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Disaster Management for Microfinance Institutions in Mozambique: Reflecting on Lessons Learnt for Future Directions

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ABBREVIATIONS

AIS: Accounting Information System
CCCP: Caixa Comunitária de Crédito e Poupanca
CGAP: Consultative Group to Assist the Poorest
DAI: Development Alternatives Inc.,
DFN: Development Finance Network
FCC: Fundo de Crédito Comunitário, MFI partner of World Relief in Mozambique
GDP: Gross Domestic Product
GNP: Gross National Product
ICC: International Capital Corporation, South Africa
MBB: The MicroBanking Bulletin
MBP: MicroEnterprise Best Practices
MFI: Microfinance Institution
MIS: Management Information System
MT: Metticash – Mozambique Currency
OSU: The Ohio State University
PAR: Portfolio at Risk
RoSCAs: Rotating Savings and Credit Associations
SC-USA: Save the Children, USA
UNDP: United Nations Development Program
USAID: United States Agency for International Development

EXECUTIVE SUMMARY

Can an emerging microfinance sector staffed with less trained local human resources operating in a poor country such as Mozambique manage major natural disasters? Challenges for the microfinance industry have emerged with every new natural disaster resulting in accumulated learning on disaster management. The available literature indicates that the answer to the question above can be affirmative if the sector, given its vulnerabilities and capacities, prepare itself to mitigate and cope with disasters.

This paper, based on lessons learned from several countries including Mozambique, first outlines the strategies and products used by MFIs for disaster management. Then, it examines the implications of such tools for Mozambique to prepare them to respond appropriately in the event of future natural disasters.

It is not possible nor is advisable for a "one size fits all" guidelines for disaster management. Several options exist and need to be examined in a relevant context for effective response. This paper is not intended to be a manual or tool kit for MFIs to draw upon in case of disasters nor it outlines a comprehensive response strategy for all types of disasters that may affect the country. Further exploration may be required to identify generic and situation specific guidelines. The paper is written with the current state of the MFIs in Mozambique in mind. It may be read in the context of identifying broad areas for strengthening the sector for effective disaster management in future.

A. Microfinance Sector in Mozambique

The microfinance sector in Mozambique is very young and unviable. It is characterized by a high turnover of microfinance providers. The sector is currently comprised of nearly 30 MFIs serving about 16,500 borrowers. Group loans and compulsory deposits are the primary services provided by the majority of the MFIs. The outstanding loan portfolio is about US$1.4 million dollars. Average loan balance range from US$ 30-50 representing 13-20% of the GNP per capita. There are variations in outreach and size of the institutions. The largest MFI, FCC, reach about 4,200 clients while about four MFIs, (CCCP, Tchuma, Crese and SOCREMO) reach a little above 1,000 each. These five represent two thirds of the total outreach and three fourths of the outstanding portfolio. None of them are sustainable. Average savings balance range from $10 to $16. Deposit mobilization by non-regulated financial providers is prohibited thus precluding several MFIs from offering savings products to the public. The sector is staffed by few local personnel due to limited availability of skilled local human resources. Microenterprises are becoming the source of incomes for several people creating a demand for financial services from the informal sector. But survival of microenterprises is low making it a risky sector to service.

B. Observations from Floods of 2000 in Mozambique

The nascent microfinance sector in Mozambique was caught unprepared to deal with the massive floods that affected Southern Mozambique in February of 2000. Two of the big five MFIs in the country, FCC and CCCP, serving over 2,500 clients in the region were affected. No preventative measures were in place. Post-disaster response measures such as loan rescheduling, new loans for recovery and cash grants were used to cope with the situation. Some broad observations from the floods include the following:

- People and MFIs are vulnerable to disasters, they are sensitive but resilient.
- Client discipline inculcated during normal times is important for MFI recovery.
- Good MIS and AIS are important for rapid response by the MFIs.
- Safeguarding client records and partial duplication of records in the head office is essential.

- Very small cash grants provided to MFI clients in a very short period through a third party can limit the adverse effect of grants on MFIs and can help avoid setting in of a dependency syndrome among the clients.
- MFI strategies and products, financial and non-financial, are only effective if delivered in a coordinated and cost effective manner by motivated staff to deserving clients

Although MFIs in Mozambique managed the floods in 2000 with the help of donors, the readiness of the currently expanded MFI sector to manage another disaster is very limited. There is now a need for developing a comprehensive disaster management strategy for Mozambique by identifying and examining relevance of MFI responses in the wake of disasters.

C. Disaster Management by Microfinance Institutions

Disaster times are hectic times for the affected MFIs and their clients and quick and rapid responses are deemed essential. The MFIs may be required to minimize the losses to themselves and their clients for continued provision of services. So, the MFIs may search for financial and non-financial tools and strategies that can ensure maximum protection for themselves and their clients at a minimum cost. But, the disaster times are also chaotic times and may prompt less effective responses to tackle the situation. It is, therefore, useful for the MFIs to be aware of the available mechanisms and their implications.

1. Mechanisms Used for Disaster Response

MFI responses in several countries involve use of the following products:

- *Grants*: Limited relief activities through in-kind aid like food, clothing, medicines and shelter; Cash grants
- *Training and education of clients:*
  - *Ex-ante*: Maximalist/integrated programs provide training on disaster management using financial and non-financial means.
  - *Ex-post*: Maximalist and few minimalist programs provide information regarding safety measures to protect against diseases due to disasters.
- *Loans:*
  - *Ex-post*: Rescheduling of existing debts; making emergency and new asset replacement/recovery loans;
  - *Ex-ante*: Repayment schedules tailored to suit predictable disaster periods; special loans for preventative measures
- *Savings*:
  - *Ex-post:* Opening access to accumulated savings that would not be otherwise possible until the member leaves the program;
  - *Ex-ante*: limited experiments with voluntary savings; special savings for coping with disasters; contingency funds.
- *Insurance*:
  - *Ex-ante*: Life and credit insurance to cover for the debts of clients diseased due to disasters
- *Microleasing*
- *Disaster Loan Funds*:
  - *Ex-ante*: Centrally placed donor funds that can be accessed by MFIs to cope with liquidity problems and make new loans after a disaster; Special funds at the MFI level that can be accessed during disasters.

The financial products used for disaster management include both adaptation of the existing products and special products designed only to cope with disasters. The MFI responses are, however, more

often triggered at the wake of the disaster. They are generally driven by the availability of donor monies tied with conditionalities and the MFIs' liquidity position rather than by client demand. Often times, the above products have fallen short in adequately protecting the institutions and the clients. Few MFIs have developed comprehensive disaster management plans that include preventative and coping mechanisms (ex-ante and ex-post) for protecting the institution and the clients in the wake of disasters.

2. Grants: Implications for Mozambique

Cash grants may be an one-time option for responding to massive and unpredicted disasters. It should be small and disbursed quickly through a third party after the clients have returned back from camps. Functioning markets and resumption of economic activities are sufficient conditions for the success of the product. While insisting on repayment of loans with the grants received may protect the MFI from losses, it may reduce the options for the clients and may possibly affect client loyalty. It may also signal that the third party is protecting the MFI rather than helping the clients. The clear line between the donor and the MFI may blur. The MFIs should strictly adhere to the principles regarding loan repayment, however, to avoid disintegration of the credit culture. The strong signals and incentives for repayment may likely induce the clients to repay the loans with the grants and thus protect the MFI.

Cash grants should be avoided in areas frequently affected by disasters and in areas that suffer from chronic delinquency problems.

3. Savings products: Implications for Mozambique

The current savings instruments used in Mozambique are inadequate to function as effective disaster management instruments for both the MFIs and the clients. Savings products appropriate for disaster management should be flexible in allowing for easy accumulation of funds during normal times and quick and easy accessibility to the funds at the time of disasters. The MFIs in Mozambique are still very young and inexperienced in providing such a product because it may require additional and/or different staff skills and infrastructure such as MIS and AIS from what is currently available.

A special contingency fund or disaster savings fund with no upper limits on the deposits that can only be withdrawn in the event of a disaster is possible to develop. But, the product may lose its credibility if MFIs do not maintain adequate reserves, records and trained staff to quickly track and honor their commitments. A fee may be charged for maintaining the accounts. This may however be demanded in frequent disaster areas than in areas rarely affected by disasters. In such cases, the funds may be accessible for meeting clients' needs due to idiosyncratic shocks. Availability of the product to both active and non-active clients may also be required. Also, linkages with Xitiques (RoSCAs) may be explored. There is now a need to assess the demand for such products for disaster management.

