

Enabling A Formal Risk Management Culture At Micro finance Institutions

A Road Map for Micro Finance Institutions
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Project Sponsored and Funded by:

Unitus Labs

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1. EXECUTIVE SUMMARY

Risk Management involves developing and executing strategies for reducing the probabilities of negative events and/or their consequences, should they occur. Most Indian MFIs focus only on short-term risks, ignoring longer term risks due to lack of information and evaluation systems.

Indian MFIs typically have ambitious growth plans and large, diverse and dispersed operations. In recent years, increased competition and triple-digit growth resulted in multiple loans being issued to clients and further, loans being extended to undeserving clients without proper internal and external checks. MFIs focused more on field operations, compromising on critical aspects like implementing robust IT based MIS, client selection and risk management. Moreover, MFIs did not have access to field or client level information. “Guess-timation” has worked up to a point (arguably we’ve passed it), but has proved to be a serious failure in changing market environments. Collecting clean MIS data and its analysis in a manner that facilitates appropriate strategy and execution is needed for MFIs to survive in the future, beyond just simple MIS reports derived from “back office” loan management systems while a robust Risk Analytics Frameworks for systematic assessment and consequent mitigation of operational risks is needed.

‘Jump-start’ measures such as creating an organizational data warehouse (also named Business Intelligence – BI), rarely deliver the promise of a robust risk analytics framework simply because they fail to improve Client selection or track client behavior.

Building a formal risk management culture at MFIs will have to begin with a formal ‘Risk Health Check’ of the MFI data and processes, followed by the identification of KPIs (Key Performance Indicators) and Risk Metrics to culminate into an Analytics-based Decisioning Framework. As you peruse this report, you will see how to go about this exercise with MFI specific examples and a road map to support Risk Analytics / BI initiatives in your organization – we call this Risk Analytics Decision Framework (RADF).

MFIs (when compared with other financial institutions) need to consider an additional dimension of operational risk - in the form of cash risk –emanating from cash collections in the field. Managing cash requires a more tactical approach rather than an analytical one. A formal system / process that can enable daily cash reconciliation is mandatory. Even though this does not fall in the domain of Analytics, given the centrality / criticality of cash risk to MFI operations, we deemed it fit to include our findings in this project report. You will see a very simple and yet effective implementation of a Cash Risk Management System (CRSKM) to systematically manage ‘Cash Risk’.

To ensure relevance to the MFI sector, we have piloted this project at Mimo Finance – a steady growing MFI in India with over 90,000 clients in the northern reaches of India. You are also welcome to reach out to us for a more detailed walk-through’ of this project. Please refer the Contacts and Information Dissemination sections of this report for more details.

“In turbulent times, an enterprise has to be managed both to withstand sudden blows and to avail itself of sudden unexpected opportunities. This means that in turbulent times the fundamentals have to be managed, and managed well.” – Peter F Drucker





2. COMPANY OVERVIEW

Partners in Prosperity

Partners in Prosperity is a registered non-for-profit society, working to help poor communities, build their own power, achieve self-reliance and permanently move from the margin to the mainstream of development process. It works in the states of Uttarakhand, UP, Delhi NCR and other states in India and has partnered with Unitus Labs to design and implement this project.

MIMO Micro finance (Project Pilot Partner)

Mimoza Enterprises Finance Pvt. Ltd. (NBFC) offers its micro finance products under the MIMO Finance brand and has operations in Uttarakhand, Uttar Pradesh, Haryana, Rajasthan, Himachal Pradesh and Madhya Pradesh. As of 31st March 2011, MIMO has 89,372 active loan clients across 43 branch locations and has disbursed 192,146 loans since 2007. This project has been piloted along with MIMO Finance.

For the purposes of this project, Mimo Finance partnered with Valuefy and Volksoft Technologies. Valuefy has significant knowledge of the banking and financial services industries with specialization in Data Warehousing and Business Intelligence systems design and implementation, especially from a Risk Management perspective. Volksoft is a ten year old software company with a proven track record of building cutting edge micro finance and micro enterprise

3. PROGRAM OVERVIEW

This program addresses the foundational aspects of building a credible Risk Management Culture at MFIs, supported by an IT-enabled Risk Management framework. It emphasizes the importance of conducting a formal Risk Health Check of an MFI's data, processes and policies as the first step and subsequent initiatives are to be phased out in a manner suitable to the organization's absorption propensity. The goal is to build a strong, formal and system-driven Risk Management culture in a MFI which adapts and evolves itself to manage the evolving risks.

