

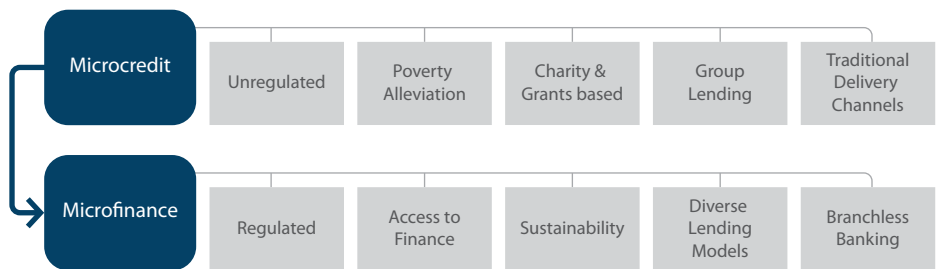
OPTIONS FOR MANAGING DISASTER RISK

By ABAN HAQ and SYED MOHSIN AHMED

BACKGROUND

Pakistan's microfinance industry has grown, diversified, innovated and is now emerging as a mature sector on the global microfinance horizon. Growth has been realized in the number of clients as well as the geographical footprint of the sector. Diversity has emerged on multiple levels in the sector: on one hand, we see diversity in the type of institutions that make up the financial inclusion space. These include microfinance banks, microfinance institutions, multidimensional NGOs and more recently, commercial banks and telecom companies through the branchless banking platform. Business models of mainstream microfinance providers ("MFPs") have also been evolving with time, moving from the one-size-fits-all group lending model to individual loans, smaller groups and Islamic microfinance. The service menu has also broadened to include products beyond the typical enterprise loan and now include credit products for other purposes (emergency loans, housing microfinance and education loans), savings, insurance and remittances. Financial performance has consistently improved and in 2011, the industry as a whole achieved sustainability.

FIGURE 1: EVOLUTION OF MICROFINANCE LANDSCAPE



Despite the progress so far, there remains a huge upside potential in the market that is as yet untapped. Estimates of the potential microfinance market range from 25 to 30 million clients. With a penetration rate of less than 10 percent at present, there is significant room to grow. The task however is not without its challenges and risks such as the availability of suitable funding, creating a critical mass of sustainable institutions with viable business models, the volatile macro-economy and unpredictable security situation in the country.

As the number of MFPs has increased, competition has intensified, especially in urban

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markets which remain the low hanging fruit for the industry. MFPs have tended to cluster branches and go after the same clients, resulting in multiple borrowing and unhealthy competition. This situation has resulted in repayment crises, albeit contained to certain areas, and raised the overall credit risk for the sector by creating a potential for over-indebtedness. However, the industry has responded to this potential threat by initiating a microfinance credit information bureau (MF-CIB) as well as creating an information database on branch locations across the country (the MicroEYE). The MF-CIB being a positive bureau will not only allow service providers to sift defaulters but also estimate existing debt burden of clients in order to make informed credit decisions. Similarly the MicroEYE gives MFPs the opportunity to assess their expansion plans keeping in view the competition and market size.

Another potential threat to the industry comes from the fact that microfinance clients overlap with the voting constituency of politicians: these are the very people who account for majority of the voters in the country and politicians can see an opportunity to gain political mileage by announcing write-offs of their debt. This is not unusual for Pakistan, where there is a clear history of loan write-offs by the government. In such a context, political entities are inclined to provide a sympathetic ear to microfinance clients with grievances. Again, the sector has responded to this threat through various initiatives: the State Bank of Pakistan (SBP) has launched a Financial Literacy Program to enhance people's understanding of financial terms and products and also strengthened the regulatory framework in terms of consumer protection and disclosure requirements. The Pakistan Microfinance Network (PMN) has initiated a campaign to disseminate information about rights and responsibilities amongst microfinance clients. Other consumer protection efforts by the industry include signing off on a voluntary Code of Conduct, initiating a price transparency initiative and also assessments of MFPs to identify gaps in consumer protection measures against global best practices. In addition the Pakistan Poverty Alleviation Fund (PPAF) has also begun to stress client protection and has incorporated the principles of client protection of the Smart Campaign in its contracts with partner organizations. To address grievances of clients, possibilities of a third party mechanism are being explored.

