-Western Union fails, or fails to perform/settle
	-Telecommunications company used for processing data fails to perform
	-IT vendors who support systems do not function holistically
Market Risk	-Insufficient collateral value to liquidate debt
1. Interest Rate Risk	-Mismatch of rate on source of funds to repricing opportunity for rates received on funds used
	-Investments locked in at then high rates, and interest rates increase
	-Interest rates drop beyond budgeted projections

Risk Areas	Risk Events/Considerations
2. Foreign Exchange Risk	-Vendor payments stipulated in a foreign currency
	-Changes in forex rates occur faster than MFI can effect changes within organisation
	-Imbalance between assets and liabilities denominated in foreign currencies may cause revaluation loss.
	-Foreign bills are return unpaid
	-Sales of Foreign currency through Nostro due to liquidity needs may not be at an advantageous rate
Liquidity Risk	-Demand for loanable funds exceeds capacity to raise funds
	-Loss of income from early maturity of investments
	-Insufficient funds to meet obligations to vendors
	-Customer demands for withdrawals exceed liquidity available to honor requests.
	-Insufficient funding to fund expansion
Management Risk	-Management override of controls
	-Gap in management succession
	-Inappropriate span of control
	-Lack of cohesive management team
	-Delegations of Authority commensurate with responsibilities
Ownership and Governance Risk	-Board composition/quality
	-Governance emanates from outside the organisation, such as a government-owned bank, preventing organisation from being competitive with respect to pay scales in the financial sector.
Subsidy Dependence Risk	-Donor withdraws product funds without notice
	-Technical Assistance is withdrawn and skill transfer to MFI has not occurred
	-Dependence on subsidies to operate
Operational Risk	
1. Transaction Errors	-Inaccurate accounting data leads to incorrect decisions
	-Bank reconciliations not completed or not completed in a timely manner lead to losses
	-Interbranch reconciliations not completed, or not completed in a timely manner lead to losses
	-Inability to track fixed assets
	-Failure to pay staff accurately and timely
	-Paying against uncollected effects
	-Payout of incorrect amounts
	-Payments to wrongly identified parties
	-Procurement results in inferior quality goods
	-Procurement results in excess payment for goods
	-Procurement of unnecessary goods
	-Unreimbursed imprest funds

Risk Areas	Risk Events/Considerations
	-Unauthorised access to premises, strong rooms, safes, and files
	-Unauthorised issuance of cheques drawn on Nostro accounts
2. Fraud and Robbery	-Outright theft of cash by staff
	-Forged cheques by customers
	-Loss of cash due to robbery
	-Forgery of bank evidentiary documents (passbooks, receipts, bank cheques, etc.)
	-Fictitious/fraudulently opened customer bank accounts
3. Information Technology	-Virus attack causes loss of data or system failure
	-Data corruption causes data to be unreadable, inaccurate, or inaccessible
	-Processing/MIS systems do not meet MFIs needs
	-MFI cannot source or outsource IT support for systems
	-Confidentiality of data is breached
	-Communications network goes down
	-Hardware, telecommunications and software not compatible/inefficient
	-Insufficient audit trail
	-Unable to retrieve stored or historical records
	-System bugs
	-Systems and power supply failure
	-Equipment maintenance not available
	-Unauthorised changes to database
	-More sophisticated systems are less understandable and visible
	-Abuse and security breaches
	-Design and acceptance testing errors
	-Inadequate functionality
	-Teleworking & remote access circumvent visual & other human controls
4. Human Resources	-Staff do not have the skills needed to perform their duties
	-Inappropriate staffing levels
	-Staff do not perform to required levels
	-Inability to recruit professional/technical staff at standards needed
	-Training does not target bank's needs (does not support strategic objectives)
	-Paying low salaries (below average market salaries)
	-Loss of key staff
	-Poorly motivated and inexperienced staff
5. Finance	-Misstated accounts/financial statements issued to regulators, shareholders, and public result in penalties, wrong decisions, loss of reputation.
	-Accounting done by staff with little experience
Reputation Risk	-Negative public opinion from non-performance of promised products/services
	-Negative public opinion from actions taken by MFI or its representatives
Strategic Risk	-Loss of market share
	-Dependence on a single product
	-Products not profitable and/or in alignment with strategic objectives

