



# Feinstein International Center

Strengthening the humanity and dignity of people in crisis through knowledge and practice



## Disaster Risk Reduction and Financial Strategies of the Poor: *Demand for, Access to, and Impact of Cash in Haiti following the 2010 Earthquake*

*A partnership study between Tufts University and INURED  
for USAID/OFDA*



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*Cover photo: Downtown Port au Prince.*

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## INTRODUCTION

2010 was one of the worst disaster years in Haiti—the January 12 earthquake affected 3.7 million people, with over 220,000 killed and another 300,000 seriously injured. The subsequent cholera outbreak killed over 2,500 people (EMDAT, 2013). In addition, the earthquake led to the destruction of infrastructure and loss of services in an already beleaguered country. Prior to the earthquake, Haiti was ranked 149 out of 182 on the 2009 Human Development Index, was considered one of the poorest countries in the western hemisphere, and was identified by its weak civil society institutions, weak governance, and massive corruption. The earthquake was not the first disaster to hit Haiti, nor will it be the last. Haiti is ranked as one of the countries with the highest exposure to multiple hazards in the world (World Bank, 2005). Any hard-won gains experienced by the country are continuously jeopardized by adverse events.

The hardest hit area was Haiti's heart and center—Port-au-Prince. While most organizations have a history of responding to disasters in rural areas, urban risk presents a new challenge to response and mitigation practices; a recent World Bank report described this urban disaster context as a “game changer.” (World Bank, 2010). Often disaster recovery and reduction (DRR) programming developed for a rural context is simply transferred to urban environments (Feinstein International Center (FIC), 2010). In Port-au-Prince the reconstruction took place in a context of risk exposure, including post-election violence and a cholera epidemic. Haiti is thus a good example of the gaps in DRR programming (Attkisson, 2010), and its experience can provide lessons, given the general increased urban risk in the world.

Urban environments are diverse, including different groups and neighborhoods, and high levels of income disparity. Urban economies are also characterized by greater commercialization,

with the majority of goods and services rendered through the market. Households are more likely to rely on cash incomes and have less access to common property resources (Farrington, 2002). Therefore, in an urban setting, *financial resilience* becomes a key component of *household resilience*. However, achieving financial resilience after a sudden-onset covariate shock, such as the earthquake or a hurricane, is not a simple matter. Besides the destruction of assets and property, cash hidden in the household or held in community savings groups can be swept away, lost, destroyed, or stolen. There were high rates of theft immediately after the earthquake in Haiti, and what some households did not lose due to the earthquake, they lost to thievery. Covariate disasters increase the demand for cash by poor households but also limit its supply. Liquidity constraints arise for financial institutions, particularly microfinance institutions given their stricter regulations, and the capacity of banks and remittance transfer services is strained. Households can usually depend on family, friends, neighbors, or the community moneylender for loans, but when everyone is affected the supply of cash shrinks just when it is needed most.

The Haiti Action Plan developed by the government of Haiti in 2010 clearly states the importance of reducing the vulnerability of people living in the risk zones through disaster risk reduction and crisis management measures at a national, departmental, and local level (Government of the Republic of Haiti, 2010). In support of this Plan, our research sought to identify how low-income households in areas with diverse risk exposure have responded to the multi-hazard environment, and which enabling factors have influenced their decision making around financial resilience. By identifying coping strategies at the household and community levels, and the bottlenecks and facilitators of recovery, programming opportunities can be identified to support post-disaster recovery and mitigation of future crises.

## 1. Research Objectives

The study objective was to explore the financial costs to households of the 2010 Haiti Earthquake in five sites: Bel Air, Delmas 32, Cité Soleil, St. Marc, and Jacmel, and to identify the strategies of economic recovery implemented by the affected population. The sites were chosen because of their diversity and general representation of the situation in Haiti. Bel-Air and Delmas 32, both lower to middle class neighborhoods, and Cité Soleil, considered one of the worst slums in the world, were heavily affected by the earthquake. Jacmel, a town immediately southeast of Port-au-Prince, experienced significant damage, though to a lesser degree than the capital itself. St. Marc, on the other hand, north of Port-au-Prince, was the center of the cholera epidemic, and was hit hard by the 2008 hurricanes. Though St. Marc was barely affected by the physical tremors of the earthquake, it was one of the main destination points for displaced households from Port au Prince and allowed us to explore the impact of the disaster on the wider region.

Our research examined the post-earthquake demand for cash, the *availability* of cash, and the kinds of cash acquisition strategies used by households. The study questions were:

- What cash was needed and used immediately after the disaster and in subsequent periods?
- What were the difficulties or obstacles households encountered in acquiring cash?
- What were the cash strategies, i.e., how did households actually go about acquiring cash?
- How successful were these strategies?

The project builds on research conducted by the Feinstein International Center (FIC) for the Office of Foreign Disaster Assistance (OFDA) on disaster risk reduction and livelihoods (Jacobsen, Marshak, and Griffith, 2009), as well as FIC's research on the livelihoods of urban and displaced populations.<sup>1</sup> This study sought to address the evidence gaps in Haiti with the intention of improving DRR programming around financial access in other urban settings.

The research was carried out in partnership

with INURED (Interuniversity Institute for Research and Development) as part of its ten-year longitudinal study of Haitian household's recovery. INURED is a research and higher education establishment based in Haiti. It is a collective initiative set up by a group of Haitian and foreign researchers that conducts both quantitative and qualitative work in order to contribute to the development of high-level research and scientific training in Haiti and to improve the country's educational, socioeconomic, and political conditions. Students were involved in the project to ensure capacity building among university youth.

## 2. Executive Summary

Households in Port-au-Prince had to recover in an urban economy that was reliant on cash. By contrast, more rural households in St. Marc and Jacmel could rely on their land holdings, livestock, and crops, both for everyday consumption but also as a source of livelihoods. Households in Port-au-Prince spend over half of their cash on food. Therefore access to cash was one of the most important components of financial resilience.

Our study found that most households' cash stocks were completely obliterated. Since access to formal financial institutions like banks is largely unavailable to the poor, they had relied on informal saving strategies such as "savings under the bed" or participation in local savings and loan groups ("sols"). In post-disaster Haiti, these strategies offer little security. In the confusion following the earthquake, household and sol savings were trapped in the rubble or lost to thieves, or the person responsible for the sol ran away with the cash or perished. Non-liquid cash stocks are also held in assets, housing infrastructure, and business inventories. Many people's home and business are one and the same, so business infrastructure and stocks were similarly lost, resulting in diminished cash flows.

Households had to find resources to restock and rebuild their businesses. While most households were able to restock, an ACTED study done after the earthquake found that they could on average restock less than 50% of their pre-

earthquake amounts. Demand for goods was also reduced in the weeks following the earthquake. Taken together, households had a difficult time restarting their livelihoods.

The only option for households, both to recover their livelihood and to put food on the table, was to seek out cash using unsustainable financial strategies. Humanitarian support in the form of cash grants and cash for work programs was available but unsustainable. Borrowing was difficult because sources of credit were diminished. Access to banks had not been an option prior to the earthquake, and no household reported access after the earthquake. Semi-formal institutions, such as Microfinance Institutions (MFIs), which had enabled households to borrow prior to the earthquake, encountered the same problems as their clients after the earthquake. Many MFIs lost infrastructure and staff. Liquidity constraints arose because banking regulations did not allow MFIs to provide loans from customer savings, so MFIs did not have enough cash on hand allocated for credit purposes to service their customers' needs. Repayment rates on existing loans fell drastically and several MFIs had to cancel the debts. Formal banking institutions took time getting back on line and limited access to funds above 5,000 US dollars a day, and while this did not directly affect households it reduced the amount of money MFIs could loan out.

The remaining option for credit was informal services—borrowing from friends and family, and from loan sharks. However, the pool of cash as a whole was reduced, and loan sharks faced the same constraints as the MFIs. Their own losses were compounded by the losses of their customers, either because they perished in the earthquake or did not have funds to repay the loan. Loans from family and friends happened at the same rate as prior to the earthquake, but the amount of the loan was reduced.

In general, households borrowed at higher rates after the earthquake, but the amount of the loan and length of the loan payment was significantly smaller. Loans were used to re-stock businesses but also for household consumption, thereby reducing the cash available for businesses and resulting in a non-viable business model. The

ACTED study found that six months after the earthquake most businesses were not able to generate enough profit either to provide for the family or to cover businesses expenses, forcing households to continue borrowing. Households are accumulating more debt while trying to run an unsustainable business, and are being pushed deeper into a poverty trap. A World Bank study of wealth and vulnerability following the earthquake found that wealthier households experienced more losses (in income and physical assets) compared to poorer households, but were able to recover within months of the disaster, while the plight of the poor worsened over time (Echevin, 2011). This means rising inequality in Haiti, with serious implications for future disasters. ■

## METHODOLOGY

The study was carried out through qualitative research conducted approximately 18 months after the earthquake. There was general survey fatigue in post-earthquake Haiti, and it was essential to partner with a locally trusted institution. INURED is a research institute in Haiti with a long-term presence in many affected communities, and our partnership significantly improved our information gathering.