4. Loans: Implications for Mozambique:

When assets and inventory used for income generation are lost, crops are destroyed and livestock are dead, when there is no insurance to cover for the losses, and savings are inadequate, rescheduling of loans may be inevitable for the majority of the MFIs. Clients are less likely to be able to generate incomes when they are in relief camps and markets are not functional. It may also be unavoidable where clients are highly displaced and are difficult to locate to customize a solution. As a result, a blanket restructuring may be the only immediate option available to the MFI. In such instances, however, restructuring would be useful only if there are options other than self-employment (possibly in reconstruction activities and/or remittances) for clients to generate funds to restart activities or start new activities to pay for the outstanding loans. In the absence of such external

mechanisms that can substantiate the flow of funds into client's hands, restructuring alone cannot be effective in protecting the MFIs and their clients.

Not all clients may demand the option of restructuring and some may indeed be able to repay on time. The readiness of the MFIs to collect on such clients depends on the status of the MIS/AIS systems immediately after the disaster. This may warrant adequate back-ups of records and opening of the branches and/or commencement of group meetings as soon as possible. Also, since the loans are generally made for a very short term in Mozambique, if loans are rescheduled for more than one third of the term of the original contract, the MFIs may suffer losses. The clients may also lose their opportunity to avail new loans.

Incentives are necessary to encourage the clients to repay rescheduled loans. There are few readily available guidelines to help in choosing the right method for restructuring. It is often contextual and needs to incorporate the situations before and after the disasters. On the one hand, economic activities may change after the disaster and some households that were struggling before may experience a windfall profit due to disasters that can help in repaying their debts on time, or even before time. On the other hand, those who performed well may suffer huge losses and may require new loans to restart the business to service the old loans. Groups may also suffer from unpaid loans of absconding members. Forgiving the loans of such run-away members may send a confused signal regarding joint liability. However, the remaining members, although have paid their dues, may be unable or unwilling to pay for the missing members. They may expect that they may be rewarded with a new loan for repaying their share on time. However, rewarding them despite their lapse to honor joint liability may be counter-productive. The MFI may then risk losing those remaining members. It is a double edged sword for the MFI. Perhaps, in places with chronic repayment problems, a contingency fund may be required that the members forfeit to pay for the outstanding loans of missing members. The groups may also be maintained small to ensure peer monitoring. However, in places with low level of absconding members, these funds may be costly for the clients and may add to administrative burdens of the staff and create rent seeking opportunities.

The MFIs may also be required to sequence restructuring with new loans. There are possibilities of combining rescheduled and new loans for relief and emergency purposes. A household approach may be necessary in deciding on such combined contracts. Information on the income streams of all the members of the household, level of damages to the income generating activity may be of help. The client absorption capacity and liquidity position of the MFI may limit the MFI from making new loans large enough to generate incomes to simultaneously repay the rescheduled and the new loan. It is shown that asset replacement loans made to clients at the early reconstruction stage with an assumption that it would help restart the economic activities and aid in repaying the old and the new loans was short-sighted. It generally took at least three consecutive such loans to achieve the objective. Meanwhile, the MFI was burdened with carrying the rescheduled loans on its books and provisioning for it. Such multiple contracts may, therefore, require the repayments to be divided between the old and the new loans. For instance, a portion of the installment may be accounted towards the old loan and the rest towards the new loans. After the first loan, the client may be obliged to at least pay off three fourth of the old loans to obtain the second emergency loan. Alternatively, the new loans may only top off the existing loan. This may however increase the administrative burden for the staff that is generally not accustomed to handling multiple transactions per client. The MFIs in Mozambique are yet to gain experience in handling multiple transactions per client for lack of adequate accounting and MIS systems. Until then, restructuring of loans may be inevitable as a disaster management strategy but may be an inadequate tool to deal with the situation.

Emergency loans may be demanded more than regular loans at an immediate post-disaster stage since they might be necessary to meet non-business related expenses. These can be made to existing clients with no rescheduled loans. These clients may be a safer bet than new clients for such loans. Safety of client records and quick retrieval of information are essential to make new emergency

loans. Emergency loans are only effective if disbursed quickly. The MFIs may realize that some clients may require more than one such emergency loan before they are able to take a regular loan. The emergency loans may also require to be made for a very short term at a reduced rate. This may add to the existing administrative burden of the staff and may reduce incomes. But with quick turnover of such very short-term loans and resumption of normal activities of the clients, it may not be much of a loss to the MFI.

5. Microinsurance: Implications for Mozambique

It is premature for the MFIs in Mozambique to provide microinsurance for disaster management. However, if linkages with private insurers could facilitate provision of affordable contracts to the MFI clients that can cover disaster losses and if MFIs can be a claimant on the policies, then the MFIs and their clients may be protected by microinsurance schemes. Nonetheless, considerable experience is needed to understand how these microinsurance schemes will be affected by disasters and how best MFIs can deal with this impact, keeping in mind both their own needs and those of their clients.

6. Microleasing: Implication for Mozambique

In Mozambique, the demand for leasing contracts and secondary markets for assets typically required by the microentrepreneurs is unclear. Several activities financed by the MFIs involve few fixed assets that could be serviced through microleasing. Furthermore, the MFIs are still at an infant stage to offer such a product on their own. They are inexperienced and possess limited logistical facilities.

If there is a demand for fixed assets and if leasing companies are available, it is, however, beneficial for MFIs to link up with leasing companies to provide such products. Since the disasters are not predictable, the preventative role of microleasing may be limited. But, microleasing can likely play a post-disaster role by facilitating replacement of fixed assets lost due to disasters. This may provide a stop-gap arrangement for the clients and the MFIs before adequate incomes can be generated to afford a loan to purchase a fixed asset.

7. Product Delivery

Lessons from several experiences show that delivery of the product in disaster situations is as or more important than the product itself. These are relevant to Mozambique.

- Timely response is essential
- Responses need to be tailored to client vulnerability and capacity
- Decentralized structure with clear responsibilities for staff will help in quick response.
- MFIs need to offer product flexibility and choice to clients
- MFIs need to send clear signals as to the nature of the response
- Effective coordination with other development actors, MFIs and government is essential

8. Choice of Disaster Response Mechanism

The choice by an MFI of an instrument or a combination of several instruments for disaster management may be guided by the cost implications in serving the targeted population given the external and internal factors at the time of the disaster.

External factors to the MFI

- Nature of the disaster: Type and magnitude
- Market conditions: Financial markets and markets for trading; business environment; competing and coordinating agencies.

- Political conditions: Safety net measures

Internal factors to the MFI

- Institutional objectives
- Institutional characteristics: Age and size
- Institutional infrastructure: Physical and human resources; MIS and AIS systems

Implications of the product (direct and indirect costs)

- Direct costs of implementation
- Institutional discipline: Staff loyalty and motivation; internal control; chain of command; coordination with development agents.
- Client discipline: Repayment ethic; client loyalty
- Liquidity position of the MFI

D. Broad Directions for Disaster Management in Mozambique

These guidelines may provide a starting point for disaster management in Mozambique.

1. Donors funding the MFIs

- The donors may facilitate mapping of the sector and identify its vulnerability and capacity to cope with shocks.
- They may play a crucial role in gathering and disseminating relevant information on disaster management.
- It may be useful to require the MFIs to provide a comprehensive disaster management strategy to qualify for funding.
- The donors may also put in place some tools to monitor the MFIs' efforts during normal times to proof themselves from disasters and monitor their efforts during disaster times.
- Several MFIs may require external help to develop their capacity for disaster response and donors could play a crucial role by funding capacity building activities in this area.
- Some accreditation of MFIs during normal times according to their capacity and preparedness to deal with disasters can be thought of so disaster related emergency funds could be allotted to MFIs that can effectively deliver the services to the clientele.
- Quick disbursements are essential for rapid response during disasters but the donors may avoid massive disbursements for relief at the risk of displacing development.

2. The MFI network

- Encouraging peer learning: The MFI network may play an effective role in offering a platform for exchanging ideas and experiences.
- Fostering synergy between MFIs: The network can facilitate coordination among the MFIs so that comparative advantages of all MFIs can be collectively utilized for effective disaster management.
- Strategic alliances to avoid rat race: Semi-formal agreements can be developed between MFI to engage in frequent consultations during disaster times to avoid duplication of efforts and negative externalities.
- Encouraging transparency in operations
- Encouraging standardization of terms (such as rescheduling, grants, emergency loans etc.,) to avoid confusion during hectic times.

