WORLD BANK GROUP

KNOWLEDGE NOTES

GLOBAL INDEX INSURANCE FACILITY

Microfinance and Index Insurance: Testing business models in the agricultural sector

HIGHLIGHTS

- While microcredit has boomed since the 1970s with microloans amounting to more than 80 billion USD globally, microinsurance, and in particular **index-insurance is still a hugely untapped market**
- Access to credit is a key instrument to alleviate rural poverty, however **microfinance institutions are often unable to expand their agriculture lending portfolio**
- Index insurance can allow microfinance institutions to **reach new clients in particular farmers vulnerable to agriculture shocks** such as drought or floods and reduce risks on their agriculture lending portfolio
- While index insurance is still a relatively new tool, **several business models are being tested**. This note describes two key models: (1) Microfinance institutions (MFIs) as **delivery channels** of index insurance, offering index insurance to their borrowers through **bundling of credit with insurance** (2) MFIs as **direct customers** of index insurance, purchasing index insurance to protect their lending portfolio

1. AGRICULTURE RISKS ARE KEY CONSTRAINTS TO THE EXPANSION OF AGRICULTURE LENDING

While access to credit is a key instrument to alleviate rural poverty, microfinance institutions (MFIs) are often unable to expand their agriculture lending portfolio. One of the key constraints that MFIs face is the exposure of agriculture lending to shocks such as drought, flood, or locust which can put farmers in a situation where they are unable to repay their loans. Major agriculture shocks can indeed lead to loan defaults and bank runs therefore resulting in destruction of risk capital, reduced access to liquidity, decreased lending and sometimes insolvency. Evidence shows that credit supply decreases in cases of weather shock, which is when access to finance is most needed. In Senegal for instance, droughts were a precipitant to a banking crisis where six financial institutions were liquidated and three were restructured and recapitalized during the droughts of 1988-1991[1].

Photo Credit: World Bank Group

1. Caprio and Klingebiel (1996)

2. MFIs AS DELIVERY CHANNELS OF INDEX INSURANCE PRODUCTS: ADVANTAGES AND CHALLENGES OF CREDIT BUNDLING

One of the key advantages for microfinance institutions to offer index insurance products to their customers is to reduce the default risk on their agriculture lending portfolio and therefore allow the expansion of agriculture credit. For instance, the experience of Kilimo Salama—a GIIF-supported project in Kenya and Rwanda (see Box 1)—has shown that one of the key MFI distribution partners of Kilimo Salama has more than doubled its loan portfolio to farmers in the first six months of 2012 thanks to index-insurance.

Index-insurance can be sold by microfinance institutions either on a mandatory or voluntary basis. Insurance products can be made compulsory by law. In India (see Box 2), Pakistan, and in some Chinese states, public authorities have made it compulsory for agricultural loans to be bundled with insurance. In other countries financial institutions have taken the initiative of offering such bundles. Bundling credit with insurance has several advantages. Indeed, compulsory insurance may be in some instances the only viable way to sell agricultural microinsurance because it helps to generate the volumes needed to reduce the insurance premiums, reduce the cost of sales and to manage adverse selection (ensuring that not just risky customers take the insurance product). On the other hand, compulsory bundles do not accommodate the possibility that farmers may have other, non-insurance means to manage their risks. Such bundling can also lead to customer protection issues if customers are not aware that they are purchasing an insurance product, or if they do not fully understand the product.

Photo Credit: World Bank Group

BOX 1—KILIMO SALAMA IN KENYA

Launched in 2008, it is now **the largest agricultural insurance program in Africa.** Kilimo Salama is the first such program to reach smallholders using mobile phone technology. This program has reached **74,000 farmers** in Kenya, covering assets amounting to **3.4 million USD.**

Target clients: Smallholders with a loan and input package from a microfinance institution (MFI) worth over $100

Success Factors: The key to success has been offering a holistic solution to mitigate weather risks, not just insurance. Insurance products using mobile technology, were bundled with agricultural advisory services, weather data, local access to quality inputs, and input credit. Kilimo Salama products have allowed credit institutions to enter agricultural lending by mitigating weather-related repayment risk.