The qualitative study conducted key informant and household interviews, community mapping, focus groups, photographic descriptions, and other participatory approaches over the course of three months. The enumerators were usually themselves from our target communities, and were intermittently based there, allowing them to collect ethnographic data on households' financial strategies. A team of two enumerators and one supervisor was based in each research site. The teams conducted two to three field trips lasting four to eight days each, during which they collected data from heads of households and local leaders, and conducted participant observation. In total, 25 household and community leader interviews were conducted in each of the four locations (Delmas and Bel Air were combined) for a total of 100 interviews. Three data collection instruments were used to structure the research: an observation guide, a head of household interview guide, and a community leader interview guide.

The two team leaders held periodic monitoring meetings, on occasion joined by INURED senior staff and a representative from Tufts University. These meetings reviewed the progress of the study and took appropriate corrective measures. The completed data were compiled according to a tabulation plan, then analyzed for the purposes of this report.

### 1. Limitations

There are several limitations to the study. The nature of the topic—finances—is a sensitive and imprecise one. There was likely some bias in interview responses, and it is always difficult for people to figure out the amount of their own

funds that were lost, saved, or invested before and after a disaster. The study was conducted in a moment in which international institutions were implementing many programs—among them financial supports for family or local vulnerable entities. This context may foster false expectations from respondents as they may perceive the field researchers as gatekeepers for aid or representative working for humanitarian agencies. These expectations may in turn affect social desirability which might be reflected in some of respondents' responses. Some of the bias limitations might have been partially addressed by working with INURED. Further, because we have used multiple sources to collect the same data, it is reasonable to assume that triangulation of data results will lead to a greater accuracy on the data collected. ■

## CHARACTERISTICS OF THE STUDY SITES

The research was carried out in five sites. Four of these—Bel Air, Delmas 32, Cite Soleil, and Jacmel—were heavily affected by the earthquake. The fifth site—Saint Marc—was slightly affected by the earthquake directly but was the destination for many people displaced by the earthquake. It was also the site of the cholera outbreak, and had suffered significant damage from the 2008 hurricane season. All the sites represent different levels of damage, different stratus of wealth (though all relatively poor to middle class), and both displaced and non-displaced households.

**Bel Air** used to be a residential neighborhood during the colonial period, but from 2004 to 2006 it was considered lawless due to the high political unrest in the area. However, the neighborhood is bustling with activity with numerous small merchants displaying their products in the street and in front of their homes. This includes hardware stores, lotto banks, small shops, and numerous vendors selling prepared food. Though the neighborhood is not wealthy, it represents a slice of lower to middle class Haitians. The majority of the streets are either paved or covered in asphalt. There were few collapsed houses, but the streets were full of debris during the time of the research, and there was evidence of displacement, with recently constructed houses made out of tarpaulins, pieces of sheet metal, wood, and/or planks.

**Delmas 32** (Acra Field) was added to the Bel Air site. The area suffered significantly from the earthquake with approximately 45% of all houses destroyed, and many displaced families from surrounding neighborhoods. Delmas 32 was divided into blocks A, B, C, D, and E. The research was carried out with eight households living in blocks C and E. Unlike Bel Air, the sanitary conditions were very poor. However, a few temporary and small shops had already popped up only months after the earthquake.

**Cite Soleil** is on the border of Port-au-Prince. It was founded in the 1960s and is considered the largest slum in the metropolitan area. The Institut Haitien de Statistique et d'Informatique

(IHSI) estimated in 2009 that Cité Soleil had a population of 241,055 and a density of 11,052 residents per km<sup>2</sup>. Our research occurred in three high-density districts: Boston, Bas Boston (Lower Boston), and Ti Haiti (Little Haiti). Deemed a lawless zone like Bel Air between 2004 and 2006, the area still has pockets of insecurity and violence, and residents advised our research team to be cautious. There is small informal trade, mainly of sweets, fried foods, soft drinks, and alcoholic beverages. The nature of the housing (temporary shelters) meant that the area experienced little physical damage from the earthquake; however, there was loss of life, livelihoods, and psychosocial damage from proximity to the destruction in the city. There was some humanitarian support in the area at the time of the survey.

**Jacmel**, south of Port-au-Prince, experienced significant damage from the earthquake and was also the site of much destruction in 2008 from Hurricane Gustav. La Montagne, the thirteenth section communale, is composed of three regions, La Croix, Colin, and Bellevue, where our research took place.

**Saint Marc** experienced a large influx of displaced households from Port-au-Prince. Damage from the earthquake was not intensive, but Saint Marc experienced its own disaster—it was the epicenter of the 2010 cholera outbreak.

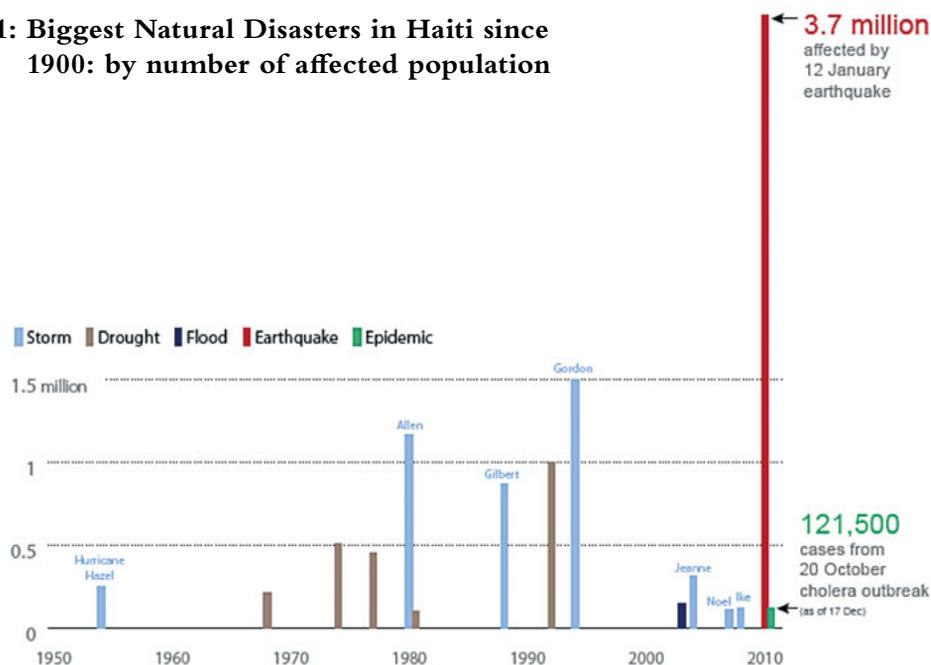
## BACKGROUND

Haiti is not new to disasters. Throughout its history, Haiti has suffered cyclones, tropical storms, hurricanes, floods, and earthquakes. Each disaster has left its stain on the populace and landscape and has contributed to the chronic vulnerability of the country and its people. The 2010 earthquake was by far the most crippling. More than 97,000 houses were destroyed, and over 188,000 were damaged (Echevin, 2011). The government was crippled by the destruction of many public buildings, including the Palace of Justice, the National Assembly, the Supreme Court, the National Palace, the Port-au-Prince City Hall, several hospitals, and the Prison Civile de Port-au-Prince, allowing 4,000 inmates to escape (Sherwell and Sawyer, 2010). The earthquake destroyed half of the nation's schools and severely crippled three universities in the capital. Tremendous damage was inflicted on the water and electricity infrastructure, as well

as roads and ports in Port-au-Prince. The impact was compounded by existing deep poverty, ineffective services, massive corruption, political unrest, a cholera outbreak, and the effects of previous natural disasters on the country. The weak government in Port-au-Prince (to say nothing of the rural areas where there is general absence of government) meant much of the response happened through the international and national non-governmental agencies.