Additionally, this program has an additional 'tactical' component for managing daily cash risk i.e., enabling a centralized system-driven daily cash reconciliation process spanning all 'off-line' MFI branches. To summarize, this program has been broken into the following two project tracks:

Risk Analytics Framework:

The key component / deliverable of the Risk Analytics project track is performing a Risk Health Check of a typical MFI (in this case, MIMO Micro finance) on its policies, processes, MIS and prevailing risk organization structure / culture. The results of this Risk Health Check will help assess the readiness of an MFI like Mimo Finance to build an IT-enabled Risk Analytics / Risk Management system.

Cash Risk Management (CRSKM):

With most MFI branches running in an 'off-line' mode without internet connectivity, this project track investigates the controls needed to be built into the daily cash reconciliation management processes spanning branches and the Head Office. The key deliverable is a web-based tool that reconciles daily cash position by tracking (a) daily branch level collections (b) daily bank account transactions and balances (c) daily expected collections / disbursements. This tool can be easily ported to work on mobile phones, if required.





4. FINANCIAL IMPLICATIONS

In this section, we provide you with a sense of the financial investments (costs) needed in executing this program, along with the listing of benefits:

a) Costs : This program was piloted in Mimo Finance with an investment of around USD 70,000, with the major cost component of USD 55,000 incurred for the Risk Analytics Framework (performing Risk Health Check and assessing the readiness / maturity of an organization). The balance (USD 15,000) was budgeted for the CRSKM (Cash Risk Management) web-based tool development and related interfaces.

PRICE COMPONENTS	PROGRAM INITIATIVES / ACTIVITIES	TOTAL - USD
Vendor Costs –Framework / Software Development and Implementation Costs	Cash Risk Management (CRSKM)	8,696
	Risk Analytics Framework - Risk Health Check, Diagnostic, KPI Dashboard, Scorecard and BI Road map	43,478
	User Training	1,185
Consultants/People Effort / Cost Others	Project Management, Mimo Sponsors' and Champions' time (~ 40 to 45 person days effort can be budgeted from the MFI side)	12,478
	Coordination and facilitation, Project Audit at the end of Project, Travel and Communication	5,000
Total		70,837

b) Benefits : Risk Analytics Framework (Risk Health Check). While the cost incurred for performing this Risk Health Check was around USD 55,000, the benefits of this exercise can only be benchmarked against the costs saved from managing risk efficiently and also from costs (rather losses incurred) associated with a rushed investment into a flawed Data Warehouse / Business Intelligence initiative.

For a medium sized MFI like Mimo Finance, a typical implementation of creating a Data Warehouse / Business Intelligence system and subsequent investment in technology with decision tools will cost in excess of USD 300,000. An initial spend of USD 70,000 on Risk Health Check will therefore create a viable basis / foundation for a more robust implementation of the Data Warehouse / Business Intelligence leading to focused Risk Analytics. The cost- benefit ratio is quite evident, especially given the low one-time cost of USD 15,000 associated with the implementation of a daily cash reconciliation system spanning branches and the Head Office.

Currently, misappropriation and mis-reporting is not uncommon in most branches at an MFI. This tool can drastically reduce potential fraud and cash mismanagement at the MFI branch level by bringing down the TAT (turn around time) to reconcile day end positions from 3-4 days to just a couple of hours. Also, this tool can be easily deployed to realize immediate gains





5. CASH RISK MANAGEMENT

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The benefits of a Business Intelligence solutions may be understood from the following experiences -

1. In New Alliance Bank (Connecticut, USA) - The impact was almost immediate as the bank was able to cut its budget time in half, from four months to two, because of BI's ability to run multiple scenarios at the same time and the ability to add extra scenarios on the fly, when needed.

