



## **Big Questions in Insurance**

For the world's poor, living with unpredictable and inadequate income flows makes it difficult to cope with risk. Catastrophic events such as illness or crop failure can be devastating financially. Households use a variety of strategies to protect themselves from misfortune. Formal insurance may be the last resort after all other possible mechanisms for risk protection become unworkable.

But how exactly will insurance be delivered? What new innovations matter most in insuring the poor? What can be done to increase microinsurance take-up rates? This briefing note seeks to explore these questions and provide additional resources on these and related topics.

### **How should households protect themselves from risk?**

Households use a variety of strategies to protect themselves from misfortune. These range from the simple (putting aside a few dollars), to the drastic (moving to less risky locations), to the potentially tragic (selling off assets). There are many options between these poles, including fortifying your housing, seeking preventive healthcare, building savings, developing networks of family and friends for support, or sending a household member to another location to pursue employment. While we don't typically call these options "insurance," they are. In fact, formal insurance may be the last resort for most households after all other possible mechanisms for risk protection become unworkable.

This is probably right in most cases—if they are tenable, many alternative options for insuring against risk work better than what is offered by formal insurance providers. Savings and credit, for instance, are more flexible and can fulfill multiple goals simultaneously. Formal insurance has a big edge in dealing with catastrophic losses, but unfavorable contractual terms can tip the balance back to informal mechanisms.

So what do households do when they can't rely on informal mechanisms? They may not have the surplus (or the financial devices) to build up sufficient savings. They may only have access to credit that is expensive, inflexible, or too slow to make a difference in an emergency. Family, migrants and friends may not be able to help when they're in the same boat.

Helping households cope better means improving options beyond what is narrowly described as insurance. Ready access to emergency loans, for example, can go far. So can programs and mechanisms to help build emergency savings.

One reason not to put too much focus on formal insurance is the barriers to adoption of formal microinsurance are much higher than it would seem. Successfully deploying a formal insurance product can involve long-term education on how formal insurance works and long-term efforts to build trust in the insurer, in addition to the expensive and painstaking work to develop useful products and efficient distribution channels. Even when that's accomplished, households face a broad range of risks, some of which are fundamentally uninsurable – like the risk of income losses from macroeconomic downturns.

Formal insurance deserves investment when risks are big and informal options are weak. But the converse is true too: informal insurance should get more focus when formal options are weak. This leads to a fundamental question for all interested in microinsurance: what are the contexts in which building up formal microinsurance will provide better outcomes for households than investing in other ways to help households protect themselves from risk? From another angle, how can households determine and adopt the optimal mix of risk protection strategies?

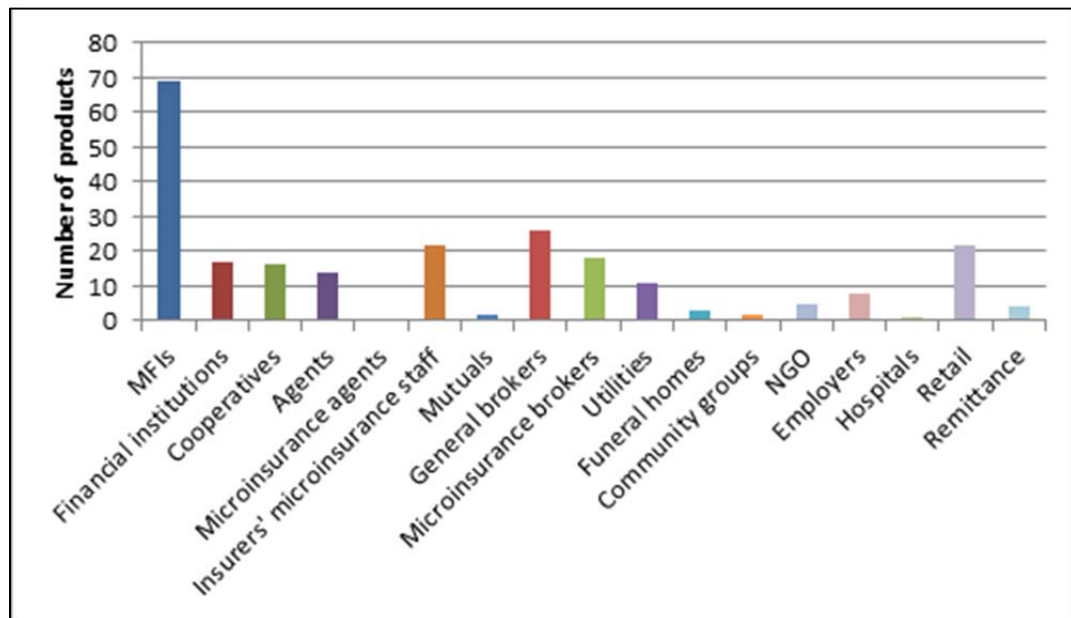
### **How will microinsurance be delivered?**