Beyond the horrific impact of the earthquake on human life, it also significantly crippled household wealth portfolios. Poverty levels were high in Haiti, with more than half of the population living in extreme poverty, and income distribution was highly unequal. According to the 2001 Household Living Condition Survey, 20% of the poorest households had 2% of total income, and 20% of

**Figure H1: Biggest Natural Disasters in Haiti since 1900: by number of affected population**



Source: UNOCHA. The information on natural disasters presented here is taken from EM-DAT: The OFDA/CRED International Disaster Database. In order for a disaster to be entered into the database, at least one of the following criteria has to be fulfilled: a) 10 or more people reported killed; b) 100 people reported affected; c) a call for international assistance; d) declaration of a state of emergency. The graphic represents natural disasters that affected more than 100,000 people.

the richest households had 68% of the total income. Inequality worsened following the earthquake. A World Bank report found that income inequality initially decreased (the Gini coefficient went from 0.2446 to 0.1970 in February of 2010), primarily due to higher losses amongst the wealthy. But then inequality increased between February and June, going from 0.3267 to 0.3325 for non-camp households (Echevin, 2011). On average, households lost approximately 25% of their assets (across all wealth groups). However, from February to June 2010, the author found that households in the poorest wealth groups continued to deplete their assets, while wealthier groups were able to recoup some of their losses. This suggests a *poverty trap* where the poorest households keep losing more following the disaster, while wealthy households slowly move towards recovery, further increasing overall inequality.

The different relationships between time and recovery for wealthy and poor households is indicative of household resilience to shocks and the coping strategies used following those shocks. Wealthy households experienced more losses: the richest households experienced the death of one or more income earners at a higher rate (11.5% compared to 8.7% of the entire population) than poor households and while 86.5% of wealthy households experienced asset loss, only 17.6% of the poorest did (Echevin, 2011). However, wealthy households were more likely to have reserves of savings, assets, or collateral for loans and thus were in a better position to cope compared to poorer households.

Caroline Moser identifies some distinctive features of urban vulnerability and resilience (Moser, 1998). One such feature relates to the assets the poor control. Productive or income-generating assets, such as a motorcycle but even cookware, enable household members to utilize their labor more effectively; for example, for transportation services and selling food on the street respectively. However, of all the assets, housing is one of the most important because, in addition to providing physical shelter, it can generate income through, for instance, renting

rooms or the use of its space for home-based production activities. Access to productive assets is a strong predictor of overall wealth, particularly in urban settings, and has been used in numerous studies instead of consumption or expenditure data (Bonilla-Chacin and Hammer, 1999; Gwatkin et al. 2000; Sahn, Stifel, and Younger, 1999).

In urban settings, three forms of resources affect a household's cash position: stocks, flows, and cash management strategies. All three were heavily affected by the earthquake. Stocks of natural and physical capital were either destroyed by the earthquake or looted immediately after. Income flows from livelihoods or remittances were disrupted. For income, the poor in Port-au-Prince either rely on small business and petty trade or the provision of services (taxi driver, hair stylist, etc.). Loss of stocks, the destruction of the physical place of employment, as well as lower demand, significantly reduced household flows of cash. The massive influx in aid offered much-needed support, but it also had negative impacts on the local economy by forcing private sector suppliers to compete with the free goods provided by aid agencies. For example, water vendors and medical providers were unable to compete with free water and healthcare (Clermont, Sanderson, Sharma, and Spraos, 2010).

Cash management strategies refer to the ways in which people manage or access cash, such as putting it in savings or having access to credit or insurance payouts. Both wealthy and poor households experienced a diminished cash position due to loss of stocks and reduced income flows; however, the poor suffered more with respect to cash management strategies. Wealthier households' savings were safely protected in formal institutions (banks), and they could procure loans to rebuild (at internationally accepted interest rates). Poorer households had used informal means for saving, including hiding cash inside the house, or participating in local savings groups, such as *sols*, *sabotays*, and/or *mutuellas* (See Box H1). These savings strategies failed after the earthquake.

## Box H1: Informal Savings Mechanisms: Sols, Sabotays, and Mutuelles

A *sol* is a rotating savings and credit association, often referred to as a ROSCA.<sup>2</sup> It is composed of a group of individuals who deposit money regularly into a communal fund that is instantly disbursed to one or more members. One cycle of a *sol* is when all members have had a turn at the fund and then it starts all over again. A *sabotay* is similar to a *sol*, but is specific to a market setting and therefore usually meets more frequently than a *sol* to account for the higher velocity of money in trade and small enterprise. Often, members deposit daily into the *sabotay*. Both mechanisms are sources for a lump sum and are usually put to use immediately, whether towards rent, schooling expenses, medical emergencies, or reinvesting in business (Wilson, 2010).

A *mutuelle*, on the other hand, is closer to an accumulating savings and credit association (ASCA). Unlike *sols* or *sabotays*, *mutuelle* funds grow over time as households contribute more savings and then use those savings to provide small loans to one another. Members decide on all the variables associated with this mechanism to best fit their specific circumstances, such as the interest rate, the loan period, and how much each individual should save. The majority of loans are used for the same purposes as the *sols* and *sabotays*—a lump sum for big expenditures or investments. Ideally, because members contribute month after month and pay an interest rate on any loans, the fund expands and allows for loans of larger lump sums over time.

The very poor had limited financial strategies after the earthquake. Savings were lost, stolen, or destroyed. Credit was limited: borrowing from a neighbor or money lender became more difficult because overall supply decreased. Precarious land ownership rights meant proving ownership where documentation was lost, never existed, or where there were competing titles was difficult. The loss of documents limited a household's ability to access remittances, which the poor in Haiti were reliant on (Savage and Harvey, 2007). However, the Haitian Living Conditions Survey shows that while 59% of the poor receive remittances, only 36% of the extremely poor do (Sletten and Egset, 2004). Therefore, even remittances do not fully reach the most destitute (Amuedo-Dorantes, Georges, and Pozo, 2008).

In general, the poor are incredibly adroit at managing their varied but often inadequate financial portfolios, but raising a lump sum to deal with unforeseen risk or a large expense is more difficult (Collins et al., 2010). Households often are forced to resort to harmful mitigation and coping strategies. The Haiti Youth Survey (2009) showed that households in worsening economic situations used coping strategies such

as reduced food consumption (86%), reduced health spending (78%), delays in children's enrolment in school (39%), and sending children to live/work elsewhere (14%). Such short-term strategies often have irreversible long-term consequences that potentially reduce future financial resilience.

One coping strategy commonly employed is distress migration. One month after the earthquake, 604,215 people had migrated to non-affected areas while another 1,301,491 moved to settlements in the earthquake-affected areas (SNGRD, 2010). Displaced households are more likely to suffer financially because they lose their social network, and often have fewer opportunities to earn income in a new location (Jacobsen et al., 2006), and are more dependent on assistance or other outside support. In addition, they can be a financial burden to the host family. A rapid assessment carried out by CRS in the aftermath of the earthquake found that households took in between six and nine internally displaced persons (IDPs) on average (Wilson, 2010). Gaye Burpee, the Deputy Director of Programming in Latin America at CRS said that the "stress these households are

facing is difficult to believe. Many in the most remote areas must cultivate an additional 25% of their land” (Wilson, 2010). To better understand this additional stress, our study includes the destination of St. Marc and Jacmel.

Identifying means for shoring up a household’s financial resilience both prior to and after a disaster is crucial for reducing some of the negative impacts of the disaster itself. In the rest of the report, findings are presented on the impact of the earthquake on household financial resilience, access to financial services/financial management strategies, household financial coping strategies, and some recommendations for fortifying household financial resilience in the face of urban, sudden-onset disasters such as the Haiti 2010 Earthquake are made. ■

### 1. Impact of the Earthquake on Household Financial Resilience

The loss to physical assets was extensive. Property damages ranged from broken dishes, destroyed furniture, cracks in walls, loss of livestock, and loss of construction material, to total collapse of homes and/or businesses. Over 105,000 houses were destroyed and 208,000 damaged in Port-au-Prince. Sixty-one percent of households had their business inventories and stocks either destroyed or irrevocably affected by the earthquake (ACTED, 2011a): *“All of my merchandize was in storage and I lost it all”* and *“I lost close to 50,000 gourdes of merchandise”* (Interview Notes). Damage and loss of stocks and assets, especially housing, has a large impact on a household’s economic vulnerability, particularly in an urban setting. In rural areas such as Jacmel and Saint Marc, households that were affected by the earthquake could rely on their land or farm production as a last resort: *“I leased a parcel of land,” “It is the reserve I made from our harvest,” “It is the little reserve we had [from the harvest] that helped us to survive,”* and *“I sold chickens to my children’s father to sell in Port-au-Prince”* (Interview Notes). The same options did not exist in an urban setting.

Households experienced direct financial losses—loss and destruction of their cash savings. Most households in the sample belong to the poorest to lower middle spectrum of wealth in Haiti and have little access to formal savings mechanisms.

