

GLOBAL RISK FORUM GRF DAVOS

Microinsurance

An Innovative Tool for Risk and Disaster Management

MICROINSURANCE

An Innovative Tool for Risk and Disaster Management

Edited by:
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Preface

Undernourishment, poverty, and persistent underdevelopment, overlapping with natural catastrophes, vector borne diseases, and many more risks add greatly to the hardship of vulnerable people and communities. The impact of natural catastrophes on societies and economies has increased considerably over the last two decades and is likely to grow further as a result of climate change. Given both the rise of population and economic activity in areas with a high risk exposure the scale and impact of major weather-related events will increase, and the economic severity of natural catastrophes will grow.

Severe weather can wipe out a family's crop, weaken their livelihoods, deplete their capital, reduce resilience, and in particular leave them with nothing to eat for the rest of the season. An accident or the death of a breadwinner may force children out of school and into the labour market. These events and responses are major contributors to the perpetuation of poverty, confining people in poverty-traps. Impacts at the household level aggregate and multiply into higher level effects on the regional and national economy.

New and innovative approaches have to be established to reduce vulnerability and poverty, and to adapt to climate change. Microinsurance covers for accidents, ill-nesses, death, natural disasters and property loss. It has the potential to help low-income families to cope with these risks for the cost of an affordable premium.

The book in hand contains fifteen papers in total, all focusing – from different perspectives – on an integrated approach in risk and disaster management. Case studies from Africa, Asia and Latin America involving a broad variety of stakeholders, institutions, risks, methods, and business models, reveal the enormous potential of microinsurance in particular also in disaster management.

It is both with great sadness and warm appreciation that we dedicate this book to the lead editor and author, Emanuela Morelli. Emanuela passed away on May 26, 2009 after eighteen month of struggle with cancer. During this time, Emanuela was admirably brave, full of ideas, hope and confidence, always with a strong living will and believe in the future, carefully tended by her family, her partner and her friends.



Emanuela was GRF Davos' first employee, joining us at our very beginning in September 2007 as a Postdoc supported by the Swiss Government with a scholarship. With her profound professional and scientific background in microfinance she brought in many new ideas and proposed novel approaches for microinsurance in disaster management. With great enthusiasm and commitment Emanuela planned and organized a number of sessions on microfinance for the International Disaster and Risk Conference IDRC Davos 2008, and started to draft the outlines of a book on microinsurance. Due to her illness she was unfortunately not able to participate at the IDRC Davos in August 2008, but insistently continued with the book project and convinced speakers to elaborate their papers for the book. It was not granted to her to see her work finished. Giorgio Amsicora Onnis, her partner, took over her tasks and responsibilities and finished her work with great carefulness and commitment.

Emanuela had a wonderful personality, fully committed to life, profession and work. We miss her merriness, her kindness, her modesty, her readiness to help others, and many more attributes we could only learn from her. Emanuela strongly believed that microinsurance is an important strategy for low-income households to manage risks and disasters. May this book help to promote future microinsurance projects for the benefit of the poor.

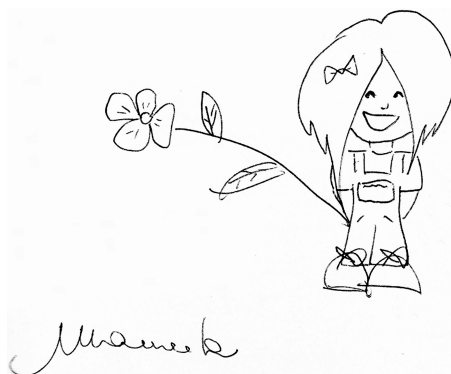
Let me also express my sincere thanks to the authors and to the reviewers for their valuable work to guarantee for the uniqueness and quality of the content, to Giorgio Amsicora Onnis, Emanuela's partner, for his dedicated commitment to finish her work, to Corina Sutter for the layout and preparing the printing of the book, and to all, not listed by name here. Thank you all for making the publication of this book happen in memory of Emanuela.

Davos, May 2010

Walter J. Ammann
President
Global Risk Forum GRF Davos

Prefazione

Denutrizione, povertà e sottosviluppo endemico, sommati a catastrofi naturali, malattie infettive, e a molti altri fattori di rischio creano una situazione di pesante impatto sulla già difficile vita delle persone e delle comunità più vulnerabili. L'impatto delle calamità naturali su società ed economie è notevolmente cresciuto negli ultimi 20 anni ed è probabile un suo ulteriore aumento a causa dei cambiamenti climatici. Con l'incremento demografico e l'espansione delle attività economiche in aree ad elevato rischio, l'impatto delle catastrofi indotte dal cambiamento climatico diverrà sempre più devastante e la gravità della crisi economica sempre maggiore.



Gli eventi meteorologici estremi possono spazzare via il raccolto di una famiglia, indebolirne la fonte di reddito, costringerla a dar fondo ai risparmi, ridurne la capacità di ripresa e, soprattutto, privarla del sostentamento per il resto della stagione. Un incidente o la morte del capofamiglia può costringere i figli ad abbandonare gli studi e ad entrare nel mercato del lavoro. Questi eventi e le relative strategie di risposta, confinando le persone nelle cosiddette trappole di povertà, costituiscono i fattori principali che contribuiscono alla perpetuazione dello stato di indigenza. Le ripercussioni negative che hanno operato su di un singolo nucleo familiare si aggregano e si moltiplicano tra loro, ripercuotendo l'impatto negativo ai livelli superiori e coinvolgendo l'economia prima locale e poi nazionale.

È necessario sviluppare approcci nuovi ed innovativi per ridurre vulnerabilità e povertà e per adeguarsi ai cambiamenti climatici. La Microassicurazione offre copertura per incidenti, malattia, morte, calamità naturali e perdita di beni ed è, pertanto, potenzialmente in grado di aiutare le famiglie a basso reddito ad affrontare tali rischi, facendo loro versare un premio assicurativo che si possano permettere.

La presente opera contiene quindici articoli che, partendo da prospettive diverse, analizzano un approccio integrato alla gestione dei rischi e dei disastri naturali. Si tratta di studi ed indagini effettuate in Africa, Asia e America Latina, relativi a una vasta gamma di portatori d'interesse, istituzioni, tipologie di rischio, metodologie e modelli di business, e che rivelano l'enorme potenziale insito nella Microassicurazione, soprattutto nel ramo della gestione delle calamità naturali.

È con enorme tristezza, ma anche con profonda riconoscenza, che dedichiamo questo libro a Emanuela Morelli, editrice principale e autrice, scomparsa il 26 maggio 2009 dopo una battaglia lunga diciotto mesi contro un linfoma. In quei mesi, Emanuela ha combattuto con ammirevole coraggio, ogni giorno piena di idee, speranza e fiducia, sempre accompagnata da un'incrollabile voglia di vivere e dalla certezza nel futuro, amorevolmente assistita dalla sua famiglia, Tina, Tullio e Mario, dal suo compagno, Amsicora, e da tutti i suoi amici.

Emanuela è stata la prima collaboratrice del Global Risk Forum Davos, unendosi a noi quando iniziammo a muovere i nostri primi passi nel settembre del 2007 grazie a un post-dottorato sponsorizzato dal Fondo Nazionale Svizzero per la Ricerca Scientifica. Grazie alle sue profonde conoscenze ed esperienze professionali e scientifiche, Emanuela ha apportato molte nuove idee e nuovi approcci al settore della Microassicurazione nel ramo della gestione delle calamità naturali. Con grandissimo entusiasmo e impegno, Emanuela ha pianificato e organizzato svariati incontri sulla Microfinanza per l'“International Disaster and Risk Conference IDRC Davos 2008”, la conferenza internazionale su calamità e rischi, e ha iniziato a gettare le basi di un libro sulla Microassicurazione. A causa della sua malattia, non le è stato purtroppo possibile partecipare alla conferenza IDRC a Davos nell'agosto del 2008, tuttavia ha continuato caparbiamente a lavorare al progetto del libro, riuscendo a coinvolgere i relatori intervenuti alla conferenza perchè elaborassero i loro contributi al fine di includerli nel suo libro. Non le è stato concesso di vedere compiuto il suo progetto. Giorgio Amsicora Onnis, il suo compagno, si è preso carico delle sue attività e responsabilità e si è completamente dedicato al compimento del progetto di Emanuela. Emanuela aveva un carattere meraviglioso, un inesauribile amore per la vita, per la sua professione e per il suo lavoro. La sua allegria, la sua gentilezza, la sua modestia, la sua disponibilità ad aiutare gli altri e tutte le altre qualità che potevamo solo sperare di imparare da lei ci mancano tanto. Emanuela credeva fermamente che la Microassicurazione rappresentasse una strategia importante per le famiglie a basso reddito nella gestione dei rischi e dei disastri naturali. Speriamo che questo libro possa aiutare lo sviluppo futuro di progetti di Microassicurazione in favore dei poveri.

Voglio inoltre esprimere i miei più sentiti ringraziamenti agli autori e ai revisori per il loro inestimabile contributo nel garantire l'unicità e la qualità dei contenuti di questo libro, a Giorgio Amsicora Onnis, il compagno di Emanuela, per il suo devoto impegno nel concludere il suo lavoro, a Corina Sutter per la preparazione del materiale per la stampa, e a tutti quelli che hanno partecipato a questo progetto. Grazie a tutti voi per aver reso possibile la pubblicazione di questo libro in memoria di Emanuela.

Davos, maggio 2010

Walter J. Ammann
Presidente
Global Risk Forum GRF Davos

Introduction

Emanuela Morelli & Giorgio Amsicora Onnis
Global Risk Forum GRF Davos, Davos, Switzerland

*“The equal opportunity principle is conceptually simple:
circumstances at birth should not matter for a person’s chance in life”*

World Development Report, 2006 – Equity and Development

Microfinance has evolved as an economic development approach intended to benefit low-income women and men. The term ‘Microfinance’ refers to the extension of financial services to poor people who are not considered qualified enough to have access to traditional bank and insurance services. Financial services generally include (Micro) credit, (Micro) savings and (Micro) insurance. In addition to financial intermediation, many microfinance institutions provide social intermediation services such as group formation, development or self-confidence, and training in financial literacy and management capabilities among members of a group.

The importance of financial intermediation in reducing the risk of impoverishment has long been recognised. Yet, substantial challenges remain in providing affordable, useful and sustainable financial services to the poor. There remain instances in many developing countries in which financial constraints – rather than lack of skills, market opportunities, etc. – prevent poor families from making the key investments necessary to escape poverty. Particularly worrisome are the punishing consequences of inadequate financial support for the health, well-being and the earning capacity of the poor. In the uncertain world of rain-fed agriculture, food availability and earnings vary widely from one season to the next, and the spectre of harvest failure is ever present. In cities, market upheavals can produce unexpected swings in unemployment, particularly in the informal economy in which the poorest tend to work. Without access to formal institutions offering savings, credit and insurance services, the poor may have difficulty in maintaining essential food consumption during lean seasons, poor harvests or periods of unemployment. This can cause temporary but acute nutritional deficiencies that affect the long-term physical and mental growth of people.

Since we conceive of poverty in terms of capability deprivation, income inadequacy and lack of services (in terms of deprivation which is intrinsically and extrinsically significant), we have to look for ways for fighting it that are able both to answer the economic need of individuals and to enlarge peoples’

substantive freedom. Microfinance is considered one of the instruments that can sustainably achieve these purposes. Firstly, it is a recent instrument of development and poverty alleviation that is completely different from the policies of assistance and beneficence. Secondly, it helps poor people by stimulating their will; by motivating them to improve their lives and promoting the spirit of enterprise. Ultimately, it is an anti-paternalistic way of helping the poor through their empowerment, responsabilisation, achievement and enlargement of poor peoples' freedom. (The concept of freedom of choosing a life one person has reason to value: opportunities for a full life). The conceptual foundation of microfinance from an ethical point of view holds the necessity that access to financial services (credit, savings/loans and insurance) is recognised and included within the basic set of human rights. Firstly, because money has an enormous influence on what we can or cannot do; secondly because the inadequacy of income is often the major cause of the deprivation normally associated with poverty, and thirdly because money is an important tool for transforming capabilities into functionings.

Microinsurance refers to the provision of insurance products specifically targeted to individuals and households at the grassroots level of society. The term 'Micro' refers to the low-income clientele served and to the low premium, limited coverage and low claim incidence, while the term 'Insurance' acknowledges that the risk insured is managed based on insurance principles and founded by premiums.

Mainly thanks to the successful achievements and broadening outreach of microcredit activities across the world, recent interest on microinsurance has emerged from both the private and the public sector. Private insurance companies consider the potential gains in selling insurance services to the poor. A large demand from low-income households and individuals who cannot afford traditional insurance services exists, which is not serviced and has low competition. Expected economic growth will also generate the need for diversified insurance products. Portfolio diversification, brand promotion as well as issues of Corporate Social Responsibility are also streamlining business interest of the private sector towards Microinsurance.

On the other hand, governments and the public sector consider Microinsurance an effective risk management tool for achieving social, economic and development goals. Insurance against natural hazards can increase resilience after disaster without sinking into more dramatic economic conditions. Health, education and accident insurance schemes will also ease social stability and welfare objectives. Financial protection of low-income individuals and households, particularly in the developing countries that are host to many successful Microcredit activities, is a major issue to ensure the stability of the financial system underlying the country's economic tissue.

In this context, the private sector is asked by governments, NGOs and the donor

community to join into action and share responsibility for the achievement of such development policy goals. Microinsurance tools will play a decisive role in coping with the various risks associated with natural and economic adversities and to accelerate the economic and social recovery after the occurrence of a disastrous event. In particular, Public-Private Partnerships have the potential to play a substantial role in vulnerability and disaster risk reduction, as well as to climate change mitigation and adaptation.

This book presents a collection of contributions from speeches given at the “International Disaster and Risk Conference IDRC 2008” held in Davos, Switzerland (25-29 August, 2008). The aim of the conference was to underline the strong existing ties between the risk management community and the public and private sectors, providing a platform for in-depth discussions among experts of different risk sectors in a truly integrated approach to risk management. In particular, two Invited Sessions on “Microfinance for Disaster and Risk Reduction” explored the role of Microfinance tools and institutions in the above context, with a special focus on Microinsurance as an instrument of poverty reduction, and disaster and risk mitigation tool. Additional contributions from academics, insurance and development professionals and practitioners in the field were selected for the current paper collection.

The scope of this book is both to investigate the linkage between disaster risk reduction and Microinsurance and to address possible combinations of loans, savings and insurance schemes for low-income people to provide them with appropriate solutions for at least a partial risk reduction. The wide variety of contributions presented, prevents this book from providing a sequential and coherent investigation of single issues related to Microinsurance. Instead, it provides a collection of case studies in different developing countries elaborated by experts across four continents. Each paper, while presenting and discussing experience drawn from most current practical applications, unfolds a host of actual key topics relevant to the implementation of Microinsurance. The book aims to provide an overview on the status and strategies of implementation in various risk sectors (life, health and natural disaster risks), highlighting existing methods, best practices and specific case studies of Microinsurance programmes and initiatives. Particular attention is placed on Microinsurance tools that are capable of reducing the damage caused by natural disasters and unexpected hazards.

We conceive global threats may be better analysed, understood and faced if observed from different points of views and perspectives, and look for sustainable solutions to global threats very different in nature. Among the various threats to the international community, poverty is a significant contributor. We believe in the necessity of considering risks in a holistic manner and with a multidisciplinary approach. Our approach is centred on Integrated Risk Management as a consistent and systematic framework

for risk analysis and assessment procedures focused on the entire circle of risk cycle (prevention, intervention and recovery), leading finally to the integral planning of measures and strategies. We aim at bringing knowledge together by involving and creating interaction between all key players and stakeholders (Science, Technology, Education, Training, Business, Politics, Government, Administration, Practitioners, People and Society as a whole), transferring scientific knowledge to applicable know-how and translating uncertainty and complexity to decision making. This book shall reflect the increasing interdisciplinary nature of Microinsurance as a poverty reduction and risk management instrument, recognising wide-ranging contributions to the development of methods, tools and evaluation strategies relevant to the field of Microinsurance, by correlating to disaster risk prevention and mitigation, with a special interest in adaptation to climate change.

Our best hope is to offer the scientific community, policy and decision makers, as well as the private sector, the donor community and key players in the international organisations, innovative and critically constructive views in the area of risk prevention and management by means of Microinsurance, emphasizing the actual problems related to its practical applications. These include: product design and pricing; affordability and accessibility; market penetration strategies; product distribution and delivery channels; premium collection and claim settlements; integration with local informal risk management networks; regulation and supervision; barriers to access; geographical outreach; social capital; social and financial impact and performance; technical solutions and innovations; cost efficiency and long-term economic sustainability; reinsurance; capacity building; leadership and finally governance issues.

The first part of this book covers topics of general interest concerning the need for Integrated Risk Management in Microinsurance, its linkage with climate change adaptation and the strategic role of a sound regulatory and policy framework in shaping a supportive environment for Microinsurance growth. The remainder of the book presents a number of case studies from developing countries in Asia, Africa and Latin America. These contributions have been grouped by increasing complexity of the prevalent insurance-product offered: life, health and disaster insurance, although each contribution does not necessarily develop just one product. The book covers a wide variety of perspectives as well as different hosting countries, type of clients and risks covered, methods, business models and institutional/organisational arrangements applied, key topics and issues, which are unfolded in each case study by authors with a range of backgrounds and expertise. This diversity, in our opinion, is the strength of this book. Each case-study presents local evidence and critical discussion about different topics and challenges, which will be crucial to ensure Microinsurance in developing countries is sustainable and economically viable, while revealing gaps for future improvement.

PART I

Keynotes on Microinsurance

Integrated Risk Management in Microinsurance

Ralf Radermacher, Jacqueline Roberts Singh & Siddharth Srivastava
MicroInsurance Academy, New Delhi, India

ABSTRACT: Microinsurance can be a tool in Disaster Risk Reduction/Management – but only if it survives the disaster itself. Reinsurance can help microinsurance to survive disasters. However, reinsurers regard the microinsurance entity as a risky client and are hesitant to engage in this market. An Integrated Risk Management approach can help a microinsurer to become a better client for reinsurance and thus to obtain reinsurance cheaper – or obtain it at all. However, Integrated Risk Management for microinsurance is insufficiently conceptualized so far. This paper takes a first step by providing examples of risks faced by microinsurance schemes and risk management techniques available to tackle them. It presents the Integrated Risk Management cycle and screens the business process of microinsurance for risks.

KEYWORDS: Integrated Risk Management, Microinsurance, Natural catastrophes, Reinsurance, Risk Management, Covariant Risks, Disaster Risk Management, Enterprise Risk Management, Health Insurance, Insurance

1 INTRODUCTION

Many microinsurance schemes today are small and localized insurance schemes (Roth et al., 2007: 16). Such microinsurance schemes can constitute an important component in Disaster Risk Reduction/Management (Mechler et al., 2006: 6; McCord and Cohen, 2005; Arnold, 2008: 4; Cheriyan et al., 2006: 56), provided they can sustain disasters themselves. One way to ensure the sustainability of microinsurance schemes in times of disasters is to link them to reinsurance (Dror and Wiechers, 2006: 527). It is, however, difficult for a microinsurance scheme to find reinsurance coverage. Reinsurers, who usually work with large professional insurance companies, are not particularly keen on engaging with a small microinsurer, catering to a clientele on which little knowledge (data) exists. Moreover, microinsurers are regarded as unprofessional and risky clients. From a reinsurance point of view, the lower professional management of microinsurance loads onto the risk that the reinsurer takes over. Before accepting risk, a reinsurer considers two

separate aspects:

1. What is the risk ceded (i.e. the risk underwritten by a primary insurer, which will be shared by the reinsurer)?
2. How much additional risk is loaded onto this as a result of potential mismanagement by the ceding insurer (i.e. false claim settlement, inappropriate pricing, lax enrollment practices, etc.)?

This is where the unwillingness of reinsurers to work with small microinsurance schemes comes in: if the pure risk ceded were the same, a reinsurer would usually rather work with a large professional insurance company than with a microinsurer. And if the reinsurer were to extend an offer to both parties, the reinsurance premium for the microinsurance scheme would usually be much higher. This is because, in addition to taking over pure risk, microinsurance is often considered a risk in itself. Eventually, the higher reinsurance premium will need to be covered by the clients of the microinsurer, for which affordability is key. Therefore, the challenge for a microinsurer is to change this bias, by becoming a “good risk” for a reinsurer.

For becoming a good risk for a reinsurer, it is suggested that microinsurance schemes adopt an Integrated Risk Management strategy. A conventional Risk Management approach focuses on dealing with risks at the individual activity level but organizations now look for more comprehensive approaches; the concept of Integrated Risk Management fills this gap. Integrated Risk Management involves “continuous, proactive, and systematic processes for understanding, managing and communicating risk from an *organization-wide perspective*...and making strategic decisions that contribute to the achievement of an organization’s *overall* corporate objectives.” (Treasury Board of Canada Secretariat, 2004).

This article explains the benefits of Integrated Risk Management for microinsurance schemes and the steps involved. It provides examples for components of risk management strategies for microinsurance schemes along the business process of microinsurance.

2 MICROINSURANCE

Microinsurance schemes are programs and institutions that adapt traditional insurance mechanisms (pre-payment, risk-pooling, and coverage guarantees) to the informal sector, providing services to beneficiaries that are commonly excluded from formal insurance. Microinsurance schemes can include life, health, disability, property, and other kinds of insurance products such as crop. The common denominator of microinsurance is its proximity to clients and its limited financial turn-over (Dror and Jacquier, 1999: 14). In the microinsurance debate today, a number of different microinsurance models are distinguished, which are all based on the common denominators mentioned

above (Radermacher and Dror, 2006; Siegel et al., 2001; Brown and McCord, 2000):

- Community-based/mutual insurance schemes: in community-based/mutual schemes the members are both the insured and the insurer and they govern and administer their scheme democratically (Fonteneau and Galland, 2006; Fischer and Qureshi, 2006).
- Partner-agent model: in the partner-agent model, a community-based institution, like a microfinance institution (MFI), links up with a registered insurance company and acts as a distribution channel for the company's products (McCord, 2006).
- Full service (charitable) model: within the full service model, a local institution (like an MFI or an non-government organization (NGO)) plays the role of an insurance provider and bears the underwriting risk. In such models some institutions tend to accept losses for as long as they find sources for cross-subsidy, thereby also being referred to as a charitable model. In this case the insurance principles might be violated.
- Provider driven model: the provider driven model is limited to health insurance. In this, providers of health services, like hospitals, initiate the insurance scheme, improving solvent demand for their services.

As all these models share, to some extent, the proximity to clients and the limited financial turnover as well as applying insurance principles as underlying features. The term microinsurance will be used in this paper with specific reference to these features.

Insurers are financial intermediaries – and so are microinsurers. Their limited financial turn-over might expose them to smaller risk in purely monetary terms, but the relative impact of risk is not reduced and might even be larger due to the difficult environment they work in. “*Risk is an integral part of financial intermediation. Hence, risk management must be at the heart of finance ...*”, (Fernando, 2008: 3). This is true for microinsurance ventures as well – and probably especially so for them.

3 INTEGRATED RISK MANAGEMENT

Risk management is a bundle of target oriented efforts, applied to minimize an institution's risk. It is the process of consciously managing adverse consequences, or risks, which can distort an institution from achieving overall objectives. There is usually some degree of risk management pre-existing in institutions and processes. For instance, many microinsurance schemes manage the risk of costly single claims by introducing a cap on the maximum amount covered. The Jan Arogya Bima policy in India, for example, will cover hospitalization up to a maximum of INR 5,000 (US\$ 106.8) per person per year. Similarly, the women of BAIF, a health mutual scheme in rural Maharashtra,

India, once divided the annual premium they collected into 12 equal shares, allocated to each month of a year, and only covered claims exceeding this monthly allocation if there were funds from previous or following months to allow for this. Both examples above constitute risk management measures that are enforced so as to prevent the institutions, or microinsurance schemes, from ruin. Such measures are just one part of risk management, applied to the function of claims settlement; and when practiced in isolation, their effectiveness is limited to their specific function. Therefore, in order to manage all the risks inherent in an overall entity, a more holistic approach needs to be applied. A holistic approach focuses on integrating risk management measures into the overall function, structure, and attitude of an organization - applying risk management strategies within all levels of the institution. This wider approach, focused on risk management for the whole entity, is therefore referred to as Integrated Risk Management.

Integrated Risk Management is understood to be continuous, proactive, and systematic processes, integrated into all parts of an entity's activities, and structured through ongoing learning and evaluation. It aims at more than just reducing existing risks – Integrated Risk Management aims at creating a risk culture within the institution that will allow for calculated risk-taking without threatening the stability of the whole entity. Proper Integrated Risk Management will help an institution achieve its objectives more efficiently and effectively, without the constant threat and diversion of risks.

3.1 Benefits of Integrated Risk Management for Microinsurance

In the microinsurance context, Integrated Risk Management is especially helpful, benefiting not just the organizations involved, but also the end users, the microinsurance clients themselves. These benefits include:

- *Increased affordability of the insurance product:* risk management strategies can reduce the chances of fraud, bankruptcy as well as inaccurate estimation of the risk premium. As a result, these strategies may have a direct impact on lowering premium levels. Although sometimes administrative loading might be slightly higher, the risk and security margin will be significantly decreased, with the end result being a more affordable insurance product for clients.
- *Ensuring that insurance can serve clients at any time:* the absence of risk management strategies might lead to financial shortfalls, which many microinsurers may try to resolve by cutting down on benefits, postponing claim settlements or – worst case – by closing down their business. In each case though, it is the client who ultimately suffers. With risk management strategies in place, an organization can avoid these situations and outcomes, and thereby ensure viability and sustainability. Surviving disasters falls into the same category.

- *Obtaining cheaper reinsurance*: reinsurance is itself a tool for risk management, but also a reinsurer will need to understand the risk it underwrites. This risk is made up of two components: 1) the risk of the ceded portfolio, i.e. the microinsurer's clients, and 2) the risk of the ceding institution, i.e. the microinsurer itself. In entering into agreements with microinsurance organizations, reinsurers will often worry about the microinsurer's ability to enforce rule-led claim settlement, supervise the process properly, and manage their risks effectively. Applying an Integrated Risk Management strategy can therefore help address these concerns by establishing the microinsurer as a better client and risk for the reinsurer. This can then lead to more favorable rates for the microinsurer, or even more fundamentally, provide them with the access to reinsurance coverage.
- *Attracting stakeholders*: donors, and other stakeholders like potential staff, supporters, and clients, expect a microinsurer to be sustainable. Integrated Risk Management satisfies this sustainability requirement, by specifically preparing for the occurrence of risks or even reducing their likelihood. Organizations that apply such strategies will therefore be seen as better investments, and attract greater support from stakeholders.

3.2 The Process of Integrated Risk Management

Integrated Risk Management follows a cycle illustrated in figure 1.

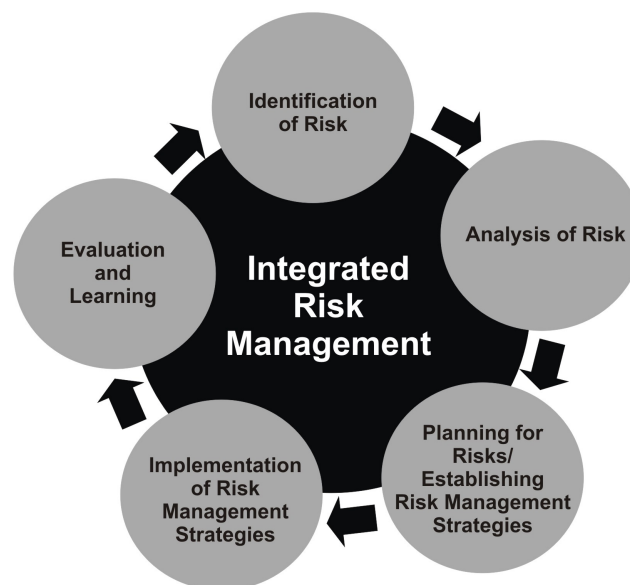


Figure 1: The Integrated Risk Management Process (own illustration)

Step 1: Identification of Risk

Identifying the risk is the starting point and fundamental step for any risk management strategy, setting the ground for all future steps and actions. It is the objective of this step to list all potential and existing risks for the institution. It is important to take a broad view, envisioning the potential risks associated with all aspects of the institution. Proper guidelines for identification can help ensure that no risk, no matter how big or small, is left undetected.

For identifying all the risks an institution is exposed to, it is important to understand the different sources of risks. This provides a systematic way for the identification process, which should be conducted at all levels of the institution and under broad participation. Different tools can be used to support this process, which will not be discussed further here.

The sources of risk can be classified into human resource risks, management/strategic risks, operational risk, financial/economic risks, political/legal risks and social risks.

Human Resource Risk

Human resource refers to the people that staff and operate an organization. Human resource risk refers to the risks associated with employees – their level of knowledge and skills, their behavior, their health and any act of theirs which can keep the organization from achieving its objective. These risks include, but are not limited to, the risk of incompetency, negligence, fraud, death and disability.

In a microinsurance setup, there exists a risk of operating a scheme with a staff that is unable to perform its duties, or is mismatched for the process. Well qualified staff might not be easily available in some of the remote rural areas where microinsurance schemes work or the payscale for qualified staff might be too low. Furthermore, it is possible that some employees might be negligent while processing claims, perhaps resulting in the acceptance of fake claims, or processing the same claim twice. Microinsurance schemes are also vulnerable to fraud on the part of employees especially with uneducated clients, for instance in collusion with dishonest parties (like healthcare providers in a health insurance scheme).

Management/Strategic Risk

The success of a business is largely influenced by the strategic decisions of its management. Strategic decisions of an organization include decisions pertaining to its mission, vision, objectives, processes, growth strategies, etc. These decisions are susceptible to risk, and managing these strategic risks is crucial for ensuring the long-term survival and success of an organization. In its

Pillar II guidelines, the Committee of European Banking Supervisors (CEBS) defines strategic risk as “the current or prospective risk to earnings and capital arising from changes in the business environment and from adverse business decisions, improper implementation of decisions or lack of responsiveness to changes in the business environment” (CEBS, 2006: 40).

In the case of microinsurance, a common strategic risk is that of choosing a business model that does not fit. For instance, applying a mutual model rather than a partner-agent model, or vice versa, can have different consequences for the institution, depending on its environment and the values of the target group and organization. Another type of strategic risk is that posed by a strategy commonly adopted by NGO's/MFI's (common microinsurance practitioners), to base much of their institution on one person's reputation as that person might be a good selling point due to their links to important institutions, community, etc. This leads to a single person maintaining a central role and shifting the organization's focus away from institutionalization. If that person indulges in a character damaging incident, the entire organization runs the risk of suffering.

Operational Risk

Operational risks are defined as the risk of loss (financial or otherwise) due to failure of business processes, information systems or internal controls. The day-to-day operations and the processes of an organization comprise the majority of these risks.

Microinsurance schemes are prone to operational risks at various stages of the business process. The risk of complicated claim formalities, unclear procedures and poor communication between employees of the microinsurance units (MIUs) and clients are some of the risks that they encounter in their day-to-day operations. The damage to physical assets of microinsurance units from natural disasters or other events is an operational risk which can also lead to closure of the unit. For instance, in a provider-model for health insurance, if the hospital operating the scheme is destroyed in an earthquake, the microinsurance unit would cease to exist. Also, an MIU's database containing information pertaining to premium collected, claims paid and insured details is at risk of being lost in the event of a hardware or operating system breakdown, if no proper backup systems were put in place.

Financial/Economic Risk

The risk that an organization will have negative net assets or have insufficient cash flows to meet its financial obligations is referred to as a financial risk. These can include risks from investments, both those in the organization and by the organization, risks with capital and credit, and economic risks in currency and interest rate fluctuations. In a largely donor dependent microinsurance

scheme, financial risk may arise if the donor ceases to fund the scheme. The gamut of risks in the category of financial risks highlights the vulnerability of organizations to other entities, all of whom will also be exposed to risks. Microinsurance schemes, in particular, often form partnerships with many different financial intermediaries. Therefore, they should pay special attention to identifying all the possible financial risks affecting both themselves and their partners.

The financial stability of a microinsurance scheme is also affected by the twin issues of moral hazard and adverse selection if not managed properly. Other financial risks include but are not limited to the risk of poor actuarial projections, low renewal rates, non-payment of premium, poor financial management systems and the risk of claims of a catastrophic nature. While some financial risks would produce a domino effect, others, like catastrophe risks, can render the scheme insolvent.

