



# Increasing the Financial Resilience of Disaster-affected Populations

Karen Jacobsen  
Anastasia Marshak  
Matthew Griffith

Feinstein International Center

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## INTRODUCTION

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Hazards such as earthquakes, typhoons, floods, landslides, volcanoes, droughts, tsunamis, and wildfires affect over 200 million people annually.<sup>1</sup> The frequency and magnitude of these hazards have increased in recent decades due to a rise in population densities, rapid urbanization, and environmental degradation. The direct economic damage from hazards is estimated at approximately \$1 trillion dollars just between 1980 and 2004<sup>2</sup>.

For people who have been struck by a disaster, the restoration of their livelihoods is critical, once their immediate humanitarian needs have been met. Similarly, if people living in hazard-prone areas could prepare in advance they would recover more quickly. The ability of households to restore their livelihoods is tied to what we term *financial resilience* -- the ways in people access, build and preserve their financial assets and limit their liabilities. A household is financially resilient when it is able to rebound from the shock caused by a hazard, and re-establish a means of earning a living. Our paper assumes that financially resilient households are better able to cope with the consequences of the hazard – including the displacement that often accompanies a disaster. Finding ways to support financial resilience both before and after disasters is a crucial way to reduce the negative impact of disasters.

When a hazard strikes a community, not all households are equally affected, and this is also true for their financial resilience. Why some households are more resilient than others, and what can be done to increase financial resilience, is the subject of this report.

The relationship between a household's or community's financial resilience and the impact of a disaster depends on the specific risk factors – or 'risk profile' – characterizing the affected area. These risk factors include the type of hazard, whether the context is urban or rural, whether a household is displaced or not, and the wider socio-economic and institutional context in which recovery must take place. This paper outlines these risk factors, and then explores existing and potential approaches to offsetting these risks so as to increase household and community financial resilience in hazard settings.

One of the most significant problems facing a disaster-affected population is the need for ready cash. In a post-disaster context cash is difficult to come by for a variety of reasons. A useful approach then, to enable recovery and reduce risk, is to identify effective ways to enable households to access (or hold onto) a *lump sum* of ready cash.

We begin by outlining the meaning of household financial resilience, and its relationship to the household's cash position. We then explore the impact of different kinds of hazards on the cash position of affected households. We then explore how different approaches – both existing humanitarian assistance and livelihood ones, and recent innovations – have addressed financial resilience, drawing on a range of case studies.

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<sup>1</sup> ISDR, Hyogo Framework for Action 2005 – 2015

<sup>2</sup> Stromberg, David (2007) "Natural Disasters, Economic Development, and Humanitarian Aid." *Journal of Economic Perspectives*, 21(3): 199 – 222.

## HOUSEHOLD FINANCIAL RESILIENCE AND THE CASH POSITION

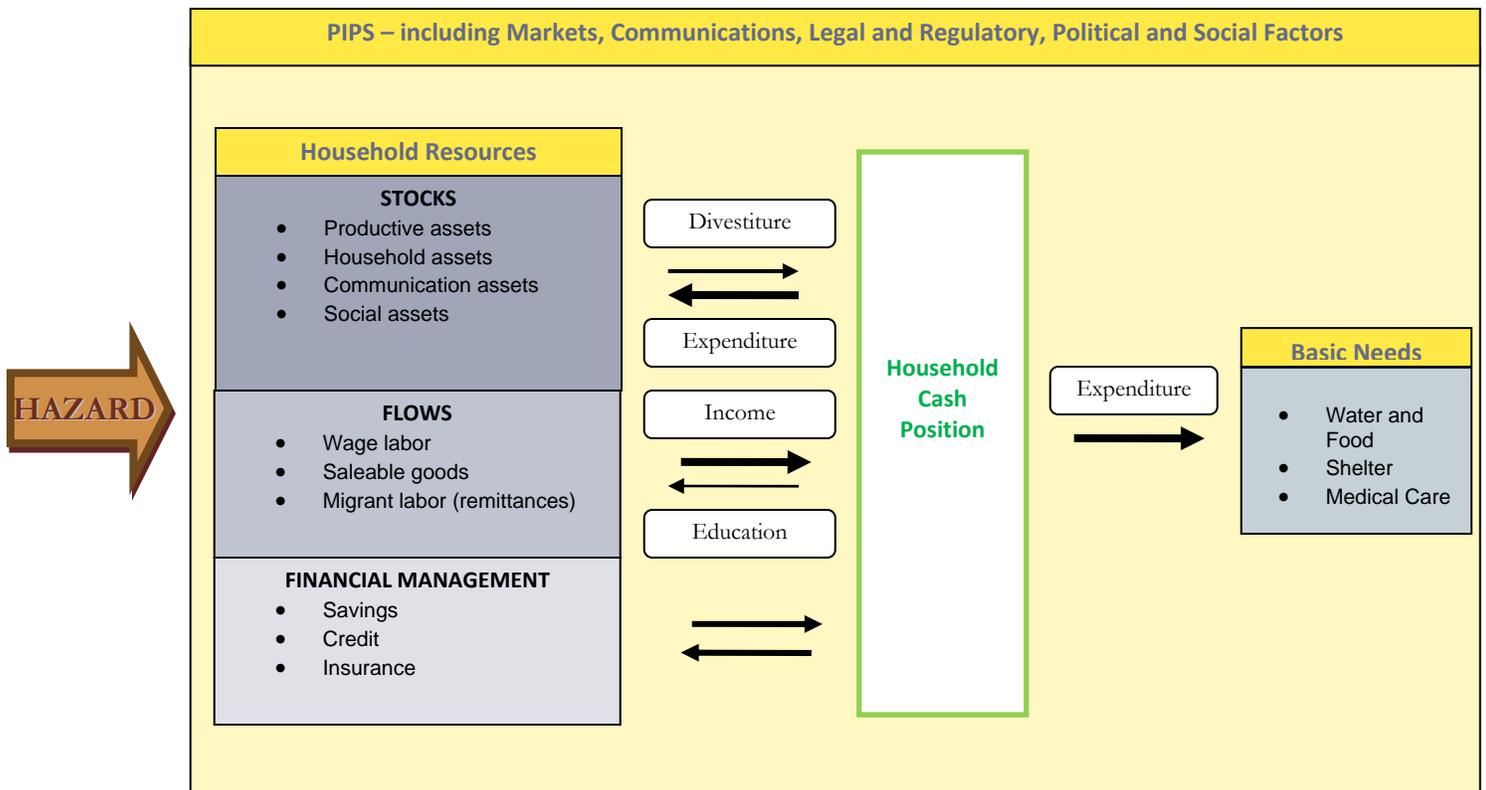
Financial resilience and vulnerability are two sides of the same coin, and concern the ways in which a household accesses, builds and preserves its financial assets and limits its financial liabilities. In order to be considered “financial”, assets must be marketable or have some intrinsic financial value. Financial assets are those that can be:

- sold or redeemed for cash,
- pledged to purchase other assets, or
- pledged to produce predictable revenue streams.

A household’s financial resilience is the difference between its assets and liabilities. Net assets, or net worth, are the cushion that enables households to be financially healthy, stave off financial shocks and setbacks arising from hazards, and re-establish livelihoods. A financially resilient household endures the shock, and regains previous levels of net worth within a reasonable period of time. Net worth is a key factor in resilience – it is a shock absorber – and it is a measure of resilience.