3. The MFIs

- Ensure safety of records
- Strengthen MIS for tracking key indicators essential for rapid response. It is important to streamline/update the MIS system and interface it with the AIS system for clear tracking of incoming and disbursement of funds, and operation modalities for quick retrieval of information for rapid response during disaster times
- Client records can be made comprehensive to provide the history of transactions for loans and savings.
- Vulnerability assessment of clients can be carried out and incorporated into the credit history of the client for customizing solutions during disaster times.
- Build client relationship history for rapid client specific response during disasters.
- Market assessment for client coping mechanisms and demand for disaster specific products may be essential to understand the role of financial products in clients' preference for disaster management. This may help in developing new disaster specific products.
- Inculcate a strong credit culture and discipline
- Diversification of liabilities and assets is essential for effective risk management.
- With backward and forward linkages in rural areas, disasters affect clients and non-clients of MFIs and have a spill-over effect on each other. It becomes, therefore, imperative for MFIs to also consider effect of disasters on non-clients.

E. Conclusion

Disaster management is a dynamic process that could ideally be developed during normal times and tested at the wake of disasters. It requires careful planning and commitment on part of all stakeholders. It is encouraging to note that it is possible to minimize disaster related losses through diligent management of portfolio and cash-flow, by building robust institutional infrastructure with skilled human resources and inculcating client discipline, through effective coordination of stakeholders during the normal times and through choice of relevant products and strategies to mitigate and cope with disasters. Much is to be learned, however, in the area of disaster management through learning by doing and sharing the experiences.

Disaster Management for Microfinance Institutions in Mozambique: Reflecting on Lessons Learnt for Future Directions

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Geetha Nagarajan

I. INTRODUCTION

Can an emerging microfinance sector staffed with less trained local human resources operating in a poor country manage major disasters? This is a relevant issue for Mozambique.

Challenges for the microfinance industry have emerged with every new natural disaster resulting in accumulated learning on disaster management. The available literature indicates that the answer to the question above can be affirmative if the sector, given its vulnerabilities and capacities, prepare itself to mitigate and cope with disasters. Microfinance institutions (MFIs) and their clients are found to be vulnerable but are capable of coping with disasters through several financial and non-financial mechanisms[1].

This paper, based on lessons learned from several countries including Mozambique, first outlines the strategies and products used by MFIs for disaster management. Then, it examines the implications of such tools for Mozambique to prepare them to respond appropriately in the event of future natural disasters.

It is not possible nor is advisable for a "one size fits all" guidelines for disaster management. Several options exist and need to be placed in a relevant context for effective response. This paper is not intended to be a manual or tool kit for MFIs to draw upon in case of disasters nor it outlines a comprehensive response strategy for all types of disasters that may affect the country. Further exploration may be required to identify generic and situation specific guidelines. The paper is written with the current state of the MFIs in Mozambique in mind. It may be read in the context of identifying broad areas for strengthening the sector for effective disaster management in future.

II. THE MICROFINANCE SECTOR IN MOZAMBIQUE

The short and medium term disaster response strategies and tools for the microfinance sector in Mozambique need to be developed in the context of the environment within which it operates. As the microfinance sector matures and the enabling environment improves, indeed, the mechanisms may evolve to better safeguard the sector from natural disasters.

The current microfinance sector functions in a country that emerged in the mid 1990s from a prolonged civil war and hit regularly by natural disasters in the form of droughts, floods and cyclones. UNDP (2000) places Mozambique among the top ten poorest countries based on human suffering index calculated using access to clean water, infant immunization, per capita income, life expectancy and school enrollment. Annual per capita income is $220 (ranked as nineth poorest in the world), infant mortality rate is 131 and average life expectancy is 47 years. The adult literacy rate for females is 23% and two thirds of the population lives in rural areas (World Development Indicators, 2001).

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[1] Vulnerability is a dynamic concept and is defined by its sensitivity, the magnitude of the system to respond to an external event, and resilience, rapidity and ease of a system's recovery from the shock (Moser, 1998).

The banking sector is very weak comprised of few commercial banks that operate in rural areas to reach the poor. As of 1999, the domestic credit provided by the banks relative to GDP accounted for 7%, down from 16% in 1990. The financial deepening as indicated by the share of broad money in GDP was 26%, and ratio of bank liquid reserves to bank assets indicating the liquidity position of the banking sector was 14%. The efficiency of the banking sector shown by the summary measure of interest spread (intermediation margin) was about 12% (World Development Indicators, 2001). In addition, insider trading and frauds have plagued nationalized banks along with mounting problems due to non-performing loans. The linkages between the banking sector and microfinance providers are very weak.[2]

A recent study that assessed the microfinance sector in Mozambique showed that it is very young and unviable (ICC, 2000). It is characterized by a high turnover of microfinance providers due to restructuring of activities according to sound microfinance practices. The sector is currently comprised of nearly 30 MFIs serving about 16,500 borrowers. Group loans and compulsory deposits are the primary services provided by the majority of the MFIs. The outstanding loan portfolio is about US$1.4 million dollars. Average loan balance range from US$ 30-50 representing 13-20% of the GNP per capita. There are variations in outreach and size of the institutions. The largest MFI, FCC, reach about 4,200 clients while about four MFIs, (CCCP, Tchuma, Crese and SOCREMO) reach a little above 1,000 each. These five represent two thirds of the total outreach and three fourths of the outstanding portfolio. None of them are sustainable. Average savings balance mobilized through voluntary and compulsory savings is about $10; it is $16 from voluntary savings.

The performance of the sector as indicated by that of the big five is below their peers, the small MFIs in Africa that serve the low end of the clientele (table 1).

Table 1: Performance of Big 5 MFIs in Mozambique and of small MFIs in Africa

	FCC	CCCP	CRESE	TCHUMA	SOCREMO	Sector	African small MFIs – MBB
Size: Outstanding loan portfolio (US$)	187,500	125,000	93,750	106,250	500,000	1,400,000	512,947
Outreach (no. of active borrowers)	4,422	2,098	2,020	1,378	1,517	16,590	5,634
Avg.loan balance (US$)	42.4	59.6	46.4	77.1	329.6	84.4	92
Portfolio yield (%)	--	37	20	42	56		54.6
Administrative expenses relative to average loan portfolio (%)	--	187	36	205	65	Na	71.4
Portfolio at risk > 90 days (% of loan portfolio)	1.9	4.8	0.9	1.8	9.1	Na	2.4
Cost per borrower (US$)	--	83	34	190	381	Na	62
Loan officer productivity (Active borrowers / loan officers)	--	198	155	276	152	60	285
Operational self-sufficiency (%)	--	20	56	20	86	Na	77.5

Source: ICC Report, 2001; For definitions of indicators and benchmark data for Africa Small MFIs, see MicroBanking Bulletin, Vol. 6, April 2001.

The sector is also staffed by few local personnel due to limited availability of skilled local human resources. Anecdotal evidence states that it takes at least about six months to hire a Mozambiquean accountant who could be trained in two to three months to maintain books according to acceptable standards.

[2] There are a few instances of linkages. For example, Save the Children, USA in Xai-Xai conducts its transactions with clients through the commercial banks. The clients draw their loan from and also repay their installments for loans and mandatory deposits in a commercial bank. The MFI staff do not handle cash nor checks.

Regulatory environment for MFI development is very weak. But the sector is increasingly recognized by the policy makers. Deposit mobilization by non-regulated financial providers is prohibited thus precluding several MFIs from offering savings products to the public. Microenterprises are becoming the source of incomes for several people creating a demand for financial services from the informal sector. But survival of microenterprises is low making it a risky sector to service. Political developments of recent years are polluting the credit culture carefully nurtured by the microfinance sector following microfinance sound practices. Various civil groups that belong to the Jubilee 2000 movement have been urging creditors to forgive the debt of Mozambique and similar countries (Larson, 2000).

III. OBSERVATIONS FROM FLOODS OF 2000 IN MOZAMBIQUE

The nascent microfinance sector in Mozambique was caught unprepared to deal with the massive floods that affected Southern Mozambique in February of 2000. Two of the big five MFIs in the country, FCC and CCCP, serving over 2,500 clients in the region were affected. No preventative measures were in place. Post-disaster response measures such as loan rescheduling, new loans for recovery and cash grants were used to cope with the situation. Some broad observations from the floods, MFI responses and their implications include the following:

- *People are vulnerable to disasters: they are sensitive but resilient.* Economic activities resume back to normalcy even after an unprecedented disaster. The effects of floods were only temporary. There was loss of physical assets and infrastructure and several had to start all over again. The effect of disasters was uneven. There were people fortunate to earn an above normal income through transportation of people to safer areas and selling of inventories that were stored safely. There were losers, indeed. But, the social contacts remained intact to facilitate rehabilitation and to restart business activities. Remittances, cash grants and loans from organizations/friends and relatives were reported to have enabled the recovery process and to restart businesses. Xitiques (RoSCAS) were also used to raise funds to buy stocks for trading.