Risk Areas	Risk Events/Considerations
	-Budgeted allocation of resources not in alignment with strategic objectives results in failure to meet objectives
	-New ventures not supported by adequate institutional capacity
	-Transformation from NGO to MDI
	-Services contracted for at unfavorable terms and conditions to MFI
	-Adverse earnings create non-compliance with central bank ratios and MFI no longer has the funds to spend on its strategic objectives
	-Business operations are decentralised & geographically dispersed, often in remote regions with inadequate infrastructure.
Legal/Compliance Risks	-Penalties imposed by failure to report to Central Bank
	-Penalties imposed by failure to remit taxes
	-Penalties imposed by failure to comply with banking regulations (borrowings of related parties, financial ratios such as capital adequacy, fixed asset/core capital, etc.)
	-Execution of contracts without sufficient knowledge of legalities
	-Violation of labor laws
	-Non-compliance with money laundering reporting requirements
Exogenous Risks	-Business interruption due to natural disaster
	-Fire

ATTACHMENT 10: ILLUSTRATIVE SIMPLE PROJECT MANAGEMENT PROCESS

Step 1: Project Initiation Process

Build a case for action and align key stakeholders; the executive committee appoints a project sponsor who is responsible for examining and justifying the benefit of the project to the organisation.

It is important from the outset to establish a framework and the management support needed to ensure successful project efforts. The case for initiating the new product development or project should be documented. The characteristics of a case for action should be:

- Clear
- Concise
- Indisputable
- Explain why the change is necessary

The project sponsor develops the Business Case for undertaking the new product development. The purpose of this step is for the project to gain the approval and support from the organisation's controlling body to start spending time and money on the planning phase of the project. The Business Case is put forth in a project charter.

Key managers are aligned when they:

- Largely agree with the objectives of the effort
- Are willing to visibly support the effort
- Contribute top resources to working teams
- Make the project a high priority
- Work for bank-wide solutions
- Have a 'we' not a 'they' attitude towards the effort

Make sure to get the right players on the team:

- Understand their critical project roles
- Recruit to fill these gaps
- Train where necessary

Get the players actively involved by:

- Providing project assignments that are interesting, challenging and have visible impact.

The risk of not doing this step is that it is too easy to start new projects, for example, deciding to develop many new products at the same time as introducing other system changes (which are in essence, projects in themselves). The result is often an over-commitment of staff; shortage of resources; lack of buy-in from key stakeholders; misallocation of scarce resources; and ultimately failure with respect to delivery time, cost, or the new product itself. Worse still, diversion of scarce resources from a more critical project can have a significant impact on the organisation.

Step 2: Project Planning Process

Once the Executive Level has approved the project charter, the planning process can begin. The Project Sponsor holds a Project Definition Workshop and invites *cross-functional* senior managers who are necessary for the product development process. The project will only succeed if it has the commitment and involvement of all key players whose input is necessary to the development process. This happens when the interests of key managers are aligned with the project and the process.

The Project Sponsor also identifies a project champion who carries out the bulk of the technical aspects of the product development process.

At this workshop, the project objectives, roles and responsibilities are explained to the attendees. The team can then define the work breakdown structure for the project:

- the tasks to be executed,
- the expected durations; and
- the people undertaking the tasks.

All the assumptions of the process are listed and all the potential risks and inter-departmental conflicting interests are identified.

These inputs then become the basis of the Project Plan and Scope Statement. Ideally this is prepared by the Project Manager or Facilitator, who then checks it with the high level Project Sponsor. The scope statement must then be reviewed and modified with all stakeholders.

Once the stakeholders have reviewed the scope, work break down, schedule, and cost, the project can move into the execution phase. The final project plan should have the:

- Project objectives and risks
- Project milestones and task breakdowns
- Resource details (personnel, supplies and materials)
- Budget details
- Project organisation
- Operating procedures
- Contact points
- Approval points

Note on Costs: Costs should be tied to goals and also tied to schedules. When designed, they should reflect input from staff, outside vendors, managers and owners and experts, depending on the size of the project.

Step 3: Project Execution Phase

The primary activities during this phase are related to the management and control of the project in terms of costs, schedules and quality. Depending on the schedule, project (read new product) meetings are held weekly or bi-weekly. Progress on the following is discussed:

- The schedule
- The costs
- Change requests to the scope
- Outstanding issues to be discussed by management
- The quality
- The resources
- The risks

As the project progresses, the level of planning precision increases. This means:

- Detailed workplans and specific assignments
- Resources required
- Detail on types of costs to be incurred
- Timing by month and quarter