The increased monetization of society in the developing world resulting from globalization and greater access to markets, means that cash has become the predominate means by which household transactions occur. Other systems, such as bartering, still exist but are becoming less widespread (although they may resurge in insecure or post-disaster settings). Transformations -- income, expenditures, investment, and divesture --between household resources and basic necessities occur via the household cash position. Chart 1 outlines the household cash position.

**Chart 1: A Model of the Household Cash Position**



The model depicts three forms of resources that affect the household cash position: stocks, flows and financial management:

- *Stocks* are based on natural and physical capital owned or accessible by the household, and include the household's housing and possessions, land, livestock, tools, seed stocks, etc. Household assets can be communal, when there is access to shared community infrastructure such as irrigation networks (eg. canals), or roads, footbridges and paths which allow people access to farmlands and town markets. Communication assets -- mobile phones, satellite phones, and other technology that allows for communication -- comprise a particularly important set of assets, and can be thought of as a household's communication capital. Divestment (eg. sale) of stocks increases cash, while expenditures on stocks decrease cash, as does investment in human capital (sending a child to school or attending vocational training) to increase future flow resources.
- *Flows* of resources include income from trade of items produced by the household, wage labor and labor migration (remittances), all of which increase household cash. Expenditures to support labor migration (travel expenses) decrease cash. Like stocks, *flow resources* are derived from a household's physical, human, and social capital (The latter includes relatives or friends in the diaspora who are a potential source of remittance flows.)
- *Financial management strategies* yield cash through savings or access to credit or insurance payouts, but decrease cash as a result of debt repayment, payments into a non-liquid savings account (or savings group), or through purchases of insurance. Financial strategies are based in the formal, semi-formal and informal sectors, as we discuss below.

Faced with a negative shock, the household cash position is quickly diminished as stocks are divested, flows are obstructed, and financial management strategies are exhausted.

#### POLICIES, INSTITUTIONS, AND PROCESSES (PIPS)

Our model draws on the Sustainable Livelihoods Framework, which emphasizes that the household's ability to utilize its assets is embedded in the wider policy, institutions and processes (PIPs) context. Albu and Scott (2001)<sup>3</sup> point out two omissions in the livelihoods literature:

- 1) the role played by private-sector markets in the livelihoods of poor people; *and*
- 2) the ways in which technological change contributes to livelihoods.

They argue that the influence of technology and market factors is pervasive in development:

“but nowhere more than in the field of micro- and small-scale enterprise development. Constraints and opportunities emerging from processes of technological change and market development are often highly significant factors in the livelihoods of people who depend to a significant degree on earnings from MSEs – whether as business owners, employees or self-employed.” (Albu & Scott 2001: p.3)

The importance of communications technology such as mobile phone technology is especially

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<sup>3</sup> Mike Albu and Andrew Scott “Understanding livelihoods that involve micro-enterprise: markets and technological capabilities in the SL framework” Intermediate Technology Development Group (ITDG) November 2001. Draft

<<http://practicalactionpublishing.org/t4sl/mseapproach>> accessed September 18, 2009

important in hazard risk areas. Weak communications structures constrain a household's ability to recover or cope both during an emergency and afterwards for example, by preventing a household from accessing remittances. After the 2004 tsunami, remittances and donations were unavailable to affected households because banks were unable to process and distribute remittances. In some cases, banks took over a month to provide access to funds transferred through remittances, and some banks remained closed for a number of weeks (Barrett, 2009).

Becoming displaced following a disaster places the migrant household in a new institutional (PIPs) context, depending on whether the household becomes refugees or internally displaced. Restrictive regulations and anti-migrant policies in a host country can prevent or significantly constrain refugees' ability to gain formal employment or take advantage of the services offered by formal financial institutions. In Johannesburg, access to financial services remains difficult for refugees as most banks only allow the opening of bank accounts with South African identity cards making it nearly impossible for them to access financial capital necessary for taking part in income generating productive activities, such as entrepreneurial business. Higher education qualifications are also not always recognized for many refugees and asylum seekers forcing them to find employment in the informal sector or via self-employment (Jacobsen & Bailey 2004; Lukoma, 2009).

In the next section we discuss different types of hazards and use our model to show how they affect the household's cash position.

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## TYPES OF HAZARDS, THEIR IMPACT ON FINANCIAL RESILIENCE, AND MITIGATING FACTORS

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**Hazards** are damaging physical events that cause loss of life, property damage, widespread social and economic disruption, or environmental degradation (UN/ISDR). The US government declares a hazard a **disaster** when the situation or event overwhelms local capacity—of an entire country or part of a country, resulting in a request for national or international humanitarian assistance and to restore normal functioning (OFDA Annual Report and EM-DAT, 2008). Not all countries have clear criteria specifying what constitutes a disaster, or when a disaster event is on a sufficiently serious scale to permit recourse to existing humanitarian relief funds (Benson et al 2009). So-called ‘natural’ disasters such as floods, droughts, hurricanes, earthquakes, winter emergencies, and wildfires, can become ‘complex emergencies’ when they take place in conflict zones or regions characterized by high levels of insecurity. Disasters also include health emergencies such as epidemics, and ‘man-made’ events such as nuclear accidents.

Hazards vary according to their frequency and severity, but for our purposes, three key factors are particularly important in influencing the welfare outcome of a household:

- correlation (idiosyncratic vs. covariate);
- speed (sudden vs. slow onset) and duration (acute vs. protracted);
- conflict or non-conflict setting.

These factors require different disaster and risk management approaches.

### CORRELATION OF HAZARDS: IDIOSYNCRATIC VS. COVARIATE EVENTS

A key distinction is whether a hazard affects only individual households versus entire communities or wider regions. These different types of events will have varying financial consequences.

When hazards -- such as a wildfire or a sinkhole collapse—affect individual households but not the whole community, they are termed *idiosyncratic shocks*. The household will lose its physical capital, and if deaths or injuries occur, some of its human capital. But the household’s livelihood assets *that are located outside the home within the community*, including access to natural and social capital, and household financial assets, are less likely to be affected. (This speaks strongly to the advantage of locating household savings outside the home.) Secondary consequences of idiosyncratic shocks include a household’s reduced ability to repay loans, which hinders access to additional credit.

*Covariate* shocks arise from high impact ‘natural’ hazards such as drought, floods, or earthquakes, and from protracted armed conflict. Such shocks affect entire communities or sub-regions, destroying or depleting a range of livelihood assets, including natural and physical capital. Households exposed to covariate shocks must deal with them on top of idiosyncratic shocks. For example, a drought depletes the productivity of all farms across the affected region, reducing income from harvest sales and reducing farm employment. The resulting bad harvest causes a temporary spike in urban food prices, forcing households to seek supplementary funds to cover daily necessities. The loss of physical assets (**stocks**) means reduced opportunities for wage labor and trade (**flows**). The effects of flooding, tsunamis, and cyclones make large tracts of crop land unusable for several seasons (DFID, 2009). Saltwater intrusion is one of the biggest threats to livelihood systems – it decreases freshwater supply, crop production, and increases health problems as well as the fragility of mud homes (Pouliotte et al, 2006).

Exposure to covariate shocks means a household's **financial resources** -- savings, insurance and access to credit --are all potentially lost or reduced. Households lose access to informal financial strategies, such as borrowing from a neighbor or reciprocal insurance. Savings with informal savings groups can be washed away or destroyed, or lost in the process of people fleeing from their villages. Lost or destroyed documents and records affect a household's ability to access remittances and formal banking services (Savage and Harvey, 2007).