The earthquake destroyed many of the traditional savings practices—the collapse of buildings and the deaths that it caused adversely affected the four main informal savings traditions discussed here. The earthquake disrupted the practice of hoarding cash in a secret place within the house on a daily or weekly basis. Households working in the informal sector or those that participate in multiple commercial activities or the craft industry often carry their daily funds on themselves or store them at home for lack of better options. While it is hard to estimate how much money in savings secured in such a manner was lost during the earthquake, many of the

respondents indicated this loss: *“I saved 120 US dollars and 3,000 gourdes in a suitcase,” “I lost 5,000 gourdes in the earthquake,” “I had 2,000 gourdes under the mattress,” “I lost money inside the house”* (Interview Notes), and many more. Many participants reported the loss of savings buried under the rubble of their house or business ranging from 500 to 160,000 Haitian gourdes, or approximately 10 to 3,700 US dollars. While the actual sums might be an exaggeration in the hope of receiving aid from the enumerators, the fact that so many households had lost even some money in the earthquake given their already precarious position and the need for cash to recover paints a picture of the unreliability of this savings mechanism in the face of sudden-onset disasters.

The earthquake also revealed the limitation of the informal economic practice of sols, sabotays, and mutuelles that were common in Bel Air and Cité Soleil. Many survivors lost a lot of money because the person who was responsible for the collected money had died or disappeared with the cash: *“I was in a sol, all the money was lost by the person who was holding all the money,” “They ran away with the sol money,” “I was in a sol, the keeper of the sol died while he was in possession of the money,” “I lost my sol money as well as money for my business, close to 1,800 Haitian gourdes”* (Interview Notes). While not all participants of a sol lost their savings, many of the sols themselves dispersed following the earthquake. A participant in one of the large market sabotays in Port-au-Prince used to count herself as one of thirty members. However, many members perished in the earthquake, while others retreated to the countryside, and now the group is made up of only three members (Wilson, 2010). This significantly limits the ability for a household to raise the necessary lump sum to start the recovery process. While informal savings mechanisms allow for some opportunity for households that do not qualify for more formal financial institutions to acquire savings and raise a lump sum, the significantly lower levels of security that are related to these mechanisms make them inappropriate for areas vulnerable to sudden-onset disasters, especially considering

that it is exactly those savings that households need to recover from said disaster.

In the three sites located in or immediately bordering Port-au-Prince (Bel Air, Cite Soleil, and Delmas) there were few respondents that did not experience some damage/loss of physical assets and savings. For some, that loss occurred after the earthquake due to the high volume of burglaries that happened in the confusion immediately following the disaster: *“The house was not damaged but I lost everything, the thieves took it all”* and *“Thieves stole all my money”* (Interview Notes). Weak and individualistic coping strategies (as opposed to communal strategies) following a disaster, such as theft and robbery, tend to occur at far higher levels in urban and particularly slum communities:

...slum dwellers have little to sell (e.g. no livestock or agricultural products) to help themselves or others in need. Third, slum dwellers simultaneously and persistently experience bad conditions over a period of years, with floods and landslides causing adverse environmental changes (runoff, poor soil), the effects of which continue even after the weather has returned to normal. Finally, the lost trust in community solidarity and hierarchical structures, as well as the fear of being hoodwinked by the authorities, further promotes a dominant sense of individual responsibility and ownership at the household level, as well as a determination to “fix” things without assistance. (Wamsler, 2007)

Even more tragic than the loss of household assets and homes was the loss of human life and physical damage to individuals. While the majority of the respondents were not themselves physically harmed, most had lost a member of their family or close friends. The impact of this is twofold when it comes to overall household resilience. The first is the overwhelming amount of psychological damage that the disaster inflicted on the survivors, and the physical manifestations of that damage. Many respondents are suffering psychosomatic problems in the form of blisters on their body, high blood pressure, insomnia, and overall higher levels of stress. For example, several respondents, even 18 months after the earthquake, gave the following responses: *“My family lives in fear mostly since I lost*

*my nephew,” “My heart is always jumping,” “I am so scared my body shakes,” “I sometimes feel my legs weaken and I also have something that hurts,” “I could not sleep, it is luck I am not crazy, I still cannot sleep,”* and *“I would feel like my head is hollow, I am still not back to normal”* (Interview Notes). Most of the household we spoke to gave some variation of the above. Psychological trauma was not limited to respondents who had experienced the earthquake firsthand, but also included those who were living in St. Marc and had lost family and friends. Many of the respondents in St. Marc reported the above symptoms based on their emotional ties to the children, relatives, and friends who had suffered damages or died in the earthquake. Only one of the respondents reported receiving any kind of support for the psychological trauma caused by the earthquake.

Because the majority of respondents were either household heads or in some cases the only breadwinner, both the physical and psychological damage impacted their ability to provide for their family. Furthermore, the loss of other household members not only led to increased psychological suffering but often also the loss of other income earners. The number of productive household members is often correlated with higher levels of wealth, especially for the poorer cohorts, given their need to rely on numerous livelihoods in order to diversify risk and scramble together enough income to support the family. A study in Haiti six months after the earthquake found that higher wages were a result of more people working in the family. In 68% of the households receiving less than 5,000 Haitian gourdes (about 35 US dollars) a month, only one person was working (ACTED, 2011a). Loss of this support and the physical and mental trauma endured by the survivors significantly lowers a household’s income flows.

The loss of housing, family, and livelihoods has triggered the migration of survivors to makeshift or formal camps near or far from their original residence, while others travelled to stay with family outside of Port-au-Prince. Lack of livelihood options in the camps has further reduced household income flows. A study carried out by ACTED found that 40 to 60% of the population in the camps had no source of income and another 30 to 36% had an irregular

income, leaving only a small number of households that seem to have a stable livelihood flow.

Households that stayed with relatives, rather than camps, fared better. However, while the majority of these hosted families took part in some type of income-generating activity prior to the earthquake, in some regions, 80% of those households were unemployed in their host community in the months after the earthquake (ACTED, 2011a). This adds a significant financial burden on the host households. Several households in the study in both Saint Marc and Jacmel reported taking in displaced family members. One woman in Saint Marc who lost several family members in the earthquake took in not only her own relatives, but also an additional 11 strangers. While these acts of human generosity are part of what makes a household resilient to shocks (i.e., social capital), the financial stressors on the host community cannot be ignored and have to be part of the discussion of a disaster's overall impact on financial resilience, not just for those households directly affected, but also for their immediate family and friends who help absorb some of the shock.

The 2010 Earthquake has exacerbated long-standing vulnerabilities in Haiti. It has significantly destroyed household capital: physical, financial, and, in some cases, human. The resulting reduced household cash position means that the very poor, who were already struggling prior to the disaster, have come out of it with few resources to help them along with their recovery. Even the households who had savings prior to the earthquake through their informal savings and loan mechanisms mainly reported losing part or all of those savings in the disaster itself. Particularly in an urban setting, the lack of cash makes survival extremely difficult. Because households do not grow their own food, they are primarily reliant on having access to cash to purchase it. This is in stark contrast to disaster-affected households in rural settings, who can at least return to their land for some kind of sustenance. Financial resilience is key to a household's recovery, and all evidence points to the fact that the majority of the poor in the research study were not financially resilient

when it came to the 2010 Earthquake. And while the earthquake is an extreme example, it still epitomizes the losses a household faces when they live through a sudden-onset disaster, which includes hurricanes, flash floods, landslides, and tsunamis.

## 2. Access to Financial Services

Formal financial access is limited in Haiti, with formal and commercial banks currently lending to one percent of the population, mainly in Port-au-Prince (Whiteside and Wardle, 2009). No respondents in our study reported using a bank for either loans or savings; instead they used informal financial management practices, which draw heavily on existing social capital, and are convenient and flexible. These practices require little to no paper work, so households that lack documentation or had it destroyed are not barred from using them, and neither are illiterate or semi-illiterate populations. Interest rates and repayment rates are usually based on near-perfect information due to either proximity or prior relationships. For households with unpredictable income streams and little collateral, such informal financial services allow them to manage their cash flow and deal with everyday shocks. However, these services lack security, privacy, and the capacity to provide a large amount of credit.

Informal financial management practices can deal with idiosyncratic shocks (to individual households), but are vulnerable in the face of a covariate shock. Savings are easily destroyed or stolen, and while access to informal credit still exists, the overall pool of funds is reduced as potential lenders face the same shocks to their cash pool. Formal financial institutions such as banks and insurance companies, while less flexible and convenient, have the capacity and security to confront a covariate disaster such as an earthquake. However, formal institutions are often unwilling or unable to risk lending to the poor due to little, or perhaps even negative, returns, the high transaction costs, and little pay-off given the small size of the savings. Poor households also find formal credit prohibitive—large monthly debt repayments—and not conducive to small and irregular income streams.