A common question, not just in Pakistan, is about the impact of microfinance. The voices demanding evidence of positive impact have grown louder in recent years and the risk of negative publicity without such evidence is high given the tarnished reputation of the industry in wake of crises. An industry level impact assessment for Pakistan has been initiated under the guidance of a steering committee made up of various industry stakeholders and independent representative of the academic community.

Risks emanating from weak corporate governance and poor oversight also remain real. However, given the clear trend of the sector shifting towards becoming regulated, this threat will be alleviated. The microfinance banks are already regulated by the central bank which provides close oversight and clear regulations for the MFBs. In addition, advocacy for a regulatory framework for the non-bank MFIs is also underway.

It is thus clear that the industry is focused on mitigating risks and proactively taking measures to identify and address them. The focus of this paper is another risk which is now being seen as a major threat to not just the growth and sustainability of the industry, but also to the improvements in clients' lives. Natural disasters have increased in Pakistan in recent years and have affected the microfinance sector adversely. This is also a risk that has been identified as one the industry is least equipped to deal with¹. Here we take a look at what has been the effect of recent disasters on the industry and then provide recommendations for managing this risk.

¹ Aban Haq and Zahra Khalid. 2011. *Risks to Microfinance in Pakistan: Findings from a Risk Assessment Survey*. Pakistan Microfinance Network.

IMPACT OF RECENT DISASTERS

The direct victims of any natural disasters are the people, and it is the vulnerable and poor that are worst affected in any disaster. However, damage at client level tends to ripple throughout the microfinance industry which is particularly exposed to the threats emanating from disasters for several reasons: a) populations worst hit by disasters tend to be the same as those targeted by microfinance; b) MFPs tend to have a low capital base and thus a limited buffer to absorb losses; c) microfinance is a financial business, making it susceptible to liquidity problems; d) microfinance tries to balance the social and financial bottom line, creating a political risk if it pursues recoveries after a calamity.

To understand the effects of natural disasters on microfinance, we need to look at all the players in the industry's eco system:

- **Impact at the Client Level:**

Disasters often result in loss of livelihood and the ability of victims to earn an income. This could be temporary or permanent. For example, floods can sweep away standing crops and deprive the landowners of income till the next cropping season or they can cause permanent damage to standing orchards of fruit which take years to rebuild. Disasters also create additional expenditures for the victims, who are already living on a "shoe-string" budget. These could be displacement costs and costs related to rehabilitation and recovery. Assets are lost and homes are destroyed or damaged. Psychological trauma and loss of loved ones imposes yet another burden on the victims.

- **Impact at the MFP Level:**

Institutions that have worked hard to build portfolios and achieve change in their clients' lives also face setbacks when disasters strike. At the institutional level, they too suffer damage to infrastructure and trauma to staff (as many MFPs recruit local staff). Files and information are often lost. MFPs struggle to strike a balance after a disaster between helping their clients and retaining relationships while maintaining credit discipline. In terms of their financial assets, the possibility of high delinquencies rises and there is an immediate decline in cash flows (due to stalled repayments or a decline in deposits). Liquidity management becomes a complex issue as most MFPs lend on leveraged resources that need to be repaid. It can also become harder and more expensive to access commercial funding due to a raised risk profile.

- **Impact at the Sector Level:**

Post disaster growth in outreach would slow down and may even result in closure of certain microfinance programs depending upon the extent of losses that MFPs have to absorb. Institutions will also be reluctant to lend in areas that are disaster prone despite the need for access to finance in these regions. Overall the risk profile of the sector rises if the percent of portfolio at risk increases, making borrowing from commercial sources difficult and expensive. Also, in countries like Pakistan that have a history of politically motivated blanket write-offs, the probability of such an action by the government also increases (see [BOX 1](#) for a discussion on this issue).