Political/Legal Risk

Political risk is defined as the volatility in a project that is caused by a country's political structure and policies or by the presence, or actions, of specific groups, which are either outside the control of the government or simply not policed. In a worst case scenario, this could make it difficult for full exploration of the microinsurance market or lead to existing operations being abandoned (Pickford and Vurens, 2007: 1). Since microinsurance schemes primarily operate in developing countries, this will be an important category of risk to keep in mind and plan for.

Legal risks can arise from regulation applied to an industry. Microinsurance schemes in India, for instance, are confronted with a gigantic barrier in legally entering the insurance market: to obtain an insurance license they would have to deposit US\$ 20 million in equity. Although the regulator gently ignores small players in his current supervision practice, some legal risk remains. Microinsurance schemes and their clients often lack access to a formal legal system since the costs incurred in legal action often exceeds the value of the claim.

Social Risk

Social risks comprise forces arising out of perceptions and behaviors of larger number of individuals which interact. These interactions are in turn shaped and determined by the larger socio-cultural fabric, which take into account the stratifications of class and castes, communication patterns, value systems and norms, etc. Microinsurance schemes working on the basic principles of collective action are therefore susceptible to social risks. These include risks posed from influential figures (Elite Capture), collective lobbying, perceived fairness, social behaviors, 'trust' between members and towards the scheme,

social homogeneity of population and illiteracy (towards the concept/scheme). Parivartan, an NGO in Orissa, India, assisted 10 villagers in purchasing insurance coverage for each of their 5 goats. When one of the goats was eaten by a cheetah, the claim made by the owner was rejected even though the Secretary of the NGO certified the case as a genuine claim. This incident led the villagers to lose faith in insurance and abandoned any hope of future tie-ups between the insurer and the NGO (Jeyaseelan, 2008).

Step 2: Analysis of Risk

Before applying any risk management strategy, efforts need to be made to measure and balance the benefits of activity with non-activity, i.e. the decision to simply take the risks. These efforts, termed as the “analysis of risk”, are the second step of a risk management process. At this stage, values are assigned to risks by examining two components of each risk – likelihood and magnitude. The ‘likelihood’ measures the probability of the risk occurring, and the ‘magnitude’ estimates the risk’s impact.

To achieve the most comprehensive analysis of risks it is important to use both quantitative and qualitative methods. Qualitative methods involve logical reasoning and are based on knowledge of previous experiences and sound judgment of the situation. Quantitative methods on the other hand, involve numerically measuring consequences and impacts, analyzing past risks along with their associated costs.

Step 3: Planning for Risks / Establishing Risk Management Strategies

The results from the first two steps, risk identification and risk analysis, provide the basis for developing the best strategies for addressing risks when they arise. The first step in the planning phase will be to determine the priority of each risk, which can be done by ranking the identified risks in order of potential severity and/or impact, as determined by the analysis stage. The next step will be to determine the most appropriate risk-treatment strategy for each risk on the basis of priorities set. Risk-treatment strategies are the plans developed to handle the risks, and are organized into two categories: 1) actions that limit or control the likelihood of the risk and 2) actions that limit or control the consequences of the risk. The major risk management techniques are risk avoidance, risk modification, risk sharing/transferring, and risk retention/acceptance. The actions to determine the strategy should include what needs to be done, who is doing it, and when it should be completed.

Step 4: Implementation of Risk Management Strategies

The implementation step deals with acting on the decisions made during the previous phases, putting in place all strategies to control and handle the

identified risks. This is the key step for any risk management process, and if not done properly can leave an organization susceptible to risk, regardless of how well the previous steps have been conducted. It is in this step that changes are made to the structure of an organization or process, new policies implemented, trainings delivered to staff, efforts and activities properly documented, etc., according to each strategy's demand as pre-determined in the planning stage. The staff and other stakeholders of the organization need to be made aware of their role in managing risks, and about the consequences of the increased cost of risk.

Step 5: Evaluation & Learning

Despite making every effort to carefully identify, understand, and plan for a risk, even the most appropriate strategies may not always fit perfectly when the actual risk occurs or changes its nature. This will at some point be inevitable for any organization, and therefore flexibility will be key. An organization needs to be prepared to deal with whatever may come, to handle each situation with proper knowledge, experience, and good judgment. If all the previous steps have been done accurately, an organization should be well equipped to do so. As a precaution for future incidents, risks and risk management plans need to be reviewed periodically, for the purpose of learning and improving.

These evaluations should involve monitoring both the risk management process and its implementation to determine if it is working. The monitoring will need to continuously check for surfacing risk events, and should be continuous and routine in nature. When monitoring for risks, it will be useful to make sure that the focus remains on the right source of information, that the information being monitored is timely and accurate, and that the people monitoring the information understand what they are looking for and what they are looking at. A regular review of changes in the organization's operations is required to ensure that the risk management program continues to be relevant, comprehensive and effective.

4 RISKS IN THE BUSINESS PROCESS OF MICROINSURANCE

For an exemplary discussion about the risks a microinsurance unit faces and the options it can apply for managing these risks, it might be useful to decompose the business process of microinsurance into four different steps: product (and process) manufacturing/design, product sales, product servicing and maintenance of long term stability (for a more detailed discussion on this see Radermacher and Dror, 2006). Screening these steps of the business process for the sources of risks described above, enables the identification of a number of risks and options on how to tackle them.

4.1 *Product (and Process) Design*

The very decision to enter the market is a risk as it might not be in the institution's core competence and might threaten successful programs in other domains. However, expectations from the target population and occupying a new and upcoming domain might require an institution to move into the sector, aside from the rarely disputed need of resource-poor communities for microinsurance as a risk management tool.

If such a decision to enter the market is taken, the business process of insurance starts with product and process design. A first strategic decision of a community-based institution is on the microinsurance model which should be applied. While a partner-agent model allows making use of complementing competencies of a professional insurance provider, it reduces the control the community-based institution has over certain elements of the business process. When, for instance, partners of Madhyam Foundation, Orissa, India, decided to venture into microinsurance together with a commercial insurance company, they did not anticipate they would have to face a barrage of complaints from their clientele due to heavily delayed servicing of claims by the insurer, a few months down the line. Realizing that their trust relationship with the local communities is at stake, the local NGOs started to opt out of this relationship and to change to the mutual model of microinsurance, where control for settling claims would remain with the members. Such a strategic decision on changing the processes opens a new set of risks, many of which will be discussed in the remainder of this article.

Regardless of the model chosen, the very market that the MIU operates in poses a challenge due to lack of data. Designing and pricing products based on weak data constitutes a severe risk for the long-term stability of the insurance scheme when underpriced, or for the sales process when overpriced. Time-series data is usually lacking and the best available, if at all, is often a cross-sectional survey, i.e. one shot data. Uplift Health in Pune, India, based their product design and pricing on a survey conducted among one thousand households (Leist and Radermacher, 2004: 2). Karuna Trust in Karnataka, India, took the same approach (Radermacher et al., 2005a). Prior to designing its health insurance product, Healing Fields Foundation in Andhra Pradesh, India, conducted an extensive research for two years to determine the health needs and health service utilization of rural people (USAID, 2008: 118). Similarly, the developers of an index insurance scheme aimed at managing crop risk in the Ukraine conducted interviews with 50 potential buyers (farmers) within the range of two weather stations. It was then decided to concentrate efforts on an index to cover winter wheat, the most important crop in the region (Roth and McCord, 2008: 23). Data collection, even when collected with the most professional methods, never yields perfect data. Seasonality, trends which can only be revealed in time-series data, interviewer bias, and respondents' recall bias (Lofgren et al., 2007: 9; Schröder and Brsch-Supan, 2008: 6) make data less accurate. Some

try to verify the data collected by interviews with key informants or through other data sources. With such inaccurate data, actuaries tend to introduce a higher security margin, which should ensure that the scheme stays viable. Being overly prudent, however, throws out the baby with the bath water, i.e. it might price the product out of the target market's willingness to pay. Pricing based on weak data is probably one of the main risks in microinsurance and cannot be managed satisfactorily during the set-up phase.

But not every microinsurance scheme has the technical capacity to price right, even if accuracy of data were not an issue. Microschemes, particularly those which decide not to link to a commercial insurance company, often do not have access to technically skilled personnel. A drawback of Kenya's Community Health Plan (CHaP) was that the staff had underestimated the actuarial knowledge necessary to design an insurance product, and they linked the insurance too closely to credit and savings. Consequently, premiums were set significantly below potential health care outlays. The organization soon learnt that designing insurance products was far more complex than designing savings or credit instruments (Maleika and Kuriakose, 2008: 3).

Another poorly designed insurance product was provided by the All Ceylon Community Development Council (ACCDC), Sri Lanka, where the package included coverage for death and disability caused by accidents, as well as fire and lightning damage and crop failure. This package was designed without insurance expertise and ACCDC soon realized it would not be possible to reimburse all the claims. The paid premiums were refunded and the scheme was simplified and re-launched as Yasiru (Enarsson and Wirén, 2006: 9).

Uplift Health, an Indian health mutual, was in a different position: a professional actuarial consultant assisted in the design of the scheme and thus enabled the mutual insurance scheme to access technical skills when needed. Delta Life, Bangladesh, employed an in-house actuary who oversaw the risk management of each product, and fixed the premiums based on actuarial data and calculations (McCord and Churchill, 2005: 22). Yasiru in Sri Lanka received technical assistance from the Dutch reinsurer Interpolis N.V with which it had a reinsurance agreement (Enarsson and Wirn, 2006: 14). Similarly, some mutual schemes organize themselves into networks in order to access technical skills, using economies of scale. Technical assistance providers like GTZ's Centre of Health Insurance Competence (CHIC) and the Micro Insurance Academy enable community-based schemes to access technical services.

But even trained actuaries, working as consultants or in insurance companies, do not necessarily have the luxury of pricing a microinsurance product on one-shot data. A fact which requires the management of the microinsurance scheme to look into this process closely and to vet the proposed prices for certain services in the local context – bearing in mind the vested interests that key informants like potential clients and health care providers might have.

At least as challenging as the pricing of the prospective package, is its composition. While insurers have a preference to include rare but more costly events, the target population might also prefer including high frequency but low cost events (Dror et al., 2007: 895), which result in high aggregated costs for the households over a year. The management of the microinsurance scheme, in close consultation with those who know the “ground reality”, needs to balance the effect of sticking to more traditionally insurable events versus having a more attractive product on offer, thereby attracting more clients, which increases the risk diversification. Yeshasvini Trust in India, for instance, has composed a package focusing on high cost surgery. They also included free outpatient advice to their insured clients (Radermacher et al., 2005b). Some microinsurance units include preventive health care methods in their benefit package. Apart from Health Uganda and Ishaka CHI (Uganda), schemes provide insecticide treated mosquito nets at a subsidized price to scheme members and distribute free anti-retroviral drugs for HIV/AIDS (Basaza et al., 2007: 2).

Apart from the mere composition of the package, risk management measures like caps, exclusions, deductibles or co-payments need to be planned at this stage. Caps and exclusions on benefits are meant to limit the insurer’s risk exposure; exclusions on certain groups (e.g. elderly in health and life insurance, and young children) are meant to avoid adverse selection, i.e. the phenomenon of worse than average risks joining the insurance scheme. Deductibles and co-payments are means to control moral hazard, i.e. unnecessary and excessive utilization. Most schemes make use of such tools; BAIF applies a cap of about 100 US\$ on hospitalization expenses and imposes age limits on hospital and life insurance.

The Save for Health Uganda scheme has a waiting period of 3 months before new members can access benefits. The scheme also has a requirement for village-based enrolment comprising a minimum of 100 people (Basaza et al., 2007: 2). Members of CUSP (Rwanda) pay a fixed co-payment of 100 Frw (US\$ 0.20) for every medicine obtained at health centers, and a copayment of 10% of retail price for medicines received in the hospital. This helped to address the likelihood of over utilization without trying to influence the choice of medicines (Vialle-Valentin et al., 2008: 5).

The challenge in all these risk management strategies is that they reduce some financial risk but make the product less attractive, i.e. add to the risk of limited uptake in the sales process.

Particularly in health insurance, financial risk linked to a product can also be addressed in the planning of the product servicing, i.e. the management of the relationships with health care providers. If a scheme decides not to manage these relationships and to allow free choice of providers, it reduces on the one hand its administrative need, but on the other hand increases the risk that clients seek care in facilities which are more costly but do not necessarily

deliver better quality. Many microinsurance schemes have therefore developed a network of designated providers – but which providers to include might affect the attractiveness of the scheme. A study of the demand for microinsurance in Tanzania revealed that some people were hesitant to join the health insurance programme of Poverty Africa (PoA) since the designated service providers offered low quality services, and some providers were near to closing their businesses. Some of the providers lacked medicines. People were willing to join the scheme if reputable service providers were included (Millinga, 2002: 21). On the other hand, the Yeshasvini Trust works with a network of private providers which are known to be the best in the state. Clients appreciate this (Radermacher et al., 2005b).

In the case where hospitals are located very far from the village, the insured may postpone visiting the hospital for fear of losing his own and his attendant's daily wage. Schemes like the Nkoranza scheme in Ghana and the Bwamanda scheme in former Zaire are effectively single facility provider schemes (in both cases the facility being a hospital). These schemes are susceptible to the problems of low participation because benefits are accessible at only one location, discouraging enrollment by people who live far from the provider (Arhin-Tenkorang, 2001: 8).

If not met, the objectives of the health care provider can have adverse repercussions on the scheme, as was the case with PoA. In this health insurance programme, empanelled health providers were required to invest US\$320. Providers made this investment partly based on PoA projections of 100,000 insured within the first year. The scheme, however, only generated 600 insured in the first year. Constrained by the low number of insured, the providers resorted to desperate measures such as inflated invoices, over-prescription and over-treatment in order to gain from their investment (McCord and Osinde, 2005: 348).

The provision of health insurance coverage to the client can be cashless (i.e. directly to the health care provider) or on a reimbursement basis. Different payment regimes between provider and insurer, however, lead to different incentives (an introduction is offered by Kutzin 2001; Jegers et al., 2002). These incentives are linked to the question of who eventually bears the financial risk. A fee for service payment in which the provider is paid for each service rendered to the insured, potentially leads to overprovision of services; the financial risk for severe cases is on the insurer as well. A case-based payment, which follows a fixed price schedule for defined ailments, shifts the risk for severe and thus costly cases to the health care provider. While this might be an interesting strategy for the microinsurer to control some financial risk, it provides an incentive for the health care provider to reduce efforts and thus quality of care. This operational risk leading to client dissatisfaction will need to be addressed by the insurer in the servicing phase. Similar tradeoffs between financial and quality risks exist in other payment regimes like capitation or

own provision. The management of a hospital-based health financing scheme in Uganda faced the problem of the provider having monopolistic control over the market, showing no interest in improving quality or containing costs. To overcome these problems, the management of the financing scheme left the provider and started its own health insurance project called Microcare. A thorough control system was developed by Microcare to take control of both access and claims. This system added to the quality of care received by patients, and according to Microcare saved the organization 40 percent of the cost of claims due to reduced fraud (CGAP, 2003: 2).

Before the product can be taken to the market, all processes of the microinsurance scheme need to be planned in detail. This ensures orientation for the staff involved in microinsurance and sets the basis to subsequently allow learning from experience. A solid Management Information System (MIS) should be integrated into these processes to support operations and learning. Delta Life had an inadequate MIS which relied heavily on manual data processing, had limited capabilities for reporting and analysis, and was not suitable for the large volume of policies generated by the microinsurance scheme. Since the risk profiles and policyholders' experience could not be properly analyzed, there were problems in pricing the product appropriately. The microinsurer was forced to charge high premiums as poor pricing called for a higher security loading. Delta Life realized the shortcomings of a poor MIS, and decided to create an independent company to develop a new insurance management package specially designed to meet its needs. The new system aims at providing a wide range of reporting and analysis capabilities (McCord and Churchill, 2005: 47).

4.2 Product Sales

With product and processes designed, the sales process can start. It is usually made up of information provision to potential clients, collecting their documents for application, underwriting and premium collection. It also includes provision of documents to clients, which attests their insurance status and the renewal of the policy.

As microinsurance targets people with usually limited knowledge about and prior exposure to insurance, information provision is very important, allowing potential clients to understand the value proposition of insurance and the features of the specific product. Such effort might seem cumbersome to some microinsurers but can turn out to be a good investment of resources as it is likely to reduce the number of drop-outs at the time of later renewal. It is important to make sure that the information provided is easy to understand; printed brochures, often not in the local language, are not necessarily the most adequate way of information provision. Any misperceptions of what is offered by the insurance can create dissatisfaction at later stages of the process. A majority of BRAC's members (Bangladesh) were not aware of all the services

that were available to them, nor were they aware of their entitlements, and were ignorant about the need and the process for renewing their health insurance card every year (Singh, 2006: 41).

The terminology used to explain insurance services to the community can act as a deciding factor in favour of or against joining an insurance scheme. Prior to introducing an insurance scheme in a rural part of Ghana, the exploratory discussions revealed that the term “health insurance” was not associated with risk sharing, but instead referred to an unfamiliar product purchased mainly by the urban elite. The risk sharing arrangements common to the rural communities were described as “solidarity groups”, associations of people who help each other in times of need (Arhin-Tenkorang, 2001: 10).

In rural Burkina Faso sickness is considered to be the repercussion of wrongful or sinful personal behavior (alcoholism, smoking, etc), and thus the population tries to avoid ‘thinking’ about disease. The act of contributing financial resources to prevent disease or costs to future disease may be regarded by them as attracting ‘bad fate against oneself’ (Sommerfeld et al., 2002: 159). In some cases, the target population is confused between the concept of insurance and that of savings. Evidence from PoA’s health insurance programme suggests that subscribers who pay their premiums believe they must use the service irrespective of their actual need in order to ensure a return on their premium. Subscribers of this programme reported that they sometimes avail themselves of unnecessary medical check-ups just to make sure that they have exhausted the amount they contributed (Millinga, 2002: 23).

But it is not only the target clientele which needs to be educated. The staff which is supposed to convey the information is often not well-versed with the concept of insurance either. Extensive training can be required to tackle this human resource risk and to make sure that the information provided to costumers is correct.

When potential clients are interested in joining the insurance scheme, they usually need to apply for the insurance and submit certain information. Some microinsurance schemes require documents like birth certificates or below-poverty-line proofs, which might not be easily available from potential clients. While it is understandable that the insurance providers appreciate detailed documents, such requirements might reduce the potential market and lead to lesser uptake. Solving one operational risk obviously increases another one.

The insurer’s decision on which risks to accept, i.e. the underwriting process, is handled very differently in different microinsurance schemes and with different heads of damage (risks covered). As few microinsurance schemes are selective of their clients beyond an *a priori* focus on certain categories of people (e.g. excluding people above or below a certain age) most underwriting is done by the sales personnel. The underwriting phase, however, is the phase where screening for adverse selection has to happen and a decent risk diversification

will need to be ensured. If given wrong (financial) incentives, sales personnel might focus on enrolling large numbers only and may neglect the underwriting task of their role. This can pose a serious financial risk later on or simply lead to undesirable sales behavior. Delta Life introduced a competition in which everyone who sold 20 new policies in a month was rewarded with a set of new dishes. This prompted a number of agents to team up and submit the policies under one person's name and then divide the dishes. Some organizers encouraged policyholders to take out two BDT 10,000 policies rather than one BDT 20,000 to boost their sales numbers. Agents also went to the extent of offering clients special rebates out of their own pockets to promote sales (McCord and Churchill, 2005: 44).

Premium collection in microinsurance is often a collection of many small amounts of cash as compared to non-cash transactions such as check payments in traditional insurance schemes. The process needs to be well organized in order to avoid fraud by staff. Karuna Trust has social workers and field offices responsible for collecting premiums. It was reported that some of the social workers did not directly forward the money to Karuna Trust's office, but instead paid some of their own bills first. The Trust's administrative staff detected the problem by cross-checking the receipts issued (numbered consecutively) with the amount submitted. Following strict intervention from the project coordinator, the open amount of approximately US\$1,000 was repaid by the respective individuals (Radermacher et al., 2005a: 31). Tight processes will need to be in place to manage this human resource risk. At the Self-Employed Women's Association (SEWA) in Gujarat, India, for instance, clients can make a fixed deposit (with SEWA Bank) large enough to pay the annual premium from the interest earned (Garand, 2005: 19). This helps to reduce the potential for fraud.

The timing and frequency of premium collection can impact the willingness to purchase insurance coverage and the decision to renew existing coverage. Community members may fail to pay the premium if the frequency or timing of premium collection does not suit their cash flow. While annual premiums result in lower transaction costs and higher investment income for the MIU, it may be difficult for the target group to pay. When Karuna Trust introduced premium payments, only half the existing clients renewed their policy. Not only were people hesitant to pay for something that had been fully subsidized until then, but it was also an inappropriate time for the collection because it was during the months when little employment was available (Radermacher et al., 2005a: 31). The problem is best reflected by a statement of a villager in Tanzania: "*The problem of people in this village is people are seasonally poor. During the harvest period every person is rich and can even afford to buy a bottle of beer, but a few months later he cannot even afford to buy a dose of malaria tablets at TSh.500*" (Millinga, 2002: 23).

For ensuring that only insured members claim from the insurance scheme, the

microinsurer needs to issue some identification document for policy holders. Some microinsurance schemes apply simple documents, others produce photo IDs for identification. The method chosen needs to be well planned in the local context; sometimes photos are unavailable in the village or too expensive to obtain, sometimes a planned procedure turns out to be unavailable within the planned time frame. In Uganda, a health insurance mutual formed to help the members pay the user-fees of government facilities was unable to print photographic IDs for its members promptly. Members were instead given printed receipts for the premium paid. Some unscrupulous members of the health insurance scheme started to print receipts for non-members too. These illegally purchased receipts were used to procure anti-malarial drugs from the local clinics before the outbreak of malaria, resulting in a shortage of these drugs when the need arose (Roth et al., 2007: 78). Lack of proper identification documents, therefore, constitutes an operational and financial risk. And as many microinsurance schemes rely on one annual renewal period, the logistical effort to produce new identification documents for thousands of people should not be underestimated.

What has been described above for the first enrollment is equally true for renewals. And so far on renewals, many microinsurance schemes do not perform very well, indicating some failure in bringing the value proposition of insurance across to clients. However, inadequate attempts to encourage policyholders to renew their policies can prove to be a risk to the financial stability of the microinsurance scheme. Delta Life faced lapses for its endowment policies which combined savings and life insurance. This could partly be due to the lax attitude of the field staff in retaining policyholders, since they were monitored and rewarded for the premiums collected and not for the number of policies that were in force; commissions for the first year are higher in many insurance schemes than for renewals. This mechanism distorts incentives for renewal. Furthermore, the staff did not receive any training on encouraging timely payment of premium (McCord and Churchill, 2005: 59). Similarly, a study to examine the factors behind the high drop-out rate of the SEWA scheme revealed that a number of policyholders failed to renew their policies because they were not contacted during the annual enrolment campaign of the insurance scheme for premium collection. This could be due to problems with SEWA's database (such as incorrect address) or the absence of family members when the scheme representatives visited to collect the premium, or inadequate mechanisms to check that all members are visited at the time of the annual campaign (Sinha et al., 2007: 663).

4.3 Product Servicing

Selling the product is only a means to an end, not an end in itself. Servicing constitutes an essential aspect from the clients' point of view as it is the process where benefits are delivered. The risks in this process are associated to

delivering what was promised to clients and the risk of stakeholders misusing the insurance.

Misuse of the scheme is related to fraud and moral hazard – which can originate from clients or service providers. Moral hazard describes a change in behaviour due to the fact that a person is insured. It refers to a client utilizing services unnecessarily (moral hazard on the client's side) or to service providers (often health service) delivering unnecessary services because the person is insured (provider-driven moral hazard). In the case of the Tanzanian health care scheme Umoja wa Matibabu Sekta Isiyo Rasmi Dar es Salaam (UMASIDA), it was observed that providers did not have any incentive to provide preventive care. Also, they did not restrict themselves to the essential drug list, prescribing instead drugs on which they made greater margins. Consultation fees were raised rapidly without any intimation to the scheme committee. These loopholes have been plugged to some extent through close monitoring and screening of private providers, and ensuring that providers restrict themselves to the WHO approved essential drugs list (Kiwara, 2005: 5).

The operational risk of provider-driven moral hazard can often be reduced through managing the provider relationship. In health insurance for instance, different provider payment mechanisms unfold different incentives. While some mechanisms help to reduce the financial risk, they might increase the risk of lesser services or lesser quality being delivered to insured patients (Kutzin 2001; Wouters, 1999:3). To counterbalance this, a quality monitoring mechanism would need to be introduced.

For controlling moral hazard on the side of clients, co-payments and deductibles are the most frequent tools in insurance. In the context of developing countries, some practitioners, however, raise the concern that co-payments and deductibles might induce more fraud, as bills might be inflated in order to recover the client's own share. Collusion between service provider and insured is one option of fraud, which can also be conducted by each party independently. To control against fraud, insurers tend to request detailed documents proving a claim submitted by a client. But this might not generate the expected security either, as documents can be forged. Supporters of a cooperative network in Southern India report their experience with accidental death insurance about a road accident for which the insured population managed to obtain documents for more than 40 deaths of recently deceased relatives. As the insurance company was unable to prove the fraudulence of the documents, they had to settle the claims. The supporting NGO cancelled the accidental death insurance thereafter.

Another way to control against fraud and partly against moral hazard is to ensure that the insured have a stake in the profits and losses of their insurance scheme. Small mutual insurance schemes with localized control can help streamline incentives between the insured and the insurer. Key to this,

however, is felt ownership. A similar approach is to pay a bonus for none or few claims, either to individuals or the group. The latter approach can help utilize group pressure. This could however lead to a social risk where too much pressure exists on people who are in genuine need of services.

Fighting fraud on the provider side poses an equally tough challenge. When UMASIDA began operations, the actual bill submitted by the providers was 200 percent more than the previously planned budget. It was observed that charges were made on what was prescribed rather than on what was dispensed. For instance, if the provider had prescribed 5 injections of penicillin, but only 3 were given to the patient, the bill to UMASIDA would still show 5 injections (Kiwara, 2005: 5). Uplift Health has set up a health hotline which clients in need of hospitalization need to call prior to admission. A doctor employed by the mutual insurance scheme guides patients to some of the network hospitals. Apart from the assistance for the patient and the potential cost saving by being guided to a cheaper provider, the accompanying doctor who sees the status of the patient at the time of admission might have a disciplinary effect on the health providers.

A microinsurer's attempt to protect itself against fraud by detailed documentation required for claims, might make the claim process for clients very cumbersome and give rise to dissatisfaction. A complicated claim process or inadequate settlement process might make the insured hesitant to make a claim or even decide against renewing the policy. ASA, an NGO in Tamil Nadu, India, started with an in-house life insurance product, but later shifted to a traditional product offered by the government-run Life Insurance Corporation (LIC). ASA however found the insurer bureaucratic, its policy document lengthy and complicated, and its claim settlement process difficult and very long. Furthermore, the insurer settled claims by paying crossed checks to the claimants, implying they had to open bank accounts. Unsatisfied with this product, ASA reverted to a variant of its previous in-house product (Roth et al., 2005: 16).

When it comes to providing clients what they were promised during the sales process, a number of factors will be considered by clients, such as the quality of the service, how easy it was to obtain the benefit, and whether it constituted any additional financial burden. In a scheme that offers reimbursement of claims and not cashless coverage, the length of time taken by the microinsurer to settle claims is very crucial to the insured. Most clients bridge the gap until reimbursement with loans from money lenders, which charge high interest rates. Delayed reimbursement might make insurance unattractive as asset and wealth protection functions are reduced. Partners of Madhyam Foundation experienced a delay of 8-9 months in the settlement of some livestock claims by a commercial insurer. Since there was no particular reason provided for this delay, it was decided to discontinue the relationship with this insurer.

If the choice of service providers is restricted, this limited choice needs to be

clear to clients in order to prevent dissatisfaction. In the health insurance of Yeshasvini Trust for instance, choice is restricted to a network of hospitals. This restriction however was not entirely clear to patients many of whom went to wrong providers resulting in the insurer refusing payment. Dissatisfaction was the consequence.

When it comes to renewing an insurance policy, another crucial deciding factor is the quality of service provided to the insured – and part of perceived quality is the way the insured are treated by service providers such as health facilities. Problems such as the provider's staff having inadequate insurance knowledge or a hostile attitude towards the insured may dissuade the insured from visiting the health facility in the future and from renewing their policy. While implementing health insurance, Karuna Trust initially faced problems with the staff of PHCs and government hospitals. Following this, the Trust had to work intensively to establish a rapport with the staff of these health care facilities so that the beneficiaries did not face problems while receiving treatment (Karuna Trust, 2005: 50).

Some members of the BRAC scheme had negative and humiliating experiences with the health insurance scheme and therefore stopped using their health insurance card. To quote one insured's experience "*I went to BRAC Shushastho (health centre) with a lot of expectations, but I was not even allowed to enter the doctor's room... instead I was insulted... I threw the card outside the health centre*". Another insured spoke of her experience, "*When we visit the hospital, they shout mockingly, free card has come. They ask us to sit and wait quietly... They made me wait for very long... Patients, who came after me, were asked to see the doctor before me... I wanted to leave the card and come back without it* (Singh, 2006)." Working with the health care provider is thus a component of risk management.

The (elasticity of the) capacity of the microinsurer to respond to a sudden increase in claims, caused for instance by some covariant risk affecting many insured, is another challenge. When Gujarat, India, was hit by communal violence in Feb 2002, which continued for the next few months, the microinsurer VimoSEWA was caught unaware and could not provide timely services for the multiple risks that it had covered. Furthermore, the crisis delayed the hiring and training of staff, and increased work loads with a flood of claims for which VimoSEWA was unprepared. Not only did this incident expose the vulnerability of MIUs to covariant risks, but it also led to dissatisfaction among the members and consequently some dropouts. The violence and the consequent tense and dangerous atmosphere set VimoSEWA back by half a year in terms of its total plan (Garand, 2005: 9).

4.4 Maintenance of Long-Term Stability

Integrated Risk Management is a tool for maintaining long-term stability – and to make insurance more (cost) effective. The business process of “maintaining long-term stability” is in itself a process with a strong risk focus.

The risks tackled in this process are mainly financial in nature. The financial consequences of more than expected claims are the main issue of concern in this process. Such an adverse claim ratio can be caused by stochastic fluctuations in claims or the occurrence of a covariant risk like a natural catastrophe. No reinsurance or maintaining insufficient reserves for meeting claims as and when they arise is a risk that can then render an MIU insolvent. Ideally, the reserves to be maintained by the microinsurer should be decided after considering the frequency of premium payments (cash inflow) and the average time taken to settle claims (cash outflow). When an earthquake struck Gujarat, India, in January 2001, over INR 3,400,000 (US\$75,000) was required to satisfy claims, causing a severe financial strain on the microinsurer VimoSEWA. Prior to the earthquake, annual payouts for asset protection were below INR 30,000 (US\$662). This experience helped VimoSEWA appreciate the need for reinsurance (Garand, 2005: 7).

Another financial risk to some schemes can be withdrawal of donor support. A large dependence on donor funds and expertise can jeopardize the existence of the microinsurance scheme if the donor decides to withdraw support to the scheme. Two community-based health insurance schemes in Uganda – Save for Health Uganda and Ishaka CHI – stopped receiving support from DFID in 2002. The schemes also ceased to receive direct financing from governments or other donors. Following this, the poorest sections of the population no longer had access to health care subsidies to join these schemes (Basaza et al., 2007: 7). In a similar case, in 2002, Karuna Trust implemented a pilot health insurance scheme, with UNDP fully subsidizing the premium since the target population was not familiar with the concept of insurance. In 2005, when premiums were collected for the first time, only half the members paid to renew their membership. Some complained about having to pay for benefits that were free in the previous years (Radermacher et al., 2005a: 37).

The same effect of large parts of the insured dropping out can arise when considerable adjustments of the premium for the sake of financial stability are necessary. Due to an adverse claim ratio Yeshasvini Trust had to double its premium from one year to the next for the sake of its financial viability. As a consequence, the number of insured dropped from 3.6 to 2.2 million – which might have also changed the risk profile of the pool. BAIF was in a similar situation when it offered health insurance to its clients through United India Insurance Company (UIIC). When BAIF’s claims ratio exceeded 100 per cent, UIIC decided to increase the premium charged to BAIF’s insured clients by about 80 per cent. Unable to justify such a rise to its clients, BAIF decided to turn its insurance scheme into a mutual (Radermacher and Dror, 2006:

404), fearing large drop out of members. BAIF applied other risk management techniques instead.

Another financial risk which can threaten the existence of a microinsurance scheme is the link – or lack thereof – to financial markets. Two extremes can illustrate this risk. No link at all, even to basic financial services such as banks, exposes a small scheme to the risk of burglary. With improvements in the financial infrastructure and advances in microfinance, the occurrence of this risk is reduced and only a few small schemes would have no access at all. At the other extreme is the risk associated to sophisticated investments to financial markets, which might even get insurance giants like AIG, which act as partners in microinsurance, into trouble.