In situations of protracted conflict and insecurity, formal financial service providers withdraw their services (banks close), or reduce the range of their services (bank staff do not venture into insecure zones). National-level banking and economic planning is often suspended or not implemented; rural institutions are cut-off from broader markets; and insecurity depletes the existing customer base (Hudon and Seibel, 2007).

Access to remittances, needed more than ever before, is reduced as regions become difficult to access. The 'last stage' of the remittance journey, in which remittances must be physically transferred (hand-carried) to their recipients, becomes blocked. In Darfur, labor migration (remittances) to Libya used to contribute 25 percent of household income. It has now been reduced to 20 percent on top of already drastically reduced total income (Young, 2006).

Given the nature of the hazards that OFDA works with, this report only considers covariate shocks. However, the distinction is necessary for determining the appropriate responses to a disaster. For example, a regional hazard cannot be mitigated by insurance schemes that do not pool risk with areas unaffected by that hazard.

#### TIMING AND DURATION OF HAZARDS: SUDDEN VS. SLOW ONSET, AND PROTRACTS VS. ACUTE

*Sudden onset* hazards happen rapidly and/or unexpectedly, their timing measured in days, hours, or even minutes. Such events include earthquakes, tsunamis, floods, severe storms, volcanic eruptions, and landslides. These are mostly geological and climate hazards; but include man-made accidents such as industrial or technological accidents such as toxic spills, nuclear accidents, etc. Their *spatial impact* is usually more localized, and their *duration* is acute rather than protracted, although the after-effects can be very long-term, such as displacement, loss of land productivity, etc.

*Slow onset* hazards are measured in periods of months or years, and usually pertain to drought, famine, civil strife, and conflict. Their spatial impact can be wider, affecting entire regions or even whole countries, and they are often protracted.

These distinctions have important implications for risk management strategies. Sudden onset hazards, depending on their severity, might require immediate provision of food and/or shelter, while slow onset ones are better managed with risk coping strategies that reduce the negative impacts in the long run. For example, the effects of desertification could be mitigated with infrastructure investment or provision of more drought-resistant seeds rather than or in addition to food aid.

#### CONFLICT VS. NON-CONFLICT SETTINGS

When a hazard occurs in a conflict zone, such as the tsunami in Aceh or Sri Lanka, or the Pakistan earthquake in the Kashmir region, the impact of the hazard is complicated by factors such as the presence of armed groups, a war economy, and pre-existing damage to infrastructure. Insecurity and conflict-related problems like looting and other forms of asset stripping often mean households are already financially compromised, and the hazard creates additional complications. The conflict itself

is a particular type of disaster, often referred to as ‘complex emergencies’. Complex emergencies made up almost a quarter of the disasters that OFDA responded to in 2008.

### **FACTORS INFLUENCING FINANCIAL RESILIENCE IN DISASTERS**

Not all households are equally vulnerable when exposed to a hazard. A range of household-specific and contextual factors influence vulnerability and resilience. These include age group (for example, under fives and the elderly are more vulnerable to health hazards like cholera or avian flu, and the more working-age individuals in the household, the more income-secure it is), gender (women are vulnerable if land ownership regulations favor males). In this paper, we focus on two factors of particular importance: 1) whether the disaster occurs in urban or rural settings, and 2) whether people become displaced or not.

#### **URBAN VS. RURAL SETTINGS**

Urban economies are characterized by more commercialization, with most goods and services rendered through the market. Urban residents are more likely to rely on cash incomes rather than on subsistence agriculture or in-kind payments, and have less access to common property resources (Farrington, 2002). There is increased exposure to health hazards in densely populated urban areas, and urban populations are more vulnerable to secondary health consequences, such as epidemics of typhoid, cholera, and diarrhea diseases often associated with environmental hazards such as flooding, landslides, volcanic eruptions, etc.

Urban settings also often display weaker social bonds, allowing people to default on social capital responsibilities; greater disparity in income tends to foster individualistic behavior; populations living in slums have fewer assets (like livestock) to sell off; and lack of institutional or legal protection can further exacerbate already individualistic behavior (Wamsler, 2007).

All of these factors affect a household’s coping behavior as well as the effectiveness of interventions. For example, while people in urban centers have better access to financial institutions than those in rural areas, the poor or displaced are usually unable to utilize them. This lack of access is important when deciding whether to implement mobile phone technology to increase access to financial institutions, or work with simplifying regulations to allow for utilization of available services.

#### **DISPLACED VS. IN SITU POPULATIONS**

When people’s land and homes are destroyed, or if violent conflict threatens, large-scale population displacement is likely. The 2008 earthquake in Pakistan destroyed almost half a million homes forcing approximately 3.5 million people to be displaced (IFRC, 2008), The 2008 earthquake in China completely obliterated entire townships; in Beishaun county alone, more than 10,000 people lost their homes (IFRC, 2009).

Compared with those who remain *in situ*, displaced households are more likely to suffer financially for the following reasons. Displaced people are more likely to:

- have lost their asset base or had more of it destroyed;
- have lost a significant part of their social network;
- Be living in a place where the local (host) population and/or the authorities are unwelcoming or resistant to their presence
- Be living in temporary housing or camps where previous livelihood activities are highly disrupted or difficult to pursue. Before coming to camps, IDPs usually report farming as their main economic activity. In the camp, however, there is limited access to farmland and

farming activities, significantly limiting the household's ability to earn an income without having to learn new skills (Young and Jacobsen 2009; Jacobsen et al, 2006).

- Be dependent on handouts and assistance.

On the other hand, displaced people might be better off than non-displaced in that they:

- Are more easily reached by aid workers, and thus more likely to receive assistance;
- might include household members that are stronger and more able than those left behind (who might be older and less able to travel, or poorer with fewer resources that enable them to flee

Displacement is an important consideration in financial resilience and needs to be factored into intervention strategies. In particular, the issue of when and whether displaced people will return to their homes after a disaster is not well understood, and is an important intervening variable in understanding resilience and DRR.

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## HOUSEHOLD FINANCIAL IMPACT AND RESPONSE TO DISASTER

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At the household level, there are two basic needs that drive the financial activities of the poor. The first is managing basic cash flow that can transform irregular income flows into dependable resources to meet daily needs. The second is raising a lump sum when confronted with unforeseen risk (hazards, health emergency, etc) or large expenses (school fees, agricultural investment, livestock, etc) (USAID, 2008). Therefore a key aspect of financial resilience is *access to a lump sum* i.e. a one off transfer of substantial size to a household. This important component of financial resilience has only recently begun to be explored – such as by Collins, et al, (*Portfolios of the Poor*) - as part of understanding the financial strategies of the poor in developed countries.

For households, the financial impact of a hazard event is like a financial shock. A financial shock is an event, limited in duration but potentially recurring, that leads to a sharp rise in required expenditure and/or a sharp decline in income. A shock requires a ready lump sum of cash to get the household past the event, weather the financial strain resulting from the shock, and resume their previous livelihoods or begin new ones. In the best cases, households have planned for financial shocks and have a ready lump sum ('savings for a rainy day') that is sufficient to deal with the shortfall. (In the US, financial advisers encourage their clients to set aside enough to tide them over three months without income.) Households will draw down their savings, and take on credit at the best terms they can find. However, for the poor, savings are meager, and credit either unavailable or available only at extremely high prices.