- *MFIs are vulnerable: they are sensitive but resilient.* The MFIs suffered losses but were able to cope with the situation. Resilience of MFIs may due in part be a function of the types of products offered, geographic and product diversification, heavy support from international donors to defray some of the costs due to floods. The observation may be different for a very small and new/young local MFI without any external help and serving very poor clients.

Table 2: Income, Expenses and Outstanding Loan Portfolio for CCCP in Gaza, in MT

Period	Income	Expenses	Loan portfolio
Jan-00 (pre-flood)	7,994,000	3,165,000	242,250,000
Feb-00 (flood)	16,226,500	11,719,000	224,125,000
Jun-00 (post-flood)*	17,267,500	25,974,400	226,375,000
Jul-00 (post-flood)	31,940,000	29,428,400	202,500,000
Aug-00 (post-flood)	39,808,000	33,593,400	201,375,000

Source: CCCP, 2001; * Right after cash grant disbursal.

- *Client discipline is important for MFI recovery.* Client discipline inculcated during normal times may be tested during disaster times. Groups with historic repayment and desertion problems also struggle to perform well in the wake of disasters. In contrast, village banks that were well managed and well performed were able to honor their commitments to their institution despite

the floods with the help of some special products provided by the MFI for recovery. This helped the MFIs to quickly recover from the losses. For instance, the loan portfolio for CCCP, although slightly declined in the post-disaster period, was not significantly affected by the floods. The income from loans, although was lower than the expenses between February and June 2000, increased from July 2000 to cover for the direct expenses (Table 2).

- *Good MIS and AIS are important for rapid response.* A good MIS system that is inter-faced with AIS and good communication systems are important for a rapid response in times of disasters. It helps track essential indicators necessary to make well-informed decisions, complementing the well- intentioned decisions, and to provide special products to cope with the situation. For instance, a good system to handle multiple transactions per client could have facilitated customized solutions and better tracking of information for rescheduled clients provided with new loans.

- *Safeguarding client records and partial duplication of records in the head office was underscored.* Damage to client records could have in part preempted FCC's responses tailored to clients' needs. CCCP was not affected much since the information was sent to the head office in Maputo at regular intervals (every month).

- *Grants made by a MFI, even during crises, may send mixed signals to the borrowers that the lender can be lax on collecting outstanding loans. But very small cash grants provided to MFI clients in a very short period through a third party in Mozambique is observed to have limited the effect of grants on MFIs and setting in of a dependency syndrome among the clients (see Nagarajan, 2001, on cash grants in Mozambique, an accompanying paper to this one).*

- *MFI strategies and products, financial and non-financial, are only effective if delivered in a coordinated and cost effective manner by motivated staff to deserving clients.*

- *Although MFIs in Mozambique managed the floods in 2000 with the help of donors, the readiness of the currently expanded MFI sector to manage another disaster is very limited. There is now a need for developing a comprehensive disaster management strategy for Mozambique by identifying and examining relevance of MFI responses in the wake of disasters.*

IV. DISASTER MANAGEMENT BY MICROFINANCE INSTITUTIONS

Unprecedented disasters profoundly affect both the MFIs and their clients, especially when they are unprepared and inexperienced in coping with aggregate shocks and when formal safety nets are absent. Disaster times are hectic times for the affected MFIs and their clients and quick and rapid responses are deemed essential. The MFIs may be required to minimize the losses to themselves and their clients for continued provision of services. So, the MFIs may search for financial and non-financial tools and strategies that can ensure maximum protection for themselves and their clients at a minimum cost. But, the disaster times are also chaotic times and may prompt less effective responses to tackle the situation. It is, therefore, useful for the MFIs to be aware of the available mechanisms and their implications.

A. Mechanisms Used for Disaster Response

Several mechanisms and products used by MFIs for disaster management are now being documented. MFI responses in several countries involve use of the following products:

- *Grants*: Limited relief activities through in-kind aid like food, clothing, medicines and shelter
- *Training and education of clients:*
  - *Ex-ante*: Maximalist/integrated programs provide training on disaster management using financial and non-financial means.
  - *Ex-post*: Maximalist and few minimalist programs provide information regarding safety measures to protect against diseases due to disasters.
- *Loans:*
  - *Ex-post*: Rescheduling of existing debts; making emergency and new asset replacement/recovery loans;
  - *Ex-ante*: Repayment schedules tailored to suit predictable disaster periods; special loans for preventative measures
- *Savings*:
  - *Ex-post:* Opening access to accumulated savings that would not be otherwise possible until the member leaves the program;
  - *Ex-ante*: limited experiments with voluntary savings; special savings for coping with disasters; contingency funds.
- *Insurance*:
  - *Ex-ante*: Life and credit insurance to cover for the debts of clients diseased due to disasters

- *Microleasing*
  - *Disaster Loan Funds*:
    - *Ex-ante*: Centrally placed donor funds that can be accessed by MFIs to cope with liquidity problems and make new loans after a disaster; Special funds at the MFI level that can be accessed during disasters.

The financial products used for disaster management include both adaptation of the existing products and special products designed only to cope with disasters. The MFI responses are, however, more often triggered at the wake of the disaster. They are generally driven by the availability of donor monies tied with conditionalities and the MFIs' liquidity position rather than by client demand. Often times, the above products have fallen short in adequately protecting the institutions and the clients. Few MFIs have developed comprehensive disaster management plans that include preventative and coping mechanisms (ex-ante and ex-post) for protecting the institution and the clients in the wake of disasters.

B. Relevance of Various Products for Disaster Management

a. Grants

Micro-grants are now recommended as a one-time targeted safety net measure in areas affected by massive disasters to enable the affected to recover and rebuild from the loss. The effect of grants on the financial sector is expected to be minimal if the grants complimented rather than crowd out commercial financial services and productive investments, avoided creating a grant dependency syndrome and are well coordinated with all MFIs in the region (Parker and Pearse, 2001).

i. In-kind Grants for Relief Activities

In general, several MFIs are invariably drawn into some amount of relief activities to at least maintain a good relationship with their clients and to utilize the period to assess the situation. The issues in such activities center around the following for a rapid response:

- How to locate affected areas and clients immediately after the disaster (identification)

- What do they actually need? (needs assessment)
- How to get the products there? (logistics)
- How long do they need the assistance for? (length of response)
- How to find funds for such activities? (funding)
- What implication on the institution in terms of staff time and client discipline? (spill-over effect)

The established MFIs in Bangladesh have been effective in providing at least some minimal in-kind grants to their clients during the relief stage in places where response from the government and relief agencies have been delayed. The Grameen Bank and BRAC, the two biggest MFIs in Bangladesh, have devised comprehensive plans for a rapid relief response. The preparedness has helped them to be effective in assessment and delivery of the services according to the situation (see brief #5 of MBP/USAID/DAI, 1999). These efforts have been supported by donor funds and MFIs' internal resources specifically set aside for emergencies. The measures are reported to have been effective in retaining good clients and attract new clients; the clients also felt obliged to repay their loans.

Experiences also show that MFIs that are caught unprepared and are inexperienced in rapid response strategies due to logistical bottlenecks such as lack of communication and transportation devices and unclear chain of command may be ineffective in providing relief activities through in-kind grants. The response may be too costly and late to adequately protect the clients and the MFI.

In-kind grants are suitable to protect the MFIs only if it is limited to a very short time for relief activities. In-kind grants that can help support a business may be avoided so they may not crowd out the loans that the MFIs can make to generate incomes. If delivered properly, the possible outcome would be reflected in client satisfaction.

ii. Grants for reconstruction

For reconstruction, cash type micro-grants are observed to be suitable, especially in places where the damages are heavy, the population is returning from a long stay in the camps where they had access to relief materials and in-kind grants, and markets have resumed enabling the recommencement of economic activities. Cash grants are considered to offer wider choices to the reciepients on use of funds (see box 1)

Box. 1. Rationale for Cash Grants

The underlying theory is that the victims themselves should be empowered to prioritize (and meet) their needs. The traditional relief response of using gifts-in-kind such as food and shelter effectively dictate how and which needs will be met. Cash grants, on the contrary, would allow the recipients to make this choice.

The cash grant idea is likened to house or vehicle insurance. If an insurance claim is made on a house lost to fire, the insurance company provides a portion of the lost value in cash. The owner then decides how (or even whether) to best construct a new abode. This stands in sharp contrast to the traditional way in which the international community "insures" poor people from calamities. In such, relief agencies choose the assistance that people will receive – and thus what they eat, what they'll wear, and in what conditions they'll live. This is likened to an insurance company "paying" a claim holder by rebuilding the house for her…but to the company's specifications, tastes, desires, etc.