Selling insurance in poor regions has been a mixed experience. Households face a lot of risk and tend to be under-insured, so the potential market is large. Sales of life insurance have been uniquely brisk, especially when linked to other financial products like microcredit. But the business model for delivering insurance is challenging when many small-sized premiums need to be collected, and monitoring costs are hard to slash. The microinsurance industry is still searching for innovations that will create a better business model: Costs are still too high for providers and perceived value is still too low for many consumers.

The main challenge is to aggregate a large number of customers, in order to distribute the risk and reduce premiums, while keeping transaction costs low and providing high-value services for a target market that often needs to be informed about the function and usefulness of formal insurance.

- *Partnership models.* A promising start has been partnerships between insurers and microfinance institutions, cooperatives, or community-based organizations. The partnership model has the benefit of capitalizing on the familiarity and trust that borrowers or savers have with their microfinance institution. The insurance companies provide experience with product design and access to methods to spread risk more efficiently.
- *New channels.* In an effort to achieve scale, new channels are emerging. Retailers (supermarkets and durable goods stores), utility companies, and bill payment providers are entering the market. Figure 1 below shows that microfinance institutions remain the dominant channel for microinsurance in Latin America and the Caribbean, but insurers, brokers, and retailers are becoming larger distributors.

**Figure 1.** Microinsurance distribution channels in Latin America and the Caribbean, 2011.



Source: McCord M.J., C. Tatin-Jaleran , & M. Ingram (2012), "[The Landscape of Microinsurance in Latin America and the Caribbean: A briefing note](#)," Inter-American Development Bank, FOMIN.

- *The costs of partnership.* With both new and older channels, commissions on the sale of insurance can be large, raising the cost of premiums for customers – and making insurance less valuable for customers. Having multiple intermediaries between the insurer and the clients also risks increasing the time it takes to pay out claims, increasing the complexity of the insurance purchase decision, and decreasing the level of recognition of and trust in the insurer.

While there have been promising new ideas in product design, the success of microinsurance in going to scale depends in getting the business case right, and so far that's a work in progress.

### **What insurance innovations matter?**

Before describing possible solutions, it's worth thinking about the big challenges when providing insurance. The problems are several, and a handful of Nobel Prizes in Economics have been given to those who generated the key insights. First, *moral hazard* is a frequent constraint: Once insured, individuals are less likely to apply as much effort to avoid the event that the insurance protects: the very fact of being insured raises the probability of losses. Second, *adverse selection* arises since individuals in the riskiest situations are naturally the most eager to purchase insurance. Since insurers cannot tell who these riskier people are (at least at the outset) in order to charge them a higher premium that reflects their level of risk, policies often end up being too expensive and the market stifled. Finally,

microinsurance is hard to provide in a cheap way, since contracts are generally for *small amounts* and damages have to be assessed by insurers on an individual basis; scale economies are thus limited.

This all sounds grim: transactions costs are high and information problems are ubiquitous – not to mention that clients have limited cash flows and may not be literate or numerate and that enforcement mechanisms are limited. Many private-sector insurers have naturally looked elsewhere for profits, leaving state-subsidized companies as the main players—and even they have had a rough time of it.

New, innovative insurance products promise (at least partial) relief from these problems.

*Index insurance* (insiders sometimes call it “parametric” insurance) relies on an objective measure to trigger payouts rather than an estimate of actual damage incurred by clients. For example, rather than paying out when a farmer’s harvest actually fails, the way crop insurance does, rainfall insurance pays out when rain levels are too low or too high, as measured in a local weather station.

The main idea is that insured individuals cannot alter the level of rain, so moral hazard is eliminated. People living in drought- or flood-prone regions would be more likely to purchase such a policy, but historical rainfall levels are public knowledge, so insurers could adjust their premiums to mitigate adverse selection. Transaction costs are also greatly lowered since no actual damage needs to be assessed: regardless of the status of a person’s crop, the insurance pays when total rainfall hits pre-set levels.