Semi-formal financial institutions like Microfinance Institutions (MFIs) provide some of the security and capacity of formal institutions, with more flexibility. This sector is highly developed in Haiti. A survey conducted prior to the earthquake found that over a quarter of households with a loan utilized MFI services (ACTED, 2011a). However, MFIs operate in a more restrictive regulatory environment than other financial institutions; they are prohibited from using customer deposits to fund their loan activities, which limits their growth and loan size. An exception in Haiti is Fonkoze, which sidesteps this barrier by offering unregulated “investment accounts” to customers (Whiteside and Wardle, 2009).

There is evidence of the formal financial sector opening up to the poor—a population previously referred to as “unbankable”—mainly due to the success of the Grameen model in other countries, which has shown the potential for profit. The removal of interest rate caps and reduction of restrictive capital adequacy requirements in the 1990s led some large commercial banks in Haiti to start targeting poorer households, though primarily for savings rather than credit accounts (1.9 million as compared to 53,000 respectively) (Whiteside and Wardle, 2009). Sogebank and Unibank, two of the largest commercial banks in Haiti, have recently entered the microfinance lending market in order to deepen their market penetration, while MFIs have sought to acquire the status of regulated financial service providers, in order to fund their loan programs from customer deposits, like Fonkoze.

In the two-week period following the earthquake, cash was difficult to come by for all households. Increased demand for cash, higher prices of goods,<sup>3</sup> and decreased cash supply left many households struggling to find a source of cash. All financial sectors, from most to least formal, were affected.

The formal banking sector closed down in the days following the earthquake, with only a few commercial banks reopening 11 days after the disaster. Even after the two weeks, banks limited daily withdrawal amounts to 5,000 US dollars. This withdrawal limit hindered the

ability of semi-formal organizations, like MFIs, to service those who did not have access to a bank. In order to stay solvent, Fonkoze partnered with the US military to airlift two million US dollars in cash from the US to its branches. While the airlift helped restoring short-term liquidity, MFIs endured long-term consequences from the earthquake in the form of loss of their staff and destruction of their infrastructure. One of the largest microcredit groups in Haiti, Finca Haiti, had to write off almost one-third of its portfolio due to the death of numerous clients or losses to their business, stocks, and income streams. Of those who continued to make repayments, over half were late. Another Haitian microbank, ACME, had to raise additional funds over the summer due to the degree of losses (Costello, 2010). The result was a significant drop in the number of households that were able to utilize microfinance services in the six months after the earthquake. A survey found that the prevalence of microfinance loans in the sample population was 17% lower after the earthquake (ACTED, 2011a).

Lack of documentation further limited access to financial services. Individuals need to present IDs to use remittance transfer services, MFIs, and banks. Those who lost their documents could not prove their identities and were therefore unable to access remittances and formal financial services.

The disruption in telecommunication services in the days after the earthquake further exacerbated the problem. Households reliant on remittances had little access to transfer services, and what institutions still provided remittance transfer services were running out of cash on hand.

Informal services were not affected by lack of documentation or destruction of infrastructure, although they also had liquidity problems. However, households reported returning to their sols and taking out credit from friends and neighbors within days of the earthquake. The next section looks at the financial coping strategies utilized by households and the insufficiency of the informal sector to meet this need.

### 3. Household Financial Coping Strategies and Impact

Poor households, even the poorest of the poor, create “financial portfolios” to manage unpredictable and unsteady income stream, utilizing different financial tools (Collins et al., 2010). Following the earthquake, households sought new business opportunities, tried to restart old ones, took out loans, and tried to save for the next shock. A few households reported primarily relying on emotionally oriented strategies, such as faith or simply accepting their situation. Households utilized coping strategies ranging from prayer (“*I am leaving it up to God*” (Interview Notes)) to selling prepared food near in the camps. Strategy diversification is a common approach for reducing vulnerabilities. This section explores these coping strategies and their effectiveness.

Most of our respondents had some form of savings prior to the earthquake, whether in the form of cash, participation in a *sol* or *sabotay*, or held in livestock or assets in case of an unexpected shock. Most of these households lost these savings, but a few reported having some cash, the highest amount being 7,500 Haitian gourdes (around 170 US dollars), on hand in the immediate aftermath of the disaster.<sup>4</sup> Even such a small amount meant that households were able to purchase food and other needs, and some used their cash for livelihoods: “*I had 1,200 gourdes in my pocket on Jan. 12th. It allowed me to function plus I was able to use 1,000 gourdes to purchase merchandise to resell*” (Interview Notes). Most households reported spending the money on consumption goods, as expected in urban settings. Christian Aid found that less than 50% of household cash was spent on purchasing food and cooking fuel, 16% on water, 10% on education, and 9% on small enterprises (Clermont, Sanderson, Sharma, and Spraos, 2010). Households reported that cash on hand lasted about three months, allowing them to use that time to find more permanent sources of income. Access to a lump sum increased the ability to pursue more productive coping strategies, rather than relying on activities with short-term benefits and long-term costs.

Most of our respondents, however, were unable to recover their savings or had them stolen, and had to rely on support from humanitarian aid, as well as friends and family both in Haiti and abroad. Humanitarian agencies provided food, temporary shelter, water, medical care, and psychosocial counseling. Several respondents were beneficiaries of cash-for-work programs. Support from family and friends included offering refuge, temporary custody of children, fostering a child, food, clothing, or cash. Few households did not rely on social capital in one form or another. However, social capital is an asset that works best in the face of idiosyncratic shocks. After the earthquake, available resources were stretched thin, and not being able to support relatives and friends was an additional stressor on households. One exception to this was remittances, as remittance senders were located outside of the shock zone (primarily in the United States). Furthermore, while households that received cash support from their relatives described the financial support as a loan, remittances were not generally regarded as a loan.

Remittances are an important aspect of post-disaster recovery (Yang, 2008). Increased remittance in-flows followed the 2004 Tsunami (Savage and Harvey, 2007), the 2001 earthquake in El Salvador (Agunias, 2006),<sup>5</sup> and the 2001 floods in South Africa (Khandlhela and May, 2006). Remittances are a good example of a lump sum transfer for households with family or friends abroad. For example, in the Philippines, households with family members working overseas were able to offset drops in income from environmental shocks due to remittance flows (Yang and Choi, 2007). Several of our Haitian respondents reported receiving support from relatives abroad that was used for everyday consumption and to restart or start small enterprises. Importantly, however, remittance receivers tend not to be the poorest of the poor. A study in Haiti following the 2004 hurricane found that middle class households were more likely to receive assistance from relatives living outside the country (Fagen, 2006). Though the initial recipient might not be the most vulnerable, nearly every person who receives remittances is responsible for others and therefore shares what they can among family members near and far (Fagen, 2006).

In addition to consumption needs, Christian Aid found that 68% of the recipients of cash funds used some proportion to start a small business (Clermont, Sanderson, Sharma and Spraos, 2010). Most respondents showed great innovation and entrepreneurial spirit, many returning to their business or a new activity within two weeks: *“Immediately after the earthquake I used to make tents for sale,” “After two weeks, I went to sell [dinner cookware],” “I sold dishes and cups,” “After one week I started the motorcycle taxi,” “After the earthquake I bought some flour to make patties that I would sell to the people living in the camps”* (Interview Notes), and so on. Less than one month after the earthquake, some respondents took advantage of the Easter/Rara and Mardi Gras celebrations to make extra income. Many respondents combined wage labor and commercial enterprise to diversify sources of income, including crafts (mason, tailor, seamstress, iron craftsman), cooking food, selling water and clay, services (taxi motorcyclist, midwife, massage therapist), and temporary jobs (street sweeping, factory work, handyman).

A small business required restocking and/or rebuilding, which came on top of other reconstruction expenses. Few households had either a stable source of income or a lump sum on January 12th. An ACTED survey found that 15% of household income went to the reconstruction of houses (ACTED, 2011a). A study by Fonkoze in 2011, following heavy and destructive rains, found that 67% of households had no other financial support outside of borrowing (Fonkoze, 2011). Similarly in our study, households reported heavy borrowing: *“I borrow money at a high rate to purchase merchandise for my business,” “I borrow money,” “I borrow money from friends to support my business,” “Friends lend me money and I buy metal drums that I turn into stoves to sell,” “My husband is a mechanic and would also get loans at a high rate for my business,” and “I borrowed 1,000 gourdes for my business”* (Interview Notes). A study of the economic situation of households in Port-au-Prince six months after the earthquake found that borrowing had increased. Prior to the earthquake, 17% of households in Port-au-Prince reported relying on loans to finance their business; after the earthquake, that percentage jumped to 27. In 2009, 53% of households contracted between one and two

loans; in 2010 this figure increased to 68%. The percent of households that contracted three and four loans doubled from 6% in 2009 to 12% in 2010. Approximately 80% of the households surveyed had some form of debt at the time of the survey (ACTED, 2011a). Households borrowed for numerous reasons, including purchase of food, rent and repairs, school fees, and rebuilding of stocks or acquiring new tools and other means of production. People relied on credit for investment and to cover large costs such as health emergencies, but also to maintain a standard of living. The significant increase in debt reveals the extent of the financial loss and vulnerability of households.