A poor household's small and unpredictable income makes the availability of financial reserves an important financial management tool in the event of a shock. But few poor households have the means to set aside reserves, and when confronted with the need for a lump sum, households must look elsewhere. Those who have remittance senders elsewhere may be able to obtain additional support. But in most poor communities, relatively few households have access to remittances and most households must look to their own community for emergency credit. If hazards are not covariate, informal loans might be available from relatives, neighbors and friends, or 'shop credit' from local merchants (Brouwer et al, 2007). Pastoralists often seek loans during periods of severe drought, when they have to truck in water to keep their families and their animals alive. This water costs money, leading to household debt burdens of \$50 to \$100 simply for water (Ali et al, 2005). Households are often obliged to set aside concerns about security or cost and borrow from money lenders at exorbitant interest rates and often from similar sources that have cheated them in the past (USAID, 2008; Wamsler, 2007). Thus many households find their debt situation exacerbated after a shock.

For poorer countries, remittance flows are positively correlated to natural hazards (Yang, 2008a), filling the role of an emergency lump sum. After the Asian tsunami in 2004, the Sri Lankan Central Bank recorded noticeable and sustained increase in remittance flows coming from migrant workers in the Gulf States (Savage and Harvey, 2007). The Central Reserve Bank of El Salvador estimated that Salvadorans living abroad sent home \$1.9 billion in remittances to help deal with the effects of the 2001 earthquakes (Wamsler, 2007). Incomes in flooded regions of South Africa in 2001 increased after relatives in the cities sent money home to cover reconstruction costs (Khandlhela and May, 2006). Remittances work as a kind of hazard insurance (which is an ideal example of lump sum transfer) for households who have migrants abroad. In the Philippines, households with overseas migrants were able to offset declines in income caused by environmental shocks (like decreased rainfall) with remittance flows from abroad (Yang and Choi, 2007). Remittances thus play an important role in providing a lump sum for affected households to rebuild their homes and maintain their expenditure levels after a hazard.

In the absence of savings or access to credit or remittances, households resort to sub-optimal or harmful mitigation and coping behavior, with potential long-term ill effects for household wealth-building.<sup>4</sup> Households commonly make emergency divestitures of long-term productive assets, including selling off productive assets such as livestock for cut-rate prices. Eg. Pastoralists sell valuable cattle, animals that might have still had breeding potential or which would have sold for a better price had they enjoyed a few more years of fattening. Covariate shocks often lead to many households seeking emergency funds at the same time, creating a glut of goods in the market and depressing the selling price. Such strategies satisfy immediate cash needs, but stunt long-term wealth-building potential.

Households will also cut non-immediate expenditures, for example foregoing planned house improvements or denying themselves needed medical attention. These short-term cash savings lead to greater expense later as the roof starts to leak or the medical condition worsens and require more costly treatments. In severe situations, households resort to more drastic coping mechanisms, including cutting food budgets, reducing number of meals per day, or granting caloric and nutritional priority to the members most vital to the household livelihood activities.

Disasters potentially destroy physical and natural assets, leaving households with depleted resources and a reduced cash position, nowhere to live and no way to generate cash, and restrictions on physical mobility because of physical barriers (blocked roads, downed bridges). As families and individuals become destitute, the need for cash can lead households to engage in harmful 'maladaptive' strategies, such as theft, prostitution or recruitment into militias.

Without humanitarian intervention, the household may be unable to meet its basic needs, and in the absence of friend and family support, be forced to migrate. Distress migration or forced displacement can occur multiple times when families without the financial resources to recover from the drastic loss of household and productive assets are forced to relocate repeatedly or to resort to IDP camps (Brouwer et al, 2007). Once displaced, the poor are further constrained if they are required to live in displaced camps. In the absence of a lump sum, disasters leave households not only significantly worse off but also more vulnerable to future shocks.

#### **INTERVENTIONS TO SUPPORT HOUSEHOLD FINANCIAL RESILIENCE**

There is a long history of humanitarian responses to disaster, which are of two types: ex ante and ex-post. Traditional relief efforts are ex-post, addressing relief and recovery needs in the immediate aftermath of an acute disaster. Emergency humanitarian relief is central to a managed response and has saved the lives of hundreds of millions of people by providing food, shelter, and water (Maxwell, 2008). Relief interventions in the form of food and non-food aid (both of which can be sold) or cash grants, are effectively the emergency provision of lump sums to households in crisis. But these kinds of externally provided interventions face a range of problems, including targeting, corruption and elite capture, and they are associated with negative economic side-effects, including market distortions and dependency. Recently new approaches have sought to provide ex ante assistance i.e. before the hazard occurs, in order to mitigate risk, lower exposure to the hazard, and strengthen household ability to withstand the disaster. In the next section we discuss how different types of interventions affect financial resilience in a hazard context.

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<sup>4</sup> See Wamsler, 2007; Pouliotte, 2006; SEEP, 2009; Collins et al, 2009; Brouwer et al, 2007; among others.

## EX-POST HUMANITARIAN ASSISTANCE

A substantial literature exists on the impact of food aid on local economies and markets. Externally purchased food aid can depress prices and inhibit the recovery of local agriculture following a disaster. For example, in Malawi, after the 2002-03 food crises the influx of food aid led to a fall in the maize price from 250 dollars a ton to 100 dollars a ton during a one year period (Jere, 2007). Food aid can create disincentives for local food producers and impedes involvement from the private sector, rendering domestic producers worse off and more susceptible to future crises. When agencies purchase food aid locally, on the other hand, this can have an inflationary effect on prices, negatively impacting households that are not well off, but also not targeted for the food aid program.

In order to raise needed cash households often sell aid, and to circumvent this, some programs have sought to provide cash directly to disaster-affected populations. A study done on a cash transfer system in Kenya in order to address food security problems caused by the election violence in 2008 showed that that 70 percent of the total cash provided went towards expenditures on food items, another 17 percent went on transportation costs, and the remaining 13 percent was utilized for livelihood expenditures, as well as on savings, and loans or gifts to friends (Brewin, 2008). In Somalia, much of the cash distribution was used to repay debt (identified by the community as a top priority) which revitalized the credit market, providing an unexpected benefit that would not have occurred if the equivalent worth of food was provided (Ali et al, 2005). Households value the flexibility that cash provision offers, which allow them to choose the consumption/ investment mix that suits their circumstances best (UK Department of Development, 2008). However in order to avoid the possible market distortions caused by external provision of cash, interventions need to work with a household's resources and needs rather than just provide cash and food in the period after the initial emergency. In flood-affected Bangladesh, Oxfam's cash grants exacerbated already increasing rice prices given the diminished supply of food on the market.<sup>5</sup> Cash based programs can also simply shift the burden from the group receiving the benefits to those not targeted, increasing the purchasing power of those receiving the cash grant, but leaving the rest of the community worse off due to the increased food prices (Basu, 1996).

Traditional humanitarian relief like food aid is vulnerable to 'elite capture' and corruption. There are many places in the supply chain where food aid can be stolen or diverted. Humanitarian assistance can also be used for sexual exploitation at the distribution level, where female headed households are most vulnerable (Barrett et al, 2009). A recent study shows that even community-based organizations rather than bringing empowerment and change to urban slum dwellers, often block progress, controlling or capturing benefits aimed at the poor and misusing them for private (political) interests (Wit and Berner, 2009).