5 CONCLUSIONS

While a microinsurer is a risk management option for less affluent segments of the population in developing countries, it is exposed to risks itself. Identifying these risks and developing strategies to tackle them is essential for ensuring that the microinsurer can service its clientele at any time – also at the time of disasters. But managing the risk of disasters alone is insufficient and inefficient. Managing risks at the individual activity level would not be sufficient since risks present themselves on a number of fronts, thus requiring a more comprehensive approach to dealing with them, i.e. an Integrated Risk Management process.

A risk management process which is integrated into all business processes of the microinsurance scheme, promises to ensure sustainability and cost-efficiency for the benefit of the clients. The difference between Risk Management and Integrated Risk Management is that the former is punctual in its effort and irregular in nature, while an integrated approach aims to set a risk-aware spirit in the institution and apply management measures in all business processes of the insurance. It also makes a microinsurer a better client for a reinsurer – who in turn is essential for managing the risk of disasters. Reinsurers usually work with large professional insurance companies and are not particularly keen on engaging with small microinsurers partly because they are regarded as unprofessional and risky clients. From a reinsurance point of view, the lower professional management of microinsurance loads onto the risk that the reinsurer takes over. An Integrated Risk Management practice can therefore help microinsurers become more acceptable clients to reinsurers.

The challenge in Integrated Risk Management starts with the identification of risk. Table 1 summarizes those risks which were exemplarily discussed in this paper. Some of these risks fall into more than one risk category, but for the sake of simplicity they have been listed here in the most appropriate category.

Focusing limited resources on the management of the “right” risks constitutes the next challenge. Often managing one risk adds to another risk; one therefore

has to balance the risks and evaluate their impact, i.e. the one which is less likely to cause severe damage to the scheme. One might need to accept more frequent but lower risk compared to rare but potentially more severe risk.

The technical capacities to design and implement risk management techniques is the next challenge for microinsurers. Becoming part of a support structure which allows drawing on technical expertise when needed might be a solution. In case of engaging with reinsurers or reinsurance-like arrangements (primary insurer replicating reinsurance contracts), these partners might be able to provide some expertise. This would benefit (re)insurer, microinsurer and clients alike.

Table 1: Business Process – Risk Matrix

Business Process	Human Resource Risk	Management/Strategic Risk	Operational Risk	Financial/Economic Risk	Social risk	Political/Legal Risk
Design	Lack of technically skilled personnel to design products.	Microinsurance model adopted is inconsistent with objective of the scheme.	Absence of a well developed MIS.	Absence of controls in the product to check for adverse selection and moral hazard, and to limit the insurer's risk exposure.		
		Designing and pricing products based on weak data.		Network of designated health care providers not appealing to the insured.		
		Product not designed to meet the microinsurance objectives of broad coverage and affordable premium		Payment regime (cashless or reimbursement) susceptible to inefficiency and fraud by providers or insured.		
		Absence of coverage for minor illnesses, resulting in delayed and expensive treatment				
		Absence of an option to pay in kind if target population is short of cash				

Table 1: Business Process – Risk Matrix (continued)

Business Process	Human Resource Risk	Management/Strategic Risk	Operational Risk	Financial/Economic Risk	Social risk	Political/Legal Risk
Sales	Microinsurance staff is ill-informed or not well-versed with the concept of insurance.		Inability to provide documents for proof of age and financial status may deter the target population from enrolling for insurance.	Underwriting process ignores the risk of adverse selection.	Concept of risk pooling not understood by target population.	
	Wrong sales incentives leading to undesirable sales behaviour.		Negative experience of community with local financial institutions resulting in low trust.	Availability of free healthcare can be an obstacle to marketing health insurance.	Social characteristic of target population not taken into account while designing the marketing strategy.	
	Inadequate controls to check fraud in premium collection.		Timing and frequency of premium collection mismatched with cashflow of insured.	Inability to maintain or achieve the minimum level of enrolment in case of voluntary schemes.		
	Inadequate attempts to encourage policyholders to renew their policy.		Lack of proper identification documents of the insured can lead to misuse of insurance.			

Table 1: Business Process – Risk Matrix (continued)

Business Process	Human Resource Risk	Management/ Strategic Risk	Operational Risk	Financial/ Economic Risk	Social risk	Political/ Legal Risk
Servicing	Employees unable to perform duties such as verification of claims if they are mismatched and unfit for the process.		Fraud and moral hazard behaviour by insured and service providers.	Microinsurer lacks capacity to manage covariant risks.		
	Group leaders not professional managers, but given responsibility – therefore frustrated and tempted by premiums		Staff at health care facility may have limited understanding of insurance, inadequate capacity to manage insurance schemes, and may have hostile attitude.			
			Complicated claim process may make the insured hesitant to file claims and even renew the policy.			
			Delay in settling claims can impact future renewals.			
			Complicated claim formalities.			
			Terms and conditions of the policy not well communicated to the insured leading to some claim rejections.			

Table 1: Business Process – Risk Matrix (continued)

Business Process	Human Resource Risk	Management/Strategic Risk	Operational Risk	Financial/Economic Risk	Social risk	Political/Legal Risk
Sustainability	Absence of background checks of staff hired for premium collection, etc.	Absence of constant oversight and management control.		Lack of reinsurance coverage and insufficient reserves to meet an unexpected large number of claims. Withdrawal of donor support to the microinsurance scheme. Considerable adjustments to the premium charged, in order to maintain financial stability, can affect renewals. Absence or over-dependence on financial markets.		No license to provide insurance

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Microinsurance and Climate Change

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ABSTRACT: Throughout 2009, concluding with the Copenhagen world climate summit, one issue frequently debated was whether microinsurance is a viable means of adapting to the impacts of climate change. Microinsurance can be used to deal with weather and climate risks but the solutions have to be precisely geared to often very specific local or regional needs. Success depends on careful application of underwriting techniques and management tools.

KEYWORDS: Climate Change Adaptation, Weather Risks, Microinsurance

1 INTRODUCTION

The fourth status report of the Intergovernmental Panel on Climate Change, published in 2007, concluded that there is a highly significant link between global warming and the greater frequency and intensity of extreme weather events. A considerable body of scientific evidence indicates that flooding and droughts will continue to increase. In many regions, low-lying coastal plains, river deltas and archipelagos will be swamped by the projected rises in sea levels. The IPCC also stated that developing countries, and poor sections of the population in general, will be hit particularly hard. In other words, as confirmed by a landscaping study by the Microinsurance Centre, USA, the countries affected will be those that have virtually no insurance systems. Statistics show that just 80 million people, fewer than 3% of the population, in the world's 100 poorest countries had microinsurance coverage in 2006.

2 GROWTH OF MICROINSURANCE

Microinsurance, which protects those on the lowest incomes against a wide variety of risks, is growing fast. Current ILO figures show that, in Africa alone, the number of microinsurance policies rose 80% between 2005 and 2009. In India, there are now individual portfolios insuring over a million people.

The object of microinsurance is to cover the main risks that impact the lives of individuals or families. The most widespread forms are health and whole life – often in combination with a microcredit. Microinsurance was originally designed to cater for the most pressing problems of people exposed to risk.

However, in countries such as Malawi which suffered severe droughts even in the 1970s and 1980s, food security is a major concern, for which people would greatly appreciate a microinsurance solution. Likewise, in parts of Vietnam that are hit by frequent floods, poor people consider the risk of natural catastrophe a microinsurance priority.

It is, of course, true that people with health or property microinsurance may be affected by weather events triggered by climate change, but strategic coverage of weather risks is a different proposition.

Weather risks occur on many different scales. For instance, flash flooding along a stretch of river may involve a few hundred people, a tropical cyclone hundreds of thousands and a severe drought several million. The individual problems call for different underwriting techniques, including microinsurance for individuals, insurance pools and nationwide catastrophe bonds (cf. Munich Re Foundation Report 2006, p. 12).

In the comparatively short history of microinsurance, experience has shown that natural catastrophes can pose a huge challenge to a portfolio. For instance, following floods in 2000 and an earthquake in 2001, the managers of a large portfolio in the Indian state of Gujarat were forced to acknowledge that natural hazards put a severe strain on their microinsurance programme. Tropical Cyclone Nisha, which struck southern India in 2008, caused flooding in over 200 villages and more than 15,000 losses. The resulting financial burdens were very heavy. Skilful loss management at the scene was able to demonstrate to a very new microinsurance market just how vital a part it can play in extreme situations.

3 WEATHER-RISK COVERS AND CLIMATE CHANGE

Covers have already been devised that deal with typical weather risks in these times of climate change. In 2006, for example, a rainfall index cover was introduced in the Ethiopian market to protect 17 million farmers against extreme drought (as opposed to normal dry conditions). But what happens if the temperature or precipitation levels do not trigger the cover even though the country is hit by severe drought? In other words, if no compensation is paid, even though the insured suffer heavy losses? It would take years to restore people's faith in insurance.

This simple example shows the huge challenges faced by the still new field of microinsurance and by mesoscale covers such as index insurance and weather derivatives.

The following aspects merit special attention:

- natural catastrophes are large-scale events. A flood can, as it were, inundate all policies simultaneously, producing extreme claims. In the absence of

reinsurance, a maximum loss may lead to insolvency. It is therefore vital for the liabilities assumed to be correctly managed and all the real risks factored in to ensure surprises and unforeseen loss accumulations are avoided;

- the greater the geographical scope and spread of the portfolio, the better. Successful international microfinance organisations like Opportunity International's MicroEnsure take this into account. If cover extends over a large area, the risk of maximum loss is reduced and the likelihood of manageable, partial losses increased. Geographical spread is one of the key conditions of insurance.

The same applies to spread over time. Natural hazard covers must be offered over several years to ensure a cushion is formed for dealing with the problem years. Phases of high and low losses will only balance out over longer periods of time. One-off and one-year covers are tantamount to gambling;

- insurance and loss management need to be carefully handled to ensure that the client always understands how a decision has been reached and that payments are processed without delay. Policies must be easy to understand, particularly in places where levels of insurance illiteracy, or indeed illiteracy in general, are high.

Unless traditional insurance and the new field of microinsurance can be seen to settle losses (the basic minimum requirement), customers will lose interest. Loss payments help insurance systems to become established. Microinsurance faces enough administrative and financial challenges as it is.

Microinsurance schemes in particular need to meet further conditions in addition to these basic criteria if they are to succeed.

- As a rule, programmes that come straight off the drawing board have little chance of succeeding. So, it is important to involve the people concerned in finding the right microinsurance solution. Cover has to be in line with the real needs and wishes of those exposed to the risks or people will not accept it and there will be no opportunity to develop it.
- If the relationship between the sum insured and the premium is not right, this reduces the product's acceptability. It is important for the insured to understand that insuring high-frequency events is not an economic proposition for either side. The system can only work if it covers lower-frequency extreme events. This aspect will assume even greater significance as global warming results in increased weather extremes.
- People on low incomes are perfectly willing to pay for a good product. However, if a programme is to succeed, it needs to satisfy three conditions: people must (1) be able to pay the premium, (2) be willing to purchase cover and (3) conclude a contract of insurance. Other factors to be borne in mind are not only the annual premium in absolute figures but also the fact that

poor people cannot necessarily make regular payments or may only be able to afford small instalments.

Microinsurance solutions that, by and large, meet the above criteria have now appeared on the market. Examples include cover against extreme flooding for people in one of Asia's major cities, against tropical cyclones in the Philippines and against extreme winters in Mongolia.

4 MICROINSURANCE AND THE CLIMATE AGREEMENT

The agreement negotiated in Copenhagen will apply for many years and relate to a decisive phase in the development of microinsurance.

The UNFCCC has acknowledged the part played by microinsurance, as demonstrated by the Copenhagen negotiations in December 2009. Now, the different players will have to join forces and work on economically viable solutions. The path from pilot phase to widespread, multi-year covers will be long and difficult. Microfinance organisations, insurance industry, regulatory authorities, governments and donor organisations will all have to play their part.

However, microinsurance alone will not protect people from the risks inherent in climate change. Mesoscale and macroscale solutions will also be needed and require understanding on the part of all those responsible. Climate change and weather risks offer microinsurance a small but significant opportunity to successfully establish itself on a broad scale: an opportunity we need to seize.

Improving Access to Insurance for the Low Income Market – the Role of Enabling Policy and Regulatory Frameworks

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ABSTRACT: There is a growing consensus in emerging markets that increased participation of the economically weak segments of population in the process of economic growth is important to sustain and accelerate the growth momentum. Providing access to financial services, including insurance at an affordable cost to these segments, is seen as a condition *sine qua non* for poverty reduction and social harmony in the financial landscape. Promoting affordable and accessible insurance products requires enabling policy and regulatory frameworks, as much as other key factors like investment and human resources. Access to insurance also happens to be a central element for an equitable mitigation of the risks faced by poor households and small entrepreneurs. This paper highlights the importance of a sound insurance regulatory and policy framework not only as one of the features of good governance and maintaining trust but its role in providing great strength and certainty to the economy and the society. It identifies major country-level policy and regulatory initiatives that improve market efficiencies and allow inclusion of low-income households and comments on the different forms of insurers, alternate distribution channels, incentives, flexible payment mechanisms, innovations in product design, and tax incentives. While recommending that regulation needs to be justifiable, appropriate and proportionate to the problem it is seeking to address, it also suggests that regulators need to recognise the diversity of insurance activities and market to ensure that community expectations about the adequacy, accessibility, and security of financial institutions and financial products are always met. The issues discussed are not only relevant for a better understanding of the risks and practical concerns faced by regulators and policymakers, but also for setting reform agendas for improving access to insurance as part of an inclusive financial sector framework.

KEYWORDS: financial inclusion, microinsurance, policy, regulation, supervision

1 BACKGROUND

The worldwide integration of economies and financial markets is increasing, and a sound and vibrant insurance and reinsurance industry is needed to sustain global economic growth. Secure and high quality savings and accessible and affordable insurance services and pension schemes are financial services demanded by all. There is a growing consensus that increased participation of an extended range of individuals, households and firms in the process of economic empowerment has an important role to play in helping the communities in these markets to adapt to climate change and encourage investment in sustainable projects by providing a tool to mitigate natural catastrophe and disasters. While reaffirming their commitment to meet the Millennium Development Goals the leaders of the G20 nations have recently pledged to cooperate to improve access to food, fuel, and finance for the poor. What is also worth noting is the thrust given in the communiqué¹ for promoting successful regulatory and policy approaches and elaborating standards on financial access, financial literacy and consumer protection. With reduced transactions costs, reduced barriers to entry and massive expansion in terms of geographical outreach, access to finance is bound to increase tremendously.

The relationship between access to finance and economic development is one of the most debated issues in economic theory. There is strong evidence that access to finance is conducive to economic growth. As early as 1939, Joseph Schumpeter, one of the fathers of modern economic thought, highlighted the instrumental part played by financial institutions in encouraging technological progress and economic development. ‘Capitalism’, as he put it, ‘is that form of (...) economy in which innovations are carried out by means of borrowed money’² The channels through which finance fastens growth include:

- the pooling of savings from disparate depositors, preventing production processes from being limited to inefficient scales;
- the allocation of resources through the selection of the most promising investment projects, allowing capital to flow where it can be used most profitably; and
- the management of risk through aggregation and the transfer of risks to those more willing and able to bear them.

More recent academic work has sought to quantify the impact of financial development on growth. Key contributions are the studies published by Robert King and Ross Levine in the early 1990s, when many emerging economies started to press ahead with financial liberalisation. Their estimates suggest that the gains to be expected from financial deepening are very significant

¹Leaders’ Statement: The Pittsburgh Summit, September 24-25, 2009 (<http://www.pittsburghsummit.gov/mediacenter/129639.htm>)

²Schumpeter, Joseph A. (1939), *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process* (New York: McGraw-Hill).

indeed. A 10 percentage point increase in the ratio of broad money to GDP is associated with acceleration in GDP growth of a quarter of a percentage point per year.³ Moreover, not only is this association positive, but it is also causal, as financial deepening today affects economic growth tomorrow. Subsequent work has refined these findings and has shown that the positive impact is channelled mainly through productivity gains rather than through capital accumulation itself.

Today, most countries promoting financial inclusion consider microinsurance as a tool for providing access to insurance services delivery mechanisms at an affordable cost to the excluded segments of the population. It is the *mantra* for poverty reduction and social harmony⁴ in the financial landscape. With reduced transactions costs, reduced barriers to entry and massive expansion through introduction of flexible products at competitive prices and also in terms of geographical outreach to meet the diverse needs of the low income population, access to insurance is bound to increase tremendously.

Therefore, the development of microinsurance is a central element not only for the promotion of inclusive financial systems but also for equitable mitigation and management of risks both *ex ante* and *ex post*. Designing successful regulatory and policy approaches and elaborating standards on access to insurance, insurance literacy and customer protection, that will allow low-cost delivery of insurance services without exposing policyholders to unnecessary risks and costs, presents a formidable challenge.

2 DEFINING MICROINSURANCE

The definition of microinsurance continues to be a topic of debate and discussion. The funding of microinsurance runs along a continuum where premiums may be fully paid by the policyholders (privately funded) or they may be partially or fully paid by the State (hybrid schemes and publicly funded) or other components of society, such as formal sector employers (cross subsidies through the contributions paid to statutory social security schemes). The roles of all the entities in the continuum should be viewed as complementary while achieving the highest possible level of protection and coverage.

In many developing countries, neither governments nor insurance companies have been particularly effective in extending coverage to people in the informal economy. Where governments have social protection schemes, they are

³King, R. and Levine, R. (1993b), "Finance and Growth. Schumpeter Might Be Right", Quarterly Journal of Economics, August 1993, 108(3), pp. 717-37.

⁴Chinese Premier Wen Jiabao in his work report to the National People's Congress on 5 March 2009 has stressed that all work done by the government is aimed at enabling the people to "lead a better-off and dignified life", and making society more impartial and harmonious. The China Insurance Regulatory Commission (CIRC) is currently mandated to expand coverage and microinsurance, and facilitating the market development of health and pension insurance.

often delivered through formal sector employers, typically with the employers contributing on a cost-sharing basis. Naturally, such approaches do not reach unorganised workers, both employed and self-employed, in the informal economy.

Even if they are subsidised, insurance programmes for the poor may be an efficient way to target social transfers to people when they are most needed: after the flood or in time to pay for a family members' funeral bill. This efficiency in allocating welfare payments provides sufficient justification for the use of microinsurance programmes and their positive social impact, as can be seen in the Philippines. However, donors promoting Microinsurance normally subsidise only what the private sector would be willing to do on its own. They are advised against directly subsidising premiums or claims costs as this will lead to unsustainable programmes and which may ultimately result in a potential backlash from consumers when the subsidy is removed. An exception may be when subsidies are targeted for certain risks and vulnerable groups⁵.

Whereas social insurance relies on the involvement of the State through fiscal contributions, private insurance rests on a contract between the insurer and an individual or particular groups of people, in which the level of insurance premium for a given benefit coverage is set. Linkages for microinsurance to date have been to government-funded welfare programs, such as India's insurance scheme for self-help groups in Andhra Pradesh, and the Colombian government's "Familias en Accin" and "Red Juntos" programmes⁶. In the Indian case the insurance products are almost 100% subsidised by the government (clients pay a 20 cents service fee). Even so the claims made on the insurance company have well exceeded the payments into the scheme (\$25 million versus \$15 million in 2009). In placecountry-regionColombia the subsidisation is more modest. Insurance premiums are 100% subsidised in the first year, but are phased out after three years, at which point the private insurance providers must convince the participants to continue paying for the premium on their own.

Private risk sharing markets are comparatively small in low and middle-income countries and the potential for the development of the insurance industry appears to be significant in these markets owing to regulatory changes and liberalisation efforts. In India, the liberalisation of the economy and the opening up of the insurance sector has created new opportunities for insurance to reach the vast majority of the poor, including those working in the informal sector.⁷

⁵Lessons Learned and Recommendations for Donors Supporting Microinsurance (2008), CGAP Working Group on Microinsurance (2008)

⁶Mazer, Rafe (2010), Getting beyond Government to Person Payments in Microinsurance, CGAP, March, 2010

⁷Microinsurance: Demand and Market Prospects – India (2006), Allianz AG, GTZ and UNDP Public Private Partnership, 2006.

Developing and developed countries may have a lot more in common these days than many people think. While promoting access to insurance through market-led solutions is becoming an increasingly important tool to mitigate risks in low and middle-income countries, critics argue that such insurance ignores the social aspect. According to them, private microinsurance providers will divert scarce resources away from the poor, escalate costs, and allow cream skinning, adverse selection and moral hazard behaviour.

Many insurance supervisors are wary about promoting microinsurance – for a good reason. A major concern stems from the fact that as prudential supervisors they should not be perceived to be erring by being responsible for promoting institutions and risk coping mechanisms which may run a systemic risk. In their view, the roles of development and protection of the interests of the policyholders should be clearly demarcated to ensure that a position of potential conflict of interest does not exist. As a result, in this classical approach, the supervisor should not normally be responsible for promoting the market. Instead, the supervisor should focus on promoting stability and confidence of the market. If done effectively, growth will be a natural by-product, or in other words, it should not be a principal stated as being objective. Given the fact that the insurance sector in many emerging markets is in a very nascent stage of development, such a separation may be too early to be introduced.

From a policy perspective, it is important that the demarcation line between social security programmes and market-led approaches is clear, and that subsidies do not inhibit market initiatives. Growth of the private sector microinsurance market could potentially increase the availability of these products beyond what the government has capacity to pay for and reduce prices through competition (as has already happened in Colombia, South Africa and other markets especially with private sector funeral insurance providers, for example). From the examples cited above, families in Colombia are eventually phased out of subsidised insurance, and in India there are already many private firms operating in the microinsurance market.

In the microinsurance landscape, one also finds that many microinsurance schemes operate beyond regulatory purview or are regulated and/or supervised by an authority which is not the insurance supervisor. Unregulated microinsurance providers are usually small and tend to be community-based organisations and non-governmental organisations (NGOs). Mutuals, run by professional insurance staff, are normally regulated and supervised, sometimes under a Cooperatives Act. Insurers that are not regulated by the insurance laws may be weaker in terms of distribution and premium collection systems, risk management procedures, data collection methods, monitoring and analysis systems, and technological platforms and might need comprehensive institutional strengthening compared to capital-based insurers.

From a customer protection perspective, it is important that the governmental

body responsible for the supervision of different insurance providers is clearly defined in the respective laws and the information made public. One should always remember that protecting policyholders belonging to low-income households is critical since they are either illiterate or less-educated and therefore more vulnerable to mis-selling or subscribing to fraudulent schemes⁸. They should be made aware of the insurance supervisor. This is useful not only for instilling trust amongst the customers but also for justifying their confidence in relying on insurers to honour the obligations that they have agreed to, besides minimising the risk of failure and regulatory arbitrage.

The International Association of Insurance Supervisors (IAIS) has therefore defined microinsurance⁹ as follows:

“Microinsurance is insurance that is accessed by low-income populations, provided by a variety of different entities, but run in accordance with generally accepted insurance practices (which should include the Insurance Core Principles). Importantly this means that the risk insured under a microinsurance policy is managed based on insurance principles and funded by premiums. The microinsurance activity itself should therefore fall within the purview of the relevant domestic insurance regulator/supervisor or any other competent body under the national laws of any jurisdiction.”

The *Explanatory Note* further elaborates:

“Microinsurance therefore does not include government social welfare as this is not funded by premiums relating to the risk, and benefits are not paid out of a pool of funds that is managed based on insurance and risk principles. For the same reason, it does not include emergency assistance provided by governments in, for example, natural disasters, floods/fires in low-income townships, etc. However, as risk manager of last resort, the State may determine that there is a need to sponsor access to microinsurance for the most underprivileged through redistributive practices. There are cases where the State plays a stronger role in fully funding schemes, but these would only be considered microinsurance if they are run according to insurance principles.”

⁸In the Philippines many organisations were providing insurance and are operating without a license when the law clearly states they need to obtain a license from the Insurance Commission. The Insurance Commission (IC) has very recently issued a separate set of rules together with two other regulators – the Securities and Exchange Commission (SEC), and the Cooperative Development Authority (CDA) – that orders the termination of “informal insurance” or “insurance-like schemes” offered by different organisations within a year and to either partner with commercial insurers or incorporate themselves into an insurance firm, a cooperative, or mutual benefit association (MBA) – non-profit organisations set up by teachers or government workers – within two years. (Source: New microinsurance rules issued, Business World, February 1, 2010 (<http://microinsurancephil.blogspot.com/2010/02/new-microinsurance-rules-issued.html>))

⁹Issues in regulation and supervision of Microinsurance (2007), IAIS. Basel, Switzerland, 2007

3 THE POTENTIAL FOR MICROINSURANCE

While banking has been demystified and incorporated in the common man's mindset (thanks to microfinance), the next battle on breaking barriers of access is expected through innovation and creativity in the insurance industry. The sector's importance cannot be disputed.

Today we find that the world's most advanced markets for financial services are reeling in uncertainty. It's worth noting that the current financial crisis has had a limited impact on demand for microinsurance¹⁰, which is an asset class largely non-correlated to the market. With a likely drop in demand for insurance products from customers in developed countries, the microinsurance market is even more attractive in relative terms, and must surely be part of a wise strategy for growth. Indeed for investors coping with global financial markets that are volatile and often disappointing, diversification remains essential. The future of financial services must lie partly in these and similar non-correlated assets, underpinned by rapid transformations in demography and strong demand in emerging markets.¹¹

In stark contrast to these perilous markets is the largest, most underserved market per capita: the low-income population in developing countries. In a recent report produced by Lloyd's 360 Risk Insight and the Microinsurance Centre, *Insurance in developing countries: Exploring opportunities in Microinsurance(2009)*, the size of the potential market is estimated to be between 1.5 and 3 billion policies, with significant demand for a range of products, including health, life, agricultural and property insurance. Over 135 million people are currently covered with microinsurance, which is around 5% of the potential market. There is significant demand for a range of insurance products from health and life, agricultural and property insurance, to catastrophe cover. The annual growth rates are currently over 10%.

Earlier, the International Finance Corporation, in a joint report with the World Resources Institute *The Next Four Billion*, had estimated that this population of low-income consumers at the base of the pyramid had USD 5 trillion in annual purchasing power globally. This market is significantly underpenetrated, and thus presents a huge opportunity with the promise of

¹⁰Kuper, Andrew (2008), From Microfinance Into Microinsurance, Forbes.com, 2008.

¹¹The BRICs (Brazil, Russia, India and China) alone have been acclaimed as lands of great opportunities and development by the Goldman Sach's Report published in 2003. Their growth rates, consumer spending, and the currency evaluation was compared to the G6 nations and the BRICs have been predicted to surpass the G6 nations by the year 2050, thereby suggesting the importance of these 4 emerging economies in terms of shaping the global economy in near future. 26.7% of India's population is projected to be under the age of 15 in 2020. Population growth will be relatively slower in China and Brazil but the sheer size of its population continues to promise a significant consumer base. Source: Eghbal, Media Special Report: Diverging demographic prospects for BRIC consumer markets (2009), Euromonitor International Plc., 25 Jun 2009)

profits and welfare gains in markets of billions of clients. It therefore deserves a place in both business strategies and development agendas.

In the developing world, the insurance sector must shed its ‘ivory tower’ mentality in order to reach the lower end of the market segment. This is where the business of the future lies. The insurance sector cannot afford the luxury of being a laggard in a fast-paced world and will have to actively interact with the hawker, the small business man, the casual worker, the construction worker, the traditional birth attendant and the small horticulture farmer in the village. The active poor have money, businesses, property and lives to be secured. Insurance products need to be adequately designed to mitigate their social and economic risks, and made accessible and affordable. The future of business is in linking with the common man and the insurers will literally be seen as friends of the poor and enemies of poverty.

The growing interest to invest in microinsurance activities today also signals the beginning of a significant trend that will be further shaped by numerous variables, including: economic growth, urbanisation, financial sector development, climate change, and information technology. Given the positive impact on low-income consumers, there is the added opportunity to diversify risk while achieving reasonable returns. Take microfinance for example: the few institutions (such as BRI Indonesia, ProCredit Bank in Albania, and Banco Solidario, or BancoSol, in Bolivia) that realised this hidden potential sometime back in the 1980s and early 1990s are now becoming multinational corporations, a feature that no one expected two decades ago. All this has been achieved in environments with poor legal frameworks, including those for secured lending. Working with the poor and making money with the poor as they fight their poverty will be the largest growth industry of the future.

4 POLICY MATTERS

At its best, finance works quietly in the background, contributing to growth and poverty reduction. Financial systems play a crucial role in alleviating market frictions and hence influencing savings rates, investment decisions, technological innovation and therefore long-run growth rates. In particular, insurance lends greater financial depth and is responsible for advancing economic growth by providing economic agents more opportunities to save, invest and borrow. When risks cannot be managed, or when they are not adequately mitigated through risk management and safety measures, insurance coverage will change, signalling the nature of these underlying risks to potential investors.

By offering products with various combinations of life insurance and savings benefits, microinsurance has the potential to add financial depth to the rural economy, and simultaneously encourage long-term savings. There is a need to broaden the product range and focus on voluntary products covering major

risks such as life, agriculture or assets. Group insurance schemes not only cut down transaction costs but also lead to improved underwriting and claims management by monitoring through peer pressure. They are also helpful by way of building support networks and educating customers.

Countries with better developed financial systems have been found to experience faster economic growth and enjoy lower levels of poverty and income inequality through more efficient resource allocation and productivity and better distribution of income. This is demonstrated by the historical experience of the now developed countries as well as East Asia. But when things go wrong, financial sector failures are painfully visible. Although financial development plays an important role in dampening the impact of external shocks on the domestic economy¹², it has also demonstrated that deeper financial systems without the necessary institutional development lead to a poor handling or even magnification of risk rather than its mitigation. Both success and failure have their origins largely in the policy environment; hence getting the important policy decisions right has always been and continue to be one of the central development challenges.

Even though finance thrives on market discipline and fails to contribute to development process effectively in the presence of interventionist policies, governments do have a very important role to play in promoting well-functioning financial systems, while acknowledging that financial structures do change during development, and tend to become more market-based as the countries develop. A growth-promoting mixture of markets and intermediaries is likely to be determined by legal, regulatory, political, policy and other factors.

One reason why access to financial services, including insurance, has increasingly been receiving greater emphasis in recent years, and become a focal part of the global development agenda, is that modern development theory sees the lack of access to finance as a critical mechanism for generating persistent income inequality, as well as slower growth. Another reason is the observation that small enterprises and poor households face much greater obstacles in

¹² "Two causes are very apparent. First, the construction of regulatory and supervisory capacity has often lagged behind liberalisation. Second, the domestic investment response to financial liberalisation has often been disappointing; savings mobilisation has continued to be low, and the newly liberalised systems have often not effectively intermediated savings into new and higher levels of domestic investment.

Moreover, the contribution of the financial sector to the achievement of faster poverty reduction (through the achievement of higher wage-employment growth and self-employment in small and medium-sized enterprises) appears to be meagre at best in many countries. And financial crises in endangering macro-economic stability contribute to higher unemployment and poverty when they result in recession. In general, we have only a limited understanding of the channels through which the financial sector affects investment behaviour, its effects on savings rates, and the interaction between domestic financial flows and external financial flows. This is a critical issue to encourage the flow of private capital to developing countries and its effective use for investment and pro-poor development. (Financial Sector Development for Growth and Poverty Reduction (2004), UNU-WIDER, 2004)."

their ability to access financial services all around the world, particularly in developing countries.

Although general policies are in place in many jurisdictions, the financial sector policy framework specifically targeted at promoting financial inclusiveness and developing microinsurance is limited to a few jurisdictions, for example, Brazil, China, India, Mexico, Philippines and South Africa. Insurance usually falls within the general legal framework for insurance supervision and this framework is often not specifically equipped to address the low-income segments of the population. Although, traditional insurers have, of late, begun to target low-income segments, their needs are met in a limited manner by informal microinsurers, and the latter are largely unregulated. Appropriate changes to the regulatory architecture – legislation and regulatory incentive structures – should help in expanding access as well as extending customer protection.

Insurance market growth rates seem to vary according to the state of the enabling environment, which includes economic, legal, and political factors, as well the existence of the necessary internal building blocks of insurance markets, such as institutional infrastructure, technical resources and capacity. This also holds true for the development of microinsurance.

Studies have revealed that insurance penetration (total premiums as percentage of GDP) generally follows the “S curve”¹³ (see Fig. 1) – it is slower at the early stages of development, accelerated with the expansion of the insurance market and the economy and then eventually slows down as the market matures.