A cash payment to disaster-affected people would benefit in the following ways:

- Give choices, empower and turn people into active proponents of their future
- Kick start a monetary economy rather turn the market into a barter system
- Benefit small traders than large trade organizations that would usually bid for provision of in-kind aid for the donors
- Decrease the transport and logistics problems in moving, storing and distributing bulky materials during the disaster times

Source: Kerri Sylvester, 2000

Making cash grants, nonetheless, would involve setting up systems for control and registration so they can be audited and accounted for. Money is fungible so conventional impact evaluations may be difficult to conduct. Security for carrying and distributing cash in the public needs to be considered as well. Also, the following issues need to be sorted out to minimize the long-run implication of a grant (such as grant mentality damaging the credit culture):

- *Who will do it?*: The MFIs, the donors, donors in coordination with an MFI?
- *When do it? – Timing of the grant*
- *Who gets access?* All affected or only MFI clients if MFIs are involved?
- *How do it?* If MFIs are involved, how coordinate to avoid negative externalities?
- *How to minimize costs?*
- *How much to provide?*

The cash grants made in Mozambique were effective in protecting the MFIs and the clients. The grants were small and made by a third party to the affected MFI clientele. Lapses in client discipline, except in few isolated cases, were not consequential. Indeed, newness of the product, tightening of the procedures through closing down of non-performing groups/village banks and streamlining institutional discipline before and after the floods could have sent a strong signal to the clientele impacting such a result (see Nagarajan, 2001, on cash grants in Mozambique, the companion paper to this one). But the effect is better tested in the event of another similar disaster. Likewise, the cash grants made by Trickle-up to several microentreprenuers in Central America affected by Hurricane Mitch in October 1998 were evaluated to be effective to restock inventories and restart businesses. The grants were made in two traunches of $50 and $100 to entrepreneurs identified by NGO partners of Trickle-Up. The results were based on the ability of the businesses to survive and produce a business plan for the subsequent years (Trickle Up annual report, 2000). It is not clear how many of these grantees graduated to become MFI clients and/or became grant free.

Implications for Mozambique

Cash grants may be an one-time option for responding to massive and unpredicted disasters. It should be small and disbursed quickly through a third party after the clients have returned back from camps. Functioning markets and resumption of economic activities are sufficient conditions for the success of the product. While insisting on repayment of loans with the grants may protect the MFI from losses, it may reduce the options for the clients and may possibly affect client loyalty. It may also signal that the third party is protecting the MFI rather than helping the clients. The clear line between the donor and the MFI may blur. The MFIs should strictly adhere to the principles regarding loan repayment, however, to avoid disintegration of the credit culture. The strong signals and incentives for repayment may likely induce the clients to repay the loans with the grants and thus protect the MFI.

Cash grants should be avoided in areas frequently affected by disasters and in areas that suffer from chronic delinquency problems.

b. Savings

Savings can perform the preventative and coping roles in disaster management for the clients and the MFIs. Savings in anticipation of a disaster are possible and are observed to be used in areas affected by frequent but predictable disasters. The instrument is, nonetheless, useful as a disaster management instrument for the clients only if it allows for accumulation of adequate funds that can be easily accessed to help meet their needs during the disasters. It is also useful only if post-flood transactions could be effected in monetary terms.

For the institution, the instrument is useful only if the records are maintained well to allow easy withdrawals during the hectic times and there are adequate reserves to meet the demand. Maintaining reserves may not, however, be a problem if adequate growth in savings balance are achieved. But administrative costs may be high if staff skills do not match the requirements to maintain clear records to ensure safety of the deposits. Frequent reconciliation of accounts may become necessary and may add to the costs. Internal control systems must be prepped up to detect and avoid fraudulent practices.

It is observed, however, that the clients who held flexible savings accounts with the MFIs tend to draw down on their cash savings to cope with disasters only after exhausting other non-financial and financial options (Wright, 2001). Therefore, the use of flexible financial savings may not cause a big run on the MFI nor would be the first line of defense for client protection unless significant volume of funds are accumulated in the account.

Implications for Mozambique

The current savings instruments used in Mozambique are inadequate to function as effective disaster management instruments for both the MFIs and the clients (see Table 3 for details on current savings products offered by three MFIs).

Until March 2001, FCC collected deposits from its members with every installment and allowed full access to their deposits at close of every cycle provided the borrower and all bank members have repaid their loans. Members were allowed to adjust the last installment with the accumulated savings or leave it with the MFI. Since no interest was paid on savings, several opted to use it for paying the last installment. Indeed, the instrument was termed as “collateral” than deposits. At the time of the floods, FCC had collected the majority of its loans and had just started the new cycle for several banks. This left several village banks with very low accumulated savings balances. Average savings balance in February was lower than the estimated value of damages[3]. FCC also lost the records in one of the major flood affected area making it impossible to allow for immediate withdrawal of the balance. CCCP started its operations in the region only six months prior to the floods. Therefore, little time was available for their clients to accumulate adequate funds. CCCP deducted 5% of the loan at the time of disbursal as compulsory savings but that was not sufficient to cover for the outstanding loans nor meet the client demands for funds. Thus, other strategies were required for protecting the clients and collecting on outstanding loans.

Table 3: Characteristics of Current Savings Products

	FCC	CCCP	SC-USA
Type of Deposits and use	Accepted as a collateral from active borrowers; use to calculate loan size for subsequent loans: two times savings balance plus loan size commensurate with the cycle.	Compulsory; advance payments for loans; only collected from active borrowers	Compulsory; only from active borrowers
Limits	Minimum: Zero Maximum: Tied to loan amount Paid every loan installment period. Held in FCC	5% of loan amount every cycle and deducted at time of disbursal; can accumulate for five loan cycles amounting to 25% of total volume disbursed. Held with CCCP	10% of the loan amount to be deposited into savings account in the same commercial bank where they withdraw and payback their loans. Held in members’ savings accounts at the commercial bank
Accessibility	End of cycle to withdraw, adjust for last payment or accumulate for future adjustments; full access at close of the cycle only if all bank members and borrower has fully repaid the loan.	Upon leaving the program	Upon leaving the program
Interest paid	From March 2001, if the bank pays on time, members receive 3% of their savings balance	CCCP pays the association; association uses it to build its	Paid by the commercial bank that holds the

[3] Average savings balance with MFIs in Mozambique was estimated at US$16 (ICC, 2001).

	at time of closing. (Before floods, Mt.20,000 was promised to be paid to each client of a bank that paid back on time irrespective of the savings balance).	capital to make emergency loans to its members and pay the CCCP promoter	account

Savings products appropriate for disaster management should be flexible in allowing for easy accumulation of funds during normal times and quick and easy accessibility to the funds at the time of disasters. The MFIs in Mozambique are still very young and inexperienced in providing such a product because it may require additional and/or different staff skills and infrastructure such as MIS and AIS from what is currently available.

A special contingency fund or disaster savings fund with no upper limits on the deposits that can only be withdrawn in the event of a disaster is possible to develop. But, the product may lose its credibility if MFIs do not maintain adequate reserves, records and trained staff to quickly track and honor their commitments. A fee may be charged for maintaining the accounts. This may however be demanded in frequent disaster areas than in areas rarely affected by disasters. In such cases, the funds may be accessible for meeting clients' needs due to idiosyncratic shocks. Availability of the product to both active and non-active clients may also be required. Also, linkages with Xitiques (RoSCAs – Rotating Savings and Credit Associations) may be explored. There is now a need to assess the demand for such products for disaster management.

c. Loans

The most important of MFIs products, loans, are put to a litmus test in the event of disasters. The income streams for the clients may dry up due to disruption of normal activities affecting their obligations to the MFIs. The MFIs are aware that clients hit by disasters are unable to repay loans according to a pre-disaster schedule. If the MFIs insist on on-time repayment, the result for many otherwise good clients may be default. Such actions would punish clients unduly, reduce long-term repayment rates, and force the MFIs to remove otherwise good clients from its borrowing list. Moreover, it would mark the MFIs as insensitive to their clientele and decrease long-term loyalty to the institution. Clearly, these outcomes are unacceptable to MFIs. Loan forgiveness cancels all remaining loan payments and removes the loan from the MFIs' books. But this is not a real option for the MFIs since it undercuts long-term client commitment to repay, and certainly results in losses to the program. These compel the MFIs to adapt the existing loan instruments to suit disaster situations and also use other mechanisms to protect both themselves and their clients.

i. Pre-Disaster, Preventative:

These loans can reduce clients' exposure to losses and are relevant in places where disasters are frequent and can be predicted with some accuracy. In Bangladesh, where the timing of the flood season is well known, several MFIs adjust their loan repayment schedules to reduce the required repayments during the flood season. In this way, when a severe flood occurs, clients' obligations to the MFI are already at a minimum (Brown and Nagarajan, 2000). This may cause cash flow problems unless the MFI maintain a diversified portfolio of clients and/or have means for profitable investment of idle funds. For example, in CODEC, Bangladesh that serviced only the fishermen in one area had sustainability problems and required to push up interest rates due to idle funds repaid before the cyclone but not on-lent because of lack of demand immediately after the cyclone (Linda Mayoux, DFN posting, June 21, 2001). In addition, it is crucial for borrowers to understand the repayment schedule and records are transparent to avoid corruption. Some MFIs use new loans in advance of the flood to encourage clients to construct stronger, more protected houses or to purchase small boats and assets that help reduce losses when the floodwaters rise. These loans may not directly contribute to income generation and may require subsidization.

ii. *Post-Disaster, Emergency Relief:*

Immediately after a disaster occurs, MFIs are found to provide new, small and quick disbursal emergency loans to help the clients meet their immediate needs and help them restock inventories to restart economic activities.