Another example of index insurance is “hospital cash.” Unlike a traditional health insurance product that reimburses a client for medical acts, “hospital cash” pays out after the client has spent a certain number of days in the hospital. Transaction costs are mitigated by the fact that such claims are easier to verify, and moral hazard is reduced since individuals are unlikely to neglect their health to the point of needing a multi-day hospital stay.

But index insurance products are not a panacea; some pieces of the index puzzle remain to be figured out. One puzzle is how to overcome *basis risk*: the discrepancy between the objective measurement that triggers the payout and the actual losses incurred by the insured. For instance, if a weather station is located far from a farmer’s plot of land, she may suffer catastrophic drought even though enough rain falls at the station. An insurance product is not helpful if it does not help cover actual losses. There are remaining questions on how to overcome the limits of index insurance and to see what new innovations in insurance products can increase value to households while remaining profitable for insurers.

### **How can take-up of valuable insurance products be improved?**

We know that poor households face a lot of risk, and that their existing risk management strategies are usually insufficient. So, in theory, the demand for microinsurance should be high. Yet, participation in microinsurance remains low, often close to zero unless the product is actively promoted and explained

to select households (or wrapped into another product like a loan). Why are insurance products not more highly demanded by poor households, even when the price is favorable (“actuarially fair”, to use the jargon)?

A first order problem seems to be understanding of how formal insurance really works. Poor households typically insure through social networks, with payout based on mutual obligation, long-term relationships and actual loss. In comparison, formal insurance is based on time-limited risk-sharing between strangers. Recent work by Jean Platteau and Darwin Ontiveros provides some concrete evidence on how clients misunderstand the functioning of formal insurance versus informal insurance (Platteau and Ontiveros, 2013)<sup>1</sup>. For instance, people believed that their insurance premium should carry over to the next year if they did not receive a payout for the current year. Formal insurance is arguably the most complex financial product poor households may make use of—the fact that many households don’t understand it, even in mature markets, should perhaps be less surprising than it is.

Other important challenges include:

- *Uninsurable risks.* One factor is that not every risk is insurable. It’s hard to insure against downturns in the economy, for example, or losing your job. In those cases, most people end up drawing on their own resources (like drawing down their savings) or borrowing – or turning to state-provided support or charity. In this way, saving and borrowing are important risk-coping mechanisms – and households may be wise to tilt their resources toward saving over purchases of formal insurance contracts, especially when formal insurance contracts are relatively expensive and only cover a narrow set of risks.
- *Price.* The studies show that the price of insurance matters (no real surprise there). Price decreases, subsidies and vouchers (the latter two alter the price as well as reduce credit or liquidity constraints that households face) lead to large increases in microinsurance purchase rates.
- *Marketing and convenience.* Other factors matter greatly as well. Helping poor households understand the need for insurance and the contracts, through financial literacy programs, information, social networks or framing cues, has been shown to boost participation. The convenience of enrollment or purchase also appears to be an important determinant of participation.
- *Trust.* Trust has a particularly large impact on participation. Perhaps because formal insurance markets are new in many developing countries, potential clients are much more likely to purchase insurance when they trust the insurer’s promise that it will be there when needed. A study of insurance for livestock in China, for example, shows that villages were much more likely

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<sup>1</sup> Platteau, J.P. & Ontiveros, D.U. (2013), “[Understanding and Information Failures: Lessons from a Health Microinsurance Program in India](#),” Research Paper No. 29, ILO Microinsurance Innovation Facility.

to purchase insurance for their pigs after having witnessed the insurer pay out claims to fellow villagers who had purchased a policy following the death of their animals (Cai, et al. 2010)<sup>2</sup>.

Another study of microinsurance demand, conducted for a rainfall product in India, confirms that increasing potential clients' trust in the insurance provider causes an increase in take-up. Researchers arranged to have a representative of a trusted local microfinance institution endorse the microinsurance sales agent. As a result, the likelihood that potential clients purchased insurance was 36 percent higher than average (Cole, et al. 2013)<sup>3</sup>.

In short, the list of barriers and challenges is long. A growing number of research studies look at the causes of low take-up, and Table 1 lists factors that have been studied.

Determinant of take-up	Product	Paper
Price/Subsidy	Rainfall	Cole et al.,2013 (India)
	Health & Funeral	Dercon et al., 2012 <sup>4</sup> (Kenya)
	Health	Thornton et al., 2010 <sup>5</sup> (Nicaragua)
	Rainfall	Giné, Townsend, Vickery, 2008 <sup>6</sup> (India)
	Life	Bauchet, 2012 <sup>7</sup> (Mexico)
Credit constraint	Rainfall	Giné and Yang, 2008 <sup>8</sup> (Malawi)

<sup>2</sup> Cai, H., Y. Chen, H. Fang, & L.A. Zhou (2010), "[Microinsurance: Trust and Economic Development: Evidence from a Randomized Natural Field Experiment](#)." NBER.

