



Photo Credit: Mercy Corps

THE USE OF FINANCIAL PRODUCTS IN MITIGATING NATURAL DISASTER RISK

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RESEARCH PURPOSE

Globally, the frequency of natural disasters has steadily increased in recent decades, particularly the devastating storms and floods that many associate with climate change. Asia and the Pacific have borne the brunt of this alarming trend: natural disasters are now four times more likely to affect people in the region than those in Africa, and 25 times more likely than those in Europe. Natural disasters caused around \$45 billion worth of damage in Asia and the Pacific in 2015 alone, affecting more than 59 million people, and financial losses from natural disasters continue to increase, with low-income populations feeling the greatest impact. A comprehensive disaster risk financing and insurance strategy can increase the resilience of vulnerable communities against the financial impact of disasters.¹ However, while there is a growing body of literature on the importance of financial

¹ World Bank 2014, "Financial Protection Against Natural Disasters", available at: <https://www.gfdrr.org/sites/gfdrr/files/publication/Financial%20Protection%20Against%20Natural%20Disasters.pdf>

Major Findings

- › Financial services are more readily used by households to support recovery, but currently do not compensate for relief immediately after disasters.
- › Existing access to financial services may not translate to use of savings and financial services for disaster risk mitigation.
- › Expected losses from disaster are more pronounced for business income than wages, and for households with lower job and asset security.

products for building household resilience to natural disasters², research to understand what influences the uptake and use of products for disaster risk mitigation that could help inform the design and reach of these products has been limited.

This study helps to fill this gap through a household survey in Indonesia that examines levels of actual and perceived vulnerability to natural disasters, and how this links to the demand for and use of financial products for coping and recovery.

CONTEXT AND RATIONALE

Indonesia is located on the Pacific Ring of Fire – an area with high tectonic activity – and has the second longest coastline in the world, making the country particularly vulnerable to earthquakes, volcanic eruptions, and tsunamis as well as to other risks driven by climate change³ and therefore an ideal case study.

To investigate the role of financial products in building household resilience to natural disasters, Mercy Corps Indonesia commissioned a quantitative household survey in Yogyakarta and West Sumatra, two disaster-prone regions in Indonesia.

This study was conducted in conjunction with the evaluation of the Indonesia Liquidity Facility after Disaster (ILFAD) program operating in these areas. ILFAD promoted the design and uptake of unique financial products designed to help households address large-scale natural disasters. Mercy Corps Indonesia implemented the ILFAD initiative to build the operational capacity of 162 microfinance institutions (MFIs) in post-disaster settings and offer a number of disaster related financial products through 15 partner MFIs, which were used by over 2,200 clients. ILFAD implementation areas provided a unique opportunity to improve understanding on what attitudinal, behavioural and product design features most influenced the uptake and use of financial products towards disaster risk mitigation.

There is little demand for commitment savings and insurance products for risk reduction, in contrast to high-demand for flexible savings accounts. The lack of demand for insurance is consistent with global evidence, and may be linked to lack of trust, lack of financial capability and heterogeneity in need for such risk protection.

Access to disaster-related financial services can have net psychological and behavioural benefits for investment.



Photo Credit: Mercy Corps

² Cole S., Bastian G., Vyas S., Wendel C. and Stein D. 2012. "The Effectiveness of Index-based Micro-insurance in Helping Smallholders Manage Weather-related Risks." London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

³ UNISDR 2017, "Indonesia Profile Page", available at: <https://www.unisdr.org/partners/countries/idn>

METHODOLOGY

In August 2016, a survey with over 2,500 people was conducted in parts of Yogyakarta and West Sumatra that had experienced either earthquakes and/or volcanic eruptions over the last ten years. The survey focused on assessing household vulnerability to losses due to natural disasters, and the related attitudinal, behavioural and product design factors that influenced the use of financial products in enhancing disaster resilience; the sample was therefore targeted at users and potential users of disaster-related financial products. All households in the survey were clients of financial institutions in these regions and half of them, clients of financial institutions supported by Mercy Corps to develop disaster related products. This allowed a comparison to be made between households that were familiar with disaster related products and those that were not. Around 95% of respondents had savings accounts and around three-quarters had loans from financial institutions. As such, the sample is not representative of the country's population as almost half of Indonesians do not use financial institutions⁴.