The same ACTED study revealed a shift in credit sources. Households were less likely to report borrowing from a loan shark or MFI, and almost twice as likely to hold debt with a sol or sabotay, compared to 2009 (ACTED, 2011a). This is partly because MFIs were unable to quickly recoup their cash position and partly because of the loss of ID cards necessary to take out a loan. Loan sharks suffered from a similar fate. Low repayment, combined with their own losses, contracted their availability to provide credit. Borrowing from friends and family stayed at the same rate and was the most common form of borrowing both before and after the earthquake.

A shift in credit sources also implies a shift in loan terms. MFIs provide the longest repayment periods, about five months in Haiti, while loans from institutions such as sols, sabotays, or individuals tend to be much shorter, around two months. MFIs also provide some of the lowest loan rates, compared to private individuals or moneylenders. The ACTED study found that more than half of all surveyed households did not borrow at a fixed rate, suggesting the threat of financial risk (ACTED, 2011a). The shift in types of loans and loan terms means households are unable to borrow an amount sufficient for recovery, and must rely on additional loans to stay afloat. While over 90% of households said they were able to restore some of their stock post the earthquake, it was at less than half of the pre-earthquake level (ACTED, 2011a). This has impacted the financial viability of small businesses and markets. Profits from sales

decreased in 2010 compared to 2009, and there was a significant increase in the proportion of respondents who reported needing to borrow in order to keep their business. The number of investors and volume of investments showed a steady decline in the year and a half following the earthquake (Interview Notes).

In 2009, half of the small businesses were able to cover their business expenses through profits; that percentage dropped to 43 after the earthquake, with the difference being made up by households who now have to exclusively rely on loans (ACTED, 2011a). These businesses are unable to generate sufficient profits not only to provide for basic household needs, but also to cover their own costs. This is partly due to lack of markets for goods to be sold, lower demand capacity, and insufficient stock. Add to this the additional cost of the interest rate, repaying the debt, recovering household assets destroyed in the earthquake, shelter material, medical costs for injuries sustained in the earthquake, everyday food and water consumption, and covering upcoming costs such as school fees, and suddenly it becomes painstakingly clear that these households are barely staying afloat while piling up additional debt. The result is a vicious cycle that traps small traders and professionals.

Not only do these households show a low capacity to recover from the earthquake, their recovery attempts make them more vulnerable to the next disaster. Hurricanes and landslides are yearly occurrences in Haiti, and these hazards share many of the same characteristics as earthquakes—sudden onset and covariate. Households rely more on *sols* and *sabotays* to acquire credit because of the contraction of credit from MFIs, and they and their savings are in the same precarious position as they were prior to the earthquake. When asked what are they doing to prepare for the next disaster, most households reported little ability to mitigate their future losses: *“I can’t say anything, I am leaving it up to God,” “I can’t make any preparations for the hurricane, I do not have the means,” “I do not make any preparations for the hurricane because I do not have any money to buy rope to secure the tarp,” and “The only preparations I made was to purchase a new tarp to put on the new roof”* (Interview Notes).

The 2010 earthquake led to households using a variety of rather weak coping strategies, and since then most appear to be backsliding. The slow recovery has been interrupted by other disasters: Haiti has experienced three epidemics, eight floods, and six storms, affecting almost one million people, killing over 7,000 people, and costing a quarter of a billion US dollars (EMDAT). If household financial resilience cannot keep pace with the frequency of disasters and other shocks, then poverty traps result. ■

## CONCLUSIONS AND RECOMMENDATIONS

The research shows a community that is struggling for survival, and while the entrepreneurial spirit and creativity is there to balance inconsistent income flows, the financial environment is not conducive to sustain businesses. Households have to keep borrowing just to stay afloat. This is not a new phenomenon in Haiti—few households were resilient to sudden-onset disasters prior to the earthquake. The frequent contraction of credit and massive household debt is a symptom of the overall economic instability of poor Haitian households. The earthquake simply exacerbated pre-existing financial vulnerabilities and constraints.

Households are not borrowing to recover, they are borrowing to survive. However, there are few other options available to them. Informal savings and credit practices such as ASCAs and ROSCAs offer poorer households a convenient and flexible way to save, grow their savings (interest rates utilized in ASCAs), and take out loans, but these practices offer little support in the face of a covariate shock. More effective financial coping strategies need to be supported, especially in the context of urban disasters. The bolstering of alternative formal and semi-formal mechanisms is of prime importance.

In order to mitigate risk and strengthen a household's ability to recover from a disaster, we recommend that the following disaster risk reduction/mitigation (DRR/M) programs be implemented. These programs are aimed at increasing a household's access to a lump sum of cash, through more secure saving options, access to credit and insurance, and/or better access to remittances. These programs can be combined with financial literacy classes, perhaps provided by existing financial institutions, with the goal of making households better consumers of financial services.

Currently a household's best means of accessing a lump sum is transferring risk within the community through informal practices such as ASCAs and ROSCAs. Financial programs need to be designed so that households can transfer the risk out of the community via more secure

savings, access to bigger loans with better terms, insurance schemes, and more reliable remittance transfer services, while still being able to serve a population with inconsistent and unreliable income streams and low collateral.

One of the main constraints for our study households was their inability to access MFI loans given the organization's own liquidity constraints. This constraint has been identified following previous large sudden-onset disasters. After the 2004 Asian Tsunami, MFIs experienced similar problems. The process of evaluating MFI proposals for additional funds took over six months, significantly reducing the affected household's access to financial relief for everyday needs and for rebuilding their businesses and livelihoods in general (Bate, 2006).

In order to address exactly this problem, an emergency liquidity facility (ELF) was created to serve Latin America. The ELF serves as an emergency lender to prequalified Latin American MFIs, providing necessary funds to guarantee the MFI's liquidity in the face of a shock. This is achieved by pre-identifying qualifying MFIs prior to a disaster and then channeling the donor capital to the institutions within weeks, or in some cases, days (Bate, 2006). The money is then loaned at pre-disaster interest rates, with an increase in rates with every extension, up to two years. Up to this point the ELF has been effective. Following the 2005 devastation from Hurricane Stan and the eruption of the Ilimatepec Volcano in El Salvador, the Salvadoran MFI Apoyo Integral received 750,000 US dollars in emergency loans, allowing them to forgive interest, suspend fees, extend payment terms, and establish grace periods (Bate, 2006).

Another DRR/M strategy, which is the primary form of transferring risk in the face of a shock in the United States and Europe, is insurance. This financial strategy is infrequently utilized in many developing countries due to the novelty of the concept (paying for a service that you *might* utilize), prohibitive premiums, and difficulty in

assessing the degree of damage. However, in 2011, Fonkoze partnered with its insurance company Microinsurance Catastrophe Risk Organization (MiCRO) to create a product linked with their microloans that cancels loan balances, provides a 125 US dollar cash payout in an emergency, and pre-approves a new loan for when the customer is ready to borrow again (Fonkoze, 2011). All Fonkoze's microloan clients pay a small premium, which amounts to approximately 55% of the cost of the product. The product was further enhanced by providing information on better preparedness strategies, such as where households should store seed stock and cash to prevent losses.

The scheme is primarily an index-based insurance that automatically triggers payments when objective thresholds of rainfall, wind speed, and seismic activity are exceeded. This approach allows insurance providers to avoid problems of moral hazard since the payout is not based on calculating a household's losses but rather a onetime ubiquitous payment tied to an objective measure of the presence of a disaster. The system is backed by international insurance companies to guarantee that their risk is spread out while being able to provide the necessary liquidity for the MFI to pay out the insurance to their clients. MiCRO works in collaboration between several stakeholders, including Fonkoze, Swiss Re, Caribbean Risk Managers Limited, Mercy Corps, Department for International Development, Alternative Insurance Company, Guy Carpenter and Company, and the Swiss Agency for Development and Cooperation. The scheme was able to provide payout within 15 to 64 days following the reported shock to almost 7,000 clients (Fonkoze, 2011).