In order to avoid elite capture as well as minimize market distortions appropriate targeting and monitoring is essential for many of these interventions. Possible effects on price and competition caused by the provision of cash or food aid can be mitigated if markets are strictly monitored both before and during aid distribution (Barrett and Maxwell, 2005). Targeting and timing of the relief provision needs to be carried out appropriately in order not to worsen the position of other households or communities that might not have been affected otherwise.

## DISASTER RISK REDUCTION/MITIGATION

Recent efforts have sought to provide ex ante assistance i.e. before the hazard occurs, in order to mitigate risk, lower exposure to the hazard, and strengthen household ability to withstand a disaster. Such programs are referred to as Disaster Risk Reduction/Mitigation (DRR/M) programs. Non-

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<sup>5</sup> [http://www.alnap.org/pool/files/TLL\\_OxfamCase.pdf](http://www.alnap.org/pool/files/TLL_OxfamCase.pdf)

financial examples include early warning systems and the construction of earthquake-resistant shelters. A DFID study contends that for every dollar spent on mitigation approximately two to four dollars are saved in reduced disaster impacts (DFID, 2006). Investing resources in hazard-prone areas *before* a disaster strikes, can mitigate social, economic, and environmental costs (DFID, 2004).

In this section we explore DRR/M efforts that address financial resilience. Such programs are distinct from traditional ex-post humanitarian and livelihood relief approaches in that rather than importing food, cash or commodities, they identify household risk factors that make households more vulnerable to hazards, then work with existing resources and human capital in the community to shore up this vulnerability. Such DRR/M initiatives seek to avoid or reduce the negative externalities associated with relief such as market distortions, corruption, and exacerbation of local tensions.

DRR/M programs aimed at financial resilience potentially increase access to a lump sum by supporting household financial strategies related to savings, access to credit and insurance, and remittances. Household financial strategies can further be supported with financial literacy and education that increase people's understanding of the financial institutions and services available to them, and make them better consumers.

In the rest of this paper, we discuss how DRR/M can increase the financial resilience of a household and community before and after a disaster hits by supporting and capacitating pro-poor and disaster-relevant financial management strategies.

#### FINANCIAL MANAGEMENT STRATEGIES AND SERVICES

Interventions that reduce risk do so either by directly preventing a disaster, reducing people's exposure to hazards, or increasing their ability to cope with them. In this paper we focus on the latter, arguing that access to a lump sum allows households to better cope with the disaster. How do households gain access to a lump sum after a disaster? This can be achieved by either transferring risk within communities or shifting some of the burden of the shock out of the local system. The first approach - transferring risk within communities - is widely practiced and pertains to informal arrangements between different members of the community (reciprocal insurance, borrowing from a neighbor or relative, savings under a pillow). Though this approach offers convenience and flexibility, it rarely produces a sufficient sum to deal with a large emergency and is rather ineffective for anything but idiosyncratic shocks. The second approach - transferring risk out of the community - is most relevant to dealing with a disaster (a covariate shock). This can be done through formal institutions such as banks, microfinance organizations, insurance schemes, etc.

Savings, credit, and insurance strategies transfer risk via informal, semi-formal, and formal financial products and services. We now look more closely at these three categories, to see how current offerings can be improved. Formal and semi-formal financial resources often do not address the risks faced by the most vulnerable people - those who do not have the collateral to qualify for loans, who believe that taking on credit is taking on a different form of risk, and individuals that do not see the immediate payoff of insurance and therefore forgo coverage. Therefore, ideally any financial management tool supported by OFDA would draw on some of the flexibility and convenience of the informal programs in order to still attract and benefit poorer customers/beneficiaries while still transferring the risk outside of the community via formal organizations.

#### INFORMAL FINANCIAL MANAGEMENT PRACTICES

Informal financial management practices draw heavily on existing relationships and social capital such as family, friends, and neighbors and have the advantage of *convenience* and *flexibility* that is

important when households without reliable income flows experience sudden shocks. Usually these tools are made up of small savings at home (savings under the bed), “money-guarding” by neighbors or relatives, small loans (often interest free), and the local money lender. These arrangements require little paper work and therefore often can better serve illiterate or semi-illiterate populations. The repayment rates are often highly flexible and drawn out due to near-perfect information provided by either proximity or familial relationships. This makes any interest rate, even those that seem exorbitant at over one hundred percent, more like a lump sum cost of borrowing, rather than a compound interest (Collins, 2009). Informal financial practices lack *security*, *privacy*, and the *capacity* to provide large amounts of credit. But they are often the only financial management options available, because formal institutions like banks and insurance companies are unwilling to risk lending to the poor due to fear of high transaction costs and little – if not negative – return.

Informal practices lose their power in the face of a large or protracted covariate shock such as a tsunami or drought. When a hazard strikes the entire community potential lenders become unreliable sources, or the timing and amount of a loan or insurance product do not correspond with the financial needs of the household. Savings can be easily destroyed or washed away or funds misappropriated without the appropriate documentation necessary to hold up in court. Therefore, informal practices are best suited to handle consumption smoothing in the face of small idiosyncratic shocks, rather than covariate shocks. However, some of the practices of informal institutions could be integrated with formal arrangements to make them more attractive and useful to poor households hit by a disaster.

#### SEMI-FORMAL FINANCIAL PRACTICES

Semi-formal financial practices include savings groups and solidarity loans from MFIs. They are less convenient and flexible than informal arrangements, but more so than formal institutions given that they are based in the community and work with the community’s preferences regarding terms, agreements, and rates. However, the regulations and requirements associated with semi-formal practices are often unpopular and make them less flexible. Such regulations include mandatory meeting attendance, record keeping, regulated contributions, set interest rates, and training in book keeping and simple arithmetic. These regulations allow for greater *reliability* and *potential for profit*, but they do not always match household needs -- or cash flows. However, semi-formal institutionalization allows for greater guarantee of access to money, in ways established by the group in the by-laws or organizational rules. Also, collective funds, such as ASCA loans, bring in interest that increases the size of the savings and credit pot. Thus, while semi-formal financial management tools come with a greater initial cost compared to informal ones, they allow for greater return at the end of the loan cycle. Problems of *privacy*, *security* and *capacity* still exist, however.

#### FORMAL FINANCIAL INSTITUTIONS

Formal financial institutions--private sector and government banks, MFIs, insurance companies and international financial organizations—have the advantage of offering *capacity*, *reliability*, *security*, and *privacy*, but lack *convenience* and *flexibility*. They are highly regulated with formal contractual arrangements between the customer and the institution, offering individual accounts, safer facilities, and clear legal protection. Customers have incentives in the form of higher interest rates for increased savings--an effective means to acquiring a sufficient lump sum.

However, formal institutions come up short regarding the qualities that make informal and semi-formal arrangements attractive to poor households. They exclude the poor because of lack of accessibility and inconvenience -- banks lack branches in remote rural areas—and their products are inflexible. Debt repayment arrangements are seldom conducive to irregular and small income streams. The poor rely on small, incremental payments to furnish their debt, while most loan or insurance payments require monthly rather than weekly large payments (Collins, 2009). Thus, while

formal bank and insurance services are often able to offer greater financial capacity, the poor are often barred from taking advantage of them.

The financial resilience of poor households would be enhanced by creating a portfolio of financial management strategies designed to give them quick access to a lump sum after a disaster. Improved financial management options have a double-benefit—they will help households weather disasters, and they will build wealth in “normal” times. However, it is important that these strategies are linked to financial literacy education. The next section explains how disaster-linked financial management services can potentially increase the financial resilience of poor households in disasters.