KEY FINDINGS AND RECOMMENDATIONS



Photo Credit: Mercy Corps

The key findings from the survey relate to households' disaster experience and future expectations of disasters; they provide insight into how households use and plan to use financial products to cope with and recover from disasters, and the psychological, behavioural and product design factors that influence decision-making.

Key Finding: Financial services are more readily used by households to support recovery, but currently do not compensate for relief immediately after disasters.

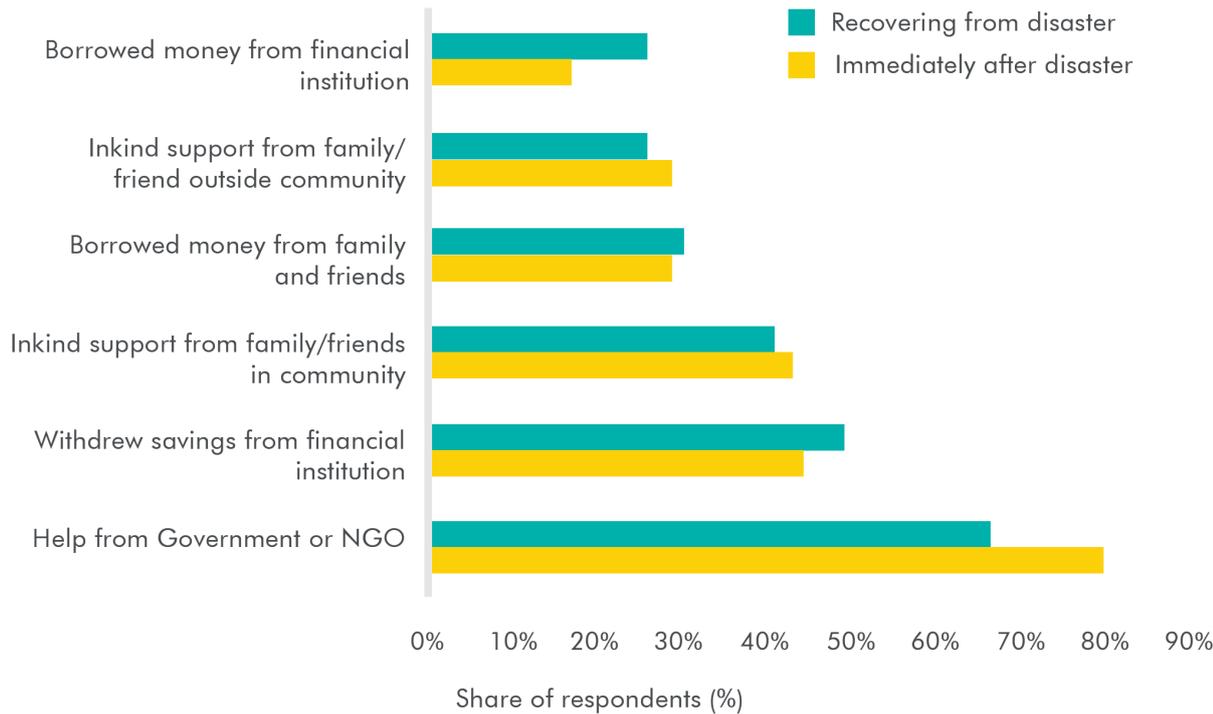
Recommendation: Relief programs must continue to serve as a critical immediate safety net for basic needs for disaster affected households, but recovery should focus on increasing financial options and allowing households to better leverage their existing financial options towards long-term resilience.

⁴ World Bank 2016, "Achieving Universal Financial Access by 2020", available at: <http://www.worldbank.org/en/topic/financialinclusion/brief/achieving-universal-financial-access-by-2020>

Despite having experienced severe⁵ disasters, over 80% of respondents thought that their family conditions had recovered or were better than before the last disaster they experienced. The main types of strategies that households reported having used to cope immediately after and recover from disasters are shown in Chart 1 (respondents were allowed to select more than one strategy).

Help from the government or an NGO was the most common method to cope with and recover from disasters, followed by withdrawing existing savings from financial institutions and relying on family and friends. Importantly, loans were used at much lower rates than savings, but borrowing money from financial institutions was more common among respondents who sought assistance in recovering from, compared to immediately after, disasters. Insurance was very rarely used, with only 2% of households mentioning this method.