2. Manage Risk by Understanding Fraud Trends - To determine the bank's exposure, the company's risk managers develop month to month predictions of trends in credit card fraud. Previously it could take as long as a few weeks to identify fraudulent transactions, but with Panorama (BI Vendor), risk managers now get a daily feed of "flagged" transactions. That means they can use the application to predict _ based on constantly updating data what the fraud totals will be at the month's end. Also, that forecast becomes more accurate as the month goes by. Based on these findings, the bank can then take appropriate action to mitigate and reduce fraud.

3. Adding More Insight to the Business - Previously the company's team of 40 skilled business analysts spent a great deal of time running the same database queries every month or every day. These same analysts can now retrieve the complex information they need in just a few seconds. This improved ability to examine data frees the analysts to focus on their real task _ anticipating trends, identifying areas that are working, and discovering ways to attract new customers.





6. KEY FINDINGS

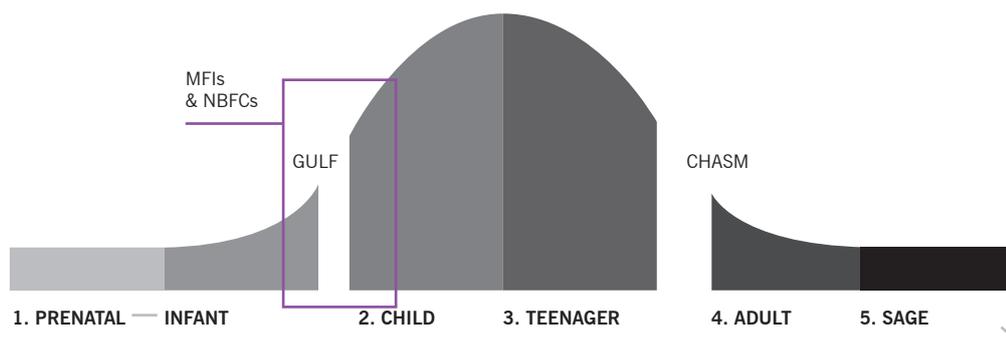
The TDWI (The Data Warehousing Institute) Maturity Model

TDWI is an acknowledged agency fostering high levels of strategic mindshare amongst the Data Warehousing practitioners. It has developed the TDWI model illustrating how business intelligence and data warehousing projects evolve from low-value, cost-centre operations to high-value, strategic utilities that drive market share (with enhanced Risk Management capabilities). One can use the model to gain an instant perspective on where its data warehousing initiative is now, where it needs to go, and how it will get there.

The maturity model consists of six stages: Prenatal, Infant, Child, Teenager, Adult, and Sage. Business value increases as the data warehouse moves through each successive stage. The stages are defined by a number of characteristics, including scope, analytic structure, executive perceptions, types of analytics, stewardship, funding, technology platform, change management, and administration. Organizations evolve at different rates through these six stages, and each may exhibit characteristics of multiple stages at a given time.

MFIs Standing on TDWI's (The Data Warehousing Institute) Maturity Model

Valuefy's assessment at the end of this project suggests that most MFIs, when bench marked against the industry benchmark of TDWI, tend to be straddling the gulf trying to move from being an 'infant' to a 'child' in terms of their status on the Data Warehouse / Business Intelligence (DW / BI) value lifecycle. What this means is that more preparatory work (starting with Risk Health Check) needs to be conducted before growing to a more matured DW / BI implementation, a foundation for building a robust Risk Analytics capabilities. The following picture illustrates this in the form of a bell curve. Detailed explanation of the 6 stages is given in Appendix B



BUSINESS VALUE SEMANTIC INTEGRATION

There are several key reasons for MFIs being at this stage, straddling the 'Infant' and 'Child' stages, with the critical ones as follows:

- The MFI sector in India is just a few years into the process of transforming themselves into formal non-banking finance companies (NBFCs) – a major shift from an NGO mindset; this explains relatively low levels of readiness on this front. Also, most MFIs could not focus on these gaps due to the sudden spurt in growth during the past 3 years.
- Even if a couple of MFIs may have embarked on such initiatives, the lack of formal Risk Health Checks (on processes, data and policies) pegs the maturity of such Data Warehousing / Business Intelligence initiatives at a low level. Basically, these MFIs end up as slightly more advanced, with reporting engines having some ad-hoc reporting.