Since 2005, Pakistan has faced multiple disasters. These include the massive earthquake in October 2005, the Internally Displaced Persons crisis in 2009, the 2010 Floods across the country, followed by the Sindh Rains in 2011. Each of these has hit the microfinance sector with varying intensity (see [FIGURE 2](#)).

To provide context to the discussion, total gross loan portfolio of the sector stood at PKR 25.5 billion at the end of 2010, implying that nearly 10.2 percent of the sector's GLP was at risk in the 2010 Floods. Similarly, total GLP in Sindh stood at PKR 8.3 billion in 2011, implying that 63.9 percent of the portfolio in the province was deemed risky.

BOX 1: WHAT IS WRONG WITH BLANKET WRITE-OFFS?

The standard advice to MFPs hit by a disaster is to avoid blanket write-offs. Although the knee jerk reaction may be to forgive loans of clients that have been traumatized and going through severe financial crisis, this practice can cause serious problems for an MFP, both in terms of reduced capital and distortion in the credit discipline that can take years to rebuild.

All loans need to be evaluated on a case-by-case basis. Organizations should be willing to make adjustments to clients' loans when necessary to help the clients while making sure that the MFP remains in business.

Source: <http://www.microfinancegateway.org/p/site/m/template.rc/1.11.175195/1.26.18152/>

FIGURE 2: RECENT DISASTERS AND THEIR IMPACT ON MICROFINANCE IN PAKISTAN

2005: Earthquake	<ul style="list-style-type: none">Struck AJK and KPK the hardest; 3 districts affected73,000 people killedCaused damages amounting to PKR 265 billion (US\$5.2 billion)Microfinance portfolio worth PKR38 million affected
2009: IDP Crisis	<ul style="list-style-type: none">5 districts & 2 agencies affectedPKR 97 billion (US \$1.1 billion) in damagesMicrofinance portfolio worth PKR 200 million affected
2010: Floods	<ul style="list-style-type: none">60 districts affected20 million people affected, with over 1,980 reported deaths and nearly 2,946 injured and 1.6 million rendered homelessMicrofinance portfolio worth PKR 2.6 billion affectedPKR 34 million worth of microfinance infrastructure damaged
2011: Sindh Rains	<ul style="list-style-type: none">9 districts affectedMore than 5.5 million people affectedMicrofinance portfolio worth PKR 5.3 billion affectedPKR 34 million worth of microfinance infrastructure damagedRefinancing requirements estimated at PKR 3.3 billion

Sources: PMN, NDMA and The World Bank

Given the nature of these two disasters, the worst hit were institutions working in rural areas with exposure in agriculture and livestock. It is thus no surprise that these institutions in particular and the sector in general have been struggling to recover their growth momentum and restore portfolios.

DEALING WITH DISASTER RISK – INSTITUTIONAL LEVEL

Effects of disaster on microfinance and lessons learnt have been documented by various organizations, especially at the client and MFP level. Post-disaster microfinance in Haiti after the 2010 earthquake, in Sri Lanka after the 2004 tsunami and in Pakistan after the 2010 floods have yielded important lessons for stakeholders in dealing with post disaster situations as well as preparing for disasters².

In order to manage disaster risk, institutions need to act on multiple fronts:

- **High Equity:**

A stronger institutions is better equipped to face shocks, and disasters are no different. Strengthening the equity base of the institution and creating contingency reserves in periods of growth and profitability can help mitigate the impacts of a disaster.

- **Product Diversification:**

The risk of disasters can be further mitigated through product diversification. In Pakistan's context, most disasters have been floods which strike the agriculture sector most seriously (as seen in the recent floods). Institutions with lending activity concentrated in agriculture thus suffer the most and could benefit by

² See <http://www.microfinancegateway.org/p/site/m/template.rc/1.11.175195/1.26.18152/> for more on this topic and links to key resources on the subject.

expanding their lending into other economic sectors (e.g. urban micro-enterprises). By the same token, lending institutions which help clients mobilize savings, even small amounts, have found that these funds become very important for clients as they move into the rehabilitation and recovery phase.