#### **CASE STUDIES: FINANCIAL MANAGEMENT DRR INTERVENTIONS**

In disaster contexts, the capacity of a financial service to provide a ready and sufficient lump sum to cover a short-fall is crucial. But as discussed above, informal and semi-formal financial strategies used by the poor are often limited in capacity. For example, Rotating Savings and Credit Associations (ROSCAs) while useful for smoothing daily expenses and general wealth building, seldom have sufficient funds to cover the needs of all its members in when a covariate financial shocks occurs. On the other hand, private sector insurance that covers hazard-related damages might offer excellent capacity, but involve extensive paperwork, high premium payments and rigid payment schedules, and thus be misaligned with household cash flows. In addition, most private insurance pays out only after long delays. Problems with convenience, cost, flexibility, and reliability make private insurance unavailable or simply unattractive to poor households.

In this section we identify some opportunities for OFDA to support financial resilience ex ante and ex post disaster settings.

#### **MICROFINANCE INSTITUTIONS AND THE EMERGENCY LIQUIDITY FACILITY**

When a covariate shock occurs, there is a spike in expenses and affected households often require credit. Informal credit sources dry up quickly as everyone is in the same boat. Microfinance institutions (MFIs) can potentially fill this gap by making credit available, however, they are usually undercapitalized, having loaned out available funds in order to extend their financial outreach as widely as possible. In disasters, repayment slows or stops, and MFIs lack the liquidity to meet the increased demand. Some of the larger MFIs offer hazard-specific loans from their own resources, but few have the necessary capital to meet all demand, and loans usually go only to existing clients in good standing (Parker and Nagarajan, 2000).

In recent years, donors and international financial institutions have recognized both the need for funding that is delivered quickly, and the value of MFIs, which offer points of entry into disaster-affected communities, and which specialize in financial support to households and micro-enterprises. However, the Asian Tsunami of 2004 revealed that simply sending money to MFIs on the ground in affected areas was ineffective. Some MFIs were inefficiently run even before the Tsunami, and many saw their operations severely hampered by the hazard event. The process of evaluating MFI proposals to provide financial relief to affected households and businesses took six months (Bate, 2006), a severe delay to people looking to fill financial shortfalls quickly.

The Emergency Liquidity Facility (ELF), created to serve Latin America, sought to address some of these problems. The ELF is effectively an emergency lender to pre-qualified Latin American MFIs, standing by to deliver liquidity in case of a hazard or external shock. The ELF pre-identifies well-managed, efficient microfinance institutions, then channels donor capital to select institutions in a matter of weeks or even days (Bate, 2006). Those organizations can then quickly lend the funds to their hazard-affected microfinance clients.

The major enabling component is pre-qualification. In the case of the 2004 tsunami, evaluations of potential recipients led to months of delays. The ELF evaluates microfinance institutions in advance. By April of 2007, the ELF had pre-qualified 47 MFIs in thirteen countries in Latin America and the Caribbean (Periera, 2007). Eligible institutions meet the following criteria (Periera, 2007):

- *Is the MFI established?* Qualifying institutions must have at least three years of lending experience in the area, and of profitable operations.
- *Does the MFI focus on the poor?* At least 50% of the loan portfolio must go to micro- or small enterprises.
- *Does the MFI have a healthy portfolio?* Write-offs plus loans overdue more than 30 days must total more than 11% of the total portfolio.
- *Is the MFI profitable?* For the preceding three years, the institution must have a return on equity of at least 10%.
- *Is the MFI solvent?* The institution must have sufficient capitalization for normal times, and adequate loan reserve policies.

The loan product covers the MFIs' short-term liquidity needs by allowing the MFI to take out a six-month loan from the ELF when the hazard strikes. The money is loaned at local pre-hazard interest rates. The MFI can extend the duration of the loan for up to two years, but with each extension the interest charges increase so as to deter long-term dependency on the ELF funds (Bate, 2006).

Administratively, the ELF is one fund among several managed by Omtrix, a financial consulting firm based in San Jose, Costa Rica. Currently, the ELF commands approximately \$10m with which to respond to emergencies, most of it coming from the Swiss State Secretariat for Economic Affairs (SECO) and the Inter-American Development Bank (IADB), although several non-profit and corporate investors also contributed ([www.emergencyliquidityfund.com](http://www.emergencyliquidityfund.com), 2009). The Fund itself generates little income – members pay only a small one-time membership fee, and since lending is contingent on the occurrence of a hazard, interest income is unreliable. The ELF is grouped with other funds – which spreads overhead costs and contributes to income from equity management – makes the daily maintenance of the fund feasible (Periera, 2007).

While emergency liquidity provision is the fund's primary task, the ELF also includes a pre-hazard consultation mechanism, called the Technical Support Facility (TSF). The TSF is comprised of teams of five experts in microfinance and disaster relief who visit member MFIs and provide risk assessments and hazard management plans (Periera, 2007).

In good times, membership in the ELF can make a MFI seem less risky in the eyes of potential investors, facilitating access to additional capital and helping the institution grow to serve more customers (Periera, 2007). In times of hazard, membership can mean a less painful recovery for the MFI and its clients. In October 2005, the Salvadoran MFI Apoyo Integral faced clients seeking emergency credit in response to the twin devastation of Hurricane Stan and the eruption of the Ilamatepec Volcano. The MFI received a \$750,000 emergency loan from the ELF, and was able to forgive interest, suspend fees, extend payment terms, and establish grace periods, according to the individual needs of its clients (Bate, 2006).

#### *Opportunities for OFDA*

At present, the ELF operates only in South and Central America, and there has been little assessment as to whether its distributions to MFIs result in usable lump sums for households. But there is promise behind the ELF idea and OFDA should experiment with exporting the ELF model to other parts of the world.

The ELF is the product of a linkage between grassroots institutions on the ground (the MFIs), and a private international corporation (Omtrix). OFDA could facilitate such linkages. Additionally, OFDA could support an enhanced pre-evaluation regimen, since that seems to be the bottleneck that prevents additional MFIs from becoming members and benefiting from ELF funding in times of hazard.

Currently, the ELF focuses on financial mitigation of disaster impacts. But MFIs are uniquely placed to deliver non-financial as well as financial assistance in the event of a hazard. For such assistance to be effective, MFI personnel must be adequately trained. Currently, the ELF model includes ex-ante consultations and training; OFDA might also emphasize non-financial assistance. This would entail additional costs, but would capitalize on the special access MFIs retain in disaster-affected communities.

#### INDEX-BASED WEATHER INSURANCE

Index-based insurance uses pay-outs tied to a publicly-observable index, such as rainfall levels or commodities prices or livestock disease incidence, rather than individually experienced losses. The weather event serves as a proxy for yields, and pay-outs happen automatically once a certain threshold has been crossed.<sup>6</sup>

Index-based insurance avoids many of the problems of traditional insurance. The pay-out is automatic, and tied to an objective measure, such as rainfall, thus eliminating costly visits of insurance agents. Moral hazard is eliminated since the pay-out is not tied to the individual farm, and the farmer can improve his crop without affecting the pay-out in case of natural hazard. Automatic pay-outs mean farmers receive the disbursement without getting held up in administrative bureaucracy. Also, the lower transaction costs make the premiums more affordable than private or government products (Manuamorn, 2007). Finally, by incorporating the risk into wider markets, index-based insurance spreads the risk beyond the local region affected by the drought, thus solving the problem of covariance that cripples informal risk mitigation strategies.