CHART 1: MOST COMMON WAYS TO COPE IMMEDIATELY AFTER AND RECOVER FROM DISASTERS



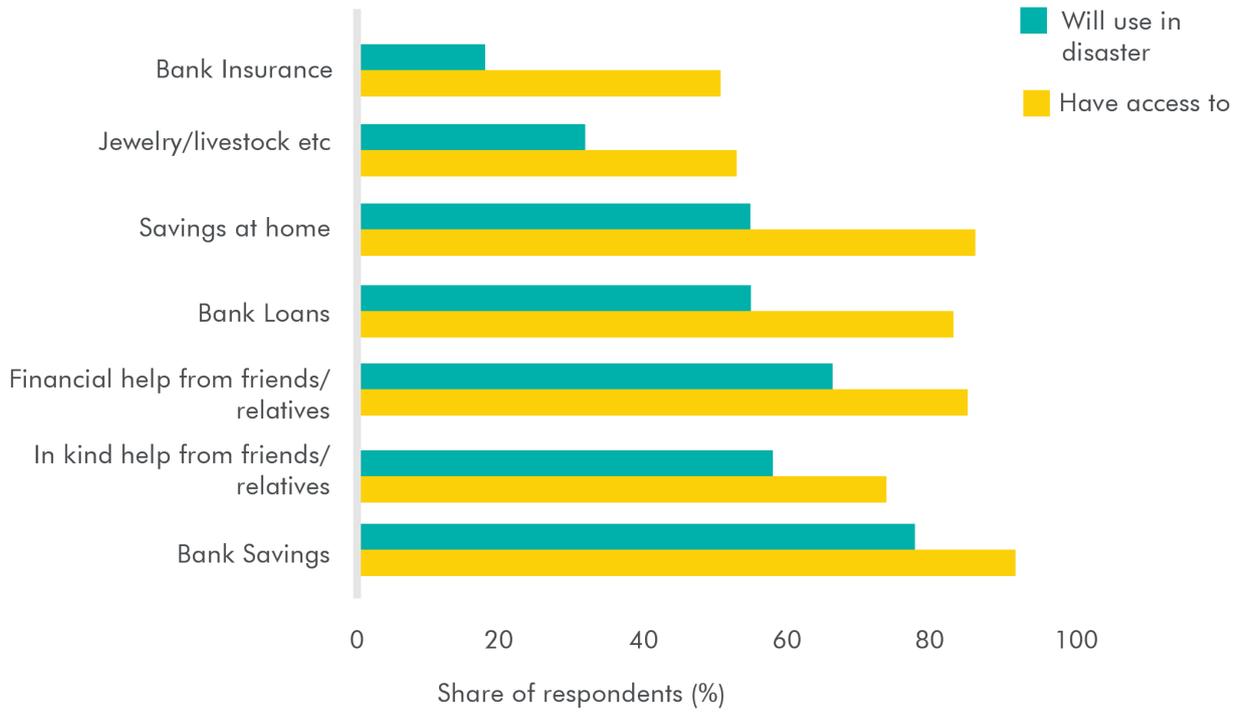
Key Finding: Existing access to financial services may not translate to use of savings and financial services for disaster risk mitigation.

Recommendation: Development actors and financial institutions must do more to support households with financial planning and understand financial protection options for disaster risk reduction (DRR). The relative barriers for using particular products to manage risk must be better understood.

Households were much less likely to use sophisticated financial products (such as insurance) in the event of a disaster. Bank savings and relying on family and friends were by far the most common strategies that households planned on using in the event of a disaster. The discrepancy between having access to options to financially protect themselves and actually using them is summarised in Chart 2.

⁵ Severe was defined as causing monetary damage, or some disruption of productive activity for at least 100 people within one kilometer of respondents' household.