Table 1 identifies the environmental factors and the internal building blocks that seem to influence each of the four stages of insurance market development – i) dormant, ii) early growth, iii) sustained growth, and iv) mature. The *dormant* stage involves creating the preconditions for insurance transactions. These are critical as their absence makes consumers and insurance companies wary of entering into insurance contracts. Some insurance markets operate at a very low level, even though the preconditions for insurance transactions have been established. Many emerging insurance markets, where there is potential to develop microinsurance, fall in this category. In the *early growth* stage, the small size of insurance companies can substantially challenge the efficiency and effectiveness with which the market provides insurance. Insurance markets in the *sustained growth* stage work within supportive economic, legal, and political environments.

¹³The S-curve shows the statistical relationship between insurance penetration and economic development (represented by GDP per capita). Allowing income elasticity to vary as GDP grows for an economy, Enz (2000) proposed the S-curve relation between per-capita income and insurance penetration. Using this factor model one can generate longrun forecast for life insurance demand. Observing the outlier countries or countries distant from the S-curve plot, it is possible to identify structural factors like insurance environment, taxation structures, etc. resulting in such deviations. (Enz, R. (2000) “The S-curve Relationship Between Per-Capita Income and Insurance Penetration”, Geneva Papers on Risk and Insurance, Vol. 25; pp 396-406).

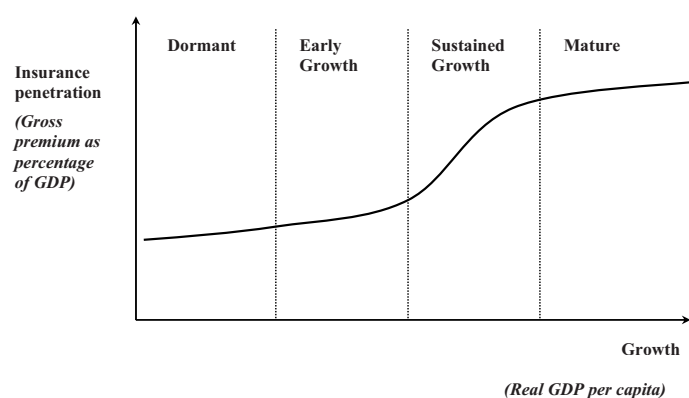


Figure 1: Stages of Development of Insurance Market

Table 1: Capacity Needs at Different Stages of Development of Insurance Market

Factors	Stages of development			
	Dormant	Early Growth	Sustained Growth	Mature
External factors	- Political stability	- Economic stability	- Financial sector reforms	- Tax incentives
<i>Economic</i>	- Property rights	- Scale	- Enforcement	
<i>Legal /</i>	- Contract	- Market restrictions	- Judicial	
<i>Political /</i>	- enforcement	- Financial inclusion	- efficiency	
<i>Preconditions</i>		- policy	- Transparency	
Industry specific factors	- Insurance law	- IAIS Insurance Core Principles		- Alternate risk management and finance
	- Regulatory and Supervisory framework	- Governance and market conduct		- Financial market securitisation
	- Basic data collection	- Transparency and disclosure		
	- Risk management by government	- Consumer awareness of risks		
		- Consumer protection / support		
		- Data collection		
		- Actuaries and professionals		

Adapted from 'Assessment on How Strengthening the Insurance Industry in Developing Countries Contributes To Economic Growth', USAID, February 2006

Given a stable political system, well functioning financial systems also require fiscal discipline and stable macroeconomic policies on the part of governments for a broader participation from long-term social and commercial investors. Monetary and fiscal policies affect the taxation of financial intermediaries and provision of financial services.

Financial systems also require developed legal and information infrastructures to function well. The ability of firms to raise external finance in the formal financial system is quite limited if the rights of international investors are not protected. Such investors are reluctant to invest in companies if they will not be able to exert corporate governance and protect their investment from controlling shareholders/owners or the management of the companies. Thus, protection of property rights and effective enforcement of contracts are critical elements in financial system development.

Following the development of an appropriate legal framework, an insurance market requires a sound regulatory framework, including efficient and effective supervision. Lacking these preconditions, an insurance industry can be curtailed by arbitrary, opaque, ineffective, and unnecessarily costly regulatory interventions which can diminish consumer confidence and dissuade potential consumers from buying insurance. In addition, lack of effective supervision can discourage foreign and domestic investors from supplying capital, retard insurance market efficiency, and dampen industry development.

Institutional reform is a long term process and specific policy actions and right incentives, along with explicit prioritisation, is therefore important to the private sector to help boost access. There are a wide range of such measures, ranging from specific legislation to recognising intermediation – innovative technologies¹⁴ based on the internet and mobile phones¹⁵ to reach

¹⁴Financial Information Network and Operations (FINO), a technology solutions company, provides innovative technology solutions to enable financial providers to reach millions of under-served people. One of FINO's key solutions is a biometric-enabled, multi-application smart card and a portable point-of-sale terminal, which combines with back-end software. In India, the smart card forms the basis for ICICI Bank's micro savings product. ICICI Lombard is also using FINO's biometric cards to lower costs of enrolment and claims processing in the micro health insurance scheme. In partnership with the Manipal Group of hospitals, smart cards have been piloted for some clusters, where enrolment stations have been established equipped with laptops for online enrolment of members into the health insurance program. The card will is also used for premium collection. Through this technology, customers transact using a personalised e-passbook, which provides biometric authentication when used with an authentication device.

¹⁵'Kilimo Salama' which in Kiswahili means "safe farming" is an innovative program launched in March 2010 in Kenya. By utilising state-of-the-art risk management tools, revolutionary mobile phone technologies, and the knowledge and expertise of farmers and rural business men and women, a model has been developed for the first time to provide farmers with reliable, low-cost cover from the vagaries of extreme weather. It will use a low-cost, mobile phone payment and data system, and automated, solar powered weather stations, to offer thousands of farmers in parts of Western and Central Kenya affordable, "pay as you plant" insurance to protect their investments in desperately needed high-yielding seeds, fertilizers, as well as other farm inputs. (Source: Microinsurance plan

the underserved segments; and protection against money laundering and terrorist finance without jeopardising access by small firms and poor household access¹⁶. Or focusing on development of offshore financial centres to export wholesale financial services may lead to the neglect of onshore financial infrastructures necessary for access of small firms and individuals.

Enabling regulations can also consider:

- *Removal of ceilings on sum assured and also on remuneration:* this would allow institutions to charge the rates that they need to be profitable and improve access. Otherwise regulations might end up hurting the very poor they are trying to protect as the supply of these services may completely dry up. An alternative may be the imposition of a ceiling on the total potential benefit in any one year. In the Philippines, credit life, health and life insurance schemes offered through the co-operative microfinance institutions (MFIs) represented by the Paco-Soriano-Pandacan Development Co-operative (Paco Soriano PDC), and the Cebu People's Multipurpose Co-operative (Cebu People's MPC) impose such a ceiling to reduce the risk of over usage, contain costs and make reliable projections¹⁷.
- *Introduction of anti-discrimination policies:* These may help against cases of active or passive discrimination against the poor or different ethnic groups. India has experienced growth in micro-insurance schemes since 2000. Private insurance companies are permitted to operate in the Indian market on condition that they also offer insurance to low-income households¹⁸. Of the

uses mobile phones, weather stations to shield Kenya farmers (2010), Microfinance Focus, 5 March, 2010 (<http://www.microfinancefocus.com/news/2010/03/05/microinsurance-plan-uses-mobile-phones-weather-stations-to-shield-kenya-farmers/>)

¹⁶In the specific context of hardships in complying with this KYC requirement by small value policyholders with possible implication for the spread of insurance into rural and low-income domains, especially the micro insurance sector, the insurance regulator in India has relaxed the norms by exempting microinsurance clients from the requirement of submission of recent photograph and proof of residence. This relaxation has been provided on all the life insurance policies held by a single individual up to a total Annual Premium of INR10000. (IRDA Circular No. 057/IRDA/AML/MAR-07)

¹⁷Barbin, Eloisa A, Christopher Lomboy and Elmer S. Soriano, A field study of microinsurance in the Philippines, Working paper No. 30, ILO Social Finance Programme & InFocus Programme on Boosting Employment through Small Enterprise Development

¹⁸When India's insurance regulatory body was established in 1999, it was named the Insurance Regulatory and Development Authority (IRDA) as a reflection of the strong role the government envisaged in insurance development, and not just supervision. This approach resulted in a large and dynamic microinsurance industry with the insurance legislation compelling the commercial sector to sell insurance to the "social" and "rural" sectors in India. The subsequent "Obligations of Insurers to the Rural and Social Sectors" of 2000 – adjusted in 2002 and 2007 – requires all insurers to satisfy specific quotas for sales in rural and social sectors. India's growth and innovation in terms of distribution and product range has been heavily influenced by the development role of the IRDA. The Micro Insurance Regulations (2005) only facilitate the attainment of the targets set for the rural and social sectors. Although many perceive it as a cost of doing business rather than a commercial opportunity, the Indian regulatory push did send important signals to motivate the industry to discover the low-income segment. Despite reaching over 14 million policy holders as a result

fourteen micro health schemes listed in 2005, nine covered hospitalisation expenses. However, twelve schemes excluded childbirth and pregnancy-related illnesses, and most excluded people with HIV. A field study of six health insurance schemes in India indicate that they had played a positive role in reducing catastrophic health expenditure in the case of hospitalisation, but had only a limited impact on out-of-pocket expenditure, as hospitalisations represented only 11 per cent of total household expenditure on health¹⁹.

- *Increasing competition in the financial sector:* The governments must also ensure an adequate level of competition in the financial system by taking measures to address the demand side constraints. Competition could influence the inherently asymmetric incentive structure of the established informal players in regard to moving up market and encouraging their penetration into low-end markets. This process is already in motion in some countries and it is likely to gather further strength and momentum in the medium-term primarily because of the increasing role of foreign insurers and other financial institutions in most developing countries.
- As financial institutions find their traditional business facing competition, they seek out new lines of profitable opportunities, including insuring the small medium enterprises (SMEs) and the poor. An ILO study²⁰ done in 2003 in South Africa had concluded that the country's large and dynamic insurance industry appears to be overwhelmingly skewed in favour of the non poor and those with formal sector employment. With the singular exception of funeral insurance, microinsurance is neither widely used nor widely available in South Africa. Microinsurance that is specifically tailored to the needs of SMEs is almost unheard of. It further suggests that MFIs can play a direct role in educating entrepreneurs, even where they are not channelling the insurance themselves. Cell captives and rent-a-captives are probably emerging as attractive alternatives at present.

of IRDA's approach, policy approaches including compulsory provisions must be evaluated carefully to motivate the sincere business interests of insurance providers and ensure sound and sustainable market development. Critics of the so called quota system however often miss noticing the fact that insurers in India have exceeded the target stipulated by IRDA. Further studies must look into: whether low income people and the poor are the real beneficiaries in the rural and social sector as India has a substantial proportion of rural rich who are not insured or under insured; whether insurance products provide value for money; the surrender and lapsation rates and of course, utilisation.

¹⁹Fragmentation of risk pools is a common phenomenon in most low- and middle-income countries. The term refers to a situation where multiple public and private insurance options are present: this limits pool sizes, increases administrative costs, and creates equity and risk selection problems – for instance, when high-income and low-income groups and high-risk and low-risk populations each have their own risk pool. (Health insurance in low-income countries – Where is the evidence that it works?(2008), Joint NGO Briefing Paper No. 112, Oxfam May 2008)

²⁰Aliber, Michael (2003), South African microinsurance case-study, ILO Social Finance Working Paper No. 33, Social Finance Programme & InFocus Programme on Boosting Employment through Small Enterprise Development.

- *Disaster risk transfer mechanisms for equitable and efficient risk management:* higher exposure to hazard and in vulnerability point to a continuing trend of increasing losses due to natural disasters and extreme weather events. However, since insurance markets in the majority of developing countries are undeveloped, the coverage for natural disasters remains extremely limited. The demand for risk transfer instruments is often constrained by market gaps, lack of regulatory frameworks, lack of data on disaster risk, a lack of a culture of risk financing, and the reluctance of large reinsurance market players to invest in the development of small risk markets.
- With little to no access to formal insurance mechanisms for disasters, the poor are forced to self-insure, depleting their savings when disaster strikes. Reliance on government or donor assistance is often inadequate, as this support can be ad hoc, poorly targeted, and slow in disbursing. As emerging economies grow, and low-income households, farmers and businesses become more creditworthy, insurance can encourage investments in productive assets, higher-risk/higher-yield crop and disaster prevention. By covering sudden-onset events, such as earthquakes, floods, and cyclones, as well as slow-onset events, such as droughts, micro-disaster insurance can help to break this cycle by providing households and farmers with rapid access to post-disaster liquidity, thus protecting their livelihoods and providing for reconstruction.
- Primary insurers at the country level play a key role in most microinsurance schemes, by channelling the risk to commercial markets. Regulatory changes implemented in India over the last several years have increased the incentives for insurance companies to participate in such schemes²¹. Internationally there is also increasing interest from reinsurance companies to develop risk transfer tools against the effects of adverse weather.
- Disasters present a special challenge to microinsurers because of the covariant nature of the risks which require careful diversification and reinsurance to remain solvent. Due to the high costs of capital and reinsurance, it is difficult to offer low cost catastrophe coverage that is affordable to low-income clients. Disaster insurance premiums include the costs of handling many small contracts, distributing the product often to remote areas, as well as assuring sufficient capital to cover dependent claims. These elements combine to make insurance more costly than the purchaser's expected losses from the insured events. Thus, a major dilemma is to offer premiums that can be paid by the very poor in high risk areas. Local, national and international insurers, therefore, face special challenges in ensuring the long-term viability of microinsurance schemes, and developing them as an effective climate and disaster risk management tool for the poor. In the longer-term, climate change raises the additional challenge of insurability decreasing as the magnitude of damages continues to increase.

²¹Arnold, Margaret (2008), The Role of Risk Transfer and Insurance in Disaster Risk Reduction and Climate Change Adaption, Policy Brief for The Commission on Climate Change and Development, March 2008.

- In developing countries, transaction costs can be minimised by offering policies to groups or communities and through established MFIs. The expense of claims handling can be dramatically reduced through index-based instruments. Finally, the high costs of capital reserves and reinsurance can be lowered through government or donor provision of reinsurance.
- However, critics point out that disaster assistance can discourage governments and individuals from taking advantage of the high returns of preventive action. An added dimension is the “moral hazard” problem, which asserts that households and businesses are prone to take less precaution if their assets or livelihoods are insured. Sceptics warn that insurance may conversely present disincentives to taking proactive risk-reduction measures.
- The challenge of linking insurance to prevention underlines the importance of integrating microinsurance into risk management programs that combine regulatory and citizen oversight to assure incentives and effective regulation. Although a number of important initiatives²² have been undertaken in recent years to promote national programmes for the protection of public assets and catastrophe insurance pools for homeowners, these mechanisms do not reach the poor. Nevertheless these programmes demonstrate some innovative ideas and creative alliances to deal with market failures and other issues. Safety nets for high-risk poor communities will not work without public-private partnerships, as no one partner can operate without the assistance of the others: highly exposed and fiscally unstable developing country governments cannot fully absorb the risks; informal community solidarity and family systems are overtaxed by large covariant losses; and private insurers cannot offer low-cost policies, given the need for expensive reinsurance and large uncertainties in the projected loss estimates.
- *Emergence of institutions better suited to the needs of lower income households or smaller firms:* it is also important to ensure that other complex regulatory standards and requirements do not inadvertently penalise small policyholders and hurt access by failing to make full allowance for the potential for a portfolio of small and medium enterprises for risk pooling. Rigid chartering rules, high capital adequacy requirements, very strict accounting requirements may reduce the ability of institutions to serve the poorer segments of the society.
- Although far from an exclusive list, the following Table 2 provides some actual examples of cases where mutuals and cooperatives have been instrumental in enhancing access to insurance services.

²²A number of examples come from World Bank-led efforts, including the provision of technical support to Mexico in issuing a cat bond, contingency financing arrangements in Colombia, the Caribbean Catastrophe Risk Insurance Facility (CCRIF, the first regional institution which allows the eighteen participating countries to pool their risk and save on individual premium payments), and the Turkish Catastrophe Insurance Pool (TCIP, a mandatory earthquake insurance pool for homeowners) where the World Bank reinsures a layer of risk for the pool.

Table 2: Key approaches for management of microinsurance programme involving mutuals, cooperatives and community based organisations

Function	Country	Description
As distributors	India	The Microinsurance agent regulations brought out by the Insurance Regulatory And Development Authority (India) have recognised self-help groups to tie-up with insurer not only for collection of proposal forms but also for collection and remittance of premium and policy administration service. Local handling of marketing and sales lowers transaction costs.
Supporting premium collection	Philippines India	Remittances of funds from Filipino workers overseas have been an important source of support to local families and the wider economy. Church groups providing support to communities of foreign workers have worked with insurers in the Philippines to collect premiums on insurance products during their regular community meetings and remitting them collectively to insurers, reducing cost and improving the efficiency of these contributions.
As part of the claims assessment process	India	The Microinsurance agent regulations brought out by the Insurance Regulatory And Development Authority (India) have allowed self-help groups to assist in the claims settlement process.
As the owners of a group insurance product	Sri Lanka Philippines Guinea	Savings and credit cooperatives (SACCOs) are able to reduce transaction costs and offer group insurance coverage tailored to the needs of their members by negotiating lower premium rates than what would otherwise be offered by insurers. This fact is also an example of motivating collective risk reduction through individual action and has implications for influencing the quality and cost of services provided to low-income segments.
As part of the process of understanding customers	India Nepal South Africa	Mutual societies are active in information dissemination of formal social protection and poverty alleviation programs. They also ensure registration of all eligible citizens and monitoring by civil society.
As part of the process of educating customers	Ethiopia Zambia Brazil India	Community groups along with MFIs, perform needs analyses and awareness campaigns in a variety of ways, including focus group meetings, street plays, and inviting microinsurance claims recipients to tell others about the benefits of insurance. This enhances awareness of insurance and encourages collective action and risk reduction activities by all group members.
As providers of complimentary services	Brazil India Philippines	Many credit cooperatives complement their financial services offering, namely savings and loans, by cross selling life and non life insurance. Sometimes this may involve non –financial products too.
As carriers of insurance risk	West Africa	The UEMOA legislation, brought out by the Economic Community of West African States (ECOWAS) comprising of 8 countries, has developed a multinational framework which allows mutual social health organisation to underwrite health insurance and simplified accounting requirements have been prescribed for such providers.

Adapted from Draft Issues Paper on the Role, Regulation and Supervision of Mutuals, Cooperatives and other Community-based organisations in increasing access to insurance markets, November 2009.

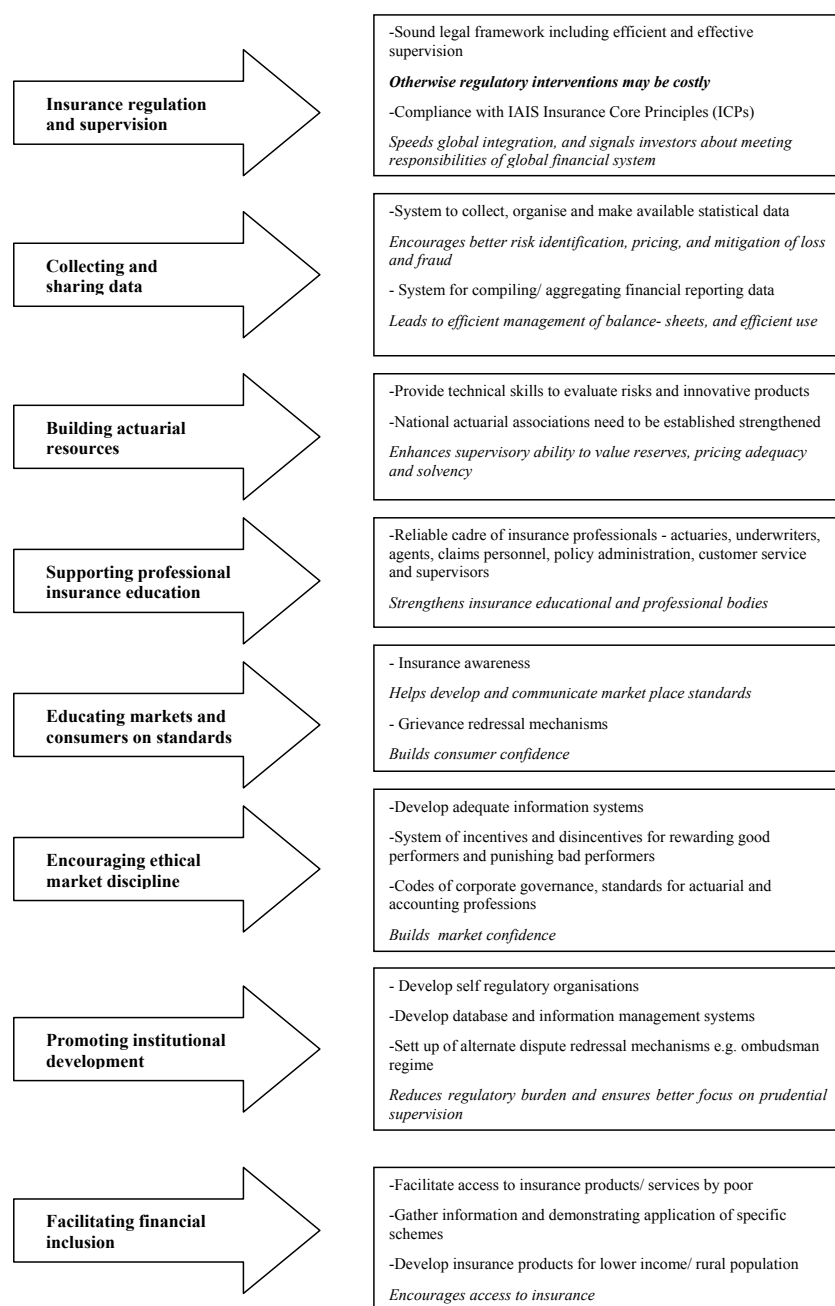
The key ingredients for improving access to insurance are summarised in Fig.2 along with suggestions on how such investment might best be organised in emerging markets.

In order to improve the environment for more profitable investments at the low end of the financial market greater attention is needed to improve rural infrastructure, markets, and pro-poor technology. In most developing countries, people in rural areas face high risks and transaction costs because of lack of basic infrastructures. The potential service providers also face similarly high risks and transaction costs in reaching rural people. A strategy aimed at opening up new economic opportunities in these areas will reduce clients' transaction costs and risks associated not only with investments but also with using insurance services provided by formal sources which, in turn, will increase incentives to seek insurance services of formal sources. In addition, the same strategy will improve suppliers' incentives to expand the services because it will reduce their risks and transaction costs.

Prioritising different reform efforts is important and recent research also suggests that in low income countries improving information infrastructures seems to yield more immediate access benefits than legal reforms. A robust market needs a sound system to collect, organise, and make available detailed data on losses and exposures. Due to lack of adequate data, insurers tend to manage their balance sheets (amounts of reserves and investment selection) inefficiently, causing inefficiency in the use of capital and thereby raising the cost of insurance. Without sufficient data to estimate losses more precisely, insurers either set prices too low and eventually run the risk of becoming insolvent or set prices too high and attract few customers. An industry-wide system of comprehensive data collection can also help to mitigate fraud, and reduce the cost of insurance for all. Timely availability of good quality information is also important, since this helps reduce information asymmetries. Governments can play an important role in this process, by encouraging systematic collection of data as part of providing a wider and deeper range of services. They are also important in creating and supporting the legal system needed for conflict resolution and contract enforcement, and strengthening accounting infrastructures to enable financial development. The governments should also take measures to address demand-side constraints.

Microinsurance in general has a strong need for trained specialist staff (loss adjusters and actuaries). For example, livestock insurance, relies on veterinarians for a number of functions such as managing risk, underwriting, loss adjustment and fraud control. To begin building specialist insurance capacity, development agents such as governments, development banks, NGOs and MFIs, need to undertake landscape studies at country level to establish the supply of insurance expertise and develop ways to improve it.

Most emerging insurance markets have minimal input from actuaries and other insurance professionals. In the absence of residual technical skill to



Source: Strategic Approaches to Capacity Building by Arup Chatterjee - 4th International Microinsurance Conference Cartagena, Colombia, 5-7 November 2008

Figure 2: Key policy ingredients for improving access to insurance

evaluate risks and adapt products to local conditions, markets cannot innovate. Moreover, many do not have actuaries within the supervisory agency, which weakens the supervisor's ability to monitor reserves, pricing adequacy, and solvency. Supporting professional insurance and actuarial education and training, in a broad range of topics and adapting them to local environments are worth considering.

Uptake of insurance depends on consumer confidence. Self-regulatory organisations can play a role in shaping the expectations of consumers regarding the benefits of insurance, responsible sales practices, the products offered, fair treatment in claims, ways to control losses, and other aspects of insurance transactions through mandatory or voluntary disclosures, policy statements and codes. In some markets, insurers also offer a grievance redressal procedure to resolve consumer complaints.

While financial development should normally be expected to have a disproportionately beneficial impact on the poor and may promote growth, in reality, the relationship between financial development and income distribution may be non-linear, with adverse effects at early stages, but a positive impact after a certain point²³. At the outset, expanding access to finance may actually increase inequality, as new entrepreneurs who manage to finance their investments will experience a surge in their incomes. Only after labour and product market spill-over effects start becoming significant, increasing employment opportunities and wages of the poor, we would see a reduction in income inequality. In the long run, with aggregate economic growth, more people can afford to buy financial services; a better functioning financial system makes it accessible to a wider segments of the population²⁴. Hence, making financial development a priority makes good sense for policymakers.

5 ROLE OF REGULATION AND SUPERVISION

Regulation has a tremendous effect on the competitive landscape. Experience shows that the greatest strategic challenge for expanding access to insurance is to make providers of any form of insurance, including microinsurance, comply with sound insurance regulatory principles. Even though broadening and diversifying the customer base is also one of the most important steps towards expanding access to insurance in emerging markets along with helping in designing and establishing enabling market access reforms, the importance of effective regulation and supervision for safeguarding the interests of poor customers by providing adequate customer protection cannot be undermined.

²³See Demircuc-Kunt and Levine (2007), Finance and economic opportunity, World Bank Working Paper for an extensive review of the theoretical literature in this area.

²⁴Although success stories of microinsurance are well documented in the practitioner literature, a rigorous evaluation requires careful distinction between those changes that can clearly be attributed to financial access from those that might have happened anyway or are due to other changes in the environment in which microfinance clients operate.

Table 3: Insurance Core Principles

Conditions for effective insurance supervision	Prudential requirements
ICP 1 Conditions for effective insurance supervision	ICP 18 Risk assessment and management ICP 19 Insurance activity ICP 20 Liabilities ICP 21 Investments ICP 22 Derivatives and similar commitments ICP 23 Capital adequacy and solvency
The supervisory system	Markets and consumers
ICP 2 Supervisory objectives ICP 3 Supervisory authority ICP 4 Supervisory process ICP 5 Supervisory cooperation and information sharing	ICP 24 Intermediaries ICP 25 Consumer protection ICP 26 Information, disclosure and transparency toward the market ICP 27 Fraud
The supervised entity	Anti-money-laundering activities, combating the financing of terrorism
ICP 6 Licensing ICP 7 Suitability of persons ICP 8 Changes in control and portfolio transfers ICP 9 Corporate governance ICP 10 Internal control	ICP 28 Anti-money-laundering activities, combating the financing of terrorism (AML/CFT)
Ongoing supervision	Markets and consumers
ICP 11 Market analysis ICP 12 Reporting to supervisors and off-site monitoring ICP 13 On-site inspection ICP 14 Preventive and corrective measures ICP 15 Enforcement or sanctions ICP 16 Winding-up and exit from the market ICP 17 Group-wide supervision	ICP 24 Intermediaries ICP 25 Consumer protection ICP 26 Information, disclosure, and transparency toward the market ICP 27 Fraud

Source: IAIS. (2003) *Insurance Core Principles and Methodology*. IAIS, Basel

While recognising the diversity of insurance activities and markets, from the regulatory stand point, the focus is primarily on consistent application of the principle of proportionality based on the nature, scale and complexity of risk which an insurer may be exposed to. There is a need to make the regulatory framework robust, introduce risk-based prudential regulation, remove non-prudential barriers to entry and investment, nurture a vibrant insurance culture, implement international standards and practices (including documentation), improve the human capital of both local market participants and regulators, and promote efficient and transparent markets.

The primary source for guidance in these matters is the International Association of Insurance Supervisors (IAIS). The IAIS issues global insurance principles, standards and guidance papers, provide training and support on issues related to insurance supervision. The Financial Stability Board has recognised the IAIS as the standard-setting body for insurance supervision and included the IAIS' Insurance Core Principles (ICPs) of insurance supervision among the 12 key standards for financial stability.

The paper on *Issues in Regulation and Supervision of Microinsurance*, jointly drafted by the IAIS and the CGAP Working Group on Microinsurance²⁵, also recognises that the ICPs (Table 3) are the foundation of all insurance supervision, including microinsurance. For improving access to the insurance market, a proper understanding of the relevance of ICPs is important for developing and assessing enabling regulatory frameworks. Such assessments are also useful for speeding the integration of emerging market jurisdictions with the global economy. Technical assistance that transfers the expertise and lessons learnt from more mature to emerging insurance markets and also amongst them is also seen as an essential component of enhancing understanding of the key risks and challenges in managing them.

6 CRITERIA FOR ASSESSING AND DESIGNING STRATEGIES FOR EXPANDING ACCESS - EXAMPLES OF ENABLING REGULATORY APPROACHES

The emerging evidence based on country experience, while admittedly not comprehensive, suggests that supervisors can directly influence the development of microinsurance by aligning regulatory and supervisory practices to the specific characteristics of their jurisdictions (See Table 4). The diversity in approaches that different countries use and global experience indicates that the following measures are vital to trigger a more powerful process toward improved access to insurance. It is reflected today in the form of recognition of alternate distribution channels, incentive structures, payment mechanisms, different forms of insurers, innovations in product design, and tax incentives. The overriding objective is, of course, protecting customers against a risk of an insurer to meet its obligations. This has led to improvements in market

²⁵Name changed to Microinsurance Network in 2008.

efficiencies and has allowed inclusion of low-income households hitherto unable to access or afford insurance.

It is evident from Table 4 that the purpose of developing microinsurance is to extend access to insurance services that are appropriate to the needs of the low income population and that are provided by regulated providers. In general, the regulators of microinsurance have been found to be pursuing one or more of the following objectives:

- facilitating both outreach and formalisation, ensuring a level playing field for big and small players where they seek to serve the same markets;
- promoting products, providers and distribution channels that will trigger the favourable introduction of low income clients to insurance and its benefits;
- adopting risk-based regulation by tailoring regulation to the distinctive risks posed by microinsurance products and intermediation; and
- minimising the regulatory burden on underwriting and intermediation.

The microinsurance sector is expanding rapidly not only in size but also in the range and complexity of products offered (e.g., index-linked insurance products). The introduction of a risk-based capital regime will promote orderly and sustainable growth through effective prudential oversight. It would also necessitate the initiation of concomitant steps to strengthen the capacity of insurance supervisors.

Broad access to financial services implies an absence of price and non-price barriers. It is difficult to define and measure because there are many dimensions of access, including availability, cost, and range and quality of services being offered. For supporting the development of microinsurance policymakers, regulators and supervisors and investors need to understand and make use of the criteria for assessing and designing strategies for expanding access which are summarised in Table 5.

It is necessary to clearly recognise that eliminating financial exclusion as early as possible in a sustainable manner needs to be given central importance. Building inclusive financial systems that serve the majority should be made a central goal of every developing country's financial sector policy objective.