<sup>3</sup> Cole, S., X. Giné, J. Tobacman, P. Topalova, R. Townsend, & J. Vickery (2013), "[Barriers to Household Risk Management: Evidence from India](#)," *American Economic Journal: Applied Economics*, 5(1): pp. 104–135.

<sup>4</sup> Dercon, S., J. Willem Gunning, A. Zeitlin, C. Cerrone, & S. Lombardini (2012), "[Health Insurance Participation: Experimental Evidence from Kenya](#)," Research Paper No. 10, ILO Microinsurance Innovation Facility.

<sup>5</sup> Thornton, R., L. Hatt, E. Field, M. Islam, F.S. Diaz, & M.A. Gonzalez (2010), "[Social Security Health Insurance for the Informal Sector in Nicaragua: A Randomized Evaluation](#)," *Health Economics*, 19(S1): pp. 181-206.

<sup>6</sup> Gine, X., R. Townsend, & J. Vickery (2008), "[Patterns of Rainfall Insurance Participation in Rural India](#)," World Bank Policy Research Working Paper No. 4408.

<sup>7</sup> Bauchet, J. (2012), "[Price and Information Type in Life Microinsurance Demand: Experimental Evidence from Mexico](#)."

<sup>8</sup> Giné, X. & D. Yang (2008), "[Insurance, Credit, and Technology Adoption: Field Experimental Evidence from Malawi](#)," *Journal of Development Economics*, 89: pp. 1-11.

Liquidity constraint	Drought	Giné, Karlan, Ngatia <sup>9</sup> (Kenya)
	Rainfall	Cole et al., 2013 (India)
Financial literacy	Drought	Giné, Karlan, Ngatia (Kenya)
	Rainfall	Gaurav, Cole, Tobacman, 2011 <sup>10</sup> (India)
Education	Rainfall	Cole et al., 2013 (India)
Trust	Sow	Cai et al., 2010 (China)
	Rainfall	Giné, Townsend, Vickery, 2008 (India)
	Rainfall	Cole et al., 2013 (India)
	Health & Funeral	Dercon et al., 2012 (Kenya)
Familiarity with product	Rainfall	Giné, Townsend, Vickery, 2008 (India)
Limited salience	Rainfall	Cole et al., 2013 (India)
Framing	Rainfall	Cole et al., 2013 (India)
Wealth	Life	Giesbert et al., 2012 <sup>11</sup> (Ghana)
Risk aversion	Life	Giesbert et al., 2012 (Ghana)
	Rainfall	Giné, Menand, Townsend, Vickery, 2010 <sup>12</sup> (India)
Convenience of enrollment	Health	Thornton et al., 2010 (Nicaragua)
		Bauchet, 2012 (Mexico)
Social networks (as a way to overcome lack of familiarity with/understanding of product)	Drought	Giné, Karlan, Ngatia (Kenya)
	Health & Funeral	Dercon et al., 2012 (Kenya)
Participation in other financial products/services	Life	Giesbert et al., 2012 (Ghana)
Marketing and Information	Rainfall	Gaurav, Cole, Tobacman, 2011 (India)
	Life	Bauchet, 2012 (Mexico)

<sup>9</sup> Giné, X., D. Karlan, & M. Ngatia. Forthcoming. "Financial Literacy and the Demand for Index Insurance in Kenya."

<sup>10</sup> Gaurav, S., C. Cole, A. Zeitlin, & J. Tobacman (2011), "[Marketing Complex Financial Products in Emerging Markets: Evidence from Rainfall Insurance in India](#)," Research Paper No. 1, ILO Microinsurance Innovation Facility.

<sup>11</sup> Giesbert, L. (2012), "[Subjective Risk and Participation in Micro Life Insurance in Ghana](#)," GIGA Working Papers, No. 210.

<sup>12</sup> Giné, X., J. Vickery, L. Menand, & R. Townsend (2010), "[Microinsurance : A Case Study of the Indian Rainfall Index Insurance Market](#)," World Bank Policy Research working paper.

Most of the studies use randomized control trials (RCTs) to obtain a clean estimate of the influence of each factor on take-up. However, additional research is necessary to determine which “nudges” and interventions work best and what take-up encouragement strategies will be cost-effective.