While the Fonkoze insurance scheme innovatively combines numerous programs for overall risk reduction (linking with previous loans, cancellation of previous debt, provision of new loans, index based, re-insured on international markets, provision of financial education, and additional risk reduction information) general index-based microinsurance has been proven successful previously in rural settings. In India, the organization BASIX introduced an index-based drought insurance product along with other financial services,

starting with the farmers they already had a relationship with. Similar to Fonkoze's product, BASIX was reinsured internationally by ICICI Lombard (Manuamorn, 2007). Fonkoze, working throughout Haiti, has demonstrated that this type of insurance scheme can be appropriately adopted for an urban setting as well.

Both the liquidity fund and the insurance schemes are a move towards providing households with the necessary funds to recover; however, what households really need is cheaper and easier access to more formal services. Mobile banking technology and branchless banking can partly lower the barriers and provide for faster access to funds, including remittances, and safer storage of savings. Branchless banking has been applied in Brazil, South Africa, the Philippines with its bank-based (SMART) and non-bank-based (GLOBE G-cash) systems, and Kenya with Vodafone's MPESA. Mobile ("branchless") banking allows customers to use a mobile phone to make payments, transfer money (a faster way to access remittances), and check their account. A study of the mobile banking program WIZZIT in South Africa found that mobile banking was far more affordable, as much as one-third cheaper, than traditional banking and therefore accessible to poor households. However, while the majority of urban Haitians own a cell phone, it is important to note that telecommunication companies in Haiti were affected by the earthquake and were down in the few weeks after the earthquake. A potential secondary constraint is access to electricity for recharging the phones. All of this has to be taken into account when resolving the best approach to providing quick and easy access to a lump sum for disaster-affected households.

Household responses to the Haiti earthquake provide insights into the opportunities and challenges following an urban disaster. The need for easy and quick access to a large lump sum is integral for quick recovery from a disaster. Without this sum, households rely on available financial strategies; in the context of Port-au-Prince, this is primarily borrowing. Given the extent of the damage, households borrow not just to reinvest in business but simply to get by. This is neither a sustainable nor appropriate

strategy for long-term resilience. When working in an urban disaster-prone context, organizations need to consider appropriate strategies to shoring up household financial resilience through more flexible, yet secure financial management strategies. Only then will households be able to “recover” post a disaster, rather than just survive it. ■

## ACRONYMS

ACME	Asociacion por la Corporacion Microenterprise
ACTED	Agency for Technical Cooperation and Development
ASCA	Accumulating Savings and Credit Association
CRS	Catholic Relief Services
ELF	Emergency Liquidity Facility
FIC	Feinstein International Center
IHSI	Institut Haitien de Statistique et d'Informatique
INURED	Interuniversity Institute for Research and Development
MFI	Microfinance Institution
OFDA	Office of Foreign Disaster Assistance
ROSCA	Rotating Savings and Credit Association

## BIBLIOGRAPHY

- ACTED. 2011a. "Situation Économique et Endettement des Ménages Haïtiens Port-au-Prince & Léogane." Port-au-Prince, Haiti.
- ACTED. 2011b. "Diagnostic des Besoins des Populations d'Accueil et Déplacées du Bas Artibonite." Port-au-Prince, Haiti.
- Agunias, D. 2006. "Remittance Trends in Central America." Migration Information Source (MFI), April 1. [www.migrationinformation.net/pdf/Migration\\_Information\\_Source-Central\\_America.pdf](http://www.migrationinformation.net/pdf/Migration_Information_Source-Central_America.pdf).
- Ali, D., F. Toure, T. Kiewied, and Humanitarian Practice Network. 2005. "Cash Relief in a Contested Area: Lessons from Somalia." Overseas Development Institute.
- Amuedo-Dorantes, C., A. Georges, S. Pozo. 2008. "Migration, Remittances and Children's Schooling in Haiti." IZA Discussion Paper No. 3657, 7.
- Attkisson, S. 2010. "Haiti Wants Food Aid to Stop? Government Says Generous Public Outpouring Is Interfering with Economy, Drawing Non-Victims to Camps and Enticing Corruption." *CBS News*. Retrieved from: [http://www.cbsnews.com/8301-18563\\_162-6419171.html](http://www.cbsnews.com/8301-18563_162-6419171.html).
- Barrett, C., R. Bell, E. Lentz, and D. Maxwell. 2009. "Market Information and Food Insecurity Response Analysis." *Food Security* 1:151–68.
- Basu, K. 1996. "Relief Programs: When It May Be Better to Give Food Instead of Cash." *World Development*, 24(1): 91–96.
- Bate, P. 2006. "In Case of Emergency: Break Glass: An Innovative Fund Helps Mfis Respond to All Kinds of Disasters." *Microenterprise Americas*.
- Bonilla-Chacin, M., and J. S. Hammer. 1999. "Life and Death among the Poorest." Mimeo. Johns Hopkins University and Development Research Group, World Bank, Baltimore, MD and Washington, DC.
- Brouwer, R., S. Akter, L. Brander, and E. Haque. 2007. "Socioeconomic Vulnerability and Adaptation To Environmental Risk: A Case Study of Climate Change and Flooding in Bangladesh." *Risk Analysis* 27(2): 313–326.
- Clermont, C., D. Sanderson, A. Sharma, and H. Spraos. 2010. "Urban Disasters – Lessons from Haiti. Study of Member Agencies' response to the Earthquake in Port-au-Prince, Haiti." Disasters Emergency Committee.
- Collins, Daryl, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven. 2010. *Portfolios of the Poor: How the World's Poor Live on \$2 a Day*. Princeton, NJ: Princeton University Press.
- Costello, D. 2010. "Can Microlending Save Haiti?" *The New York Times*. Retrieved from: <http://www.nytimes.com/2010/11/14/business/global/14haiti.html?pagewanted=all&r=0>.
- Dercon, S. 1996. "Risk, Crop Choice, and Savings: Evidence from Tanzania." *Economic Development and Cultural Change* 44(3): 485–513.
- Douglas, I., K. Alam, M. Maghenda, Y. McDonnell, L. Mclean, and J. Campbell. 2008. "Unjust Waters: Climate Change, Flooding and the Urban Poor in Africa." *Environment and Urbanization* 20(1): 187–205.

Echevin, D. 2011. "Vulnerability and Livelihoods before and after the Haiti Earthquake." The World Bank.

EMDAT (Emergency Disasters) Database: <http://www.emdat.be/database>.

Fagen, P. 2006. "Remittances in Crises: A Haiti Case Study." Humanitarian Policy Group, Overseas Development Institute, London, 7.

Fallon, P. R., and R. E. B. Lucas. 2002. "The Impact of Financial Crises on Labor Markets, Household Incomes, and Poverty." *World Bank Research Observer* 17(1): 21–45.

Farrington, J., T. Ramasut, and J. Walker. 2002. "Sustainable Livelihood Approaches in Urban Areas: General Lessons, with Illustrations from Indian Cases." ODI Working Paper 162, May.

Few, R. 2003. "Flooding, Vulnerability and Coping Strategies: Local Responses to a Global Threat." *Progress in Development Studies* 3(1): 43–58.

FEWS NET. 2010. "Price Bulletin Archives." Retrieved from: <http://www.fews.net/pages/countryarchive.aspx?pid=650&gb=ht&loc=3&l=en>.

Feinstein International Center. 2010. "Examining Linkages between Disaster Risk Reduction and Livelihoods." Tufts University, Boston, MA.

Fonkoze. 2011. "Evaluation of First Year Results. Kore W. Port-au-Prince, Haiti." Retrieved from: [http://www.microfinancegateway.org/gm/document-1.9.58002/Kore%20W%20-%20First%20Year%20Evaluation%20\(Electronic%20Version\).pdf](http://www.microfinancegateway.org/gm/document-1.9.58002/Kore%20W%20-%20First%20Year%20Evaluation%20(Electronic%20Version).pdf).

Gine, X., R. Townsend, and J. Vickery. 2008. "Patterns of Rainfall Insurance Participation in Rural India." *The World Bank Economic Review* 22(3): 539.

Government of the Republic of Haiti. 2010. "Action Plan for National Recovery and Development of Haiti." 15.

Grant, J. 2002. "CARE's Mata Masu Dubara (Women on the Move) Program in Niger." *Journal of Microfinance* 4(2): 189–216.

Gray, K., and M. Allison. 1997. "Microenterprise in a Post-emergency Environment." *Small Enterprise Development* 8(4): 34–40.