In pursuing this goal, reasons are advanced - often for good political economy reasons - to broaden the access agenda to include all unserved and underserved people rather than just low-income people, for providing market-based insurance services or microinsurance. It is argued that this will help in enlisting powerful support of the middle class in the common fight for access and will result in unleashing innovative responses to penetrate the bottom of the pyramid market. To carry forward this argument, governments need to recognise that the private sector formal financial institutions have a major role to play in serving this market. In the process, the links between the formal

Table 4: Some examples of regulatory adaptations for enabling expansion of access

Brazil	<p>The Superintendencia de Seguros Privados (SUSEP) has developed microinsurance products for car and life insurance and promoted sector dialogue on microinsurance, both of which motivated the industry to become interested in the low-income market.</p> <p>The parallel tax relief for life insurance has also added to expansion in microinsurance provision. The supervisor, for promoting access to insurance has set up a Microinsurance Commission. Besides defining microinsurance, the Commission has recommended: (i) differentiated treatment for microinsurance and separate license category for underwriting microinsurance; (ii) specific consumer protection norms via product regulation; (iii) the introduction of a microinsurance broker – with lower training requirements; and, (iv) the introduction of a microinsurance correspondent – to regulate the relationship between insurers, insurance consumers and intermediaries.</p>
China	<p>The China Insurance Regulatory Commission is examining the development of a tailor-made, multi-level rural insurance system with wide coverage. The development of various customised property insurance, life insurance and other insurance products is being encouraged through pilots in 19 provinces with cooperation between the government and insurance companies.</p>
India	<p>Insurance Regulatory and Development Authority (IRDA), with its Microinsurance regulations, has relaxed agent regulations, promoted linkages between regulated insurers and nongovernmental organisations (NGOs), introduced product features, and allowed composite insurance services (however, with different risk carriers behind the service).</p>
Kenya	<p>The Insurance Regulatory Authority is in the process of amending the Insurance Act to develop a policy which will be used as a guideline to develop microinsurance in Kenya.</p>
Malaysia	<p>The 2010 budget speech of the Prime Minister states that the government will support insurance and the <i>takaful</i> industry's initiatives to develop Microinsurance products so that the low income group and small businesses continue to benefit from better financial protection.</p> <p>Takaful is the Islamic counterpart of conventional insurance, and exists in both life (or “family”) and general forms. It is based on concepts of mutual solidarity, and a typical Takaful undertaking will consist of a two-tier structure that is a hybrid of a mutual and a commercial form of company. In addition, all the functions of a Takaful undertaking should conform fully to Islamic law. [Source: IAIS Issues paper on issues in regulation and supervision of Takaful, October 2006]</p>
Peru	<p>The supervisor has issued a microinsurance regulation for the insurance industry and its agents e.g. microfinance institutions, trade unions, and others. The new rule includes a definition for microinsurance, requirements for simple products, for group and individual insurance, for claims handling, and for simplified reporting to the supervisor.</p>

Table 4: Some examples of regulatory adaptations for enabling expansion of access (continued)

Philippines	The Insurance Commission has adapted its regulations of Mutual Benefit Associations (MBA), which are recognised under the insurance law, by creating a new form (or tier) of “Microinsurance (MI) MBAs” with specific rules. The rules include simple products, stipulated requirements to comply with performance standards, and defined eligibility criteria for microinsurance products based on the benchmark of the minimum daily wage for non-agricultural labourers. Compared to traditional MBAs, MI-MBAs are subject to lower entry requirements such as a lower guarantee fund.
Mexico	Following the recent ruling on amendments to the omnibus tax bill on claims payment, insurance companies will be able to pay claims through order checks without them bearing the legend “to be credited to the designated beneficiary’s account”. Claims may be paid through wire transfers or transfers to Popular Savings and Loan Entities authorised to operate as such by the National Banking and Securities Commission.
Senegal and Mali	A regulation on micro health insurance has been adopted. From 2004 to 2006, in a participatory process, eight UEMOA (Union économique Et Monétaire Ouest Africaine) West-African jurisdictions were engaged to draw up legislation on mutual social health organisations. The regulation aims at taking into consideration the specificity of those institutions (that are private, non-profit, based on solidarity, covering a social risk). The rules, in particular prudential, have been drafted with the aim of protecting the individual consumers and of not putting too much burden on still new and fragile institutions
South Africa	The South African National Treasury has released a discussion paper setting out proposals for a new regulatory framework for companies offering insurance products to low-income earners. The proposals relate to the provision of micro-insurance which is any insurance product targeted at, or accessible to, low-income households. The proposals should make it easier for insurers to service this market focusing on reducing regulatory costs. The recommendations include a dedicated micro-insurance license which would also be available to regular insurance providers wishing to enter this market in addition to their normal books of business.

and informal financial systems will strengthen, allowing the poor to migrate upward. However, abundant care needs to be exercised at all times to ensure that there is no market drift towards the wealthier segment of the population at the expense of the low income population who lack the political clout to demand better service. This recognition is fundamental to the potential solutions and the seriousness with which they are likely to be pursued and executed.

Insurance supervisors in most developing countries had been treating access to insurance problems with benign neglect. This attitude has now begun to change. A number of insurance supervisors now evince more interest in financial inclusion. Since financial inclusion can best be achieved when it is mainstreamed into the broader financial system under competitive conditions, improving access to insurance should be made an explicit responsibility of the

Table 5: Criteria for assessing and designing strategies for expanding access

Criteria	Rationale
External	
Proportion of population in low income categories	<i>Microinsurance is appropriate where a substantial proportion of population falls into low income categories</i> <i>Limited disposable income for insurances and a high opportunity cost</i>
Low penetration of insurance and Microinsurance	<i>Low take up of microinsurance</i>
Proportion of informal sector to total microinsurance market	<i>Larger proportion indicates high levels of informality</i> <i>In the absence of formal insurance provision, low income communities develop informal pooling mechanisms to cope with risk events</i> <i>Indicates needs in low income market segment not being met by the formal market</i> <i>Reveals regulatory and other impediments to formalising their operations</i>
Policy and regulatory	
Financial inclusion policy	
- Push interventions	<i>Financial inclusion policy can push microinsurance development</i> <i>Regulators and supervisors need a clear mandate to support market development and respond with regulatory adjustments</i>
- Pull interventions	<i>Long term growth and scale depends on the financial viability of selling products in given markets</i>
Regulatory approach	
- Proactive vs. reactive	<i>Proactive and inclusionary regulatory approaches more supportive than reactive and exclusionary approaches</i>
- Facilitative vs. exclusionary	<i>Regulatory uncertainty undermines microinsurance development</i>
Regulatory burden	
- Impact of compliance cost	<i>Application of proportionality criteria ensures regulations are tailored to risks, complexity and size of the microinsurance operations</i>
- Impact of exclusions	
- Regulatory response	<i>Low burden (need for special dispensation is reduced)</i> <i>High burden with limited capacity incentivises informality (need for special intervention)</i>
Microinsurance definition	
- Using low risk features to define microinsurance may not be most appropriate	<i>Weak definitions result in regulatory avoidance and arbitrage</i> <i>Tailor regulation to the risk characteristic of microinsurance</i>

Table 5: Criteria for assessing and designing strategies for expanding access (continued)

Criteria	Rationale
Policy and regulatory	
Licensing and prudential requirements	
- High regulatory barriers on entry and formalisation and restrictions on institutional types	<i>Supports informality by excluding potentially legitimate providers</i> <i>Facilitates entry, formalisation and growth while still maintaining prudential standards</i>
- Tiering and graduation	<i>Allows regulators and supervisors to leverage non traditional institutional types</i>
- Unlevel playing fields	<i>Introduces bias against provision by potentially legitimate players. Entities underwriting the same kind of risk should face similar regulatory burdens</i>
Sound corporate governance	
- Institutions underwriting microinsurance should be subject to corporate governance, accounting and public disclosure standards	<i>Weak governance implies higher regulatory effort to ensure compliance</i> <i>Where regulator has implemented measures to improve governance structures rather than excluding such institutions, a whole category of entities were able to support market development</i>
Market conduct regulations	
- Determine extent to which current insurance regulatory burden inhibits the underwriting and/or distribution of insurance products appropriate for low income segments	<i>Define a microinsurance product category with lower risk (including policy contract duration, benefit cut-off level and risk events that are included and simplicity of terms) that will justify reduced prudential and market conduct regulation</i> <i>Catalyse development of simplified terms and conditions for Microinsurance</i>
Intermediaries	<i>Allow multiple categories of intermediaries and innovative distribution channels for ensuring low cost distribution</i> <i>Avoid prescriptive regulation in order to accommodate changing distribution models</i> <i>Avoid remuneration caps on intermediation process and require microinsurers to disclose remuneration levels to supervisor</i>
Technology	<i>Removes barriers for geographic expansion</i> <i>Reduces transaction cost for distribution and administration</i> <i>Promotes scalability and sustainability</i> <i>Offers flexibility to offer diverse financial services that meet local needs</i>

Table 5: Criteria for assessing and designing strategies for expanding access (continued)

Criteria	Rationale
Policy and regulatory	
Consumer protection	
- Promoting insurance awareness	<i>Promoting insurance literacy and carrying out awareness campaigns</i> <i>Simplified procedures for underwriting management and claims administration</i>
- Grievance Redressal	<i>There must be ease of consumer recourse to lodge a complaint and/or channel enquiries</i>
Supervision and enforcement	<i>Base regulation and supervision strategy on a careful assessment of the areas of risk facing the consumer and the industry</i> <i>Complement strategy with careful monitoring to ensure supervisory forbearance or prioritisation can be adapted to changing circumstances and risk experience</i> <i>Use market capacity to support self regulation in low-risk areas</i>
Market environment	
Reliance on compulsory credit based insurance	<i>Large reliance indicates microcredit is an important driver of growth</i> <i>Microfinance rating agencies have an important role for formalising informal insurance operations. They reduce ratings of microfinance institutions with self insured portfolios</i>
Reinsurance	
- Enable microinsurance providers to access reinsurance	<i>Reinsurance protection facilitates introduction of innovative products and microinsurance schemes</i>

Adapted from presentation by Hennie Bester and Doubell Chamberlain Emerging Guidelines for Developing and Regulating Microinsurance, at Conference on integrating Microinsurance into the Financial System - Regulatory, Supervisory and Policy Issues, Basel, Switzerland, 16-18 September 2008.

insurance supervisor of each country.

The governments, including insurance regulators, have to take a number of concrete actions to translate the goal of financial inclusion into a reality. Governments have to define the responsibility of the insurance regulator in fulfilling this role and executing it in a manner that will provide the necessary space and incentives for private sector institutions, including social investors, to play an increasing role in providing insurance services to the low income population.

The governments can further support the access agenda by focussing on a few key areas:

Creating an enabling environment

Social and physical distance from the formal financial system is one amongst many different reasons why the poor do not have access to insurance services. Supervisors need to find a balance that promotes inclusion, i.e. extending insurance to the low-income market while protecting their investments and confidence of the insurance providers, without taking on undue burden.

Financial institutions are likely to be in richer neighbourhoods and insurance agents may not be near the poor. Specifically for access to insurance services, dealing with small transactions is costly for the insurance companies and ceilings on sum assured and remuneration that can be charged backfire and limit access to the poor even more. While the potential of offering different products to satisfy certain risk management needs to be recognised, the institutional form is not that important as long as one can get products of value to the market effectively, including use of innovative technology. Allowing operational autonomy for the private sector service providers, including NGOs, provides an opportunity to make sound business decisions and adopt commercial practices.

The financial institutions established by the private-sector will have to develop more robust business models to deliver financial services to the low-end markets. They may increasingly require partnerships and alliances with a range of financial and non-financial institutions, including limited service non-government MFIs. They need to figure out how emerging new technology can be integrated into their service delivery models to penetrate this market and stay competitive. To ease constraints on expanding supply of services, insurance supervisors should continuously examine how regulatory systems can facilitate financial inclusion²⁶.

²⁶In Colombia, microinsurance has benefited from an enabling regulatory environment. The regulator does not set any price controls on premiums or commissions. In addition, the regulator supports the distribution of microinsurance products through innovative channels like utility companies. Smart card technology (e.g. electronic debit cards) is allowed by the regulator for collection of premium payments. The supportive norms have helped in

Developing financial infrastructure

A basic prerequisite for financial access is the development of financial infrastructure. This includes among other things, clearing systems for securities and payments (both electronic and paper), credit bureaus and tax collection systems. A highly automated tax collection system for instance, would increase revenues for the government and, most importantly, would let lenders make credit decisions. Using this data to create a credit bureau would unleash entrepreneurial forces at the micro level that are stifled because of high interest loans, and cost disadvantages. Just as poor roads hamper an economy, friction in financial infrastructure exposes the economy to poor compliance, higher exposure to fraud, increased costs and barriers to entrepreneurship.

Leveraging on information, communication, and technology (ICT)

At a fundamental level, any good financial infrastructure is built upon the power of developed ICT. If ICT are the roads, bridges and tunnels of finance, financial infrastructure is the vehicle that moves the money. Financial infrastructure can significantly reduce both risks and transaction costs of providing a range of financial services in various ways. Financial infrastructure, for example, can reduce information barriers and asymmetries, induce entry of new institutions into the industry, induce financial technological innovations, and promote greater competition. The financial infrastructure must be built upon existing infrastructures. To provide proper incentives, funds or cost advantages must be made available to companies that develop new technologies in the financial inclusion space. Providing legal and regulatory space for new institutional modalities to emerge and thrive needs to be given greater attention than in the past²⁷. Improvements to regulatory systems need to be done within a forward-looking framework where technological innovations in information and communication tend to increasingly dismantle the industry boundaries and make it possible for non-financial institutions to become major players in

reducing the cost of distribution and products have become easily accessible and affordable to low income clients.

²⁷Mobile Banking, also known as M-banking or SMS banking (a new form of electronic commerce engendered by the growth of wireless communications in Africa), is becoming the preferred mode of delivering financial services to the unbanked. Opinion is sharply divided on who should regulate M-money services. Whereas the central bank argues that regulation of money supply is its sole preserve with telecom operators only serving as channels of distribution, the telecom regulator argues that the responsibility of regulating M-money services rests with it as the services provided are akin to money transfer schemes and this does not warrant a banking licence because they do not take deposits. The other issues involve customer education, social exploitation and the KYC regulations. An integrated regulatory regime would be the most appropriate, with the telecom regulator ensuring technical integrity of mobile payment platforms and the Central Bank holding the line on financial and prudential matters. What are needed, however, are clear guidelines on consumer protection and competition with the authorities ensuring that the state of mutual dependence between the mobile network operators and the financial service providers benefits the end customer.

providing a range of financial services which are traditionally considered the domain of pure financial institutions.

Initiating legal reforms

Many regulatory and supervisory frameworks, often inadvertently, pose barriers to entry, formalisation, and growth of the sector. In general, supervisors lack microinsurance information and experience, and they are unaware of alternative legal and regulatory regimes that can encourage insurance for the poor. Few jurisdictions have adapted their laws to promote microinsurance, and barriers to forming an inclusive market remain. These include high entry norms such as capital or solvency requirements and complex reporting and disclosure conditions that impede the formalisation of an informal programme. Other obstacles include restrictions in the form of stringent licensing requirements for alternative delivery channels, or costly product regulations that prevent commercial insurers from going down market. A rigorous market analysis and comprehensive evaluation on the impact of regulation is important before embarking on legal reforms to promote an inclusive insurance market.

Often important legal reforms need to be carried out outside the financial sector. The need for coherence and integration in regulation has become an increasingly important issue. In an environment where new regulators are established and the role of existing regulators is reviewed with state monopolies being restructured and privatised, there is a growing recognition that a more integrated policy framework is necessary to promote transparent, consistent and coherent business regulation. Despite attempts at greater coordination, the regulatory framework in many emerging market economies remains fragmented and contradictory. The need for harmonisation and coherence has become more critical for promoting inclusive insurance markets, given areas of overlap²⁸. Moreover, regulations whether sectoral or economy-wide, require a range of expertise and skills, which may not necessarily be found in a single regulator. Different sectoral regulators need to discuss issues of common interest to develop broader solutions to problems affecting all sectors.

Introducing reform programs to transform state-owned financial institutions

In most countries, state owned financial institutions have low outreach, provide poor quality services, are full of rent seekers, and consume large amounts of public funds to sustain their operations. In many instances, state owned financial institutions and state sponsored programmes have been blamed for distorting the market by promoting politically motivated programmes.

²⁸In South Africa, a large burial society needs to have a legal personality (registered with the Department of Trade and Industry), be registered as an insurer (financial services regulator), may be supervised by an apex or self-regulatory body; and if providing an in-kind benefit (funeral services), be regulated by the Department of Health.

However, they do offer the potential to become demand-driven, sustainable institutions providing access to an increasing segment of the underserved and unserved population. This potential must be fully harnessed through appropriate reform programmes to serve low-income groups. Such efforts should encompass postal savings institutions and other formal insurers, in addition to firms offering agricultural and rural insurance which do not function effectively and efficiently nor operate sustainably.

Insurance awareness and financial literacy

Programmes to increase financial literacy and insurance awareness among different categories of excluded people are an integral part of any financial inclusion strategy. They are not just about imparting financial knowledge and information, but also changing behaviour. Absence of financial awareness and literacy is one of the main reasons behind lack of access to financial products or failure to use them even when they are available. Microinsurance also involves education as much as it provides insurance coverage. The poor may not have anybody in their social network who knows the various services that are available to them. Lack of education may make it difficult for them to overcome problems with filling out a proposal form for insurance and even report a claim, and the small number of transactions they are likely to undertake may make the insurers or insurance intermediaries think it is not worthwhile to help them. The insurance supervisor as well as the insurance industry have an important role to play in fulfilling this task.

7 CONCLUSION

Financial inclusion is a complex issue. Although important advances have been made in expanding access, a significant section of the population in the emerging market economies continue to remain excluded from access to many financial services, including insurance. The implementation of policy and regulations requires tempering and tailoring advice to individual country circumstances. The challenge is to align private incentives with public interest without taxing or subsidising private risk-taking. This task is becoming increasingly complex for all countries in an ever more integrated and globalised financial system.

For most emerging economies, the existing reform agenda – developing institutional and legal underpinnings for the financial system and promoting financial access through insurance and microinsurance – remains valid and should be outlined as an integral part of financial sector policy. Effective governments are needed to build the legal, institutional and regulatory framework without which market reforms can go badly wrong at great cost – particularly to the poor. While excessive or cumbersome regulatory barriers stifle incentives and discourage investment, effective regulation remains

essential. It is particularly challenging for low-income countries, where the underlying legal and information infrastructure is weak, and achieving minimum efficient scale is difficult.

Policies should encourage competitive provision of insurance services to the low-income households and small firms. By working together with market participants, policymakers and other cross-sector regulators, the broader financial inclusion policy must facilitate provision of insurance services to in an efficient and effective manner not only through supportive legislation and regulations but also the provision of adequate infrastructure. To avoid regulatory arbitrage undermining sustainable access, consistent protection should drive cross-agency regulatory harmonisation.

All the providers of insurance services should be suitably trained and qualified so that they can contribute to offer need-based products, which reflect the risks characteristics of low-income households and small firms, and efficient sales as well as after sales service at an affordable premium in a manner consistent with financial stability and consumer protection. This needs to be complemented through building consumer awareness targeted at the unserved and underserved segments, expansion of professional insurance education and training and by putting in place a mechanism of transparency and adequate disclosure. Creating awareness and developing capacity of regulators, supervisors and policy makers to understand and recognise the unique attributes of microinsurance is of utmost importance.

The regulatory regime should take into account nature, size and complexity of operations. In particular, the prudential regulations should be tailored to the risk characteristic of the insurance service provider. For those characterised by weak financial oversight structures and more volatile economic cycles, it may be useful to adopt capital buffers to complement the macro-prudential regime.²⁹ Market conduct and other regulations in this area (including anti-money laundering and combating the financing of terrorism, AMF/CFT) need to minimise compliance costs while retaining effectiveness in terms of protecting customers against mis-selling. The taxation of financial services should be access-friendly.

The design of any direct government interventions should seek to respect the market-led logic to the extent possible – especially in regard to cost-effectiveness - and to avoid damaging distortions to the functioning of the invisible hand. To facilitate maximum scale through public-private partnership, the design of policies and interventions to increase access should avoid stifling private provision. Some forms of direct government involvement in financial service provision may be justifiable, only in those cases, where it is otherwise difficult to overcome market failures or to deal with incompleteness of private market provision.

²⁹Stephanou Constantinos (2009) The Reform Agenda, Crisis response Note No.2, The World Bank, June 2009.

By the same logic, some permanent element of subsidy can, in some cases, be permissible to foster access. However, the design of subsidies should, where possible, be time-bound and aimed at making institutions and access to self-financing sustainable.

All policies for improving access should have clear and measurable objectives and their effectiveness should be quantitatively monitored with transparent public reporting. In particular, the effectiveness of regulation should be assessed for its impact on access. Governments should therefore ensure collection of sufficient data to allow for the determination of the gaps in access to insurance services that will facilitate private-sector solutions; providing accountability of public policy for monitoring and evaluation of the effectiveness of pro-access policies; and helping build a better, evidence-based understanding of what works in relation to access. In addition, comparing characteristics and performance across countries of various regulatory drivers is something from which supervisors can benefit tremendously.

As the world economy emerges from the current financial crisis, innovation will be critical. A recovering economy, increased global competition, and increased fraud/security threats will demand better solutions. Since technology players are not as limited by the current economic crisis, they will play an important role in jump-starting innovation. Consequently, the challenge and the opportunity for insurance services stakeholders and their regulators will be to work in partnership with technology innovators on customer-enhancing innovations, without sacrificing safety and soundness or risking consumer privacy, security or financial well-being.

Financial inclusion combats poverty by unblocking advancement opportunities for the disadvantaged poor, thereby fostering social inclusion and inclusive socio-economic growth. Broad thrusts for promotion of financial inclusion are unlikely to be very different across national borders, but differences in socio cultural backgrounds may necessarily mean differences in details of specific approaches. There may never be an occasion to call the tasks of financial inclusion and poverty eradication over and done with. Natural or man made disasters can all too often push affected population segments afresh into poverty and exclusion, and in any event, poverty is a relative rather than absolute term in definition or perception; which is why social and financial inclusion figures prominently in policy agenda even of mature developed economies.

*“Those whom you push down will chain you down
Those whom you leave behind will pull you behind
The more you envelope them under darkness of ignorance
The more distant will your own welfare be!”*

From:

“Disgraced” in Gitanjali Rabindranath Tagore (Nobel Laureate in Literature)

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PART II

Life Microinsurance

Microinsurance through Mutual Benefit Associations in the Philippines

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ABSTRACT: Since 2006, six new microinsurance Mutual Benefit Associations (MI-MBAs) have adopted a business model that was tried and tested by CARD Mutual Benefit Association (MBA) over ten years. The business model was a blending of the partner agent approach with that of the mutual insurance provider. This business approach has enabled the six MI-MBAs to insure 109,335 households as of December 2008, each household with four insured individuals. The six MI-MBAs have joined CARD MBA in forming a microinsurance MBA network that insures 3,188,392 individuals in 797,098 households.

New insurance products – credit life, health, optional group life – are at various stages of pilot testing among network members. A pooled catastrophe loss of life re-insurance facility for network members is under negotiation with re-insurance companies.

This paper examines the prospects for continued outreach, viability and sustainability of these microinsurance MBAs, focusing on four key result areas: (1) Meeting the needs and preferences of the market; (2) Influencing the policy environment; (3) Building and sustaining the momentum for change through social entrepreneurship; and (4) Developing capacity to manage and govern microinsurance providers.

KEYWORDS: mutual benefit association, microinsurance market, social entrepreneurship, microinsurance policy, management and governance

LIST OF ACRONYMS

ADJFI MBA	Ad Jesum Foundation Incorporated
ASKI MBA	Ahon Sa Kaharipan, Inc. Mutual Benefit Association
CARD MBA	Center for Agricultural and Rural Development Mutual Benefit Association
CARD NGO	Center for Agricultural and Rural Development Non-government Organization
FICCO	First Community Cooperative Mutual Benefit Association
KSK MBA	Kasagana KA Mutual Benefit Association
MFI	Microfinance Institution
PBC Inc.	People's Bank of Caraga Incorporated
RBTMBA	Rural Bank of Talisayon Mutual Benefit Association
SRCDC	Santo Rosario Credit and Development Cooperative Mutual Benefit Association
SEDPI	Socio-economic Development Program Microfinance Institution
MCPI	Microfinance Council of the Philippines, Inc.

1 BACKGROUND

From 2004 to 2008, the Insurance Commission of the Philippines licensed six microinsurance providers as Mutual Benefit Associations (MBAs) under a landmark circular, IMC 9-2006.¹ These six MBAs were established following a business model developed by the CARD-MBA, another MBA that had been licensed earlier in 1999.² The business model was based on establishing an MBA that had a contractual partner agent arrangement with a microfinance institution or a credit cooperative to facilitate member outreach, collection of premiums, claims settlement and information management.

Together with CARD-MBA, the six licensed MBAs formed a microinsurance network that by December 31, 2008, was providing basic life insurance to 797,098 low-income households, each household with an average of four insured individuals. The development and growth of the network has been supported by the RIMANSI Organization for Asia and the Pacific, a microinsurance resource center that was founded by microfinance institutions in March 2005 to provide technical assistance and business and organizational development support to MFIs that wanted to replicate the CARD MBA business model.³

In addition to outreach potential, the business model followed by the RIMANSI network of microinsurance MBAs shows signs of viability and sustainability. The Insurance Commission continues to annually renew their licenses to operate based on an evaluation of audited financial reports submitted by the MBAs, product viability tests conducted by actuaries and field audits undertaken to assess performance issues. Although all RIMANSI network MBAs presently carry only a basic life insurance product, new products such as credit life, hospitalization and medical reimbursement schemes are in the research, development or pilot stage.

A common catastrophe insurance product is also being developed and negotiated with potential reinsurance partners, principally the National Re-insurance Corporation of the Philippines to cover loss of life across all MBA members in the RIMANSI network in case of natural or manmade disasters.

¹Insurance Memorandum Circular IMC 9-2006, entitled “Microinsurance Regulation and Declaration of Policy Objectives” recognized and defined for the first time the terms and conditions for registering microinsurance providers in the Philippines. These terms and conditions are discussed in Section 4 below.

²CARD MBA was licensed under provisions of the Insurance Code of the Philippines that recognized Mutual Benefit Associations as legitimate insurance providers. Until IMC 9-2006 was issued in 2006, there was no recognition or differentiation of microinsurance. While CARD MBA met the conditions for qualifying as a microinsurance provider, not all MBAs would necessarily do so. Section 2 elaborates on the microinsurance MBA business model that was developed from an analysis of CARD-MBA’s relatively successful growth and development since it started as an informal Members Mutual Fund in 1994.

³RIMANSI Organization for Asia and the Pacific was incorporated by the following microfinance institutions: ASKI, ARDCI, CARD NGO, CARD Bank, CARD MBA, PALFSI, USWAG and KCCDFI.

Table 1: Milestones in the Development of the RIMANSI Network

Milestones	Date
Licensing of CARD MBA	October 29, 1999
Incorporation of RIMANSI, Inc.	March 17, 2005
RBT MBA licensed	September 15, 2006
ASKI MBA licensed	October 6, 2006
Recognition of microinsurance MBAs by Insurance Commission and definition of guarantee fund requirements through IMC 9-2006	October 25, 2006
KSK MBA licensed	April 19, 2007
Ad Jesum MBA licensed	July 27, 2007
FICCO MBA licensed	November 11, 2007
Insurance Commission recognition of SEGUARADO performance indicators	April 30, 2008
SRCDC MBA licensed	August 1, 2008
5 pre-MBAs*	Pending licenses

Source: RIMANSI Internal Memos. 2005 to 2008. Also evidenced by certificates of registration from the Securities and Exchange Commission and licenses to operate from the Insurance Commission.

**As of September 2009, these five have all received their operating licenses from the Insurance Commission*

Table 1 identifies some of the milestones in the development of the RIMANSI network of microinsurance MBAs.

At about the same time in 2006 that it issued Insurance Memorandum Circular IMC 9-2006, the Insurance Commission licensed an initial two microinsurance MBAs. The memorandum circular formalized the then Insurance Commissioner's recognition of the crucial role that microinsurance providers could play in making the industry responsive to the government's poverty alleviation and social protection goals. It was a milestone policy in that it defined a level of capitalization that was attainable by potential microinsurance MBAs. In the following year, the Insurance Commission licensed an additional three microinsurance MBAs to operate in Metro Manila and in Mindanao. In 2008, it licensed a sixth microinsurance MBA. As of December 31, 2008, these MBAs, together with the CARD-MBA, provided life insurance cover to about 3,188,392 individuals through 797,098 policyholders who were members of these MBAs.⁴

⁴As of September 2009, these MBAs provided basic life insurance to 1,041,743 members. Since each member's policy covered the spouse and at least two dependents, the number of individual covered was estimated at 4,166,972.

On April 20, 2008, the Insurance Commission recognized RIMANSI's efforts to establish performance benchmarks for all microinsurance MBAs in its network. The performance indicators, with the acronym SEGURADO, measured solvency, efficiency and earnings, governance quality, understanding by policyholders of their entitlements, roles and responsibilities, risk management effectiveness, affordability and accessibility, development orientation and outreach.

This paper discusses the prospects for continued growth, viability and sustainability of the RIMANSI network for microinsurance MBAs and the factors that underlie these prospects. These prospects are particularly relevant insofar as the network presents an outreach opportunity for providing sustained catastrophe insurance cover to low income individuals who are covered by RIMANSI network MBAs.

The purpose of this paper is to contribute to the international exchange of ideas, experiences, approaches and lessons learned in promoting the practice of microinsurance. The paper identifies the problem of socio-economic vulnerability and the unmet need for viable and sustainable approaches to social protection as the starting points and motivation for concerted action on the part of microfinance practitioners in the Philippines to define and implement a microinsurance MBA business model.

The microinsurance MBA approach cannot be a panacea even for current MBA members. Rather, the microinsurance MBA business model continues to evolve – through business planning, the implementation of improvements and performance evaluation – in response to its opportunity-threat environment towards its purpose of providing progressively better microinsurance protection for more low-income families. The microinsurance MBA approach therefore claims neither to have all the answers nor even to have asked all the questions.

Another objective in presenting the status and situation of microinsurance MBAs in the Philippines is to stimulate constructive discussion around the performance and potentials of the business model.

The paper was written on the author's own initiative rather than part of his contractual and paid duties and responsibilities as external consultant to RIMANSI for business and organizational development. It was based on direct observation and participation by the author in the business and organizational development issues that were encountered in implementing the MI-MBA business model with RIMANSI. It was also based on analysis of audited financial statements submitted to the Insurance Commission as well as on market research studies and external evaluations commissioned by RIMANSI focusing on governance and management issues.

The author's viewpoint might be construed as being not completely disinterested in the results of his support to the RIMANSI network. It is nevertheless offered as part of a practice based process of understanding the factors that

hinder and facilitate the effectiveness of a microinsurance MBA business model.

Indeed, persons and institutions directly involved in change efforts addressing the problem of socio-economic vulnerability experience firsthand the forces that hinder change and may derive understanding, learning and insight on how to overcome hindering factors. Similarly, the factors that promote successful change can be validly identified through the trial and evaluation processes that are part of business and organizational development.⁵

The initiatives, issues and challenges that seven MI-MBAs that make up the RIMANSI MBA network have encountered in the course of their venture into microinsurance as a social enterprise⁶ are presented here in terms of the felt need for insurance protection and the business model that has been implemented in partnership with microfinance institutions to address this need.

When the proposal to venture into a microinsurance MBA was first presented in November, 2004 to leaders in the microfinance and cooperatives sectors the following questions appeared to be of paramount concern among participants:

- Would microfinance clients or co-op members accept microinsurance and membership in an MBA?
- How would we market a new microinsurance product to clients/members?
- What would be the legal requirements and implications of establishing a microinsurance MBA?
- Would we be able to govern and manage microinsurance MBAs in a viable and self-sustaining manner?

These concerns were the basis for focusing on several key result areas that needed to be addressed in order to promote the microinsurance MBA business model:

- Meeting the needs and preferences of the market
- Influencing the policy environment
- Building and sustaining the momentum for change through social entrepreneurship
- Developing professional capacity and competent providers

These key result areas are discussed in the following sections of this paper:

⁵In one of his papers, Schein makes a point by entitling Section Two as “You Cannot Understand a System Until You Try to Change It:...” He goes on to summarize his views on the interrelationship of diagnosis and intervention as part of his discussion of how Kurt Lewin situated scientific inquiry and objectivity in the context of human processes. (Schein, 1995)

⁶Used here as enterprises with a primarily social as opposed to a profit driven purpose. Under the Insurance Code of the Philippines, the operating surpluses (i.e., gross revenues less total expenses) of MBAs are added to their indivisible capital.

Section 2 presents and discusses the business model that was tried, tested and shared by CARD MBA for replication and dissemination within the microfinance community of practitioners.

Section 3 elaborates on the microinsurance demand characteristics of clients of microfinance institutions and members of credit cooperatives and the marketing strategies used to attain a critical mass of microinsurance customers.

Section 4 describes the policy environment for microinsurance providers in terms of laws, circulars and policies that govern key areas of operation of MI-MBAs.

Section 5 discusses social entrepreneurship and good governance as parts of the challenge to provide the kind of leadership that will result in the start-up success and longer-term sustainability and competitiveness of fledgling microinsurance providers.