6. KEY FINDINGS cont'd

Risk Analytics Framework (Risk Health Check):

Risk Health Check was performed across the following four dimensions at MIMO Finance: (1)IT Enabled Info Mgmt, (2)Business Intelligence, (3)Analytics/Scorecards and(4)The 3Ps – People, Policies, Processes. The key findings / recommendations emerging from the above analysis / health check across each of the above four dimensions are as follows:

Key Findings and Recommendations

IT-enabled Information Management

- › Align organization structure to analytics
 - › Have control over database & applications
 - › Remove data duplication
 - › Make data structure comprehensive
-
- › Merge IT & MIS, Create separate BIU (Business Intelligence Unit), suggest business to participate in data requirement and analysis infrastructure set up
 - › Mimo should have full database control with unlimited query capability.
 - › Have a single organization data warehouse with applications feeding data into it and information/analyses flowing out of it
 - › Integrate Audit data of FE and Branch grading
 - › Capture Pre-GRT data to be used for analytics and completing the PDCA (Plan-Do-Check-Act)

Business Intelligence

- › Improve accessibility
 - › Enhance usability
 - › Achieve comprehensiveness
 - › Close Loops
-
- › Get direct access to database and reduce time for customized query/reports.
 - › Create dashboards and mechanisms for decreasing the data collection and dissemination life cycle
 - › Use OLAP (Online Analytical Processing) tools for better analysis and extracting intelligence
 - › Emphasize informed decision making across all aspects of customer lifecycle
 - › Analyze end to end information for comprehensive analysis and creation of cause-effect relationship

Analytics & Scorecards

- › System Driven Expert Scorecard
 - › Track & Monitor the performance
 - › Create new product offerings through Analytics
 - › Progress towards statistical scorecards for various lifecycle of customers
-
- › Back test the Judgmental Scorecard & include other parameters in Credit Decision system
 - › Track the performance of attributes
 - › Create Segmentation groups & cross-sell products
 - › Designate a team who keep tracking campaigns & analytical reports
 - › Complete the data entry in data warehousing

The 3P's (People, Policies, Processes)

- › Create/rename functional roles
 - › Reduce overheads
 - › Close Loops
-
- › Create Acquisition, risk and collection heads and avoid the same person handling the sales, collections and risk
 - › Align with IT systems, bring agility by reducing human intervention, documents faxing etc.
 - › Encourage and instill the process of tracking customer behavior/defaults with application information using BI tools
 - › Create processes to capture ad hoc data at ground level, like demographic transition, which can be used for strategic intent





7. KEY CHALLENGES

On the Risk Management front, the two key challenges were:

Communication to business users: The management should clearly communicate to business users the objective and benefits of such an exercise. Without appropriate communication the business users might find the discussions evaluative and hence intrusive in nature. This is more than a challenge in MFIs due to its dispersed branch networks and under-graduate staff.

Alignment: It's important for the top management and the business users to be aligned and convinced on graduating to information based decisioning. Typically micro finance organizations would start small and have lot of manual dependencies and individual centres of excellence. Top management should allay their fears in moving towards scalable and robust processes where IT and Analytics play a key role. The more delay happens on this front, more is change management effort in adopting Analytics for Risk Management.

On the Cash Risk Management front, the only challenge was to get the Loan Management software vendor to open up the interfaces for integrating with the Cash Risk tool for seamless daily cash reconciliation (from offline branches).

8. CONCLUSION

From the perspective of institutionalizing a strong Risk Management culture at an MFI, this exercise of Risk Health Check has helped in assessing gaps across the dimensions of 'people (organization), processes and tools' that could potentially derail an expensive and yet, strategic DW/BI initiative – DW/BI system being a corner stone for any robust Risk Framework.

It has also highlighted the importance of eliminating data duplication and ensuring a single source of truth for operational and transactional data. Gaps were also found in key customer data being captured in the loan back office system (e.g., some elements of customer demographics, pre-CGT / GRT data etc.).

At the end of this Risk Health Check, it also became quite evident that a DW/BI initiative without a proper definition of KPIs and Score Cards will be direction-less and hardly aid in comprehensive risk management. Cash Risk Management tool has provided a system-driven daily cash reconciliation process and has effectively closed the loop between the branches (operations) and HO (finance) on the cash reconciliation front.