Emergency loans protect clients only if they are timely and made for shorter period of time with no explicit conditions for utilization of funds. Rapid response backed by good information is the essence of emergency loans. Supply of emergency loans without proper assessment of client demand for such a product should be avoided (see box. 2).

Emergency loans can protect the MFIs only if it would ensure clients' loyalty and their quick recovery so they can resume their economic activities. It is important for MFIs that their clients recommence economic activities so that outstanding debts can be collected and new regular loans can be made. Conflicts of interest may exist between the clients and the MFIs as to the timing of emergency loans. While the clients may require it as soon as possible starting from the relief period, MFIs may not find it feasible nor beneficial to make such loans available until the clients return from the relief camps and are ready to resume economic activities.

Quick response by MFIs with emergency loans may require workable records on performance and debt position of the clients. There are, nonetheless, instances where the MFIs have provided similar sized loans at a reduced rate for a very short time as emergency loans to existing clients based on recommendation from the groups and village elders in areas severely affected by floods (BURO Tangail, 2000; Fundusz Mikro, 1999). However, if accounting systems and staff are not able to handle the workload due to new loans because of logistical reasons, there may be less of a protection to the MFIs due to emergency loans.

Box.2: Delay was a blessing in disguise.

Anecdotal evidence from an MFI in Honduras: The Inter-American Development Bank disbursed funds to the MFI to cope with Hurricane Mitch six months after the event. The funds were requested by the MFI to make emergency loans to the clients returning from the camps. The delay, nonetheless, provided ample time for the MFI to study the damages to the MFI and the clients, and screen the applicants for new loans and restructuring of old loans. Indeed, several clients who demanded emergency loans took their application back about two weeks after returning back to their economic activities. Clients stated that they over estimated the damages and recovery time. The share of the affected activity in household incomes and other activities of the client family were not adequately factored in their demand for a loan. An immediate response with financial products using donor funds by MFIs with no prior experience in managing disasters would have led to unwanted implications.

iii. *Post-Disaster, Reconstruction Loans:*

Once the clients start reconstruction, MFIs use new loans to help clients in repairing and replacing damaged or destroyed assets. The terms and conditions of these loans vary depending on the asset in question. However, clients may not have the capacity to take on more debt if they are already committed to repaying any pre-disaster and/or relief loans. This is particularly problematic for reconstruction loans used to finance assets, such as latrines or houses, which typically do not directly generate income (Brown and Nagarajan, 2000).

The above products are often found to be used in combination or in sequence with loan rescheduling.

iv. Loan Rescheduling

Loan rescheduling has been a common practice among the MFIs in disaster affected areas. Rescheduling can reduce the financial burden on clients at a time when funds are extremely scarce, however, it may also create a greater financial burden for clients during the post-disaster reconstruction phase.

Rescheduling is clearly preferable to loan write-offs especially to protect the MFI. From the MFI's perspective, loan rescheduling appears to be a very positive strategy for coping during the relief phase of a disaster. To the extent that rescheduled loans are repaid, the financial impact on the MFI is limited compared to complete debt right-offs (see box 3). The effectiveness of loan rescheduling in ensuring full repayment, however, depends on how clients believe the institution will respond to defaults, and how much the client values her long-term relationship with the MFI.[4]

Box. 3: Cost of Rescheduling

Assume a US$100 loan made in January of 2000 with a flat interest rate of 5% per month repayable in 8 bi-weekly installments. With the floods in February, the loan gets rescheduled for four installments for the months of February and March and term extended by two months. The financial impact on the MFI by June 2000 is a reduction by $9 in revenue that would have been earned by reinvesting the loan repayments expected in February and March of 2000 and fully paid by April 2000. If the repayment was stopped for two months but required to pay all the outstanding principal and interest accumulated for February and March at the first installment after the rescheduled period in April 2000 and the rest of the dues within the end of the original schedule, and if the client is prompt, the MFI would have lost about $6.5 in revenue earned through reinvesting the loan repayments expected in February and March. Only if the clients defaulted on rescheduled loans will the MFIs experience significant losses on their loan portfolios. Thus rescheduling certainly minimizes the MFIs costs compared to debt write-offs. The example assumes no additional administrative costs to the MFI due to rescheduling since the same staff time could be used to either record the cancellation of debts for the client or rescheduled payments. If any additional costs exist in staff time and accounting burdens, they may only be less compared to debt write-offs if the clients would not default en masse.

Loan rescheduling can minimize MFI losses only if the MFIs can judiciously decide on the following immediately after the disaster.

- *Where to reschedule?:* for example, in areas highly affected and no resumption of markets / highly affected and homogenous clientele / highly affected and problem clients?
- *Whose Loans to Reschedule:* Loans of all active clients / Long term clients / Clients in advanced or early loan repayment schedules / Clients suffered heavy damages?
- *What to Reschedule?:* Principal or interest or both?
- *For How Long?*
- *How to Make up Missed Payments?* Extend the term of the loan/ add the missed payments to the end of the original term of the loan/increase the regular repayments/allow bulk repayments. Clients may desire to repay the missed payments in several ways with varying impact for the MFI.

To accomplish the above, MFIs need rapid input from field offices: a difficult task when communication systems are heavily damaged and clients are difficult to locate to assess demand and tailor client specific responses.

In general, in areas where loan terms are shorter and the affect of a disaster is more severe, rescheduling loans alone may less likely protect the MFI and the clients. Rescheduling a one or two month short-term loan will likely create unsupportable increases in the remaining payments and, in cases where clients have lost everything, rescheduling alone may not be enough to help them survive and re-establish themselves. It may also hurt the MFI through reduced opportunities for frequent reinvesting of the funds for earning higher yields. In places with very high administrative costs, it may be important to generate higher levels of incomes to cover costs and become at least operationally

[4] Established clients are more likely to value their relationship with the MFI and more likely to take repayment commitments seriously. Established clients in Bangladesh tend to have higher repayment rates on rescheduled loans than newer clients. While this finding does not suggest that MFIs should reschedule only the loans of long-term clients, it does point to the likelihood that younger programs will have higher default rates on rescheduled portfolios than more established MFIs (Nagarajan, Parker and Tran, 1999) .

sustainable. It is likely that rescheduling for over half the term of a regular loan may hurt the MFI. (see MBP/USAID/DAI brief no. xx; 1999, and Brown and Nagarajan, 2000 for more details).

Implications for Mozambique:

When assets and inventory used for income generation are lost, crops are destroyed and livestock are dead, when there is no insurance to cover for the losses, and savings are inadequate, rescheduling of loans may be inevitable for the majority of the MFIs. Clients are less likely to be able to generate incomes when they are in relief camps and markets are not functional. It may also be unavoidable where clients are highly displaced and are difficult to locate to customize a solution. As a result, a blanket restructuring may be the only immediate option available to the MFI. In such instances, however, restructuring would be useful only if there are options other than self-employment (possibly in reconstruction activities and/or remittances) for clients to generate funds to restart activities or start new activities to pay for the outstanding loans. In the absence of such external mechanisms that can substantiate the flow of funds into client's hands, restructuring alone cannot be effective in protecting the MFIs and their clients.

Not all clients may demand the option of restructuring and some may indeed be able to repay on time. The readiness of the MFIs to collect on such clients depends on the status of the MIS/AIS systems immediately after the disaster. This may warrant adequate back-ups of records and opening of the branches and/or commencement of group meetings as soon as possible. Also, since the loans are generally made for a very short term in Mozambique, if loans are rescheduled for more than one third of the term of the original contract, the MFIs may suffer losses. The clients may also lose their opportunity to avail new loans.