Process: When a farmer purchases insurance, the microcredit officer or agro-vet registers the purchase by scanning a code using a specially-developed mobile phone application. The message goes to a cloud-based server that administers the policies. It then sends the farmer an automated SMS with his or her policy number.

BOX 2—THE CASE OF INDIA: MANDATORY BUNDLING OF CREDIT WITH INSURANCE

In India, crop insurance (weather index insurance or area-yield index-insurance) is **compulsory for borrowing farmers** and voluntary for non-borrowing farmers.

Target clients: The National Crop Insurance Program is targeted at **small and marginal farmers** (with less than 2 hectares), and who are highly dependent on access to seasonal crop credit.

Distribution network: It is administered through the **rural agricultural bank branch network** in each state and department and block (group of villages). The Insurers' administrative costs are kept to a minimum by linking insurance with rural finance.

Outreach: By virtue of being a compulsory program, the scheme is the world's largest crop insurance program, currently insuring about **34 million Indian farmers** (representing an insurance uptake rate of about 20 percent of all farmers).

One of the key success factors of credit-bundling is to offer a holistic solution to mitigate agriculture risks. In the case of Kilimo Salama (see box 1), insurance products were bundled with credit, agricultural advisory services, weather data, and access to quality inputs. This approach has allowed them to significantly increase the value of insurance for farmers as it is offered as part of a broader risk management framework.

CHALLENGES	DESCRIPTION
1. **Is bundling possible or are lending and insurance cycles separate?**	The **window for selling insurance** might be much before the coverage period to avoid intertemporal adverse selection problems, and not coincide with the time when most producers take production loans.
2. **Can the financial institution make sure that customers understand the terms of the insurance and are aware that they are buying insurance?**	**Consumer protection** requires that customers are aware and understand the products that they buy.
3. **Does the financial institution have the capacity to sell micoinsurance products?**	Index insurance products are more sophisticated than loans and **require specific knowledge** from the loan officers.
4. **Can the institution "piggy back" on existing mobile phone based transactions?**	The existence of **mobile platforms** can significantly decrease the cost of delivery of insurance products, such as the Kilimo Salama experience in Kenya has shown.
5. **Does the microinsurance product add value to the existing product offering?**	Financial institutions might think that there is a **reputation risk**, if the product has low customer value and high basis risk.

3. MICROFINANCE INSTITUTIONS AS CUSTOMERS OF INDEX INSURANCE PRODUCTS

The second business model that microfinance institutions have tested is to be direct customers of index insurance. In this case, financial institutions buy index-insurance or "portfolio insurance" to protect themselves from the risk of default on their own agriculture portfolio. Although this option has not yet been tested on a large scale, it has been piloted in several countries.

Portfolio insurance has the potential to benefit farmers both ex-post (ex: restructuring of loans, loans write-offs, offer of emergency loans) and ex-ante (ex: larger supply of agriculture credit, reduced agriculture lending interest rates). In Peru, for instance (See box 3), portfolio insurance has allowed a large MFI to expand agriculture lending into new geographic areas. However, one major caveat is that this model does not protect farmers' income or assets in case of agriculture shock.

INDEX-INSURANCE AT PORTFOLIO LEVEL IN PERU

In Northern Peru, **10% of all agricultural loans defaulted** due to the 1998 El Niño. Furthermore, the increased risk of default associated with El Niño **increased interest rates by approximately 3 percentage points** and some MFIs drastically reduced access to credit in agriculture. Global AgRisk Management has assisted a large MFI in Peru to manage its disaster risk using El Niño portfolio insurance. Indeed, the MFI has purchased index insurance **as an internal risk management tool** in order to expand its agriculture lending portfolio in a safe way. El Niño insurance bases payouts on the warming of the Pacific surface temperature and early insurance payouts can be used to help the MFI dynamically manage the disaster.

CONTACT

Fatou Assah, WBG Finance and Markets, IBRD-GIIF coordinator, fassah@worldbank.org
Rachel Sberro-Kessler, WBG Finance and Markets, Research Analyst, rsberro@worldbank.org

FUNDED BY