Gwatkin, D., S. Rutstein, K. Johnson, R. Pande, and A. Wagstaff. 2000. "Socio-Economic Differences in Health, Nutrition, and Population in Bangladesh." And comparable publications covering Benin, Bolivia, Brazil, Burkina Faso, Cameroun, Central African Republic, Colombia, Comores, Côte d'Ivoire, Dominican Republic, Ghana, Guatemala, Haiti, India, Indonesia, Kenya, Kyrgyz Republic, Madagascar, Malawi, Mali, Morocco, Mozambique, Namibia, Nepal, Nicaragua, Niger, Nigeria, Pakistan, Paraguay, Peru, Philippines, Senegal, Tanzania, Togo, Turkey, Uganda, Vietnam, Zambia, and Zimbabwe. World Bank, Washington, DC.

Huang, X., H. Tan, J. Zhou, T. Yang, A. Benjamin, S. W. Wen et al. 2008. "Flood Hazard in Hunan Province of China: An Economic Loss Analysis." *Natural Hazards* 47(1): 65–73.

Hudon, M., and H. D. Seibel. 2007. "Microfinance in Post-disaster and Post-conflict Situations: Turning Victims into Shareholders." *Savings and Development* 31(1): 5.

ILO/UNHCR. 1999. "Microfinance in Post-conflict Countries." ILO/UNHCR workshop, papers, and case studies.

Ivatury, G., and M. Pickens. 2006. "Mobile Phone Banking and Low-income Customers—Evidence from South Africa." World Bank and United Nations Foundation.

Jacobsen, K., A. Marshak, and M. Griffith. 2009. "Increasing the Financial Resilience of Disaster-affected Populations." Feinstein International Center, Tufts University, Boston, MA.

Jacobsen, K., A. Marshak, Akua Ofori-Adjei, and Jane Kembabazi. 2006. "IDP Livelihoods: Using Microenterprise Interventions to Support the Livelihoods of Forcibly Displaced People: The Impact of a Microcredit Program in IDP Camps in Lira, Northern Uganda." *Refugee Survey Quarterly* 25(2): 23–39. doi:10.1093/rsq/hdi0123.

Jacobsen, K., H. Young, and A. Osman. 2008. "Refugees and IDPs in Peacemaking Processes." In J. Darby and R. MacGinty, eds. *Contemporary Peacemaking*. 2nd ed. Palgrave Macmillan.

Jalan, J., and M. Ravallion. 1998. "Are the Poor Less Well Insured? Evidence of Vulnerability to Income Risk in Rural China." *Journal of Development Economics* 58:61–81.

Jaspers, S. A. S. J. 2002. "A Critical Review of Approaches to Assessing and Monitoring Livelihoods in Situations of Chronic Conflict and Political Instability." Overseas Development Institute.

Jaspars, S., and J. Shoham. 1999. "Targeting the Vulnerable: A Review of the Necessity and Feasibility of Targeting Vulnerable Households." *Disasters* 23(4): 359–372.

Kazianga, H., and C. Udry. 2006. "Consumption Smoothing? Livestock, Insurance and Drought in Rural Burkina Faso." *Journal of Development Economics* 79(2): 413–446.

Khandlhela, M., and J. May. 2006. "Poverty, Vulnerability and the Impact of Flooding in the Limpopo Province, South Africa." *Natural Hazards* 39(2): 275–287.

Kidder, T. 2000. "The Role of Savings and Remittances in Unstable Situations: Reflections after Hurricane Mitch." *Humanitarian Exchange Magazine* Issue 14.

Manuamorn, O. P. 2007. "Scaling up Microinsurance: The Case of Weather Insurance for Smallholders in India." No. 36. The World Bank, Washington, DC.

Morduch, J. 1999. "The Microfinance Promise." *Journal of Economic Literature* 37:1569–1614.

Microfinance Gateway. 2010. "Haiti's Path to Recovery." Retrieved from: <http://www.microfinancegateway.org/p/site/m/template.rc/1.26.12644/>.

Moser, Caroline. 1998. "The Asset Vulnerability Framework: Reassessing Urban Poverty Reduction Strategies." *World Development* 26, no. 1:1–19.

Platteau, J., and A. Abraham. 1987. "An Inquiry into Quasi Credit Contracts: The Role of Reciprocal Credit and Interlinked Deals in Small-scale Fishing Communities." *Journal of Development Studies* 1.

Pottier, J. 1996. "Why Aid Agencies Need Better Understanding of the Communities They Assist: The Experience of Food Aid in Rwandan Refugee Camps." *Disasters* 20(4): 324–37.

Sahn, D., D. Stifel, and S. Younger. 1999. "Inter-Temporal Changes in Welfare: Preliminary Evidence from Nine African Countries." Cornell Food and Nutrition Policy Program Working Paper No. 94. Ithaca, NY.

Sanderson, D. 2000. "Cities, Disasters and Livelihoods." *Environment and Urbanization* 12(2): 93–102.

- Savage, K., and P. Harvey. 2007. "Remittances during Crises: Implications for Humanitarian Response." Humanitarian Policy Group, Overseas Development Institute, London.
- Sherwell, P., and P. Sawyer. 2010. "Haiti Earthquake: Looting and Gun-fights Break Out." *Telegraph*, London. Archived from the original on January 19, 2010.
- Sinha, J., and A. Subramanian. 2007. "The Next Billion Consumers: A Road Map for Expanding Financial Inclusion in India." The Boston Consulting Group, Boston, MA.
- Sletter, P. and Egset, W. 2004 "Poverty in Haiti", FAFO Paper No. 2004:31.
- SNGRD. Bilan des dégâts #15. 28 Feb 2010.
- Wamsler, C. 2007. "Bridging the Gaps: Stakeholder-based Strategies for Risk Reduction and Financing for the Urban Poor." *Environment and Urbanization* 19(1): 115–142.
- Warner, K., L. M. Bouwer, and W. Ammann. 2007. "Financial Services and Disaster Risk Finance: Examples from the Community Level." *Environmental Hazards* 7(1): 32–39.
- Whiteside, I., and K. Wardle. 2009. "Haitian Microfinance Industry Overview." Haitian Microfinance, Inc., 11–12; Retrieved from: <http://www.haitianmicrofinance.com/HaitianMicrofinanceIndustryOverview.pdf>.
- Wilson, K. 2010. "Haitian Informal Finance." Savings Revolution. Retrieved from: <http://savings-revolution.org/blog/2011/1/11/haiti-saving-despite-crisis.html>.
- Wilson, K., and M. Levin. 2010. "Savings and Chance." Tufts University, Feinstein International Center, Boston, MA. Retrieved from: <http://sites.tufts.edu/feinstein/2010/savings-and-chance>.
- Wilson, T. 2002. "Microfinance During and After Armed Conflict: Lessons from Angola, Cambodia, Mozambique and Rwanda." Concern Worldwide and Springfield Centre for Business in Development, Durham, UK.
- The World Bank. 2005. "Natural Disaster Hotspots, A Global Risk Analysis." Disaster Risk Management Series, Washington, DC.
- The World Bank. 2010. "Natural Hazards, UnNatural Disasters; The Economics of Effective Prevention." Washington, DC.
- Yang, D. 2008. "Coping with Disaster: The Impact of Hurricanes on International Financial Flows, 1970–2002." *B.E. Journal of Economic Analysis and Policy* 8, no. 1 (Advances), Article 13.
- Yang, D., and H. W. Choi. 2007. "Are Remittances Insurance? Evidence from Rainfall Shocks in the Philippines." *World Bank Economic Review* 21(2): 219–248.

## END NOTES

- 1 In 2006–08, Tufts/ FIC designed and conducted studies in three cities in cooperation with IDMC—Khartoum, Abidjan, and Santa Marta (Colombia)—using a profiling strategy that allowed us to estimate the number of IDPs living in urban areas and generate comparative information. In 2010–2011, we have implemented additional surveys in Cairo, Nairobi, Aden (Yemen), and Mae Sot (Thailand). See full report, case studies, and methods annex at <https://wikis.uit.tufts.edu/confluence/display/FIC/Refugees+and+Forced+Migration>.
- 2 For more, see Shirley Ardener and Sandra Burman, eds. *Money-Go-Rounds: The Importance for Rotating Savings and Credit Associations for Women*. Oxford, UK: Berg, 1995.
- 3 The price of goods increased, steadying in February and returning to pre-earthquake values in April. FEWSNET Price Bulleting Archives, January–July of 2010.
- 4 The proportion of households that had cash on hand was higher in Cite Soleil than in Bel Air given the significantly lower damage to piecemeal-constructed houses in the slum compared to the concrete structures in Bel Air.
- 5 Dovelyn Agunias, 2006, “Remittance Trends in Central America,” Migration Information Source (MFI), April 1. See [www.migrationinformation.net/pdf/Migration\\_Information\\_Source-Central\\_America.pdf](http://www.migrationinformation.net/pdf/Migration_Information_Source-Central_America.pdf).



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