From a stakeholder perspective, there is a better sense of appreciation amongst the MIMO Finance managers about formal risk management and what it takes to build a credible and sustainable risk culture. There is also a keen understanding at MIMO now on the benefits of the risk health check and are quite keen to bridge the gaps thrown up by the Risk Health Check. Now there is a more realistic assessment of challenges involved in getting a DW / BI solution implemented.





APPENDIX A – PROJECT PLAN / TIME LINES

Detailed project time lines for the two project tracks:

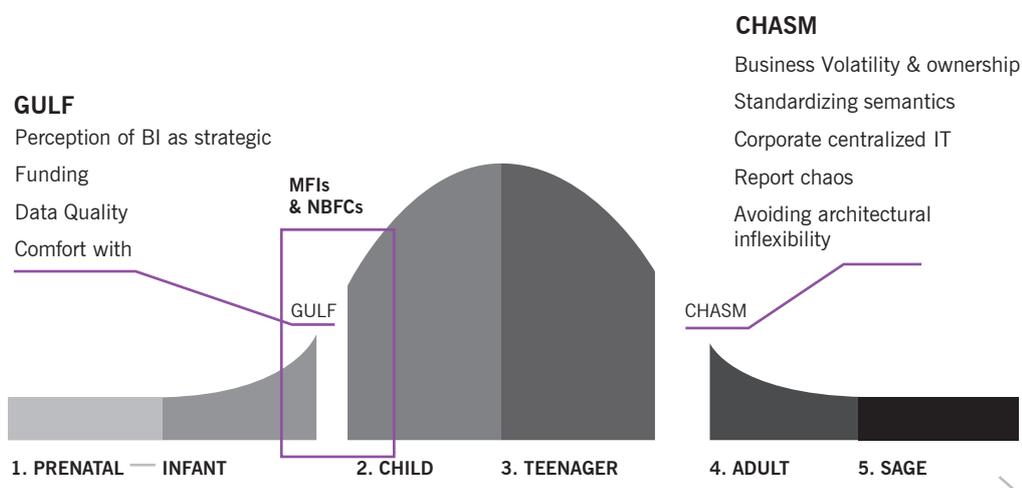
Milestone





APPENDIX B – TDWI MATURITY MODEL

The following picture illustrates the TDWI Maturity Model:



BUSINESS VALUE SEMANTIC INTEGRATION

A representation of the five stages of TDWI Maturity Model. The Y axis or the bell curve suggests the percentage of organizations in any given stage.

INFANT	CHILD	TEENAGER	ADULT	SAGE
Operational Reports (static, inflexible)	Ad hoc step to BI	Broader approach to BI and central data warehouse	Unified architecture with multi-layered enterprise warehouse	Standard development methodologies
Spread marts	Multiple data marts specific to department	Business intelligence unit formation	Comprehensive data	Extended enterprise to customers, suppliers.
Customizing required for any different report	Less control	Usage of information to make decisions	Just in time delivery	Architectural flexibility
Problems with data integrity	First set of reports	KPIs defined	Strategic viewpoint to performance	
			Predictive analytics	
			BIU reports to the CXO	





CONTACTS

Please contact Mr. Harshbardhan of MIMO Micro finance for setting up a conference call or a presentation on this project and its outcomes. His email id is mis.admin@mimofin.net

INFORMATION DISSEMINATION

We propose to disseminate this program related information and findings via conference calls with the stakeholders who participated in this program. They would assist you in walking through the presentations uploaded along with this project report to provide more details on this program.

We propose the first such conference call during September end, and a visit to Mimo Finance can also be arranged upon prior request. We also intend to host the project collateral on public networks like LinkedIn, Facebook, Scribd, PDFdatabase, apart from a YouTube videos on Cash Risk Management. We will also be circulating the project synopsis and the means of accessing the project collateral via emails to the members of Sa-dhan and Micro finance Institutions Network (MFIN).

Please contact Harshbardhan (mentioned in the contacts section) for registering to this call and receiving the dial-in numbers. We propose to have no more than 5 people per call and can schedule more such calls later.

ACKNOWLEDGMENTS

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Sharad Singh, Director, *Valuefy*
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T. Srinivas, Director, *Volksoft*
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