- **Geographical Spread:**

Concentration of outreach in specific geographic areas enhances disaster risk. Expanding outreach to neighboring or, better yet, far away territories would help institutions diversify their risk as well.

- **Disaster Preparedness:**

Institutions working in disaster prone areas need to approach this risk as proactively as they approach other operational risks. It is important to have a clearly defined contingency plan that deals with issues such as communication between the branch network and headquarters, changes in policies during the disaster and post disaster phases, and communication with clients. Important information needs to be backed up regularly and physical assets should be insured. Staff needs to be trained on the organization’s contingency plan.

DEALING WITH DISASTER RISK – SECTOR LEVEL

Even if institutions proactively plan for disaster situations, there are challenges that remain outside the ability of any one institution to tackle. Risks that are systemic often require or benefit from sector-level solutions. One key intervention in this context is the establishment of a sector level disaster adaptation fund. These can take on different forms depending on the frequency and severity of catastrophes covered and the geographic scope. Different Disaster Risk Financing (DRF) mechanisms are useful for different contexts. As demonstrated by the graphic(s) below frequent, small and predictable disaster events are best managed through budgetary mechanisms (savings at the individual level or disaster reserve funds at the institutional level), whereas second tier risks can be financed with post loss debt, though preferably using an agreement established in advance like a contingent credit or a deferred drawdown facility. More severe risks are best financed through insurance since such risks are difficult to diversify against regionally and can cause losses far in excess of an individual MFP’s ability to pay for them.

EXHIBIT: ALTERNATIVE DISASTER RISK FINANCING MECHANISMS

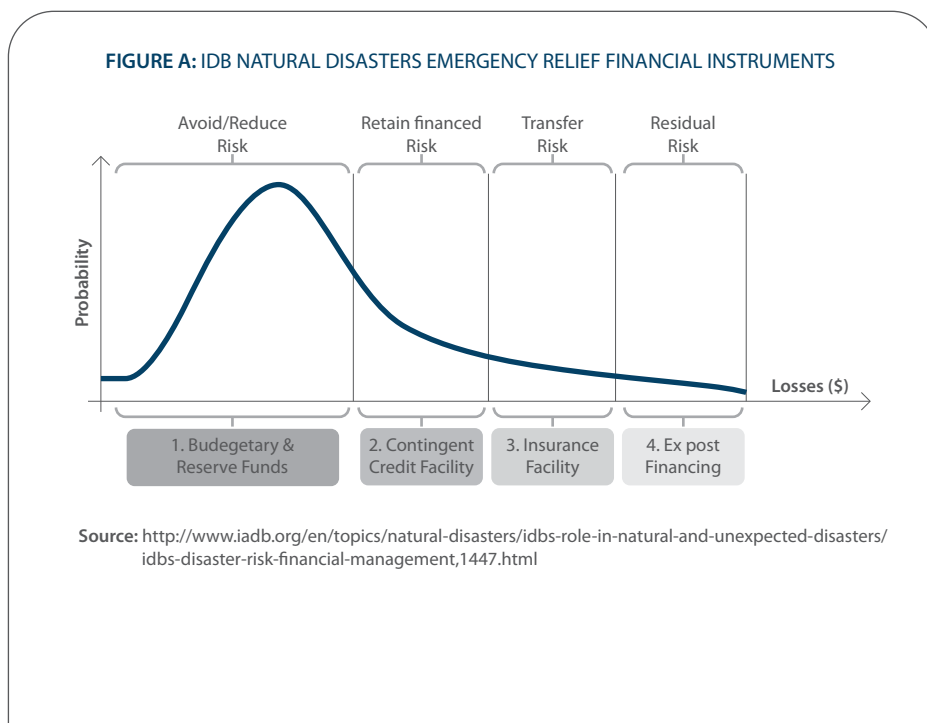
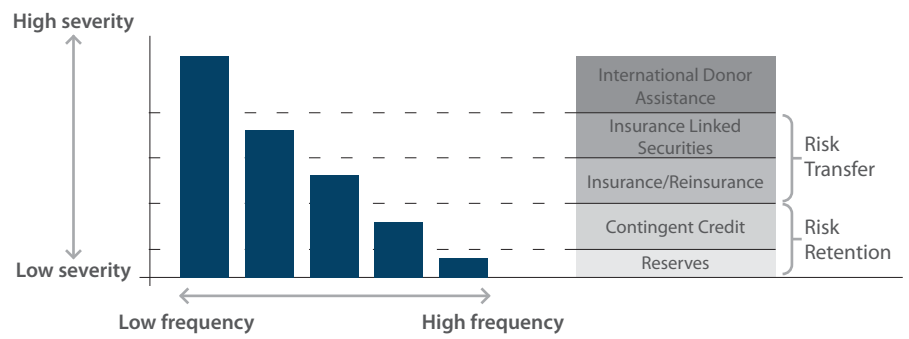