CHART 2: ACCESS AND USE OF COPING STRATEGIES FOLLOWING A DISASTER



Even though most respondents had access to savings at home, only two-thirds of people with access to this option plan on using it in the case of a future disaster. The low level of planned savings use may be partly attributable to heavy reliance on external relief and assistance including on the government and NGOs, as well as the need to protect the financial assets themselves from eroding should a disaster strike. Around half of all respondents had access to insurance, but less than 40% of respondents who had access to insurance plan on actually using this type of financial product in the event of a disaster. This finding is consistent with the existing literature on insurance, which suggests that a lack of trust, lack of familiarity and/or limited financial literacy are likely to suppress demand for insurance products. Overall, the research suggests there is a need to further investigate the gap between households accessing financial services, or holding financial products, and using them to help them cope with and recovery from disasters.

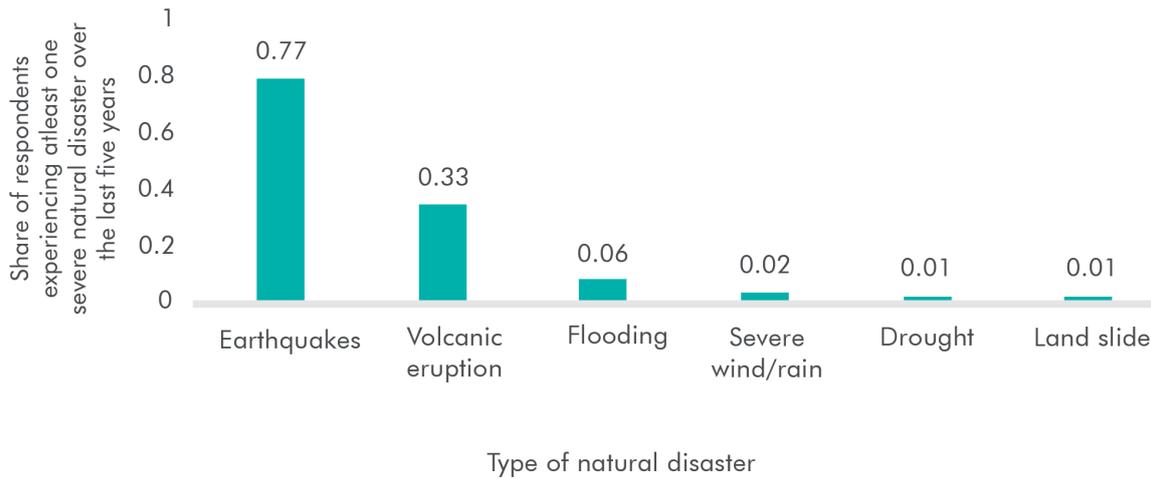


Key Finding: Expected losses from disaster are more pronounced for business income than wages, and for households with lower job and asset security.

Recommendation: Financial service providers and development actors supporting financial institutions must place greater emphasis on developing financial products that help business owners mitigate disaster effects.

Over 95% of respondents in the survey reported suffering from at least one earthquake and/or volcanic eruption in the last five years. Chart 3 shows the share of respondents that recall experiencing at least one severe disaster over the last five years. Unsurprisingly, there was a high positive correlation between a higher frequency of past experience of disasters and perceiving a higher frequency of disasters in the future.

CHART 3: FREQUENCY OF NATURAL DISASTERS AMONG RESPONDENTS



Losses were a greater concern for business. On average, respondents across all income rackets expected that disasters would have a larger impact on their business income than their labour income, as can be seen in Charts 4 and 5. This may be due to business income being less secure than labour income.

Chart 4: Expected Loss of Labour Income

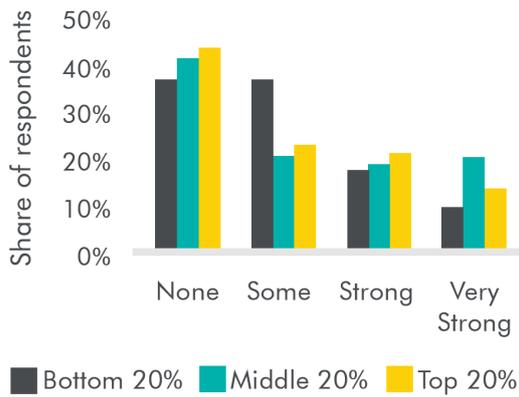


Chart 5: Expected Loss of Business Income



In addition, a larger expected loss from labour income was positively associated with not having post-secondary education and working in the informal sector. Also, expecting a larger business income loss was positively associated with having lower household assets. This suggests households with less job security or lower assets are more aware of their economic fragility and expect to be more negatively affected than those with formal income streams or higher asset standing.