Unlike savings and credit products, where the customer must win the trust of the financial institution, with index-based insurance the institution must convince the customers that they will indeed pay indemnities in the case of a damaging hazard event (Collins, 2009). As explained in the case study below, in India, a development organization, BASIX, had a long history of development activities in the regions where the insurance product was introduced, including financial services such as savings and credit groups. BASIX began by introducing the product to farmers with whom it had an existing relationship, significantly increasing rates of uptake. Once a high percentage of households in a particular region had bought in, others did too (Fine, 2007). Additionally, BASIX followed a clear marketing strategy, beginning in each village with a local leader or trusted progressive farmer, moving to an informational community meeting, and then following up individually at the homes of interested farmers (Manuamorn, 2007).

However, just as important as the relationships on the ground were the connections to the private national and international insurance markets. BASIX acted as the broker between the policy-holders and the insurance company, ICICI Lombard. According to BASIX, their product represents the first time that weather risk from farmer household level contracts was transferred from a developing country to international reinsurance markets (Mounmahan, 2007).

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<sup>6</sup> A good index is: “1) observable and easily measured, 2) objective, 3) transparent, 4) independently verifiable, 5) able to be reported in a timely manner, and 6) stable and sustainable over time with good historical data” (Manuamorn, 2007).

Communications technology plays a major role in the success of index-based insurance. BASIX designed a broad information management system, IDIAS, that streamlined database management, administration, and information verification. The ICT component cut the high transaction costs that weigh down traditional insurance products, so that index-based insurance can be made affordable to the poor (Manuamorn, 2007).

From a financial resilience point of view, a viable insurance product in drought-prone regions has multiple advantages. By avoiding losses from drought, an insured household would spend fewer of its financial resources on mitigation measures and would be more willing to plant riskier but higher yield crops. Households would also feel safer about specialization (since they have insurance protection), and might therefore become more efficient. They would also seek productive loans to support specialization, rather than simply consumption loans to get by, thus invigorating the local financial services industry.

#### *Opportunities for OFDA*

There are substantial start-up costs with index-based insurance, and organizations will need donor support. Existing non-profit or for-profit community finance organizations may have the network of relationships with potential clients existing on the ground – one of the major components of the BASIX outreach ability. But organizations might not have personnel trained to understand and explain the insurance product, nor are they likely to have BASIX's efficient process charts and ICT data storage and transmission system (Manuamorn, 2007).

Another area wherein an international donor like OFDA might be useful is in facilitating the linkages between the development organizations on the ground and the national and international insurance corporations. As described above, these linkages have proven critical to achieving a necessarily wide risk-pool, and the product would likely not have been nearly as successful without them.

#### MOBILE PHONE BANKING

The Tsunami that hit the Maldives in December 2004 was the worst natural disaster in the island nation's history. The devastation of the coastal regions and subsequent impact – both on the economy and the population – was greater than in any of the other tsunami affected countries. Over one third of the population was directly affected (World Bank, 2005) and all but nine of the inhabited islands were either partially or wholly flooded.

The Maldives comprise 1,190 coral islands with great disparities between remote islands with small populations and the capital Male. One of the contributing factors to the growing disparity is access to financial resources. In the 2006 Investment Climate Assessment (ICA) of the Maldives it was shown that the single largest impediment to private sector development was lack of access to finance (World Bank, 2008). The tsunami revealed that lack of access to formal institutions was also a hindrance to quick recovery by poor households.

The widely dispersed islands of the Maldives mean there are almost no branch bank locations outside the capital Male, and households must rely on cash. After the tsunami many households lost their life savings which had been kept at home because they had no safe place to keep their savings (BBC, 2008). Informal strategies, such as saving with a neighbor or family member, proved unreliable and insecure. The remoteness of households living and working on the atolls forces them to carry, hold, and exchange significant amounts of cash, as well as travel large distances and stand in long queues at bank branches to collect salaries or payments, pay bills, transfer payments to friends, family (remittances), or suppliers. On top of the transportation costs and time involved there are also

issues of safety and security,. Furthermore, family members working away from their home island find it too expensive and time consuming to send money to the family which significantly hinders recovery of households hit by natural disasters given the increased need for remittances (World Bank, 2008). Lack of access to formal institutions also limits a household's capacity to grow its savings or procure credit.

Savings constitute the needed lump sum integral for quick recovery after a disaster. Informal strategies that rely on social capital are inadequate under covariate shocks such as the tsunami when whole islands are flooded. Besides the direct loss of savings, physical and household assets such as homes were destroyed with over 29,000 people displaced (World Bank, 2005). In order to rebuild both homes and livelihoods, households need significant savings or access to credit, especially given that insurance products are not available to most people living in the atolls. Vulnerable households without access to such financial services are forced to divest whatever assets are still in their possession exacerbating their vulnerability.

The World Bank partnered with CGAP to deliver financial services to the Maldives via a mobile banking intervention in order to reduce poverty on the household level but also assist the development of the private sector. The idea of branchless banking is relatively new but has already been applied over the past few years in places such as Brazil, South Africa, the Philippines with its bank based (SMART) and non bank based (GLOBE G-cash) systems, Kenya with Vodafone's M-PESA, and in the near future in Afghanistan with the help of Vodafone.

In virtual ("branchless") banking customers use their mobile phone to make payments, transfer money, check on their account, etc. The use of mobile banking can give households greater access to more branches than traditional banking means (CGAP, 2008). A study of WIZZIT, a mobile banking program in South Africa, showed that customers gave it high ratings for convenience, cost, and security. Also, customers checked their account balances on their mobile phones twice as often as non-users therefore promoting greater financial awareness. Mobile banking was found by the survey to be more affordable than traditional banking and therefore accessible to low income households: a WIZZIT account was as much as one third cheaper than with a regular South African branch (CGAP, 2008).

Besides direct benefits to the household, there also exist indirect benefits via market factors. Mobile banking encourages competition by creating greater access to all banks; this creates an environment conducive to new firm entry, innovation, and growth. Banks will be able to extend outreach of services, provide more products, and reduce transaction costs. The poor benefit from reduced costs, as well as from higher wages as developed financial systems improve overall efficiency and promote growth and employment (World Bank, 2008).

The greatest potential of mobile banking is that it can make basic financial services more accessible to people living in remote locations such as the Maldives, or in areas of low population density, or where there are barriers for formal institutions to provide services due to geography. M-banking technology can overcome these barriers and deliver financial services at low cost, as long as there is mobile phone network coverage. Mobile banking can encourage increased savings, provide for cheaper ways to send remittances, enable access to formal credit, and lower transactions costs by reducing the amount of time and scarce financial resources that low income households have to use to travel to distant bank branches.

Increased access to financial services due to mobile banking allows households to store their savings in a safe and dependable location. Formal institutions, such as banks offer security and reliability, two traits that are essential in the context of the tsunami. Given the use of ICT technology, these services are now also convenient and flexible, allowing them to work in areas that have always been

perceived as impenetrable due to low population density and difficult geography for formal institutions. Households who previously lost their savings due to the sudden onset of the 2004 tsunami have the capacity to both protect their savings, and increase their capacity for post-disaster recovery using mobile phone banking.

M-banking can also give customers access to other services that aid in recovery from disaster. Reciprocal insurance and informal credit are usually inadequate under covariate shocks such as the tsunami, and therefore access to formal lending institutions are essential for households to replace lost or destroyed household and productive assets. Opening a savings account with a bank can have long term benefits by building a history and collateral with the banking institution for future lending needs. Furthermore, m-banking allows for quicker transaction of wealth allowing households to immediately benefit from much needed remittances.