FIGURE B: CATASTROPHE RISK LAYERING



Source: The World Bank

Some prominent examples of disaster risk financing schemes benefitting MFPs include disaster loan funds such as those in Central America and Bangladesh, disaster insurance platforms such as MiCRO and private sector products like the index-based microinsurance program developed by Munich Re for cooperatives in the Philippines.

Disaster Loan Funds³

A Disaster Loan Fund (DLF) is a financial reserve held against the occurrence of a disaster. The objective is to meet short term liquidity needs of a qualifying MFP that is affected by a disaster. Funds from the DLF are used to make loans to affected households that are responsible to repay the MFP, which in turn repays the DLF. Usually initiated by a one-time grant from a donor institution, DLFs can take on different forms based on the number of institutions they serve and the division of responsibilities across stakeholders.

Existing sector level DLFs tend to either be managed by a separate organization set up for this specific purpose, such as the DLFs set up by CARE (Bangladesh) and the Inter-American Development Bank (Central America), or they are managed by the MFP themselves on behalf of a funder (such as the PKSf case in Bangladesh):

- **Separate DLF Management—Multiple Institutions:**

The CARE and Inter-American Development Bank (IADB) funds serve multiple MFPs and are managed by a separate organization created for this purpose. Once a disaster occurs, these entities assess applications for funds from affected MFPs and disburse loans to affected and qualifying MFPs, which then on-lend these funds to affected clients. As clients repay their loans to the MFPs they in turn repay the DLF.

- **MFI Managed—Multiple Institutions:**

The PKSf structure serves multiple MFIs, but rather than creating a central entity to manage the DLF (or managing it themselves), PKSf provides the initial funds to each participating MFP as a one-time grant, giving the MFP responsibility for managing the funds on an ongoing basis. PKSf has built in a number of mechanisms to ensure that MFIs manage these activities responsibly, but ultimately it is the MFP that is responsible for everything from damage assessment to additional capitalization of the DLF.

Irrespective of structure, DLFs operate in a similar way:

1. **Initial Capitalization:**

The fund requires an initial capital injection to be retained in highly liquid assets.

³ This section is drawn from Brown and Nagarajan (2000) "Disaster Loan Funds for Microfinance Institutions: A Look at Emerging Trends".

Since most of the existing funds emerged on the heels of a major disaster, this injection has usually come from a donor. In normal times, sources such as the MFPs' own funds and other sources could also be explored.

2. Damage Assessment:

Once a disaster strikes, the first stage is damage assessment by the fund management, MFPs and/or clients, depending on the fund's structure. This includes taking decisions about what would trigger the fund into action, which is also an indicator of the extent of damage that would be covered. The next step is assessing the true extent of the damages.

3. Disbursement of Funds:

Post assessment, funds are released to the participating MFP based on the rules and policies of the Fund. Key decisions would relate to the terms of conditions upon which the DLF lends to the MFP (pricing, term, grace periods, share of repayments re-contributed to the DLF) and also if any terms and conditions will be prescribed for the loan that the MFP will make to the affected client.