Key Finding: There is little demand for commitment savings and insurance products for risk reduction, in contrast to high-demand for flexible savings accounts. The lack of demand for insurance is consistent with global evidence, and may be linked to lack of trust, lack of financial capability and heterogeneity in need for such risk protection.

Recommendation: Development actors working on financial services should focus on savings and loans products that more broadly meet clients’ needs, while increasing awareness around the potential use of products for DRR. Insurance should be targeted only to a specific client base with income streams most likely to be impacted by disaster.

Respondents' preferences for the features of disaster-related savings and insurance products are summarized in the table below.

Savings	Insurance
<p>Almost 90% of respondents indicated they strongly prefer savings products where funds could be withdrawn at any time.</p> <p>This did not vary with household income.</p> <p>Respondents' main reason to save more would be if there were higher interest rates (36%), more convenient banking options (29%) or lottery/reward programs (16%).</p>	<p>Demand for disaster-related insurance products was positively related to being more likely to expect a higher frequency of disasters in the future and expecting a larger loss of income.</p> <p>More than two-thirds of respondents preferred insurance products that required lower monthly payments (but had lower payouts).</p>

While there is broad-based demand for standard, unrestricted savings accounts, there is variability in demand for different features of savings accounts. In addition, lower monthly payment and payout options of insurance products are preferred by respondents.



Key Finding: Access to disaster-related financial services can have net psychological and behavioural benefits for investment.

Recommendation: Cost-benefit analyses of disaster-related financial products should consider the broader psychological, productive and other benefits from holding these products.

Disaster-related financial products are viewed in quite a positive light by respondents. Almost two-thirds of respondents believed *“financial products are an important way to prepare for disasters.”* This outcome was most often associated with individuals with lower incomes. The most popular additional benefits of disaster related financial products were less anxiety and stress in life (86%), more motivation to invest in their business or farm (76%) and more motivation to invest in their household (67%). Contrary to anecdotal evidence, concerns about karma and defying cultural traditions were not a major issue in taking up disaster-related products, with only 4% of respondents indicating this.

CONCLUSIONS

There is broad-based demand for standard, unrestricted savings accounts. However, there is variability in demand for different features of savings accounts, including higher interest rates, convenience of access, and lottery/reward programs.

Insurance should be targeted to a specific client base, particularly small businesses and employees in the informal sector who are more vulnerable to disaster. This may suggest greater tailoring of insurance products to a more focused, but still sufficiently large, subset of clients, and meeting their other product preferences, for example lower monthly payments (and lower corresponding payoffs). Other findings suggest that such a subset of clients is more likely to be made up of business owners than laborers.

Cost-benefit analyses of investing in financial inclusion should consider the broader psychological and productive benefits from holding these products. Cost-benefit analyses of disaster-related financial products usually focus on the benefits they bring after a disaster event has occurred – in mitigating loss in the immediate aftermath of a disaster, and in enabling rapid recovery. Study findings on psychological and productive benefits of disaster-related financial products suggest strongly that such products can bring benefits even in the absence of disaster – in reducing anxiety and stress, and in motivating productive investment in

enterprises, farms and households. While these benefits have not been quantified in monetary terms in this study, the results suggest that these benefits should receive consideration, if not efforts to quantify them, in the future.

Finally, the study points to the need for more in-depth research on the **barriers and potential spillover effect of using financial services for disaster risk recovery, once access is secured**. The results show that study respondents still have high dependency on friends and neighbors for coping with and recovering from previous disasters. In addition, many people in the study who have access to financial products reported that they may not use them to cope or recover from disasters. For example, less than 40% of respondents with access to insurance plan on actually using this type of financial product in the event of a disaster. Hence, it is possible that as long as disaster-related products have sufficient penetration at community level, natural social sharing mechanisms will ensure broader resource coverage, in a kind of “blanket effect”. However, it is also possible that as such products reach higher penetration rates, they can crowd out these social institutions and hence dampen this effect.

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About Mercy Corps

Mercy Corps is a leading global organization powered by the belief that a better world is possible. In disaster, in hardship, in more than 40 countries around the world, we partner to put bold solutions into action — helping people triumph over adversity and build stronger communities from within.

Now, and for the future.



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