Incentives are necessary to encourage the clients to repay rescheduled loans. There are few readily available guidelines to help in choosing the right method for restructuring. It is often contextual and needs to incorporate the situations before and after the disasters. On the one hand, economic activities may change after the disaster and some households that were struggling before may experience a windfall profit due to disasters that can help in repaying their debts on time, or even before time. On the other hand, those who performed well may suffer huge losses and may require new loans to restart the business to service the old loans. Groups may also suffer from unpaid loans of absconding members. Forgiving the loans of such run-away members may send a confused signal regarding joint liability. However, the remaining members, although have paid their dues, may be unable or unwilling to pay for the missing members. They may expect that they may be rewarded with a new loan for repaying their share on time. However, rewarding them despite their lapse to honor joint liability may be counter-productive. The MFI may then risk losing those remaining members. It is a double edged sword for the MFI. Perhaps, in places with chronic repayment problems, a contingency fund may be required that the members forfeit to pay for the outstanding loans of missing members. The groups may also be maintained small to ensure peer monitoring. However, in places with low level of absconding members, these funds may be costly for the clients and may add to administrative burdens of the staff and create rent seeking opportunities.

The MFIs may also be required to sequence restructuring with new loans. There are possibilities of combining rescheduled and new loans for relief and emergency purposes. A household approach may be necessary in deciding on such combined contracts. Information on the income streams of all the members of the household, level of damages to the income generating activity may be of help. The client absorption capacity and liquidity position of the MFI may limit the MFI from making new loans large enough to generate incomes to simultaneously repay the rescheduled and the new loan. It is shown that asset replacement loans made to clients at the early reconstruction stage with an assumption that it would help restart the economic activities and aid in repaying the old and the new loans was short-sighted. It generally took at least three consequent such loans to achieve the

objective. Meanwhile, the MFI was burdened with carrying the rescheduled loans on its books and provisioning for it. Such multiple contracts may, therefore, require the repayments to be divided between the old and the new loans. For instance, a portion of the installment may be accounted towards the old loan and the rest towards the new loans. After the first loan, the client may be obliged to at least pay off three fourth of the old loans to obtain the second emergency loan. Alternatively, the new loans may only top off the existing loan. This may however increase the administrative burden for the staff that is generally not accustomed to handling multiple transactions per client. The MFIs in Mozambique are yet to gain experience in handling multiple transactions per client for lack of adequate accounting and MIS systems. Until then, restructuring of loans may be inevitable as a disaster management strategy but may be an inadequate tool to deal with the situation.

Emergency loans can also be made to existing clients with no rescheduled loans. These clients may be a safer bet than new clients for such loans. Safety of client records and quick retrieval of information are essential to make new emergency loans. Emergency loans are only effective if disbursed quickly. The MFIs may realize that some clients may require more than one such emergency loan before they are able to take a regular loan. The emergency loans may also require to be made for a very short term at a reduced rate. This may add to the existing administrative burden of the staff and may reduce incomes but with quick turnover of such very short-term loans and resumption of normal activities of the clients, it may not be much of a loss to the MFI.

d. Insurance

While it is technically possible for the MFIs to design insurance products to cover the life and property losses due to catastrophic events, in general, MFIs offering insurance to clients in highly disaster-prone areas are required to either use increased premiums to generate larger reserves against disaster-induced increases in claims or exclude disaster-related losses from the risks covered under their insurance policy. This is because provision of microinsurance by several MFIs, especially new and small MFIs, may be difficult due to the following problems: (i) achieving a scale of diversified clientele that can cross-subsidize each other, (ii) controlling for moral hazard, (iii) calculating an actuarially priced premiums in the absence of information, and (iv) charging affordable premiums to the clients. For all of these reasons, developing disaster-specific insurance may likely fall out of the purview of the MFIs for disaster management (For more details, see Brown and Nagarajan, 2000).

Implications for Mozambique

It is premature for the MFIs in Mozambique to provide microinsurance for disaster management. However, if linkages with private insurers could facilitate provision of affordable contracts to the MFI clients that can cover disaster losses and if MFIs can be a claimant on the policies, then the MFIs and their clients may be protected by microinsurance schemes. Nonetheless, considerable experience is needed to understand how these microinsurance schemes will be affected by disasters and how best MFIs can deal with this impact, keeping in mind both their own needs and those of their clients.

e. Micro-leasing

Microleasing, now being experimented by few MFIs, may incorporate attributes that play a preventative role. Where disaster can be predicted, the lessee may be allowed to either repay through equal installments or after consulting with the branch manager pay a minimum amount during the disaster period and more than the installment amount during normal times. However, the time limit for disaster period may be set short (step-up/step-down lease). The ability to make variable installments is likely to enhance the debt capacity of the borrower because it allows them to synchronize payment with income flow (Asif Dowla, DFN posting on June 15, 2001).

Implication for Mozambique

In Mozambique, the demand for leasing contracts and secondary markets for assets typically required by the microentrepreneurs is unclear. Several activities financed by the MFIs involve few fixed assets that could be serviced through microleasing. Furthermore, the MFIs are still at an infant stage to offer such a product on their own. They are inexperienced and possess limited logistical facilities.

If there is a demand for fixed assets and if leasing companies are available, it is, however, beneficial for MFIs to link up with leasing companies to provide such products. Since the disasters are not predictable, the preventative role of microleasing may be limited. But, microleasing can likely play a post-disaster role by facilitating replacement of fixed assets lost due to disasters. This may provide a stop-gap arrangement for the clients and the MFIs before adequate incomes can be generated to afford a loan to purchase a fixed asset.

C. Product Delivery

Lessons from several experiences show that delivery of the product in disaster situations is as or more important than the product itself. These are relevant to Mozambique.

- *Timely response:* response delayed is often times response denied. A rapid response may require quick retrieval of adequate information to assess the situation and tailor the MFI reactions. To that end, safeguarding of client records and availability of comprehensive information is essential. If client information is destroyed or substantially damaged in the disaster, MFIs are largely unable to deliver most of the post disaster products described above.

- *Responses tailored to client vulnerability and capacity:* Despite the temptation to quickly adopt blanket policies for all affected households in an area, its is worthwhile both for clients and MFIs to take some extra time to understand how clients have been affected and, where possible, to customize product terms and conditions to better meet their capacity. Constant contact with the clients is essential to provide responses that match their needs.

- *Decentralized but clear responsibilities for staff:* In order to accomplish customization in an efficient and timely manner, local staff such as loan officers needs to have the authority and training to assess the situation and, within limits, determine an appropriate solution. Waiting for authorization from the central office or head quarters that is far removed from the disaster area may delay the response. Decentralized structure however requires accountability and less shirking on part of the staff. The staff may be motivated through adequate bonuses or at least through assurance of protection of their regular benefits. Disaster times are not an appropriate period to reduce staff benefits. Decentralization requires tight internal control mechanisms such as frequent reporting and surprise audit checks to prevent fraudulent practices.

- *Flexibility and choice to clients:* Client preferences (based on their asset levels and safety nets) vary to cope with disasters. Allowing clients to choose between different financial services, withdrawing from savings or taking an emergency relief loan for example, gives them the ability to customize a solution for themselves.

- *Clear signals as to the nature of the response:* The MFIs need to motivate their clients as to the nature of MFI response is state contingent and not a lapse of regular policies. For

example, loan rescheduling at the wake of disasters should be viewed as a measure triggered by the disaster state of nature and not leniency on part of the MFI if clients cannot repay during normal state of nature. This may require the MFIs to strictly adhere to repayment procedures with the disaster specific products as well.

- *Effective coordination:* Effective coordination with other MFIs, development agencies and donors should be sought out as much as possible to avoid duplication of efforts and negative externalities. A disaster management task force may be formed composed of all the service providers to chart out the course of actions. A lead agency may be selected to provide clear leadership and coordinate the efforts according to each agent's comparative advantages.

D. Choice of Disaster Response Mechanism

The discussion above shows that a menu of options exists to manage disasters. But there may not be a "one size fits all" solution to suit all MFIs in all situations. This poses a hard choice for the MFIs.

At the wake of disasters, the MFIs are grappled with issues of finding the right tools to deal with the situation. The choice may be guided by some broad guidelines. The internal and external factors and the implications for the clients and the MFIs in terms of direct and indirect costs due to use of a single or combination of the response mechanisms could be considered. Implications for the clients from the MFI responses include direct costs and costs due to compatibility of the product with their cash-flow, vulnerability, asset level and capacities to cope with shocks.

The choice by an MFI of an instrument or a combination of several instruments for disaster management may be guided by the cost implications in serving the targeted population given the external and internal factors at the time of the disaster.