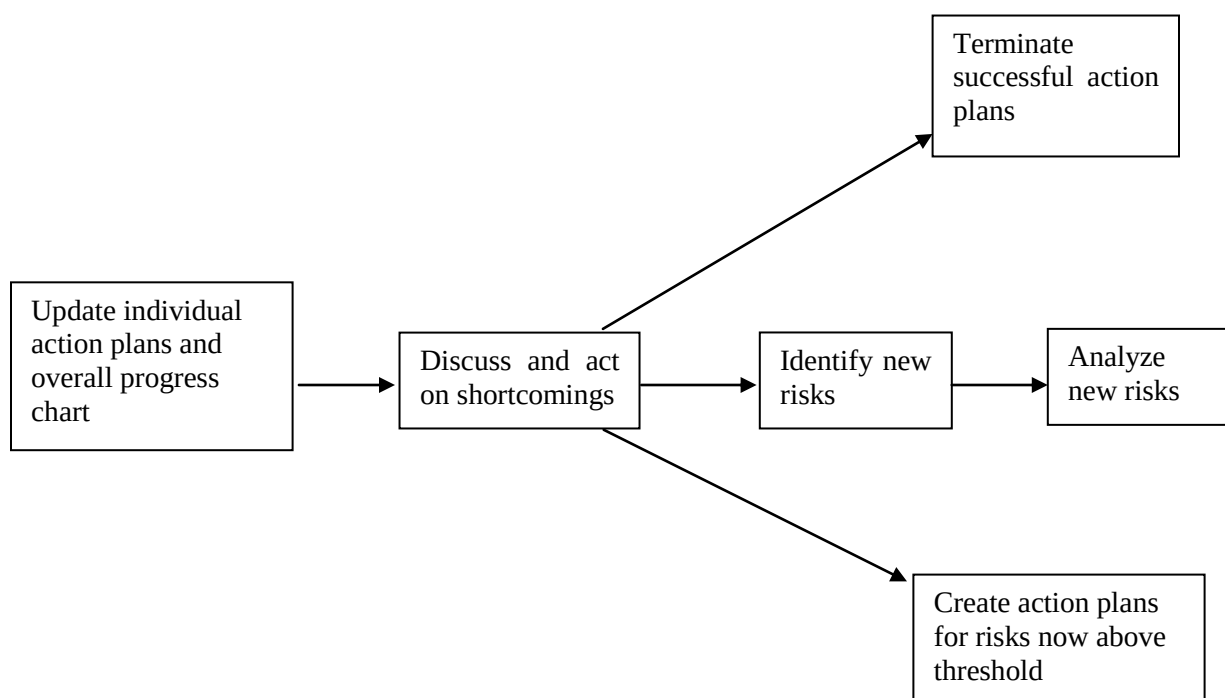
- Role of / Impact on: specific business units, products, departments and regions

There should be regular monitoring reports on progress. These reports (and audits where necessary) should also go to senior level executives who have authority for overseeing the process. Reports should include:

- Status of work vs. plan
- Quality of work
- Costs vs. budget
- Attitudes, cohesiveness and cooperation of team members.

Step 4: Ongoing Monitoring of Project

The following diagram illustrates the process of monitoring specific project risks. For each new product or project, the components of risk monitoring should be completed regularly at each team meeting and project review. Before each meeting or review, the MFI completes the left box, “Update individual action plans and overall progress chart”. These documents form the basis for the discussion in the second box, “Discuss and act on shortcomings”. The MFI project manager makes sure to complete each of the three streams to the right of the second box.



Risk management should be a top focus for new product team meetings because risk events are often the cause of the scheduling and cost problems that become the main focus. As part of the monitoring process during team meetings, the project manager should review the following:

- Progress on action plans for the riskiest risk events.
- Changes to the frequency/probability estimates.
- Any changes to risk mitigation tactic plans.

- Any triggers for prevention and contingency plans.
- Resolved risk actions.
- Re-examine low ranked risk events to determine whether they should be upgraded in risk profile and thus in priority to mitigate.
- New risk events arising.

Some "**Red Flags**" to trigger project meeting review and action are identified below. Your project team should develop an appropriate set of triggers specific to your MFI that, when reached, cause the team to analyse the driver for that trigger being reached, and establish a course of action to put the project "back on track". Red flags⁴¹ include:

- Project schedule falls behind agreed to time line by more than 30 days.
- Project budget goes over budget by more than 5%.
- If any major functional area is unable to meet ongoing resource commitments according to the time line agreed to.
- If any change in the expected project cost occurs which is greater than 5% above costs estimates.
- Sales forecast: if any change greater than 10% occurs in the forecast sale or if any change occurs in the configuration ratios (product mix) which impacts margin by more than 3%.
- More than 5% impact on the business case and financial outlook.
- If new device design or requirement is revised in some way that impacts negatively on meeting a customer need.
- If a change in the service and support planned for the new service occurs in a way that impacts negatively on a customer need or requirement.

Remember: the project planning meeting is just that. The main work takes place between project planning meetings, not at them.

⁴¹Product Development for the Service Sector, Lessons from Market Leaders, Robert G. Cooper and Scott J. Edgett, Perseus Books, Cambridge, Mass. 1999.