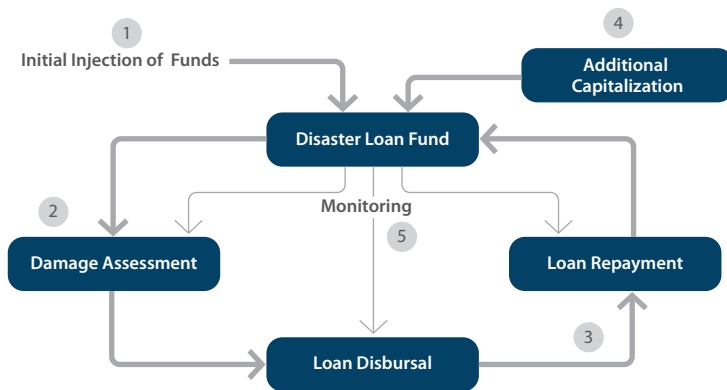
4. Re-capitalization:

As the microfinance outreach grows, or the fund depletes there is a mechanism to re-capitalize and grow the fund over time. Generally, as affected clients repay the principal amount is re-injected into the DLF. Other sources include some portion of the interest charges, a regular contribution from the participating MFPs and investment income during idle times.

5. Monitoring:

The entire process requires rigorous monitoring to ensure that assessments are accurate and the funds are used for intended purposes.

FIGURE 3: OPERATIONS OF A DISASTER LOAN FUND



Source: Brown and Nagarajan (2000)

BOX 2: THE EMERGENCY LIQUIDITY FUND IN LATIN AMERICA & THE CARIBBEAN

The Emergency Liquidity Facility (ELF) is a Fund managed by Omatrix Inc. (www.omatrixinc.com), located in San Jose, Costa Rica, with operations throughout Latin America and the Caribbean. ELF has USD 21 million available to assist affiliated institutions in emergency situations. ELF was created with the participation of bilateral and multilateral institutions, as well as private investors. ELF's purpose is to serve as a lender of last resort to MFPs affected by natural disasters or man-made crisis.

In addition to its capital, ELF maintains callable lines of credit in order to attend the need for liquidity provoked by an emergency. Its activities include:

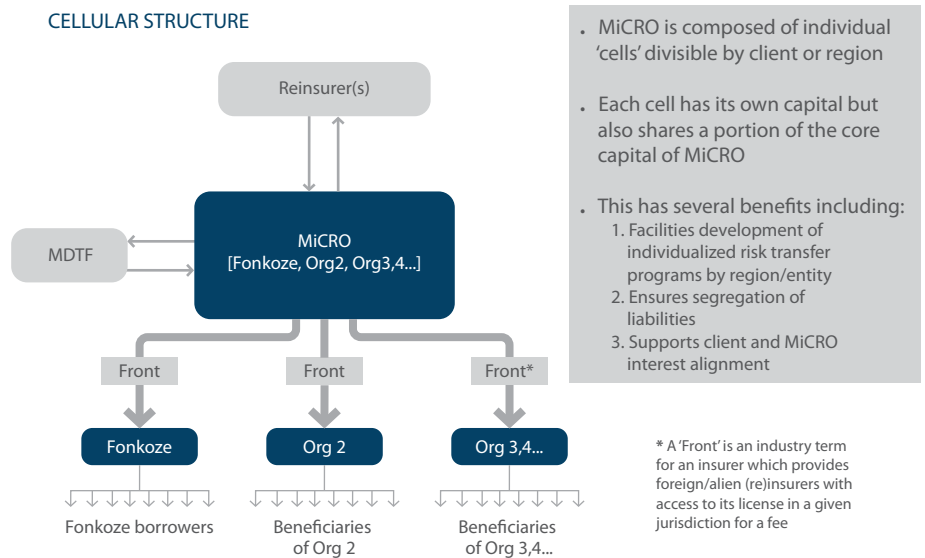
- Provide liquidity in a timely manner to microfinance providers affected by an external shock. ELF provides emergency loans to microfinance institutions to allow them to continue providing credit to their clients without interruption and overcome liquidity difficulties that occur after unexpected events.
- Preparation activities and training in risk management and mitigation. Through non-reimbursable funds from the Technical Support Facility (TSF), ELF provides technical assistance aimed at strengthening microfinance institutions with regards to their emergency prevention and mitigation practices.