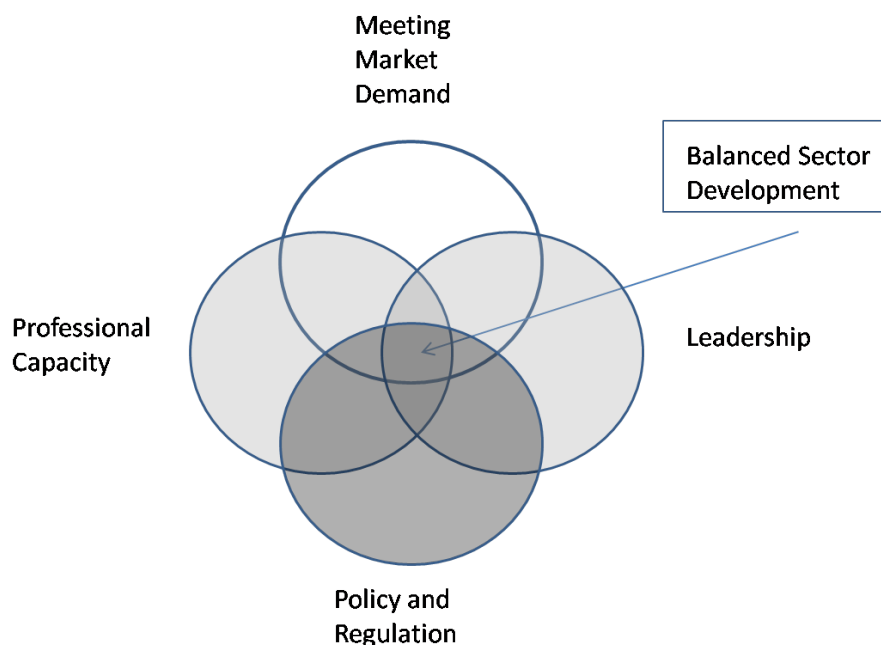
Section 6 identifies areas of operation where MI-MBAs need to build capacity in order to make the business model work effectively, efficiently and competitively.

An over-all assessment of the status of the RIMANSI MI-MBA network is made and the challenges for the immediate future are identified in the concluding section of the paper. Except where otherwise stated, the discussion on the business model and the insurance products of MI-MBAs refers to basic life insurance. The practice of starting with basic life insurance was partly due to following the CARD-MBA example, partly due to the choice of the MBA organizers to start with a relatively manageable product, and partly due to the mandate of the Insurance Commission.⁷

2 THE UNDERLYING BUSINESS MODEL

The impetus for finding better ways of providing better insurance coverage to low-income families is felt at both policy and institutional levels. The vulnerability of the poor and the effects of this vulnerability on maintaining or aggravating poverty have been well discussed by various studies. Cohen and Sebstad (2003) discussed the characteristics of vulnerability and the impact of shocks on low-income families in Tanzania, Uganda, and Kenya. In the Philippines, Reyes (2003) highlighted the contribution of external shocks to chronic and transient poverty. More recently, Dercon and Kirchberger (2008) have provided a comprehensive review of the literature on the implications of risk on poverty. Partly because of the growing awareness of the impact of

⁷Except when otherwise stated, this paper discusses the MBAs in terms of having the one basic life insurance product that the Insurance Commission of the Philippines mandates. The Commission has been flexible in allowing for pension and medical and hospitalization features within the basic life product. Optional products that require separate licensing are permissible.



Source: Information Booklet: SEWA Bank 2008

Figure 1: Key Result Areas in the Development of the Microinsurance Sector

vulnerability, poverty reduction efforts have increasingly turned to ways and means of integrating microinsurance into policy and program responses.

At the institutional level, the prevalence of informal microinsurance schemes within cooperatives and microfinance institutions in the Philippines is documented in a field study of microinsurance in the Philippines that was conducted by Soriano et al. (2002). This prevalence points to an institutional response by MFIs and co-ops to a felt need by clients for some form of insurance scheme. Including CARD, four of the seven MBAs in the RIMANSI network had informal, in-house insurance schemes prior to their formal registration and licensing.

The registration and licensing of informal and in-house insurance has been part of the search for better ways of making quality insurance available to the poor. Clarke and Dercon (2009) caution that formal insurance could crowd out credit through moral hazard and adverse selection as well as undermine the viability of important safety nets provided by informal insurance schemes. However, they also assert the benefits of complementation of informal insurance schemes to address gaps in insurance cover and working with groups – including groups that have in-house mutual benefit schemes – to promote inclusiveness and preserve affiliation to risk pools.

Table 2: Growth of CARD MBA: 1999 to 2008 (U.S. Dollars)

Year	Membership	Claims Paid (000)		Surplus (000)	Total Assets (000)
		Cumulative Claims Payment For the Year	Cumulative		
1999	28,531	22	22	147	148
2001	49,887	76	153	257	630
2003	116,395	246	553	1,032	2,935
2005	135,495	262	1,149	1,748	5,106
2007	469,457	1,382	3,311	4,422	15,067
2008	687,934	2,287	5,597	6,150	26,210

Source: CARD MBA Annual Report. 2008.
Dollar to peso exchange rate of 44.57 was used.

2.1 CARD MBA and the Microinsurance MBA Approach

In 1994, a Member Mutual Fund was started as an in-house program within CARD Bank and CARD NGO after noting a pattern of financial distress experienced by clients because of external shocks. The financial stress and attendant family distress experienced by clients was shared in numerous group meetings that were conducted weekly with CARD loan officers.

Table 2 presents the growth of CARD MBA over a ten-year period from the time that it was licensed in 1999 to December 2008. Membership grew from 28,531 to 687,934 over the period, fueled undoubtedly by the growth of CARD BANK and CARD NGO.⁸ Cumulative claims were US\$5.6 million. Assets grew to US\$26.2 million.

With support from the Canadian Cooperatives Association, an external assessment was made in 2003 of the apparent resilience of CARD MBA's business development strategy (Valdellon and Tan 2003). The study highlighted the business synergies that arose out of the MBA-MFI partnership that translated into lower expense ratios, accurate and efficient claims settlement processes and high member mobilization rates among MFI clients.

2.2 The RIMANSI Microinsurance MBA Approach

The CARD MBA approach was essentially a partner agent arrangement with the microfinance affiliates of CARD MRI, namely CARD Bank and CARD NGO. At the same time it applied the principles and practices of a cooperative, i.e., mutual, approach to insurance.

The relative advantages and disadvantages of the partner-agent approach are

⁸CARD Inc. at that time was made up of the CARD microfinance institutions, i.e., CARD Bank and CARD NGO, as well as the CARD Training Institute. For a current profile refer to <http://www.cardbankph.com/>

Table 3: Growth of Microinsurance Outreach of RIMANSI Partner MBAs

	Date Licensed	Number of members*			
		As of Dec. 31 2006	As of Dec. 31 2007	As of Dec. 31 2008	Individuals Covered**
RBT MBA	Sept. 15, 2006	6,721	12,490	18,528	74,112
ASKI MBA	Oct. 6, 2006	723	13,448	24,042	96,168
KSK MBA	April 19, 2007	0	12,237	15,059	60,236
ADJFI MBA	July 27, 2007	0	3,028	8,696	34,784
FICCO MBA	Nov. 11, 2007	0	7,605	43,010	172,040
Totals		7,444	48,808	109,335	437,340

Source: RIMANSI Annual Monitoring Reports, 2006 to 2008. The number of members in these reports may be compared with a mandatory membership report submitted annually to the Insurance Commission that lists the names of all active members.

** One MBA, SRCDC MBA, planned to start operations in 2009.*

*** Based on an average of 4 household members covered by the same policy.*

well discussed by McCord in Churchill (2006) and Roth et al. (2007) while the “mutual advantage” has been discussed by Fischer and Quereschi, Z (2006). The CARD MBA was a blending of both partner agent and mutual insurance model.

An offer to the MFI community by Dr. Alip, President of CARD MRI to replicate the CARD MBA approach with technical assistance from a microinsurance resource center (i.e., RIMANSI), was accepted by some MFIs who became the first replicators of the approach.

The progress of the first set of microinsurance MBA replicators under RIMANSI oversight is indicated in Tables 3 and 4.

The RBT Mutual Benefit Association was the first RIMANSI partner to obtain a license to provide basic life microinsurance with a medical expense reimbursement feature. The ASKI MBA, licensed to provide basic life insurance in October 2006, had around 24,000 members in Regions 2 and 3 of the country. The KSK MBA was licensed in April 2007 and operated in Metro Manila providing basic life insurance with a retirement savings feature to the microfinance clients of the Kasagana Ka microfinance institution. The Ad Jesum MBA, licensed in July 2007 provided basic life insurance to around 8,700 members in Region 11. Its coverage included accident related hospitalization and medical reimbursement benefits. The FICCO MBA provided basic life insurance to members of the FICCO Credit Cooperative in Regions 10 and 11. The SRCDC MBA was licensed in August 2008 and was scheduled to start operations in January 2009 to service members of the Santo Rosario Credit and Development Cooperative.⁹

⁹It had 6,887 members as of March 2009.

Table 4: Growth of Premiums and Claims Paid (RIMANSI MBA Partners (US dollars as of Dec 31 2008)*)

MBA	Premium Collections	Claims Paid
RBT	148,605	23,675
ASKI	335,214	27,978
KSK	189,564	10,721
ADJFI	128,974	21,556
FICCO	480,657	2,972
Totals	1,283,014	86,902

Source: RIMANSI Annual Monitoring Report. January 2009.

* Using an average dollar to peso exchange rate of 44.57.

As shown in Table 4, cumulative premiums collected by five MBAs, excluding SRCDC which started operations only in 2009, have grown over the last two and half years to US\$1,283,014.¹⁰ Similarly, total claims paid by the same MBAs amounted to US\$86,902.

The growth in outreach and the ability to hurdle annual performance re-licensing audits of the Insurance Commission suggest a relatively successful start up of the microinsurance MBAs.

3 UNDERSTANDING AND RESPONDING TO THE DEMAND FOR MICROINSURANCE

Verifying, understanding and responding to market demand for microinsurance has been an important challenge to RIMANSI and its MBA partners.

RIMANSI conducted 17 market studies for prospective partners from 2004 to 2008. This demand research was limited to microfinance clients or members of credit cooperatives who were the primary target market segment. The specific purpose of such research was to guide product design, pricing decisions and the development of an effective communications and promotions strategy by prospective microinsurance MBAs.

3.1 Respondent Profiles

In general, the respondents' profile differed significantly only when comparing microfinance clients with members of credit co-ops.

¹⁰Fifty percent of the gross premium is required by the Insurance Code to be set aside as member equity, refundable to members who continue as members for at least three consecutive years. This requirement needs to be considered in evaluating the claims ratio using gross premiums at face value.

The following respondent profile description is based on eight studies¹¹ covering six microfinance institutions (RBT, ASKI, KSK, ADJFI, PBC and SEDP) and two credit cooperatives (FICCO and SRCDC):

From 88% to 100% of microfinance clients of the six MFIs above were women while only 66% to 68% of credit co-op members were women. Members of credit cooperatives surveyed tended to have higher educational attainments, live in better houses, and earn their incomes more from employment as professionals than from micro-enterprise.

Only 3% to 10% of microfinance clients had completed a college education while 38% to 58% of credit co-op members had completed college. Most microfinance clients had at most a high school education. Most co-op members lived in houses that had a concrete base or were wholly concrete while up to half of microfinance clients lived in all wood houses.

Most co-op members (35% to 40%) were employed as professionals in either government offices or private enterprises while microfinance clients were primarily self-employed and engaged primarily in vending food, ready-to-wear clothing, cosmetics, spare parts and other commodities. Production activities such as dress making, charcoal making, tailoring, and candy making were the second most frequent livelihood activities of microfinance clients.

3.2 Characteristics Influencing Product Participation and Design

The findings presented and discussed in this section refer to the situation before the organization of microinsurance MBAs. The data from the market research were collected and analyzed as part of the mobilization phase for these MBAs.

Table 5 indicates that microfinance clients and co-op members were very aware of insurance. However, prior to the setting up of a microinsurance MBA, significant use of insurance was reported in only two of the sampled organizations, i.e. among clients of a microfinance institution that had a partner agent arrangement with a commercial insurer and a credit co-op that was implementing an in-house insurance scheme.

In another microfinance institution, reported usage rate was very low in spite of its in-house insurance program. This was an indication that clients were not fully aware of what they might have been contributing.

Among those who bought insurance, there was no conclusive indication of satisfaction. Although there was significant satisfaction among ADJFI clients and FICCO members, there was also a very high no response rate. A major cause of dissatisfaction was the slow pace of processing claims by the partner insurance company.

¹¹Each market research had a sample size of 100 randomly chosen from a master list of current borrowers that was provided by the microfinance institution or by the cooperative. A research questionnaire was designed, field tested, finalized and used by trained interviewers.

Table 5: Awareness and Extent of Use of Insurance

	Have you heard about insurance? (%)		If yes, have you bought insurance? (%)	
	Yes	No	Yes	No
RBT	88	12	8	80
KSK	77	22	25	52
ADJFI	79	21	71	29
FICCO	80	20	63	37
SRCDC	83	17	24	59

Source: RIMANSI Market Research Reports. 2005 to 2008.

Table 6: Satisfaction with Insurance Bought*

	If you bought, how satisfied were you?				
	Very Satisfied	Satisfied	Unsatisfied	Very Unsatisfied	No Answer
RBT	33	0	56	11	0
KSK	4	24	44	28	0
ADJFI	7	18	7	2	37
FICCO	6	25	8	4	20
SRCDC	0	21	63	16	0

Source: RIMANSI Market Research Reports. 2005 to 2008.

* Percent of Total Respondents who had bought insurance.

Preferences of clients/members of microinsurance MBAs guided decisions on insurance pricing and benefit packages. The data in Tables 7 and 8 show minimum benefit and maximum weekly premiums followed by the percent of respondents who selected these premium and benefit levels.

The tables present high, medium and low choices in order to reflect an observed clustering around specific premium and benefit levels. This clustering may be attributed to the socio-economic segmentation among microfinance clients and cooperative members. The differences in educational attainment and type of house discussed in Section 3.1 above reflect income differences and possibly also different benefit preferences and capabilities to pay among the clients/members.

Looking at Table 7, the higher educational attainment and greater percent of members employed among respondents from the FICCO and SRCDC cooperatives probably translated into higher income levels and correspondingly higher expectations of insurance coverage. The clients of SEDP, a microfinance institution in one of the poorest regions of the country, had more modest insurance benefit expectations. Their low end of the expected benefits would be sufficient to pay for decent burial expenses but would fall far short of providing

Table 7: Lowest Acceptable Amount of Benefit from Life Insurance (in U.S. Dollars and percent of respondents)

	Low	Middle	High
ADJFI	785 (7%)	1,234 (36%)	2,245 (36%)
FICCO	449 (10%)	1,122 (36%)	2,131 (55%)
SRCDC	224 (6%)	1,234 (20%)	2,245 (63%)
PBC*	337 (18%)	1,122 (26%)	2,131 (20%)
SEDP*	337 (45%)	561 (14%)	2,245 (7%)

Source: RIMANSI Market Research Reports. 2005 to 2008.

* Microfinance Institutions in Bicol Region and Agusan del Sur.

Table 8: Highest Premium Acceptable (in U.S. Dollars and percent of respondents)

	Low	Middle	High
ADJFI – weekly	.45 (60%)	1.35 (23%)	2.24 (10%)
FICCO – weekly	.67 (8%)	1.35 (9%)	2.24 (30%)
SRCDC – weekly	.45 (56%)	1.12 (29%)	2.24 (20%)
PBC – weekly	.22 (46%)	.45 (29%)	.67 (15%)
SEDP – weekly	.45 (19%)	1.12 (14%)	2.24 (32%)

Source: RIMANSI Market Research Reports. 2005 to 2008.

surviving dependents with money to sustain a decent life.¹²

Premium preferences also clustered themselves around what may be called high, medium and low price ranges. As may be expected, FICCO and SRCDC co-op members tended to cluster more within the higher premium clusters. One constraint in pricing MBA products is that, as required by the Insurance Commission, only one uniform contribution rate may be applied for all members for the basic policy.

The iterative process that was part of deciding on the uniform premium to be paid by members was a further challenge in the pricing decision. This iterative process involved consultations with MFI clients, MFI officers and staff, consulting actuaries and Insurance Commission officers. RIMANSI managed the process and facilitated stakeholder interaction. This iterative process was missing or compromised in the various in-house insurance schemes of cooperatives, NGOs, people's organizations, microfinance institutions and community based organizations.

Another key decision taken in product design and pricing was whether to make the package mandatory or mount a social marketing campaign to win the hearts and minds of potential members. While the Insurance Commission set the minimum number of members for licensing a micro-insurance mutual at 5,000,

¹²A burial with just the essentials might cost from around US\$112 to US\$224.

Table 9: Willingness to Contribute to a Life Insurance Fund (Percent)

	Definitely Will	Probably Will	Probably Won't	Definitely Won't	No Response
RBT	80	18	1	-	-
ASKI	90	8	-	-	-
KSK	75	20	2	1	-
ADJFI	88	11	-	-	-
FICCO	71	13	1	3	12
SRCDC	42	50	8	-	-
PBC	77	13	-	-	10
SEDP	82	9	1	-	8

Source: RIMANSI Market Research Reports. 2005 to 2008.

RIMANSI's standard has been no less than 10,000 if the partner organization had a moderate rate of client/member growth. The rate of membership mobilization from date of start-up was critically important since overheads and claims could weigh in heavily at a time when start up mobilization costs were significant and premiums were just starting to be collected for the first time.

In most cases, the trust earned by microfinance institutions and cooperatives from their clients and members facilitated mobilization towards the required minimum membership base. Table 9 indicates the percent of potential members who were either definite or inclined to contribute to a life insurance fund of a mutual benefit association. At this point, in the absence of clear indicators of financial literacy the response might be better understood as trust in the partner microfinance institution or credit cooperative rather than as part of a clearly articulated financial plan for the family.

But trust could only be an entry point for the MBA and a well thought out marketing strategy still needed to be implemented that focused on 1) delivering a product that was affordable and beneficial, 2) making premium payment convenient, 3) making explicit guarantees that members' insurance claims will be settled accurately and quickly and 4) delivering on this guarantee by actually processing claims accurately and quickly.¹³ Looking back, there has been no promotion strategy that has been observed to be more cost effective than a positive word of mouth and endorsement by members who testified to fellow members that the mutual indeed delivered on its promise of prompt settlement of claims. Finally, it was necessary to win the hearts and minds of the officers

¹³As reported by MFI directors, there was strong word of mouth rejection by MFI clients of commercial insurance products that took a long time to process. Similarly, good word of mouth endorsement of MBA products that settled claims in less than a week has been reported by MBA managers as a major factor in successful marketing for both sign up and retention purposes. It may be inferred from these experiences that in the minds of policyholders, claims settlement was part of the insurance product.

Table 10: Pricing Structure (U.S. Dollars)*

	Premium weekly basis	Payment Mode	Member Equity	Claims Reserve	Guaranty Fund	Op Ex	Pension Savings
RBT	.44	weekly	.22	.11.	.022	.09	0
ASKI	.67	weekly	.34	.17	.034	.13	0
KSK**	.34	weekly	.17	.08	.02	.07	.11
ADJFI	.45	weekly	.22	.09	.022	.12	0
FICCO	.47	monthly	.22	.14	.022	.07	0
SRCDC	.27	annual	.13	.07	.013	.054	0

Source: RIMANSI Market Research Reports. 2005 to 2008.

* With rounding errors.

** Weekly premium does not include weekly pension contribution.

and staff of the mutual and the partner microfinance institution or cooperative to support the guarantee.

3.3 Pricing and Product Decisions

The following tables give examples of the kinds of premiums and benefits that were planned and implemented for different partners of RIMANSI when they first started operations. Column one of Table 10 presents the equivalent weekly premium regardless of the frequency of collections adopted by each mutual.

Member equity refers to the requirement of the Insurance Code that mutual benefit associations set aside 50% of gross premiums as member equity that may be recovered upon resignation from the mutual after a three-year period of continuous membership.

The guaranty fund column refers to a requirement of the Insurance Commission that 5% of annual gross premiums be added to the mutual's guaranty fund until the entire fund reaches twelve and a half percent (12.5%) of the required capital for domestic life insurance companies currently set at P1 billion. KSK had a built in retirement saving provision that was payable at 65 years of age or upon resignation from the mutual.

RBT and ADJFI had reserves for medical reimbursement for in patient expenses that are built into the life insurance premium. As a guiding principle, operating expenses were budgeted at 20% of gross premiums although estimation was balanced against expected membership base and value of the claims reserve. In general, there was not much room for a surplus within the basic life product if the mortality assumptions held.

Table 11 gives examples of the benefit packages that are offered by different partner mutuals of RIMANSI. Almost all life insurance benefits allow for accidental death or total permanent disability benefits equivalent to twice the

Table 11: Product Features (U.S. Dollars)

	Member Benefit	TPD/Death due to Accident	Spouse and two dependents	Medical and Hospital Benefits	Pension Savings
RBT	673	1,346	224	44.87 annual maximum for in-patient cases	-
ASKI	2,692	2,692	449	-	-
KSK	1,346	2,692	449		Saving with interest
ADJFI	1,122	2,244	449	2.92/day hospital max of 30 days 112 medical reimbursement 17.96 accident indemnity	-
FICCO	898	1,796	224	-	-
SRCDC	673	1,364	-		-

Source: RIMANSI Market Research Reports. 2005 to 2008.

basic life insurance benefit. The benefits extend to the spouse of the member and at least the two oldest children under the age of 18. Reimbursement of in-patient medical expenses up to US\$50 and retirement savings are additional features of the basic life package that has been implemented by some partners.

3.4 Summary Assessment

Three years of experience have demonstrated that there is effective demand for insurance among clients of MFIs and members of credit cooperatives that co-operate with MI-MBAs. A significant part of the willingness to pay is due to institutional trust that MI-MBA members have for the partner MFI or co-op. To be sure, institutional trust had to be reinforced with a policy on mandatory membership but implementing such a policy could not replace having a marketing strategy that communicated a guarantee to settle claims fairly and quickly and actually delivered on this guarantee. MI-MBAs that adopted either a voluntary or a phased mandatory membership struggled to attain critical mass during the first year of operations. In any case, membership education can be and in fact has been an important means of improving member understanding and strengthening patronage of micro-insurance.

The design and implementation of a microinsurance product such as basic life is an iterative process that requires understanding needs and preferences of different stakeholders such as the MI-MBA members, the MFI officers and staff, the Insurance Commission and the insurance professionals who conduct business and actuarial analysis. Given the lack of knowledge and experience of MBA organizers in sound product design and the relatively high cost of

professional and technical assistance, a resource center such as RIMANSI can be very helpful in managing this multi-dimensional and iterative process while spreading the cost of actuarial and other forms of technical and management assistance.

4 THE REGULATORY AND SUPERVISORY ENVIRONMENT

Llanto et al. (2008) presents an overview of the regulatory framework for the insurance industry in the Philippines and of the regulatory drivers of microinsurance. The regulatory and supervisory frameworks have been very important for the start up, growth and development of microinsurance MBAs. Among the host of laws, circulars and industry notices and policies pertaining to regulating and supervising the insurance industry, the most relevant and important to the growth and development of microinsurance MBAs were those that dealt with startup capital, the definition and scope of microinsurance, product design and pricing, reporting requirements, performance standards, policyholder protection, governance and the management of insurance providers.

At another level, implementation and enforcement of existing policies, laws and circulars are critical. This dimension involves both the will to enforce policy as well as the capacity to do so. The periodic evaluation of both the regulatory framework and the quality of enforcement constitutes yet another aspect of the challenge of shaping an environment that supports the growth and development of microinsurance.

These observations arise out of the questions, expectations, preferences and apprehensions of leaders of microinsurance MBAs in the RIMANSI network with respect to the following organizational and business development issues:

- Coming up with the minimum guaranty fund¹⁴ required at start up for licensing purposes
- Securing approval for microinsurance product design and pricing
- Practicing good governance and results based management
- Compliance with reporting requirements
- Meeting standards for solvency, expense ratios and risk based capital

At a time when MFIs were working with RIMANSI to license microinsurance MBAs, the Insurance Commission was in the process of enacting new higher capitalization requirements for all types of insurance providers. The Insurance Commission issued Insurance Memorandum Circular (IMC) 2-2006 dated April 24, 2006 which dealt with “Increase in the Amount of Guaranty Fund of Mutual

¹⁴The guaranty fund is an amount under the account of the MBA whose deposit or investment certificate was to be surrendered upon licensing to the Insurance Commission to ensure that all valid member claims against the MI-MBA would be met regardless of the business status of the MBA.

Benefit Associations.” IMC 2-2006 required all existing MBAs to raise their Guaranty Funds from a previous minimum of US\$224 to US\$251 by the end of 2006. It also set the Guaranty Fund for new MBAs at 25% of the minimum paid up capital required for new insurance companies effective July 1, 2006. Under Department Order 19-06, this new minimum paid up capital for new insurance companies amounted to US\$11,218,300 effective July 1, 2006.

This dramatic increase in guaranty fund requirement for new MBAs effectively blocked all future efforts to replicate the CARD MBA experience. It was in this context that the issuance of Insurance Memorandum Circular 9-2006 covering the subject of “Microinsurance Regulation and Declaration of Policy Objectives” was issued, a product that was largely the result of a series of policy discussions and representations made by RIMANSI in behalf of the MBAs that had lodged their applications for licenses to operate.

IMC 9-2006 was a landmark policy statement in support of microinsurance in the following ways:

- It offered for the first time in the country a regulator’s definition of microinsurance, i.e., “the insurance business activity of providing specific insurance products that meet the needs of the disadvantaged for risk protection and relief against distress or misfortune.”
- It defined a microinsurance product in terms of its premium, which “computed on a daily basis does not exceed ten percent (10%) of the current daily minimum wage rate for non-agricultural workers in Metro Manila” and in terms of its maximum insurance coverage, i.e., “not more than five hundred (500) times the daily minimum wage rate for non-agricultural workers in Metro Manila.”
- It defined microinsurance MBA as any existing and/or new MBA wholly engaged in microinsurance, i.e., “it only provides microinsurance policies to its members; and it has at least five thousand (5,000) member-clients.”
- It set the guaranty fund requirement for all microinsurance MBAs at P5,000,000 by December 31, 2006 with an annual increase of five percent (5%) until the fund reached twelve and half percent (12.5%) of the capital required of commercial insurance companies.
- Finally, it defined areas for performance monitoring and evaluation, namely solvency, efficiency, governance, understanding of the product by the member, risk management and outreach.

These provisions re-opened the possibility of harnessing the MBA structure as a licensed and supervised business organization providing microinsurance to low income households.

4.1 *Summary Assessment*

The regulatory and supervisory environments have allowed for the promotion of microinsurance MBAs that specifically target a segment of the population that heretofore could not afford or access insurance. Microinsurance MBAs required differentiation because of the lower guaranty fund requirements that were set in the light of lower valued claims. This policy accommodation was crucial in making regulated and supervised insurance coverage available for several hundred thousand low-income families.

A number of ad hoc parameters have had to be set, notably maximum values for micro-insurance premiums and benefits, and minimum values for startup membership base, initial guaranty fund and annual increase in guaranty fund.

There remain many gray areas in setting the norms for registration and licensing and specific parameters for the minimum membership base, amount of guaranty funds and maximum limits for premiums and benefits have been ad hoc estimates that have not yet been quantitatively analyzed and tested. Performance standards have also not been rigorously evaluated partly due to the limited experience of fledgling MI-MBAs. Finally, the need to monitor and regulate MI-MBAs will surely tax an already burdened Insurance Commission. Mechanisms to build regulatory capacity as well as self-monitoring and self-regulation may well be necessary to ensure the integration of microinsurance providers into a sustainable and socially responsible insurance industry.

5 LEADERSHIP OF MI-MBAs

The third factor that may be considered as critical to the growth and development of the MI-MBA approach to microinsurance is leadership. In this context, leadership is discussed in terms of social entrepreneurship, governance and management.

5.1 *Social Entrepreneurship*

Although CARD MBA provided both the inspiration and the business model, some amount of social entrepreneurship was still necessary for leaders of microfinance institutions and cooperatives to take a calculated risk in supporting ventures into microinsurance. This support has been indicated in two ways, the number of MFI/co-op leaders who participated in setting up RIMANSI as a business development facilitator for their MI-MBA initiatives and the number of RIMANSI's MFI/co-op partners who started and completed the MI-MBA organizational and licensing process.

Of twenty individuals representing MFIs who attended a microinsurance business forum, ten pledged to subscribe to a microinsurance resource center that would facilitate the setting up of MI-MBAs following the business model

of CARD MBA. Of the ten, seven in addition to the CARD group actually contributed to the paid up capital of a non-stock non-profit institution that was eventually registered as RIMANSI.

On the other hand, fourteen MFIs and co-ops – including a network of ten cooperatives – signed a service agreement with RIMANSI for support in setting up and licensing a microinsurance MBA that would serve their clients/members. Of the fourteen, six completed the start up and licensing processes and now operate MI-MBAs. Five clients were on track to get their licenses to operate. Three RIMANSI clients dropped out of the process after re-assessing the risk and level of effort involved. In addition, numerous MFIs made only fleeting expressions of interest or discreet inquiries. A handful of the clients who dropped out or who expressed momentary interest opted to operate in-house programs independent of formal regulation and oversight.

5.2 Good Governance

The function of good governance in the MI-MBA business model goes beyond oversight of management, protection of reserve funds and assets and review of operating policies and procedures. The board of trustees of the MI-MBA also needs to ensure that its relationship with the MFI or co-op results in a business synergy around the recruitment, collection, and claims settlement. Most important of all, the challenge of good governance is to fulfill the mission of the MI-MBA to empower its members through greater socio-economic security and participation in its ownership, governance and business results. Thus, over and above compliance with the Insurance Commission circulars, good governance is the cornerstone of the RIMANSI MI-MBA business model.

The practices of self-assessment of the board as well as by individuals of the board have yet to be implemented. Similarly, ongoing capacity building and education programs for the boards of directors still have to be implemented.

Governance is apparently in its infancy among RIMANSI MI-MBA partners. To be sure, the policies and representation processes for a democratic selection of boards of directors from among members have been put in place. Moreover, four of seven (including CARD MBA and SRCDC) RIMANSI network MI-MBAs have made a transition from the first set of board of directors who were designated as the incorporators upon business registration and licensing to a board of directors elected through a representative voting selection process involving groups of members in different areas of operation of the MI-MBA. However, the more challenging tasks of ensuring a synergy with the partner MFI or cooperative as well as empowering members while warding off governance capture by local elites or rent seeking cliques still lie ahead.

5.3 *Management*

The third manner of leadership is that of effective and efficient management of the MI-MBAs according to performance standards. The MI-MBA has a simple structure designed to operate as a lean organization with a maximum of three to five staff.¹⁵ The basic life product also has a straightforward allocation of the gross premium to member equity, operating expenses, guaranty fund contribution and claims reserve.

The function of management is defined for the MI-MBA business model in terms of performance indicators in the areas of solvency, earnings and efficiency, claims payout, extent of MFI client participation in the MBA and extent of understanding of the insurance product by sampled members.

Management practice is also monitored in terms of planning, financial administration, organizational development, risk management, claims settlement, and the administration and development of management information systems.

Performance monitoring by RIMANSI of its MI-MBA partners is barely a year old and with many areas for improvement. At any rate, the first set of internal performance reviews indicates that all five MI-MBAs that had started operations by December, 2008 (excluding the still not operational SRCDC) met the solvency requirement of the Insurance Commission and posted a surplus usually by the second year of operations. Of five MI-MBAs assessed, one had a slightly higher than budgeted operating expense ratio and another one that practiced aggressive marketing had a very high variance from the targeted expense ratio.

In terms of management and operations practice, four of five MI-MBAs examined, settled claims on average within less than a week from date of notice of death.¹⁶ Keeping track of members and updating their membership status has been very challenging for MI-MBA managers. Developing a comprehensive management information system that can generate updated membership lists for the Insurance Commission and membership profiles for an actuarial testing of product viability and/or the upgrading of product remains a priority for managers. In addition, defining the identity and strategic goals of the MI-MBA were the identified needs given that most managers had limited knowledge and experience in strategic planning and organizational development. Addressing this gap is crucial to making the MI-MBA a strong and self-reliant partner rather than an adjunct of the MFI/co-op.

¹⁵The MBA pays the MFI a service fee in return for facilitating collection of premiums, consolidating field financial reports, facilitating claims reports and paying out benefits. In addition, MBA coordinators are recruited to act as volunteer member liaison officers who are given travel and transportation honoraria to visit member clusters for the purpose of getting feedback on issues and disseminating information about the MBA and its products.

¹⁶As required by the Insurance Commission, MBAs keep a log book of all notices of death made by members or their beneficiaries through whatever form of communication, e.g., verbal or written report, text message, phone call.