External factors to the MFI

- Nature of the disaster: Type and magnitude
- Market conditions: Financial markets and markets for trading; business environment; competing and coordinating agencies.
- Political conditions: Safety net measures

Internal factors to the MFI

- Institutional objectives
- Institutional characteristics: Age and size
- Institutional infrastructure: Physical and human resources; MIS and AIS systems

Implications of the product (direct and indirect costs)

- Direct costs of implementation
- Institutional discipline: Staff loyalty and motivation; internal control; chain of command; coordination with development agents.
- Client discipline: Repayment ethic; client loyalty
- Liquidity position of the MFI

Theoretically, in the event of a disaster, the MFIs may follow an "if-then" approach to choose the cost effective mechanism(s) for maximum outreach and protection. However, in practice, the multiple factors that affect the effectiveness of the response(s) are dynamic and interwoven thus impeding precise prediction of the outcome. Generally, the conventional MFI products like loans and savings tend to facilitate disaster management if the market conditions quickly resume back to normal, and the internal factors are intact, good and functional.

E. Broad Directions for Disaster Management in Mozambique

The stakeholders such as the MFIs, the MFI network and the donors may follow broad disaster management guidelines to respond appropriately in the wake of another disaster. This section *outlines some broad directions* for the stakeholders to facilitate disaster management. Several of these can be instituted during normal times for use in disaster times. These guidelines may provide a starting point and may not be considered as a comprehensive plan for disaster management in Mozambique.

a. Donors funding the MFIs

- The donors may facilitate mapping of the sector and identify its vulnerability and capacity to cope with shocks.
- They may play a crucial role in gathering and disseminating relevant information on disaster management.
- It may be useful to require the MFIs to provide a comprehensive disaster management strategy to qualify for funding. While such donor conditions may not necessarily mean that the plans will actually be implemented, it would at least set the MFIs in motion to plan in advance for mitigating and coping with disasters.
- The donors may also put in place some tools to monitor the MFIs' efforts during normal times to proof themselves from disasters and monitor their efforts during disaster times.
- Several MFIs may require external help to develop their capacity for disaster response and donors could play a crucial role by funding capacity building activities in this area.
- Some accreditation of MFIs during normal times according to their capacity and preparedness to deal with disasters can be thought of so disaster related emergency funds could be allotted to MFIs that can effectively deliver the services to the clientele.
- Quick disbursements are essential for rapid response during disasters but the donors may avoid massive disbursements for relief at the risk of displacing development.

b. The MFI network

- Encouraging peer learning: The MFI network may play an effective role in offering a platform for exchanging ideas and experiences.
- Fostering synergy between MFIs: The network can facilitate coordination among the MFIs so that comparative advantages of all MFIs can be collectively utilized for effective disaster management.
- Strategic alliances to avoid rat race: Semi-formal agreements can be developed between MFI to engage in frequent consultations during disaster times to avoid duplication of efforts and negative externalities.
- Encouraging transparency in operations
- Encouraging standardization of terms (such as rescheduling, grants, emergency loans etc.,) to avoid confusion during hectic times.

c. The MFIs

- Strengthen MIS for tracking key indicators essential for rapid response. It is important to streamline/update the MIS system and interface it with the AIS system for clear tracking of

incoming and disbursement of funds, and operation modalities for quick retrieval of information for rapid response during disaster times. The MFIs should at least be able to provide up-to-date information at the branch office level (with a one day lag to enter the data) on the following indicators:

- Number of villages served with geographic directions
- Number of village banks / associations served with location and contact address for the office bearers
- Active number of borrowers and portfolio for each bank / association (by loan cycles)
- Number of new clients for that month and drop-outs for the month
- Number of rescheduled banks/associations with number of rescheduled clients and rescheduled portfolio (reasons for it and history of restructuring for the same bank/association)
- Portfolio at risk (outstanding loan portfolio that is overdue by 1-15, 16-30 and 31-60 and 60+ days)
- Number of depositors and savings balance
- Number of banks/associations at risk (some criteria)
- Staff turnover and number of staff fired (with reasons)
- Portfolio due in another week, 10, 15 and 20 days.
- Average demand for credit in a week
- Average savings balance in a week
- Identifying seasonal effect by looking at the number of loan applications and repayment pattern during various times of a year (this is under the assumption that MFIs do not collect applications only during a specific time of the year and schedule payments only for a specific period of the year. In other words flexibility is assumed).

These data can be input into computers at the branches using information provided by each loan officer at the end of the day in the form of an activity/status report for her portfolio. The data should be sent to the head office for storage at regular intervals.

- The head office should at least track these indicators and data should be computerized to provide consolidated information (with one week lag) on the following indicators:
  - Number of states/zones/districts/provinces served
  - Number of banks / associations served
  - Active number of borrowers and portfolio (by loan cycles)
  - Number of new clients for that month and drop-outs for the month
  - Number of rescheduled banks/associations with number of rescheduled clients and rescheduled portfolio
  - Portfolio at risk (outstanding loan portfolio that is overdue by 1-15, 16-30 and 31-60 and 60+ days)
  - Number of depositors and savings balance
  - Number of zones/provinces/districts at risk (some criteria)
  - Number of banks/associations at risk (some criteria)
  - Staff turnover

- Ensure safety of records: Given the logistical problems, individual client specific information can still be maintained in paper records but may at least be safe guarded against fire hazards. While water-proof files or cabinets may be required in frequent and flash flood areas, it may not be absolutely necessary for Mozambique. It is adequate that the records are easily and quickly transportable to safer areas. (Upon hindsight, the FCC staff in Chokwe branch realized that several problems could have been avoided if they would have seriously considered the warnings from the head office regarding the floods and would have moved the records to safer areas.)

- Client records can be made comprehensive to provide the history of transactions for loans and savings. The credit and deposit transactions may be recorded in single passbooks and members may be provided with unique identification numbers to avoid rent seeking during disaster times by clients with dual memberships.

- Vulnerability assessment of clients can be carried out and incorporated into the credit history of the client for customizing solutions during disaster times. The poor are not necessarily vulnerable and non-poor are not necessarily capable of coping with disasters. In addition to asset/income and consumption levels (or other proxy indicators) that indicate the poverty status of the clients, the informal and formal social net systems importantly effect the coping mechanisms. Therefore, it may be useful to at least incorporate information on the following to assess the disaster coping position of a client: liquid assets owned, economic activities of household members, remittances, pensions, insurance policies etc., These data need to be updated at least once a year unless it is a not a dynamic community.

- Build client relationship history for rapid client specific response during disasters. The Grameen Bank has now developed a system to classify the clients based on their years of relationship with the bank, regularity in attending group meetings, repayment performance, loan cycles and deposits held. For example, clients who have held membership with Grameen for at least eight years, regular in their repayments and in attending group meetings and met all deposit obligations are provided with a gold card and are eligible for an automatic new loan equal to the last loan at the time of disasters. This is on par with establishing a credit line with the MFI. The audit department has a special cell to track these members. Pre-identification of the clients' capacity and performance is expected to be useful in assessing the absorption and coping capacity of the clients and therefore facilitate rapid and tailored response. BURO-Tangail in Bangladesh grades its groups according to their repayment performance and publishes that information on bulletin boards at the branch offices. This is expected to help with quick tracking of problem groups and also tailor the responses during disasters. It is presumed that performance during normal times is a good predictor of disaster performance.

- Market assessment for client coping mechanisms and demand for disaster specific products may be essential to understand the role of financial products in clients' preference for disaster management. This may help in developing new disaster specific products.

- Inculcate a strong credit culture and discipline: Credit culture can be developed through careful cultivation of a pattern of behavior given the learning capacity of the clients. It is reflected in the clients' discipline through an *orderly* pattern of behavior. Client discipline is likely to be tested during disaster times resulting in moral hazard problems and rent seeking behavior. Strong signals from the MFI before and after the disaster are therefore important to minimize losses due to disintegration of client discipline. It is to be noted that culture is developed over time and is dynamic. It is likely that mature MFIs have an advantage in imparting an institution specific culture compared to new ones. This may reflect in the behavior of the clients when faced with disasters. It may be even more imperative for a new/young MFI to send stronger signals compared to mature ones on the event of a disaster regarding their policies. This may require careful choice of instruments and intense efforts on part of the staff of new MFIs to disseminate the message.

- Diversification of liabilities and assets is essential for effective risk management.

- With backward and forward linkages in rural areas, disasters affect clients and non-clients of MFIs and have a spill-over effect on each other. It becomes, therefore, imperative for MFIs to also consider effect of disasters on non-clients.

V. Conclusion

Disaster management is a dynamic process that could ideally be developed during normal times and tested at the wake of disasters. It requires careful planning and commitment on part of all stakeholders. It is encouraging to note that it is possible to minimize disaster related losses through diligent management of portfolio and cash-flow, by building robust institutional infrastructure with skilled human resources and inculcating client discipline, through effective coordination of stakeholders during the normal times and through choice of relevant products and strategies to mitigate and cope with disasters. Much is to be learned, however, in the area of disaster management through learning by doing and sharing the experiences.

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