#### *Opportunities for OFDA*

OFDA can support NGOs or formal banking institutions in the creation of a point of sale equipped agent channel to deliver savings, credit, and remittance services to existing and new bank customers. Agent locations need to be set up throughout rural and hard to reach locations, where low population density makes creating a bank location unprofitable. In the urban sector, services through an agent network should be provided in urban low-income slum areas. OFDA can explore the possibility of using local merchants as potential agents, providing them with reasonable commission. The creation of an agent network would allow formal banking institutions to scale up and increase their client base while providing cheaper, more convenient, and more secure money transfer and payment services.

An important component of an agent network is ensuring adequate liquidity to guarantee that household's have convenient and flexible access to their funds. OFDA can help these institutions to reach a wider base of ordinary poor income households by providing the initial donor support to guarantee the liquidity of funds for the agent network.

Institutional capacity building in order to ensure that the system is properly regulated and fits the needs of vulnerable household's financial needs and preferences, as well as that people and businesses understand the benefits of the system and can adapt to it is essential for uptake and appropriate use of the product. This can be achieved either via a public education campaign or by hiring young individuals drawn from the lower income population to spread the information and educate individuals in their respective village or town. OFDA can also fund local NGOs that are familiar with the needs and capacity of their community to carry out intensive marketing, targeted customer education, and rapid sign-up and acceleration of retailers. Education combined with greater access to these financial services can help household to secure their savings and create greater capacity for wealth building and loan acquisition.

#### MICROINSURANCE, SAVINGS, AND FINANCIAL LITERACY EDUCATION

The Philippines are prone to natural disasters.<sup>7</sup> Between 2000 and 2009, the country experienced two droughts, one earthquake, three epidemics, 41 floods, 71 storms, and 5 volcano eruptions.<sup>8</sup> There were 22,858 deaths over the past 20 years due to natural disasters alone. The 2008 Typhoon left 573

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<sup>7</sup> There are high levels of seismic and volcanic activities, as well as hydro disasters due to the fact that the islands lie on the northwestern border of the Pacific Ring of Fire. In 2002, the International Red Cross and Red Crescent Society ranked the Philippines as the fourth most accident-prone country after China, India, and Iran.

<sup>8</sup> <http://www.emdat.be/Database/AdvanceSearch/advsearch.php>

dead in just four hours and caused damages estimating 95.2 million US dollars.<sup>9</sup> The Philippines also struggles with a 40-year armed conflict<sup>10</sup> which has led to the forced migration of 259,000 to 430,000 IDPs and 1,346 refugees as of 2009 (IDMC, 2009), as well as high casualties.

Over eight million Filipinos, approximately 10 percent of the population, are labor migrants in 200 countries, and provide primary or secondary income to family members in the form of remittances. Remittances are not always reliable in the direct aftermath of a disaster because of damaged infrastructure and communications. The loss of remittances after a hazard or displacement can have drastic consequences for a household. In addition, the loss of a productive household member in a disaster can have a devastating effect on poor families with irregular cash flows. Having a lump sum of cash immediately available after a disaster (or after an idiosyncratic shock) can potentially sustain financial resilience and prevent maladaptive livelihood strategies or distress migration.

Many households manage risk by relying on informal or reciprocal insurance schemes, which work well when it comes to idiosyncratic shocks. However, natural hazards are often covariate –i.e. they affect entire communities--so that reciprocal insurance schemes are wiped out.

Microinsurance is a type of formal insurance that is adapted to address the irregular cash flows of poor populations faced with hazards. Microinsurance offers a payout when a loss occurs in a way that works for poor households, because it has the same convenience as informal insurance, but retains the security and reliability of formal programs. Microinsurance is tailored to the poor who would otherwise not be able to take out insurance, and operates by risk pooling. It is financed through regular premiums (Churchill 2006).

Pioneer Life Inc, a leading insurance company in the Philippines, with a grant from the International Labor Organization, is providing microinsurance targeted at families of migrant workers. The project is called the OFW Family Savers and Wellness Club, and will provide financial literacy education, microinsurance, and savings products (ILO, 2009). The project works with children and adult family members of migrant workers who are part of migrants' associations at churches and schools in Luzon and Metro Manila. The provision of life insurance through Pioneer Life is a form of ex-post risk coping mechanism, which helps the household keep consumption spending stable and prevent (further) asset loss. The microinsurance product is coupled with a savings program that captures a portion of the remittances for later use in case of a shock.

A very important component of the project is that it combines the microinsurance and savings product with financial and risk management education. A frequent constraint in providing insurance to poor households is lack of understanding of insurance products (McCord, 2001). Knowledge of the insurance product is necessary not only for the take up of the insurance, but also to ensure the household is able to take full advantage of the policy. The combination of built-in savings, insurance and education makes for a non-intimidating, reliable and flexible approach, and creates a culture of informed risk management and full awareness of the cost and benefits of the product.

The program and products are offered through Wellness Clubs set up in schools and churches. Facilitators impart the information and increase club membership. A serious constraint to insurance uptake is trust – lenders have to trust borrowers, while insurers have to be trusted by clients (Radermacher et al, 2006). This insurance scheme addresses this problem by using a partner-agent

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<sup>9</sup> (UN Secretariat for the International Strategy for Disaster Reduction, 2009)

<sup>10</sup> between government security forces and the Moro Islamic Liberation Front (MILF) in Central Mindanao, which is further aggravated by violent acts by other armed groups, privately armed militias, and powerful feuding clans (Amnesty International, 2009).

model where the insurer teams up with a local agent, the Wellness Clubs, to take advantage of networks already in place and the trust already built by the local agent in the community.

*Opportunities for OFDA*

Insurance companies are often wary of providing microinsurance to the poor who are perceived as having low demand and poor capacity to pay the premiums. OFDA could foster partnership links with local organizations and provide the insurance company with an initial grant to cover the microinsurance scheme, thereby encouraging a long term and sustainable relationship between the local and formal partner.

Alternatively, OFDA could directly support existing NGOs offering microinsurance, allowing them to expand their coverage, or work with organizations that are already known to poor communities to help them provide similar services or build towards greater financial literacy. Most microinsurance research points to the fact that a lack of understanding of insurance products is one of the most frequent constraints to its use and expansion (McCord, 2001) - this makes financial literacy education one of the best investments that an organization can make.

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## CONCLUSION

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In this paper, we have argued that a key aspect of financial resilience in a disaster context is ready access to a sufficient lump sum to cover a short-fall. We showed how the absence of such a lump sum can result in maladaptive responses by households that ultimately make them worse off than did the disaster alone. We then showed the range of financial strategies usually available to poor households, at the formal, semi-formal and informal levels, and the problems with these in the context of a disaster. We argued that what is needed are more appropriately designed savings and insurance services that can be utilized during 'normal' times, and then enable access to large enough lump sums in an emergency. Even better, such services would also enable displaced people to access their savings or insurance when they are in strange surroundings. Finally, we identified some innovative approaches currently being explored in different settings, and suggested that these could potentially be adapted for other regions.

Central to new approaches will be the role of information communications technology (ICT), and most prominently, mobile phones. Already, mobile banking has taken off in parts of Africa (such as M-PESA, WIZZID and others), and although this technology is not a panacea, it is likely that new approaches will be built around some form of ICT.

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