5.4 *Summary Assessment*

Many in-house microinsurance providers have been averse to formal registration, licensing and regulation. Nevertheless, there has been no shortage of social entrepreneurs who invested considerable time, money, and effort to complete the tedious licensing and business start up phase. Most of those who ventured into microinsurance in partnership with RIMANSI successfully completed the challenges of the start-up phase to obtain their licenses to operate and achieved critical mass of membership before two years of operation.

While no in-depth study of the motives for venturing into MI-MBAs has been done, discussions with leaders of RIMANSI's institutional partners during the needs assessment and pre-licensing stages indicate that various reasons influenced them. These reasons included the following:

- demonstrated viability of the business model tried and tested by CARD-MBA
- apparent feasibility of replication and localization of the business model in specific areas of operation
- dissatisfaction with the dismal claims settlement record of current and potential commercial insurance providers
- an understanding of the business risk of running an informal in-house insurance program
- aversion to the risk of being penalized by the Insurance Commission for operating without a license
- availability of affordable technical assistance from a resource center, i.e., RIMANSI

On the other hand, questions about the viability of MI-MBA governance have been among the perennial concerns of leaders. In this context, education and leadership formation among the general membership as well as a rigorous training of boards of directors are indispensable to the sustainability of MI-MBAs.

The quality of regulation and supervision are very important if MI-MBAs are to become mature and competitive social enterprises. Given the limited experience and resources for microinsurance regulation in the Philippines, self-regulation and transparent peer assessment processes also seem necessary.

6 BUILDING CAPACITY AND COMPETENCE IN MI-MBA OPERATIONS

The fourth key result area in promoting a balanced development of the microinsurance sector in the country is the building of capacity to perform microinsurance operations effectively and efficiently. These operations refer to both processes such as member mobilization, collection of premiums and

settlement of claims that involve direct face-to-face interaction with customer-members as well as backroom operations having to do with the management of funds, information, and risk.

The basic life insurance product is simple and straightforward enough as to require neither sophisticated operational expertise nor a large staff. Indeed, a skeleton staff of three persons can handle at least the start up phase of the enterprise provided standard operating systems (esp., for financial management and MIS) and the institutional partnership with a microfinance institution and credit cooperative for member mobilization, collection of premiums and claims verification are put in place.

In addition, there has to be a well-defined budget for the allocation of every centavo in a peso of premium. Moreover, there are internal rules and regulations to follow in the administration of the insurance policies. There is a recommended critical mass for membership base (i.e., 10,000) and prescribed amounts for guaranty fund reserving.

In this context, the main challenges of MI-MBA officers and staff have been to know, understand, rigorously implement the prescribed budgets and product rules and regulations, reach the critical mass of members and comply with Insurance Commission policies. An important constraint has been to build and maintain an updated member database that accurately tracks changes in membership status. This constraint is most worrisome in evaluating reserve positions, preparing an annual report to the Insurance Commission and in periodically testing the viability of products.

Although there is regular monitoring of financial performance indicators, the computation of ratios is still a manual procedure that allows for discretionary adjustment and different ways of defining variables. Clearly, improvements in the management information systems are imperative to improving capacity to manage and operate MI-MBAs.

Invariably, operational effectiveness and efficiency have been impaired when the institutional relationship with the microfinance institution or credit cooperative was problematic. The reasons for this result are straightforward. At start-up, the operational processes of the MI-MBA are manageable only because of the institutional partnership with the microfinance institution or credit cooperative. Operating expense budgets have been budgeted at twenty percent or less on the premise of this partnership. Limited management and operations capability is offset by outsourcing key operating processes to the institutional partner.

True enough the single instance of an excessive operating expense ratio in 2008 by an MI-MBA partner was due to attempts by the general manager to minimize the role of the microfinance partner in favor of a large marketing staff. Other reasons for difficulties with expense ratios had to do with non-budgeted spending, especially on unnecessary re-insurance or overspending on

travel expenses.

6.1 Summary Assessment

The MI-MBA business model allows for a skeleton staff with basic skills in social marketing, accounting, records keeping, and social networking to run day-to-day operations with an expense budget of less than 20% of gross premiums. Having the operating systems for managing funds, information, and risk, as well as outsourcing key components of member mobilization, collection of premiums, and claims validation are necessary for the business model to perform competitively and sustainably.

Under these conditions, those MI-MBAs have performed best that faithfully followed this approach, developing and implementing clear standard operating procedures, implementing product rules and regulations strictly, keeping operating expenses within twenty percent of gross premiums, and developing a mutually beneficial relationship with its institutional partners.

A robust management information system is a common need especially in complying with annual reporting requirements but also for improving performance monitoring and product viability testing.

Technical assistance from RIMANSI has been helpful in product design and licensing, formulation of product implementation rules and regulations, and development of operating policies, procedures, and standard practices.

Looking forward, research and development assistance will be needed for new optional products such as credit life, group life with other institutional partners, health insurance and micro-pensions. Operating systems will likewise need upgrades to accommodate new products and business partnerships.

Upgrading staff and management capabilities will likewise be a challenge as multi-product operations and outsourcing options for product distribution expand. A common catastrophe life product jointly purchased by all MI-MBAs from the National Re-insurance Corporation of the Philippines is also a near term possibility.

Finally, the foundational partnership with a microfinance institution or credit cooperative may evolve to adjust to new business and social conditions.

All these future possibilities will raise demands on the level and scope of capacity and competence of MI-MBA officers and staff. Monitoring and evaluating this key result area will therefore be a critical aspect of keeping the individual MI-MBA competitive and advancing the balanced growth of the microinsurance sector.

7 CONCLUSIONS

High potential demand and a supportive policy environment characterize the opportunity environment for MI-MBAs.

Less than twenty percent of Filipino households have any form of insurance. The experience of MI-MBAs in the Philippines shows that a segment of these household, the enterprising poor, are willing and able to purchase insurance cover for themselves and their families. This demand goes beyond basic life insurance to include health insurance, credit life, retirement and education.

Affordable and easy payment of premiums, mandatory coverage, and confidence that the MI-MBA will settle claims fairly and expeditiously underlie that rapid increase in households covered through the RIMANSI network of MI-MBAs. Microfinance clients have a very high satisfaction rating for the MI-MBA, often higher than the microfinance institution itself. This may be an indication that the broader participation opportunities in governance, benefits and ownership inherent in a mutual association are a plus factor for the MI-MBA approach.

The Insurance Commission has created a favorable policy environment for microinsurance in the Philippines through its bold issuance of a circular that defined and recognized microinsurance and microinsurance MBAs. It has likewise defined performance standards for MI-MBAs that are not very different from industry standards.

In the face of these opportunities, microfinance institutions throughout the country have successfully replicated the MI-MBA approach pioneered by CARD-MBA. By harnessing the microfinance social networks and financial transactions channels MI-MBAs have made the payment of premiums affordable and convenient, and they settle claims far more efficiently than has been the norm in the industry. They have established a foothold in a heretofore underserved market and are poised to expand the level and scope of their insurance services.

If they are to sustain and expand their services, the RIMANSI network of MI-MBAs needs to confront a number of challenges and resolve a host of issues around the four key result areas presented and discussed in this paper.

The policy environment presents both opportunities and challenges. In particular, licensing requirements and performance standards need more rigorous analysis, particularly when quantitative norms such as minimum membership base, amount of guaranty fund, acceptable solvency margins and sound risk based capital ratios are concerned. In addition, compliance with policy and performance standards needs to be closely monitored and enforced. Given the limits to the resources of regulators, a self-regulation and peer evaluation scheme may be desirable.

In the final analysis, the future of MI-MBAs lies in the hands of the leaders of the network. As outlined above, transformative leadership requires balancing

the passion of social entrepreneurship with the rigors of good governance and oversight of the management of the MI-MBA business model.

Particular challenges to the management of the business model include the following:

- Ensuring a clear understanding and strict adherence to the success factors of the business model including financial bottom lines as a prerequisite for any changes in standard policies, practices, budgets and operating expense ratios
- Promoting the empowerment of members and local leaders while containing rent seeking behavior
- Developing sustainable ways of providing insurance coverage to local market segments outside the scope of microfinance institutions through optional products
- Making right choices with respect to direct manufacture versus distribution of insurance products
- Engaging other MI-MBAs in joint products such as catastrophe insurance and in common operating systems, e.g. for data pooling and information sharing
- Ensuring a level playing field that is focused on performance both among MI-MBAs which may be increasingly present in the same areas of operation as well as in the face of rent seeking commercial insurance companies who wield powerful lobby resources

Finally, the development of microinsurance professionals to handle MI-MBA front line and backroom operations is a major challenge to the RIMANSI network. While professional competencies are fairly simple and straightforward at the start, they will become increasingly complex as new products, services, and institutional and business arrangements come into play.

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Understanding the Context Is Understanding the Impact: Evidence from a Qualitative Microinsurance Impact Survey in Indonesia

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ABSTRACT: This paper presents the findings from a qualitative-explorative longitudinal impact assessment of an enhanced credit life microinsurance pilot in Indonesia. Different from the practical or econometric-quantitative approaches of the few microinsurance impact assessments available today, the approach applied here is sociological. Emphasis is put on contextualization. A variety of research components were executed: a baseline/endline survey of customers, interviews with 24 Muslim beneficiaries and additional research with loan officers, credit group leaders, experts, and MFI managers. Despite a number of methodological constraints which preempt absolute data accuracy, the breadth of available data nonetheless allows for indicative conclusions. This impact assessment identifies microinsurance as an agent of social change and highlights the complex interplay of the actual product with its respective socio-cultural context in producing impact. It turns out that the social impact of the surveyed product which waives the loan balance and provides substantial additional payouts upon death of a micro-borrower, was literally “micro”. For reasons of religion and tradition, most additional payouts were used for social investments. Payouts appear to substitute some of the traditional, informal, post-mortem family assistance (crowding out). To some extent, the insurance payouts also seem to have contributed to an inflation of funeral costs. Dependence on informal assistance was reduced leading to a potential erosion of equality-focused social cohesion. Positive impacts were found in the form of an increase in financial literacy. Also peace of mind of the insured increased. However, some of those insured felt less secure for reasons of religion and superstition. Customer satisfaction was nonetheless high. The insured voiced a strong demand for more urgent risk management challenges such as education and health costs.

KEYWORDS: microinsurance in Indonesia, qualitative impact research, sociological and asset-based approach, credit life insurance

1 INTRODUCTION

This paper presents the results of an impact assessment of an enhanced credit life microinsurance implementation in Indonesia. The paper aims to contribute to the scarce but growing body of empirical impact research on microinsurance. First, a short overview will be given on why there is still little impact research available to date and what research trends can be discerned. In a second step, the impact of the surveyed microinsurance implementation in Indonesia will be analyzed by applying a sociological framework of analysis with special emphasis on the socio-demographic, cultural and religious context.

Microinsurance is still a relatively recent phenomenon. It rose to prominence around the turn of the millennium when development advocates became increasingly aware of the importance of effective risk management as a supportive condition for economic growth. The 2000/2001 World Development Report epitomizes this expansion of the development agenda (World Bank 2000). When the World Bank moved on to present its Social Risk Management (SRM) framework in 2001, it conceptualized SRM not only as a safety net but as a springboard for development (World Bank 2001; Moser 2001). In consequence, interest in microinsurance as a market-based solution to Social Risk Management increased and respective donor funding became available. Not surprisingly, the number of microinsurance implementations has since grown rapidly. Although insurance has long been sold to low-asset customers, only its entry into the development discourse under the label of microinsurance (the term first appeared in the late 1990s) created a need for impact assessments. The short “developmental” history of microinsurance, however, has given researchers little opportunity to date to carry out well-funded and rigorous longitudinal impact studies (cf. Dercon and Kirchberger 2008).

The few available publications can be grouped by (1) surveyed risk type, (2) geographic region, and (3) research approach. In terms of surveyed risk types, health insurance is taking the lead over other insurance types such as disaster or life insurance (Dercon and Kirchberger 2008: 9). The dominance of impact assessments on health can be explained by three factors: (1) health protection is perceived as being of highest priority in developing countries (Roth et al. 2007: 25), (2) the number of micro-health schemes is higher than for other microinsurance types (Roth et al. 2007: 27), and (3) the high claim frequency makes impact research on health easier than for infrequent risks such as natural disasters, death or disability.

In terms of geographic regions, a clear preference is still not discernable, but research can be expected to follow those regions where microinsurance schemes are most numerous: India, Africa, and Latin America. Regarding Indonesia, the focus country of this assessment, no empirical impact research on microinsurance has been carried out before.

In terms of applied research approaches, the few available works are either based on practical analysis without an academic framework, or they are rooted in the field of development economics. For the more practical surveys, qualitative methods such as focus group discussions and key person interviews as well as small scale surveys, dominate. A SyncConsult impact assessment from Ghana is a rare example of a practical survey which uses a baseline/endline approach, albeit not the more robust double difference approach because it operates without control groups (SyncConsult 2006). Impact assessments rooted in development economics favor quantitative surveys using panel, cross-sectional or time-series data and statistical methods of analysis. Randomized Control Trials (RCTs) are currently the most accepted econometric method of impact research. What has been markedly absent so far are sociological approaches that take a closer look at how the socio-demographic, cultural, and religious context interplays with the actual microinsurance product in producing impact.

In terms of results, the few available assessments draw a positive picture of microinsurance impacts. Young et al. (2006) investigate the impact of group accident and health insurance in Uganda. While results for health are tentatively positive, group accident results are not particularly tangible due to difficulties in locating beneficiaries. Mosley (2003: 150) lists a number of positive impacts that he found in analyzing two micro-health schemes, one operated by BRAC in Bangladesh and one by FINCA in Uganda. He notes higher stability of incomes and expenditures, reduced reliance on informal emergency borrowing, increased investment in physical and human assets, and consequently an increase in peace of mind. SyncConsult (2006) reports on a voluntary life-cum-savings microinsurance project in Ghana and finds a positive impact on the livelihood of the insured. The SyncConsult report mentions in passing that respondents were superstitious that life insurance may lead to bad luck and premature death. While Mosley does not reveal much of the applied methodology, the SyncConsult report contains a number of apparent methodological flaws, such as not following up on drop-outs. In fact, preliminary results from a first systematic overview of microinsurance impact literature prepared by the Impact Working Group of the Microinsurance Network concludes that the results of most available material are tainted by methodological flaws (MiN 2009: 1). Moreover, as noted, the discussion of social context and social impacts remains marginal at best.

Something little broached so far by the existing corpus of impact research is the fundamental conceptual difference between microinsurance as a modern, highly-formalized and individualized risk management tool that is based on the concept of conditional general reciprocity and, on the other hand, traditional collective risk management arrangements such as mutual help which, as Platteau (1997) has shown, operate on a balanced reciprocity basis. This difference is especially apparent with commercial microinsurance, but to a lesser extent also applies to modern mutual insurance arrangements, because both approaches know “winner” (claimants) and “losers” (non-claimants).

Traditional collective risk management aims to provide subsistence insurance through a carefully institutionalized system of more or less balanced gives and takes (Scott 1976; Hsken and Koning 2006). For this system to work, a more or less equalized distribution of material wealth in the community is needed. The self-interested individualized accumulation of economic capital is consequently condoned though a socio-economic structure that Thompson has termed the “moral economy” (Thompson 1971; cf. Scott 1976; cf. Bourdieu 1977). When (commercial) microinsurance enters the scene, it is therefore not simply confined to its functional value as a risk management tool, but necessitates a particular way of thinking and perceiving the world, namely in an individualized and rational way familiar to modern Western societies but not necessarily familiar to low-asset families in developing countries. This paradigm shift towards individualized protection reduces the need for collective risk management activities and thereby shakes the very foundation on which traditional societies are built, for better or worse. In developing contexts where the impact of the moral economy is still discernable (Scott 1976; Ravallion 1988; Evers 1994), (commercial) microinsurance therefore assumes the role of an actor of social change. This role has so far received too little attention and deserves further research. Especially interesting would be an investigation looking at the extent mutual microinsurance fares better in maintaining social cohesion over the long term compared to commercial microinsurance.

For the moment then, the state of the art on microinsurance impact research presents itself as described above: (1) few available empirical assessments on actual microinsurance implementations, especially on non-health risks, (2) no impact research on Indonesia, and (3) dominance of an economic over a sociological or integrated research focus. With this limited state of the art, the relevance of the impact assessment presented in this paper derives from addressing all these three research gaps. In addition – as this volume is dedicated to analyzing microinsurance in the context of natural disaster mitigation – I argue that the strong influence of the respective socio-demographic, cultural and religious context demonstrated in the following empirical account is a general phenomenon that needs to be considered for any microinsurance intervention, including in the field of disaster risk. The contribution by Wilhelm (same volume) points in the same direction.

2 PRACTICAL FRAMEWORK OF *Payung Keluarga* (‘FAMILY UMBRELLA’)

Based on an initial microinsurance demand and market study for Indonesia (McCord et al. 2006), in 2006 Allianz insurance and the German Technical Corporation (GTZ) set out to develop a pilot microinsurance product in that largest Muslim country in the world. I was involved in the project as the project coordinator at Allianz Indonesia. I acknowledge that I carry responsibility for the way the product was developed, launched, socialized and operated, and thereby also for the respective social impact, which – as it turns out – is

rather sobering. Despite the fact that McCord et al. (2006: 26) had found education and health in highest demand, Allianz and GTZ chose to focus on the identified top-4 risk, namely death of a relative, in the form of an enhanced credit life microinsurance product called *Payung Keluarga* ('Family Umbrella'). This decision was based on the relative simplicity of credit life insurance and advantages in distribution through MFIs (cf. Churchill 2002: 384). Moreover, I regarded the risk of failure of a credit life pilot as relatively low and the profitability prospects as relatively high and quick when compared to more complex products. Therefore, although pursuing lower developmental aspirations, credit life can be helpful to familiarize insurance companies with the microinsurance business model and make it easier in the long run to mobilize resources for more complex follow-up products. I therefore strongly endorsed and promoted this choice.

Payung Keluarga provides two benefits instead of the usual single credit life benefit. The first benefit, i.e. the standard credit life benefit, waives the outstanding loan balance in case of death of the debtor. The second benefit consists of an additional payout of twice the original loan amount to the beneficiary. I regarded this additional payout feature as the real "micro", that is developmental, component of the product. In this standard two-benefit configuration seven local MFIs attached *Payung Keluarga* to 71,889 microcredits from 1st of September 2006 until 30th of September 2008. This time span is the reference period for my impact research.¹

Payung Keluarga was compulsory. The MFI's microcredit customers could not opt out of the insurance coverage. The premium rate was calculated as 0.1 percent of the loan amount per month (1.2% per year) and not differentiated by age or sex. On average, customers paid a one-off premium of USD 0.92 for a loan of USD 154 with a loan length of five months and 20 days. The premium was deducted from the loan at disbursement. Claims were checked and paid by the MFIs from the collected premiums, and later, without further checking, reimbursed by Allianz in case of deficits. In the reference period, 64 claims occurred. The average time from death to payout was 28 calendar days. The average waived credit balance was USD 83 and the additional payout to the beneficiary USD 287. As of September 2008, the 12-months rolling claim ratio for *Payung Keluarga* stood at 60 percent, which is a considerably high value for credit life products and serves as an indicator of considerable "customer-value" in terms of premiums being returned in forms of claims (cf. Wipf and Garand 2008: 23).

Owing to its compulsory nature, the product required no particular marketing. It was nonetheless in the interest of Allianz and the MFIs to inform the

¹*Payung Keluarga* was also sold through other MFIs. Moreover, product features were eventually made more flexible and started to differ among MFIs. For reasons of data consistency, here and in what follows, all numbers on *Payung Keluarga* refer only to those MFI which participated in the impact research while distributing *Payung Keluarga* in its described original standard configuration.

insured micro-credit customers about *Payung Keluarga*. Allianz thereby hoped to increase its brand awareness and build a large and loyal customer base, especially in expectation of further economic development in Indonesia. The MFIs considered *Payung Keluarga* with its additional payouts to be of added value to their customers and a differentiation to competing MFIs which only provided standard credit life coverage or required relatives to continue paying installments after the death of the debtor. Therefore, Allianz and the MFIs channeled considerable effort in product education such as training loan officers and customers, printing and distributing brochures, elaborating claim payment ceremonies, and last but not least a clearly marked insurance premium deduction instead of hiding the insurance premium in general administration fees or having it paid directly by the MFIs.

3 FRAMEWORK OF ANALYSIS

Payung Keluarga was conceived as a tool for managing the risk of a breadwinner's death in order to reduce low-asset families' vulnerability to poverty. My aim in carrying out an impact assessment was to measure the impact of *Payung Keluarga* on the lives of the insured and their beneficiaries, especially with regards to whether risk management had been improved and vulnerability reduced. Before turning to the actual research, several concepts employed in this rough outline need a clearer definition: namely impact, poverty, assets, vulnerability, and risk management. For these definitions to work, we need to be clear on the unit of analysis first.

For my assessment, there are two primary units of analysis: (1) The insured who survive the entire length of the insurance contract, and (2) the beneficiaries of those insured who died during the reference period. Both the insured and the beneficiaries are individual persons but I do not clearly delineate the insured and beneficiaries from their respective families. It would have been interesting to include the wider community as a unit of analysis as well. However, the scope of the assessment did not allow for it. Closely following the official OECD general definition of impact, I define microinsurance impact as positive and negative, primary and secondary changes produced by a microinsurance intervention, directly or indirectly, intended or unintended over the short-term and long-term (cf. OECD 2007: 24). The usefulness of this definition lies in its broad scope which explicitly includes the possibility of unintended, negative and long-term impacts. Those tend to be the changes with the highest probability of being overlooked.

Turning to poverty, I do not operationalize poverty as an absolute measure such as the famed 1-USD-expenditure-per-day poverty line. Instead, I take the ex-ante state of a low-asset family's multi-dimensional asset base as a

point of departure.² Becoming poorer thus means negative changes to the asset base while becoming better off means positive changes to the asset base. Therefore, it is the relative change to the family's own asset base that matters. When defining the asset base, I build on asset approaches presented by Moser (1998; 2007) and Heitzmann et al. (2002) who in turn draw on the works of Sen (1981) and others who have expanded the previously dominating one-dimensional monetary view on poverty. In consequence, I decompose a low-asset family's asset base into the following components: (1) labor, (2) human assets such as health status, education, skills, and psychological states such as peace of mind and optimism, (3) physical assets, especially productive assets such as land, equipment, livestock, and housing, (4) social assets such as social networks within the family and between families and even extending to the community and state (e.g. access to safety net mechanisms), (5) financial assets such as cash, savings, social security coverage, and insurance contracts, (6) location and infrastructure such as proximity and access to water and sanitation, educational facilities and markets, and (7) political and institutional assets such as participation in family decision making as well as in organizations at the community, civil or political level. This broad definition of the asset base underlines that low-asset families, just as those that are better off, are "managers of complex asset portfolios" (Moser 1998: 1). In addition, it unveils numerous areas on which microinsurance might produce further impacts. For example, an increase in financial literacy of the insured would mean an increase in human assets; or social ties within the core family may strengthen and inter-family ties may weaken causing changes to social assets, with the net effect not being necessarily clear cut.

Thus defined, the asset base not only serves as the reference point for poverty or its antithesis, welfare, it also provides the means for managing risks. To illustrate this, we need to put the asset base in relation to the concepts of vulnerability, risk and risk management. Following Heitzmann et al. (2002: 4), vulnerability can be decomposed into the so-called "risk chain": (1) the risk itself as an uncertain negative event, (2) the options and actions for managing risks, i.e. the risk response or risk management, and (3) an eventual welfare loss as a function of risk and risk response. In order to stay consistent with the broadly defined asset base as a proxy for poverty, I further specify the term "welfare loss" employed by Heitzmann et al. (2002: 4) as a loss of assets. Assets like cash, savings, insurance, social relations, skills, and education can all be employed for designing and deploying a risk management strategy. The asset base suffers if the function of risk and asset-based risk response bears a negative sign.

²I prefer the loose term 'family' instead of the more common term 'household' because it better fits socio-demographic conditions among low-asset Indonesians. There, the concept of family is not restricted to those living under the same roof but rather encompasses a wider social network of relatives, in-laws and even neighbors and friends (cf. Lont 2000: 162; cf. Newberry 2007: 1314).

Three major strategies can be used in mobilizing assets for the risk response: (1) risk reduction, (2) risk mitigation, and (3) risk coping (Alwang et al. 2001: 3; Moser 2001: 364; Heitzmann et al. 2002: 9; Holzmann et al. 2003: 7). Risk reduction and risk mitigation take place ex-ante in anticipation of a still unmaterialized risk event. Risk coping takes place after the risk has materialized as a shock. These strategies are not mutually exclusive. Components of each can be integrated into the risk response. Microinsurance fits into the category of risk mitigation because it promises compensation for future anticipated losses. A special strength of microinsurance is seen in its capacity to cover covariant risks, e.g. natural disaster risks, which affect many families in the same geographic area and are said to cause the disintegration of informal risk management networks (Alwang et al. 2001: 19; Dercon and Kirchberger 2008: 5; Pan 2008: 6). Naturally, families will strive to employ the most efficient and loss-minimizing combination of assets and strategies in their risk response.

The issue of embeddedness further adds to risk management complexity. As proposed by Polanyi (1944), furthered by Granovetter (1985), and later taken up by Hefner (1998) for Southeast Asia, the concept of embeddedness postulates that economic and socio-cultural processes are intertwined. An essentially economic process such as managing risks through microinsurance cannot be understood and analyzed without regards to culture in general and, as I argue for Indonesia, religion and the remnants of the moral economy in particular. In short, insured and beneficiaries are not completely free from cultural and religious constraints in their risk management choices and actions.

If we thus consider the complexities of (1) a highly diverse asset base, (2) a variety of non-exclusive risk management strategies, (3) a myriad of asset-strategy combinations in formulating risk responses, and (4) the issue of embeddedness, it becomes clear that the one-dimensional original theory of change for *Payung Keluarga* championed by GTZ, Allianz, and myself needs to be critically reviewed. This original theory of change closely follows Brown and Churchill (1999) and Young et al. (2006) and is based on three hypotheses: (1) The insured micro-credit debtors, in the case of *Payung Keluarga* mostly women, contribute significantly to the family income. (2) If the micro-entrepreneurial breadwinner dies, the family is doubly hit by a financial crisis due to the income lost and expenses such as funeral costs and settling of debts and other accounts. (3) *Payung Keluarga* with its double benefit of credit waiving and additional payouts is assumed to cushion the post-mortem financial crisis and ideally leaves funds available for opening up new income sources, e.g. by financing training or business investments. By doing so, *Payung Keluarga* would render severely asset-depleting high stress coping measures like the sale of productive assets unnecessary (cf. Sebstad and Cohen 2000: 60). As indicated above, the major part of the available literature on microinsurance impact focuses on this essentially economic perspective of impact. However, the theory of microinsurance change in its manifestation as *Payung Keluarga* needs to

be expanded. Beyond its actual function as a risk mitigation tool in case of death with possible protective impact on physical and financial assets, *Payung Keluarga* should also be scrutinized for impacts on other assets, for example (1) changes to human assets such as education, skills and peace of mind, as well as (2) changes to social assets like the stability and reliability of social networks. In consequence, – diverging from the aforementioned closely defined impact hypotheses – the rather explorative key assumption which underlies my methodology is that microinsurance impact materializes itself as part of a complex mixture of asset-based risk management strategies which, are likewise, intertwined with the respective socio-cultural context.

4 METHODOLOGY AND DATA

I carried out impact research on *Payung Keluarga* on the sidelines of my employment with Allianz in Indonesia. My research was not commissioned by Allianz or GTZ. However, Allianz allowed me to dedicate a portion of my working time on impact research (for which I am grateful). I undertook fieldwork (in Indonesian) on several occasions at the respondents place of living from July 2006 until October 2008. The regional focus was on urban and semi-urban areas in the Greater Jakarta area, mixed with research stints in Bali, Sumba and West-Timor. The methodology I applied was qualitative-exploratory. The 404 total respondents draw from a wide range of backgrounds to ensure a holistic approach able to capture as many intended and unintended impacts of microinsurance as possible, and to allow for a triangulation of data³. Respondents were grouped into six research components: (1) a customer component that consisted of a baseline and endline survey using group questioning methodology, (2) a beneficiary component of interviews with 24 Muslim *Payung Keluarga* beneficiaries, (3) a loan officer component that consisted of group questionings with MFI staff in order to benefit from their “helicopter perspective” on the insured MFI borrowers, (4) an expert component consisting of 20 loosely structured background interviews with experts from a range of fields including academics, religion, insurance, microfinance, and politics, (5) a credit group leader component for a more in-depth inquiry into customer’s perspectives and motivation using a mix of group questioning and focus group methodology, and lastly (6) a number of interviews with managers of Allianz’ MFI partners.

Table 1 displays socio-demographic and insurance variables (as far as available) on the total insured population as well as of the customer and beneficiary components.

Customer component participants were not randomly chosen but selected by

³Bamberger (2000: 14) defines triangulation of data as “the principle of increasing the validity of the data by looking at different data sources”. According to Kabeer (2003: 113), triangulation serves “to ensure validity of interpretation”.

Table 1: Socio-demographic and insurance variables of customers and research participants

	All insured (N)	Customer Component ¹	Beneficiaries
Cases	71,889	313	24
Living surroundings	urban 43% semi-urban 42% rural 15%	urban 49% semi-urban 37% rural 14%	urban 62% semi-urban 38% rural 0%
Female ratio	89%	83%	25%
Average age	39.30 ²	38.73	40.67
Marital status	-	single 5% married 86% widowed/divorced 9%	single 13% married ³ 83% widowed/divorced 4%
Religion	Muslim 83% Protestant 10% Catholic 5% Hindu 2%	Muslim 54% Protestant 25% Catholic 8% Hindu 12h%	Muslim 100%
Average years of schooling	-	8.94	9.05
Estimated illiteracy rate	-	10 %	0 %
Employment status	-	informal 98% semi-formal 0% formal 2%	informal 38% semi-formal 38% formal 24%
Principal occupations	-	trading 50% farming 17% housewife 15%	trading 29% office boy 8% construction worker 8% taxi driver 8%
Estimated average income (USD/month)	100	125	150
Payung Keluarga coverage ratio (ex-post only)	100,00%	80%	-
Average loan (USD)	134,75	177,604 ⁴	-
Average loan length (months)	5,68	8,30 ⁴	-
Average premium (USD)	0,92	1,33 ⁴	-

¹Ex-ante (n=174) and ex-post participants (n=139) are summed together. 62 repeat participants are therefore counted twice. This accounts for a considerable number of intermediate changes e.g. on age or occupation.

²Age at time of loan disbursement. Note that date of birth data of MFI customers is often inaccurate.

³Includes spouses who became "Payung Keluarga" beneficiaries after the death of the insured.

⁴Last loans of those ex-post participants who had taken a loan since the ex-ante survey, i.e. received insurance.

the MFIs based on a number of selection criteria I had provided. Nevertheless, the customer component profile provides a sufficiently close match with the general insured population for the purpose of this study. It should be noted, however, that the group component participants were slightly better off than the average insured as can be seen from their higher estimated income and higher loan amounts.

The high female ratio of insured (89%) and customer component respondents (83%) reflects the focus of MFIs to provide microcredits as working capital to women. Most of these so-called female micro-entrepreneurs were involved in petty-trade, such as selling foodstuffs, cosmetics and textiles. It is still remarkable that 15 percent of the customer component respondents stated their principal occupation as being housewives. This indicates that (1) some loans were actually passed on to the husbands and that (2) many women regarded their micro-business as a side-activity. The existence of these two phenomena was confirmed by loan officers and group leaders. With such a high female ratio among the insured, it is not surprising that most beneficiaries were male, namely the insured's husbands. I therefore generally refer to the insured as women and to the beneficiaries as men.

I did not undertake a specific investigation into the customers' and beneficiaries' income and expenditure patterns. Income figures are therefore to be taken as highly indicative only. As a rule of thumb, the difference in loan amounts served as reasonable proxy for differences in physical and financial assets, i.e. economic strength. From general observation it was clear that insured and beneficiaries commanded considerable physical assets. TV sets, refrigerators, motorcycles, quality furniture, and good clothes were standard items in the homes where I conducted my field work. In fact, the respondents themselves described themselves as belonging to the middle class (*ekonomi menengah*), not as poor. What also came out very clearly was that the husbands were assigned the role of main breadwinner and head of the family. The women, however, were responsible for managing day-to-day expenditures. Their petty businesses contributed ancillary income to the family budget.

If we summarize the socio-demographic profile of the customer component, it is particularly representative for (1) married, Muslim women engaged in petty trading of (2) diverse ethnic backgrounds and (3) of low but not very low income and physical assets (4) who, through their husbands and other relatives, have access to considerable additional family assets, and (5) live in urban and semi-urban areas, mostly in Greater Jakarta. Other clusters of respondents such as male rice farmers in rural Bali and Sumba are only marginally represented.