Source: http://www.emergency-facility.com/en/whats_elf.html

Privately Managed Global Insurance Platforms:

Recent disasters in the Philippines (2009 typhoon) and Haiti (2010 earthquake) spurred efforts to look for innovative ways to secure the microfinance sector against disaster risk. After the earthquake in Haiti a number of stakeholders came together to set up the Microinsurance Catastrophe Risk Organisation, SCC, or MiCRO⁴. MiCRO is a licensed re/insurance company (domiciled in Barbados) which can do business in nearly any country. It issues unique re/insurance protections for catastrophic (cat) events. Its structure shown in FIGURE 4 gives it the ability to offer customized programs for any type of entity and unlike other microinsurance solutions, which use either parametric or indemnity policy formulations, MiCRO combines the two in a unique way by developing an industry-first basis risk transfer solution⁵.

FIGURE 4: TECHNICAL STRUCTURE OF MiCRO



Source: <http://microrisk.org/>

Clients can opt for a parametric based solution, which has the disadvantage of basis risk, or parametric with basis risk coverage:

- **Parametric coverage only:**

MiCRO can offer a unique, stand-alone and customised index-based re/insurance product under which payouts are based on an objective predefined parameter (e.g. mm of rainfall). The product is designed to mirror actual damage as closely as possible. Advantages are faster payouts, lower premiums and easier administration while the key disadvantage is basis risk.

- **Parametric with basis risk coverage:**

This provides the client with indemnity-like coverage but requires the client to adopt certain interest alignment measures as well as pre-approved loss assessment procedures. If actual losses exceed the parametric payout – a basis risk loss – MiCRO can provide an indemnity payout to ensure full coverage.

Leaving aside local regulations and taxes, pricing depends upon the country's risk profile, locations insured, type of risks covered and the levels of potential payout desired.

⁴ Information about MiCRO has been drawn from the organization's website <http://microrisk.org/>

⁵ Basis risk is the risk of mismatch between actual losses arising from a given event and parametric insurance payouts for the same event

Another example of a private sector initiative is Munich Re's microinsurance product in the Philippines which aims to protect the lending capacity of cooperatives to low-income groups against extreme weather events. The product will enable low-income households in the Philippines to receive benefits through their cooperative after devastating natural events. For the cooperatives, the microinsurance plan will guarantee liquidity of the loan portfolio and will provide quick payouts via its local partner Coop Life (a cooperative life insurer for local cooperatives and members in the Philippines). The Philippines is highly exposed to extreme weather events such as typhoons, torrential rain and subsequent floods, creating financial risks to microfinance institutions, disrupting their cash flows as borrowers often cannot repay their loans, leading to insolvency issues. This product is currently aimed at cooperatives but has the potential to be scaled up to other types of institutions working at the base of the pyramid.

RECOMMENDATIONS

There is little disagreement on the need of sector level solutions for managing disaster risk in Pakistan's microfinance sector. This is necessary not only for protecting our clients and ensuring continuity in provision of financial services to them but also for institutional stability in the sector. Although it is only in recent years that global stakeholders have begun to pay attention to these risks, experiences now exist that Pakistan can benefit from. Depending upon who are to be the direct stakeholders and beneficiaries of a risk management scheme, structural solutions would vary. If it is to safeguard the exposures and loan portfolios of MF sector, then the structure would be different. If it is to safeguard the economic proposition of the MF borrowers, then the roles and economic modeling of any scheme would be layered so as to protect the MFP loan portfolio at the first layer and then provide the compensation of losses, with deductible, at the ultimate layer thus protecting the low-income households. Internationally, the following models have emerged over time:

- A local funding platform similar to **disaster loan funds** could be considered. However, unlike the traditional DLFs, this fund could have the ability to provide liquidity after loan losses or at least cover the income lost by MFPs due to loan rescheduling and or refinancing. This could be housed within and managed by the State Bank of Pakistan or the Pakistan Poverty Alleviation Fund or a private fund management firm, but would be open to all the different types of service providers that are interested to participate. Seed capital could come from donors whereas participating MFPs would contribute an agreed upon amount on a regular basis. The DLF could also have a technical support facility with resources to help microfinance institutions strengthen their administration, risk management and contingency planning capabilities, as well as to allow them to resume operations quickly after emergencies caused by factors beyond their control.
- Another option would be to look at **global risk mitigation platforms**. The sector as a whole could buy stakes in platforms such as MiCRO or could dovetail this effort with the National Disaster Management Authority which has also initiated a dialogue with global re/insurers and consultants with respect to the country's overall exposure to natural disasters.
- However, the option of DLF or going to an off-shore cellular component of MiCRO may not be tax-efficient as the income, accumulated reserves and equity funds would be taxable under the applicable laws, and hence would deplete the reserves. An option is to consider a Catastrophic Insurance Fund Company, proposed to be a not-for-profit one, incorporated and registered under the Section 42 of the Companies Ordinance, 1984. It can be with either of these

options:

- (i) without share capital and limited by guarantee of the sponsors; or
- (ii) with share capital and limited by guarantee of the sponsors.

The Company can be monitored and supervised by a Board of Directors including sponsors and independent directors. One of the prime reasons of proposing the Company to be a not-for-profit one to make it tax-efficient as only then can the Company acquire the tax exemption under the Income Tax Ordinance, 2001 applicable to its retained earnings and profits on investments. These retained earnings and investment profits are extremely important for the Company so as to gradually become self-sustainable and less-relying exclusively on the Donor funding. The technical and administrative affairs can be managed by experts, local or foreign, called "Managers", selected through a tender held by the Board of Directors for three to five-year periods. With this structure, the Company will combine the advantages of both the not-for-profit industry and the private industry under one roof. The Company will not only manage fund generation in order to attain a sustainable growth in catastrophe insurance, but will also continue to manage important social responsibility projects geared towards improving catastrophe insurance awareness.

Table below provides key advantages and disadvantages of these three models. It would be ideal to create a task force of sector stakeholders to begin the dialogue process on the issue and develop a way forward before the next disaster strikes.

Type of Structure	Advantages	Disadvantages
Disaster Loan Fund managed by SBP or PPAF	<ul style="list-style-type: none"> • Could be set in place relatively quickly • Would be housed in an institution already familiar with the MF sector • Would generate confidence of the sector and wider stakeholder (such as donors) due to parent organization's standing 	<ul style="list-style-type: none"> • Not the core business of either organizations • May not be tax efficient and erode the fund over time
Cellular Component in a Global Platform	<ul style="list-style-type: none"> • A specialized solution created for such risks 	<ul style="list-style-type: none"> • May not be tax efficient • There may be complications related to foreign exchange risk, who will manage this relationship on behalf of the sector
Dovetail with NDMA	<ul style="list-style-type: none"> • May be a cost efficient alternative 	<ul style="list-style-type: none"> • NDMA's focus is different from MF and MF would only be a small component. • Timelines for operationalization are unpredictable • Policies may be vulnerable to change in government
Catastrophic Insurance Fund Company	<ul style="list-style-type: none"> • Could combine private sector expertise with tax efficiency of a non-profit • A financially sustainable model for the longer term • Does not require complicated legal processes • Subject to disclosure and corporate governance guidelines of SECP that could satisfy donor concerns 	<ul style="list-style-type: none"> • Unclear how the funds available with SBP, for example, could be transferred into the company

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