My fieldwork benefited from two major factors: (1) the product configuration of *Payung Keluarga* was identical across all MFIs and geographical regions. Such uniformity is atypical for market-based microinsurance products. It promotes comparability of research data. (2) *Payung Keluarga* was a particularly simple microinsurance product covering death as an easily observable major life cycle

risk. This simplicity facilitated research design and enhances transferability of findings. Considering the hypothesis that microinsurance impact is produced within a complex risk management mix embedded in a socio-cultural context, simplicity of one factor, namely the product itself, reduces overall complexity.

There were also, however, three major limitations: (1) lack of control groups, (2) difficult and non-randomized respondent selection, and (3) small sample sizes. Regarding the lack of control groups, neither for the customer component nor for beneficiary component could I apply the double difference approach strongly recommended by Rao and Woolcock (2000: 175). Although double difference methods are usually associated with quantitative data collection (Baker 2000: 56), it would nonetheless have been ideal to compare insured and uninsured respondents also on a more qualitative basis. The reason for a lack of control-groups was that *Payung Keluarga* was obligatory from the start which meant there were no active micro-credit customers without insurance among the partner MFIs. Research at other MFIs which had decided not to implement *Payung Keluarga* was not possible because I could not incentivize them to undertake the considerable administrative efforts to support my research. As regards the beneficiaries, I had no access to low-asset families living within a similar context but without insurance. I therefore had to gauge the counterfactual by asking beneficiaries to imagine how their situation would have been without insurance. Because death of a relative is a fairly clear-cut and singular occurrence, and because post-mortem procedures in Indonesia are highly institutionalized, I hold that such establishment of a counterfactual enjoys an acceptable degree of validity.

Regarding the second major limitation, the non-randomized choice of respondents, this was prone to lead to selection bias and skewed results. The limitation mostly applied to the customer component. As I had no access to the MFIs' customer databases before the onset of *Payung Keluarga*, a randomized choice of credit groups could not be done. I therefore resorted to providing the MFIs with a catalogue of selection criteria, which included among others the selection of typical rather than show-case credit groups. And in fact, the groups which I could visit were of varying social cohesion and loan repayment performance. There was a fair mix of good, average and bad groups. For the beneficiary interviews, the selection process was much smoother. I nonetheless still had to take limited time for research and travelling into account, which often led me to abandon interview possibilities in more remote areas. However, with 38 percent of all beneficiaries visited, the beneficiary sample enjoys a fair degree of representativeness by virtue of its relative size. The remaining components primarily served for qualitative data collection, which is why non-randomization is not particularly critical in these cases.

The third major limitation regards sample size. Only in the customer component did I have more than 100 respondents, which – at least for quantitative data collection – is regarded as the minimum threshold for

achieving representative results (Morduch 2005: 54; Pan 2008: 92). Samples in all other components were smaller. This is especially unfortunate for the beneficiary component. However, for the remaining components I did not strive for large sample sizes in the first place because their focus was on qualitative research and gathering of in-depth background information.

To summarize, the research findings presented below should be regarded as findings that reveal indicative tendencies of microinsurance impact without claiming to accurately quantify them. Even where at first sight data seems quantitative, the methodological constraints described only give these figures “validity by tendency”. It will be the challenge for future microinsurance impact research to further perfect data collection methodologies.

5 THE COMPLEXITIES OF DEMAND

Although the decision to design *Payung Keluarga* as an enhanced credit life product had already been taken by the time the ex-ante customer survey started in July 2006, I nonetheless asked the 174 ex-ante participants about risks to their daily life and on their applied risk management strategies. Table 2 shows the result of this effort.

Column (C) shows a weighted ranking of risks to the respondents’ daily lives, which is generally much in line with the findings of the earlier demand and supply study by McCord et al. (2006: 26). Column (D) displays how often these risks had actually happened to the respondents. Sample size is only $n=63$ because this was an open-ended qualitative question. The majority of respondents did not share their experiences. Columns (E) and (F) show coping measures which the respondents had applied, roughly separated into high stress and low stress measures. Again, not all those who recounted their experiences shared information on how they dealt with them.

Due to the chosen methodology, numbers in columns (D), (E), and (F) are at best indicative rather than fully representative. Nonetheless, a number of conclusions can be drawn: (1) the risk ranking (column C) shows a large gap between education expenses and severe illness as the two top daily preoccupations compared to all other risks. (2) Drought, fire, and other disaster risks are ranked low although the preoccupation with drought was unsurprisingly higher in rural areas than in urban areas. More surprising, however, was that credit groups in Central Jakarta which had experienced both neighborhood fires and severe flooding – and moreover had to sell parts of their assets to cope with those disasters – still ranked those risks well below education and health. (3) Risk perception is therefore related to both the frequency of risk occurrence (which is not accurately displayed here) and how well risks can be dealt with, and eventually related to the resulting costs. This general finding is not new (cf. Brown and Churchill 1999). (4) What is new here is that in an Indonesian low-asset context, low stress measures such as family

Table 2: Risk perception and risk management among ex-ante customer component participants

A	B	C	D	E	F
#	Risk	Risk ranking by points (n=174 respondents)	Observed frequency (n=63 respondents)	Applied coping – High Stress (observed frequency)	Applied coping – Low Stress (observed frequency)
1	Educational expenses	248	6	Asset sale (5)	Family Assistance (1) Pawnshop (1)
2	Severe illness	230	28	Asset sale (3)	Family Assistance (10) Savings (7) Free Treatment (4) Family ROSCA (<i>arisan</i>) (1) Community Assistance (1)
3	Expensive social obligations	62	2	Asset sale (2)	
4	Death (of family member, not spouse)	56	17		Family Assistance (6) Office loan (1) Family ROSCA (<i>arisan</i>) (1) Community Assistance (1)
	Death (of spouse)		6	Asset sale (1) Money Lender (1)	
5	Transportation accident	42	5		
6	Bankruptcy	32	0		
7	Drought	22	5	Asset sale (5)	Overdue credit 5
8	Old age	21	0		
9	Natural disaster (flood, earthquake)	16	11	Asset sale (10) Money Lender (1)	
10	Fire	6	11	Asset sale (10) Money Lender (1)	
11	Theft	4	2		Family Assistance (1)
12	Lay-off (of a family member)	0	0		

and community assistance apparently play a small role in financing education, a larger role in financing medical treatment, and a particularly large role in financing death related expenses. This explains the inverse risk perception of such risks. Expensive social obligations as the third-ranked risk, are the flip side of this overall strong showing of collective risk management. In case of distress and disasters, the wider family and community are supposed to help. This can cause considerable financial pressure on the assisting persons. (5) A last noteworthy point is that the death of a spouse, normally the husband, can lead to high stress coping methods such as assets sales, most likely because of the forgone income-generating capability. Such high stress coping does not seem to happen in case of death of other family members and if it occurs, it tends to do so a considerable time after death.

An inquiry with the credit group leader component revealed the most decisive reason why education was perceived as the most pressing risk, even before health (which is unusual by international comparison (Roth et al. 2007: 8)), and why dealing with death was so much less of an issue. Unanimously, the women declared that in their living environment assistance by family and community was strongest in case of death, less so in case of illness, and almost absent in case of education expenses. It seems that tragic and ever-recurring events such as death and, to a lesser extent, severe illness had been responded to by the establishment of institutionalized collective assistance. Wilhelm (same volume) shows that the same holds true for age-old repetitive disasters like fire and flooding. On the other hand, relatively modern phenomena like education expenses and modern medical treatment have not yet led to the establishment of institutionalized and collective informal risk management strategies.

6 HOW PAYOUTS WERE USED – AND WHY

The above observations raise doubts whether the beneficiaries of *Payung Keluarga* were in fact in urgent need of formal life insurance. The question is how such individualized risk management relates to previously existing, collective informal assistance in practice. For this reason, Muslim beneficiaries were asked how they had made use of their additional *Payung Keluarga* payouts (see Table 3).

According to Table 3, most funds are spent on funeral ceremonies (37%), especially for the traditional *slametan* ceremony, i.e. the solemn gathering of the wider family and the nearby community after death, for prayers and eating. *Slametan* are of autochthonous origin and are strongly connected to ancestor and spirit beliefs. *Slametan* are held on the 1st, 3rd, 7th, 40th, 100th and 1000th day after death (cf. Geertz 1964: 68-76; cf. Magnis-Suseno 1981; cf. Sutrisnaatmaka 1987).

Slametan always involves the serving of food and refreshments which makes them expensive. Together with other funeral rites, such as the proper Islamic

Table 3: Usage of additional Payung Keluarga payouts among Muslim beneficiaries (n=24)

Rank by USD	Usage	USD		Frequency	
		USD	%	#	%
1	Funeral ceremonies (<i>slametan</i> etc.)	2.950	37 %	18	37 %
2	Paying off other debt	1.630	21 %	6	12 %
3	Business investment	1.110	14 %	6	12 %
4	Savings / remaining money	900	11 %	8	16 %
5	Medical costs	420	5 %	1	2 %
6	Education	360	5 %	5	10 %
7	Charity (<i>amal</i>)	300	4 %	1	2 %
8	Others	150	2 %	2	4 %
9	Living expenses	80	1 %	1	2 %
10	Distributing to other family members	40	1 %	1	2 %
Total		7.940	100%	49	100%

burial shortly after death and the ensuing nightly praying sessions (*tahlilan*), the minimum costs of all funeral ceremonies until the 40th day sum up to a minimum of USD 210 and to an average of USD 375. The financing of the funeral ceremonies was derived from different sources. The first seven days were primarily covered by community donations. The later festivities, such as the *slametan* on the 40th and 100th day after death were largely financed by contributions from close and distant family members (compare Table 2). Those contributions can take the form of outright gifts or informal interest-free loans; the boundaries are fluid here. Depletion of savings only plays a minor role. The beneficiaries regarded the sale of assets or the taking of formal credit as an inappropriate or strange (*aneh*) way to finance funerals. I conclude that such an overt incurring of a financial burden goes against the Muslim understanding that funerals should not burden the family.

Although it is not a Muslim ritual, the beneficiaries considered the proper holding of a series of *slametan* after death as obligatory to ensure a dignified passage of the deceased to the afterlife, and to thereby safeguard the welfare and prosperity of the remaining family and community. This strongly reflects the ongoing influence of autochthonous ancestor beliefs that postulate an ongoing connection between the dead and the living and the intertwining of their fortunes. Of course, from an instrumental perspective, an elaborate funeral ceremony is also connected to issues of social status. By and large, when seen from a Western perspective, the payout usage for funerals can be regarded as a social investment. In the perspective of the customers and beneficiaries, however, the connection between a proper funeral and consequent (economic) welfare is much more direct and appears perfectly reasonable. In

their understanding, the holding of proper funeral rites is beneficial for the further stability and increase of physical and financial assets, as well as human assets in terms of peace of mind. These strongly intertwined asset classes are once again representative of the prevalence of embeddedness.

Payung Keluarga has only financed approximately 34 percent of total funeral expenses. Family and community assistance still made up at least 40 percent. Nonetheless *Payung Keluarga* seems to have substituted parts of the informal assistance; not so much regarding the early community assistance but rather the later family assistance. Nine beneficiaries reported that without *Payung Keluarga* their family and friends would have had to contribute more funds. In addition, six beneficiaries declared that due to *Payung Keluarga* they had spent more on the funeral ceremonies than they would otherwise have done. One of the six extra-spending beneficiaries explained the personal motivations and social pressure at work when deciding how much to spend on the funeral:

“Of course I wanted to have a proper funeral for my wife, including the 40-day *slametan* as is prescribed by local tradition. I received lots of donations which were enough for the (festivities of the, M.H.) first seven days. For the 40-day *slametan* I didn’t want to spend as much as I actually did. My friends came and pressed me to spend even more, and so I spent more, but not as much as they recommended ... Yes, the pressure to spend a lot on the *slametan* is increasing. When I first moved to this area the situation was different.”

This example shows the ongoing influence of the moral economy. Socio-cultural norms induce the beneficiaries to spend considerable amounts of money on funerals. In addition, social pressure leads them to spend even more than they themselves consider appropriate. These are clear constraints on the free, personal choice of the usage of life insurance payouts. Through the serving of food and the informal payment of the “professional praying men” involved, much of the insurance fund is distributed in small portions onto the community members. The funds are virtually atomized.

Next to an increase in funeral spending, there are other implications of substituting collective assistance with individual insurance: *Payung Keluarga* has intruded into an arena of collective risk management which is highly institutionalized and appears to work effectively (due to high levels of migration even in cases of covariant shocks). Indications therefore point to making a case that *Payung Keluarga* is crowding out instead of offering complementary protection. A second implication is that in the long run, social cohesion may suffer when social capital – in the sense of ensuring access to help on the basis of balanced reciprocity – is of decreasing importance.

These findings, while indicative in nature, already open two potential avenues of argument: (1) microinsurance actively promotes the individualization of society, or (2) microinsurance provides needed individualized protection to

a society which in any event is heading toward individualization thanks to larger forces such as migration, urbanization, and the extension of the market economy. Although I hold that there is truth in both points of view, this article is meant to raise awareness of such questions rather than answering them. As mentioned before, more research would be needed here, ideally with a longitudinal timeframe and with more rigorous data collection methods.

Let us turn back to the analysis of the usage pattern of Muslim beneficiaries. Paying off other outstanding debt consumes the second largest portion of funds (21%). Even more than the expensive funeral rites, debt repayment is religiously motivated. According to the unanimous belief of the interviewed insured and beneficiaries, the repayment of debt is a precondition for Muslims to enter heaven. The quicker debts are repaid, the better for the deceased. Typical comments by customers were: (1) “Hutang lunas, mati lancar” (With debts repaid, death will be smooth); (2) “Orang meninggal bawa hutang, bingung” (If someone dies and carries debt, that’s confusing). These comments strongly focus on a religious and psychological level. Therefore, my position is that the repayment of debt is largely of social benefit rather than providing urgent economic relief. A second observation supporting this argument relates to the nature of the repaid debt which was generally informal and interest free. Creditors were family members, neighbors or employers and, as such, are unlikely to urge the bereaved family for immediate repayment.

The third position in Table 3, namely economic investment, was more in line with the original causal model and the expectations of GTZ and Allianz. However, with only six instances and 14% of funds, such cases cannot be taken as proof for broad economic relief brought about by *Payung Keluarga*, especially because most such investments were made by notably better-off beneficiaries. There appear to be several factors which are conducive to the undertaking an investment out of an insurance payout: (1) a relatively high asset base of the beneficiary, (2) payouts well above the customary funeral costs, (3) absence of semi-formal or formal employment of the beneficiary, (4) presence of an entrepreneurial attitude, (5) a religious attitude which sanctions the usage of payouts for forward-looking purposes. If we scrutinize these points more closely, they give additional clues why payouts were used as documented in Table 3. Most beneficiaries were men commanding considerable and independent incomes, often from semi-formal or formal employment. The male beneficiaries were therefore in a relatively strong financial asset position to afford the documented social investments. Entrepreneurial need and attitude was often lacking due to the comfort of dependent employment. If Allianz and MFIs had insured the main breadwinners, namely the husbands, instead of the female micro-borrowers, the usage pattern of payouts would likely have looked differently.

Even more influential than economic need and entrepreneurial spirit was the religious attitude of the beneficiaries with regards to the insurance payout.

Most beneficiaries agreed that the primary purpose of the insurance payout was to serve the religious needs of the deceased, not the material needs of living. The insurance payout was perceived as a form of donation. This is not surprising if traditionally all financial assistance received from external parties was in the form of donations, either from the community or from the family. As those donations were clearly marked to finance funeral ceremonies, not investment or consumption, why should the “insurance donation” be regarded differently? Only beneficiaries with a more flexible perception felt morally authorized to use parts of the insurance payouts for their own purposes, such as economic investment. The finding that insurance payouts are often perceived as donations for the deceased also explains why few funds were spent on education (5%), distribution to other family members (1%), or to cover living expenses (1%). Moreover, the extremely low usage for living expenses confirms the earlier observation that beneficiaries were not facing severe poverty in the short-term after the death of the insured. This falsifies the first key hypothesis of the original GTZ-Allianz theory of change, namely the assumption of a severe post-mortem financial crisis. If anything, such crisis seems to develop only some considerable time after death.

7 EFFECT ON OTHER ASSETS

Regarding peace of mind, 44% of the insured participants of the ex-post customer component (n=109) stated feeling “a lot safer” because of *Payung Keluarga*. 45% felt “somewhat safer”, six percent reported “no change” and five percent felt “less safe”. As mentioned above such figures are to be taken as “valid by tendency” only. Nonetheless, a general increase in the feeling of protection can be noted. This however does not translate into more affinity for business risk. Although slightly more ex-post than ex-ante respondents described themselves as willing to venture into new business opportunities, available data does not allow to attribute this change to the provision of *Payung Keluarga*. It is more enlightening to consider the reasons for some customers to actually feel less safe with *Payung Keluarga*, a phenomenon which I came to call *takut cepat mati* (afraid of dying prematurely). I found such concerns to be based on two beliefs: (1) one’s lifespan is based on divine decision (cf. Sutrisnaatmaka 1987: 50); (2) it is consequently impossible and blasphemous to try to insure a life; doing so would entail divine retribution in the form of cutting short one’s life (cf. Samik-Ibrahim 1963: 122). While the first conviction was unanimously held by all respondents regardless of religion, the second is based on a literal interpretation of the term *life insurance* in the sense of insuring that a person will not die. This second belief was held by a much smaller portion of respondents. The above numbers suggest a rate of five percent. However, further qualitative feedback shows that *takut cepat mati* concerns were shared to a varying degree by many of the insured.

While the matter of positive impact on peace of mind is therefore ambiguous,

the matter of financial literacy as another component of human assets is much easier dealt with. Here, a clear increase in financial literacy, or more precisely insurance literacy, can be observed. In a self-assessment of their insurance know-how, ex-ante customer component participants (n=174) attested themselves a weighted average insurance know-how of 23 percent (with zero percent marking low know-how and 100 percent marking good know-how). In the repetition of this self-assessment during the ex-post survey, know-how levels (n=139) increased more than twofold to 54 percent. In the absence of exogenous factors like large awareness and marketing campaigns by the government or other private insurers, this is a remarkable result. Here, the product education efforts by the MFIs and Allianz described above seem to have paid off. Further proof of increased financial literacy comes from a brand recognition exercise: in the ex-ante customer component, participants recognized 36 percent of the shown logos of major banks and insurers. One year later, the portion had risen to 63 percent. The biggest jump in brand recognition was naturally registered by Allianz. From the least known of ten logos Allianz jumped to being the second-best known company. If we exclude Allianz, recognition levels of the remaining nine companies jumped from 39 to 60 percent. When combined, both exercises give strong evidence for an increased sensitization to insurance related messages, and probably to messages of financial planning as a whole. It should be added, however, that despite such sensitization only one single respondent had voluntarily bought a new insurance product in the intermezzo between baseline and endline surveys. Due to a lack of appropriate follow-up products, Allianz has therefore not yet managed to turn its increased brand awareness into cross-sales.

8 CUSTOMER SATISFACTION

When, during the endline survey, customers were asked about their satisfaction with *Payung Keluarga*, they anonymously gave *Payung Keluarga* 8.3 out of 10 possible points. This is a good but not a spectacular result for an insurance product in an Indonesian context where feedback, rankings, and grades are known for having a strong positive bias. Again, the origins of this satisfaction bear strong contextual connotations. Let's look at possible points of criticism first: issues of affordability and trust were almost absent from customer feedback. Apparently these concerns were mitigated by comparably low premiums and high levels of trust of micro-borrowers to their MFIs. Critical reflections of possible negative social consequences and actual effectiveness in providing better risk management options, which are so present in this paper, were absent from the feedback of customers, beneficiaries, loan officers, and MFI managers. The most frequent criticism, where there was any, was that the insurance protection was too limited.

Looking at aspects noted positively in the endline survey, the main drivers of customer satisfaction were: (1) feeling of protection, (2) good price, (3)

tolong menolong (mutual assistance). While the first two points have already been dealt with, the aspect of *tolong menolong* (mutual assistance) deserves a closer look. The idea of mutual help and assistance is deeply imbued in the respondents' conscience and regarded as highly meritorious. During the training of loan officers and the socialization of *Payung Keluarga* to customers, I strongly emphasized the aspect of *tolong menolong* in order to depict insurance as a large mutual assistance network in the hope of making insurance principles more palpable. This resounded well with customers. However, to them, *tolong menolong* still meant an eventual definite return for any assistance given, i.e. a system of balanced reciprocity. Therefore, the question of a premium refund at the end of a loan contract still emerged as the most frequently asked customer question.

An additional, less obvious reason for customer satisfaction is the fact that *Payung Keluarga*, and insurance in general, offers the insured and their beneficiaries the possibility of avoiding reliance on direct financial relationships with neighbors and friends, while – through emphasis on *tolong menolong* or by holding proper *slametan* – sticking to publically sanctioned forms. For example, it is by no means true that beneficiaries are perfectly happy with having to rely on financial assistance from family and friends. The majority of beneficiaries admitted to a feeling of *malu* (shame, awkwardness) when having to rely on assistance from others, although the level of *malu* varies depending on circumstances and their closeness to the lender. Likewise, contributors are also not necessarily happy about their obligation to contribute. This is strongly indicated by “expensive social obligations” faring as the third most challenging risk in Table 2. Insurance therefore enables the insured to maintain proper outward forms while inner substance is diverging in a way which is personally regarded as more convenient. In short, increased autonomy and individualization seem to be the preferred choice of the insured.

9 CONCLUSION

As a point of departure for this paper, a short discussion of available impact research on microinsurance implementations has revealed a scarcity of academic publications on the issue, especially regarding Indonesia and non-health market-based microinsurance. However, the increasing number of microinsurance implementations which has followed the broadening of vulnerability and poverty conceptualizations in the development discourse, now calls for scrutiny on the effectiveness of such microinsurance programs. As the current discussion is dominated by development economics, sociological approaches are largely absent in current impact research. This absence carries the risk that the importance of socio-cultural context in the way microinsurance impact is produced is being missed. It is this research gap that this paper has tried to address.

To ensure a holistic and contextualized research perspective, I have employed a broad asset-vulnerability framework that strongly builds on Moser (1998; 2007) and Heitzmann et al. (2002), and – next to typical assets such as labor, land, or cash – includes soft assets such as education, health status, and social relations. In addition, the framework is enriched by the notion of the interdependent embeddedness of economic and social spheres. Based on this research perspective, I have surveyed the impacts of the obligatory enhanced credit life product *Payung Keluarga* launched by Allianz and GTZ in Indonesia in 2006. *Payung Keluarga* has been largely developed and operated by myself as the Allianz project coordinator. In this position, I wondered if microinsurance was really doing the job it was supposed to do, namely to reduce the insured's vulnerability to asset losses and thereby prevent poverty. This provided the trigger to undertake my non-commissioned (but tolerated) impact research. The applied qualitative-explorative research methodology (e.g. ex-ante/ex-post group questionings, interviews, triangulation of data) was greatly facilitated by the uniformity and simplicity of the product. However, my research was also beset by a number of often unavoidable shortcomings (e.g. lack of control groups, non-randomized respondent selection, small sample sizes). Research outcomes can therefore not lay claim to accuracy. They nonetheless reveal indicative tendencies on the way *Payung Keluarga* has created impact through its interplay with context.

Research outcomes show that the initial theory of change for *Payung Keluarga* was too individualistic and one-dimensional by wrongly assuming a severe financial crisis after the death of the breadwinner which could be mitigated by *Payung Keluarga*. Instead, several enlightening findings emerge: (1) The insured female micro-borrowers were not the main bread-winner of the families but were mostly supplementing the higher incomes generated by semi-formally or formally employed husbands. Bluntly put, *Payung Keluarga* benefited the main breadwinner in the form of additional payouts instead of insuring him. (2) More than half of the additional payouts were used for so-called social investments such as funeral festivities instead of being used for direct business investment. This usage pattern was certainly facilitated by the relatively strong economic position of the beneficiaries. However, the main driving forces were social and religious norms, such as the increasingly monetized and expensive tradition of elaborate *slametan* festivities to be held at set intervals after death. This constitutes an example of the still prevailing clout of the moral economy in an embedded environment which puts socio-cultural constraints on the free choice of payout usage by the beneficiaries. Moreover, feedback from the insured and beneficiaries alike highlights that their understanding of what constitutes reasonable usage choices is notably different to orthodox rational choice models based on an individualized *homo oeconomicus* conception. (3) *Payung Keluarga* has done little to improve the asset situation of beneficiaries. Payouts appear to have substituted a portion of the highly-institutionalized collective risk management practices of family donations. Furthermore, the

availability of such exogenous funds appears to have increased funeral spending in a number of cases. These indicative findings may bear social consequences: even if *Payung Keluarga* as a particularly simple product may not have a significant single effect here, commercial microinsurance taken further seems to have the potential to decrease the dependency of the insured and beneficiaries on the rigorous norms of the family's social assistance network, with potentially liberating effects for the insured individual and potentially negative effects on the egalitarian tendencies in social cohesion. The consequence could be an increase in social inequality. (4) On the other hand, notable improvements can be observed regarding the insureds' financial literacy as a human asset. However, feedback on feelings of peace of mind as another human asset is more ambivalent. Here, superstitions of interference with divine destiny and fear of consequent bad luck coexist with more practical considerations of the need for financial protection.

In summary, the impact of *Payung Keluarga* on the asset base and risk management options of insured and beneficiaries can at best be described 'micro', with a number of questions relating to social sustainability being raised. This meager result is due to a lack of contextualization during the product planning and implementation process, a shortcoming and lesson learned not the least for myself as the project leader on Allianz' behalf.

What clearly stands out is a good level of customer satisfaction and a strong demand for more insurance products, especially for education and health insurance. Customer satisfaction was mainly driven by (1) feelings of protection, (2) low premiums, (3) and an associated notion of participating in mutual help (*tolong menolong*) through insurance. Feedback from beneficiaries also points to the fact that the insured may indeed prefer individualized formal protection over the necessity to rely on social relations for protection. Asking for assistance seems to be connected to a feeling of *malu* (shame, awkwardness), while giving assistance places clearly felt strains on the financial assets of the donators. A much stronger driving factor for demand, however, seems to be the weakness or absence of institutionalized informal collective risk management arrangements for relatively modern risk phenomena such as education expenses and the costs of modern medical treatment. Demand for disaster risk protection, on the other hand, was low. This can be ascribed to its comparatively low frequency and to the existence of relatively effective informal responses (cf. Wilhelm, same volume).

How to proceed? The question regarding the desirability of supporting individualized risk protection to the potential disadvantage of collective informal risk management arrangements needs further research and discussion. Potential unintended negative or positive consequences on social cohesion need to be considered. More attention should be paid to the notion that formal insurance is a fundamentally different concept than informal collective risk management arrangements based on mutual trust and social cohesion.

Apart from the need for more rigorous follow-up research on the social impact of commercial microinsurance, the bridging role that mutual insurance may be able to play between traditional informal assistance based on balanced reciprocity and individualizing commercial microinsurance based on conditional general reciprocity also merits further investigation.

For the time being, I suggest a pragmatic approach: microinsurance in Indonesia is certainly going to expand. The satisfaction levels of customers, MFIs and Allianz clearly point in this direction. Other insurers are also becoming more active in the Indonesian microinsurance market. More products will certainly be developed and ideally, these should first address those demands where existing risk management capacities are least developed, i.e. education and health. The scope for disaster insurance should be carefully assessed, especially in light of low demand correlated with considerable existing risk management capacities in the communities. Already during the planning stage, the possible social impact of any future products should be considered as holistically and contextualized as possible. The broad asset-vulnerability framework that served as the impact research guideline on *Payung Keluarga* may also be of help for other microinsurance projects to fathom the complexities of risk management decisions in an embedded environment, where, after all, microinsurance is only one of many available risk management options. What this paper has shown is that microinsurance impact can only be understood in close relation to the socio-cultural context in which it is developed and applied.⁴

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⁴As a post-scrip to this research, and as its first practical impact, Allianz Indonesia has meanwhile introduced joint-life coverage for Payung Keluarga and is now marketing this form of benefit to its partner MFIs instead of promoting high additional payouts to mostly male beneficiaries. In addition, Payung Keluarga has meanwhile proven to be economically sustainable so that microinsurance is now firmly established as a line of business with Allianz Indonesia. The company is seriously considering the introduction of education and health based microinsurance as a follow-up to Payung Keluarga. After all, the strategy to first start with a low-risk pilot while accepting limited initial developmental impact seems to have paid off for the long run.

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Zurich Bolivia: Demonstrating Key Microinsurance Success Factors

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ABSTRACT: To more strategically address the unsatisfactory risk management situation of low-income populations around the world, Zurich decided in 2007 to form a central microinsurance team, to lead its microinsurance business globally, to foster development locally, and to direct functional expertise to specific projects in various countries. Key functional workstreams are (a) proposition development, (b) distribution skills, and (c) administration. As Zurich's first business unit to be active in microinsurance and as a pioneer in the Bolivian market, Zurich Bolivia has developed many of the required skills since it first started to provide credit life insurance related to microcredits, relieving the surviving family of having to pay back the loan in case of the death of the borrower. Although Bolivia is at the forefront in the commercialisation of microcredit, Zurich Bolivia had to do a lot of convincing and put in hard work until it could launch its first microinsurance projects with Prodem and BancoSol. After limiting itself to credit life for a few years, Zurich Bolivia together with BancoSol developed a product that was not linked to credit but rather to having a savings account. The product was structured to not only address the need of the end customer but also with an eye on the demands and interests of the distribution partners, a crucial factor in securing a stable, long-term partnership. Based on available market research, Zurich Bolivia soon started to develop additional products covering health and accident related risks. In order to bring costs down and to strengthen the relationship with the distribution channel, Zurich Bolivia developed in-house an IT system that linked it to BancoSol, enabling them to minimise manual labour and efficiently collecting premiums. At the end of 2008, Zurich Bolivia sold microinsurance through 20 strategic alliances.

KEYWORDS: Accident insurance, administration, BancoSol, Bolivia, distribution, health insurance, International Labour Organization, life insurance, microfinance institutions, microinsurance, product development, proposition development, savings-linked products, Swiss Agency for Development and Cooperation, technology, Zurich Financial Services

1 BACKGROUND: ZURICH'S MICROINSURANCE STRATEGY

1.1 Formation of a central microinsurance team and public-private partnership with the SDC

Recognising a significant unmet need for insurance among disadvantaged populations, especially in emerging markets, Zurich Financial Services (hereinafter referred to as “Zurich”) established at the beginning of 2007 a central microinsurance team at its Corporate Centre in Zurich. The aim of this team was to coordinate and build on the existing microinsurance efforts in some of the group's business units across Latin America, Africa and Asia, to explore new business models, and to systematically approach the low-income market to provide appropriate and affordable products in a profitable and therefore sustainable manner. To help support this objective, Zurich entered into a public-private partnership with the Swiss Agency for Development and Cooperation (SDC) through which it had access to technical expertise of the International Labour Organization (ILO) and to contacts in local communities.

1.2 Zurich's approach to microinsurance

Zurich pursues an inclusive approach to microinsurance as opposed to only focusing on the poor to the exclusion of other customers. Reaching the low-income population and continuously extending the reach to lower income segments requires innovative solutions and skills that are also applicable to other market segments. By spreading the costs of developing and owning such skills over a larger market, investments can be more easily justified and per-policy costs will be lower as a result.

To build a business that is helpful for the customer and financially rewarding for Zurich, it is imperative to design product propositions that address the real needs of the customers and offer them at prices that the poor can afford. The price of the product to the customer depends on the price of the risk the insurer is covering and the costs of “running the machine”. One way, then, to increase the affordability is to reduce the risk cover to what is necessary. Risk costs, fortunately, are almost perfectly scalable so that a reduction in cover very directly leads to a decrease in premium. The other way to reduce the premium to the customer is to aim for as low a per-policy cost for “running the machine” as possible. These costs behave differently than the risk costs. Besides completely variable costs such as commissions per policy sold, there are costs of a more fixed nature, including fixed or upfront commissions agreed with a distribution channel, costs of actuarial, claims, and other technical staff, costs related to call centres, or investments in systems. To limit, and over time continuously bring down, the per-policy price linked to such costs, very large numbers of customers must be reached in the most efficient ways.

Zurich's microinsurance team has defined three workstreams that Zurich will

focus on to build and run successful microinsurance businesses:

1. Proposition development

Low-income customers are even more careful and distinguishing in their buying behaviour than wealthy clients. They do not have money to spare so they demand quality. This means that products need to be designed that focus on what they really demand, what is important to them. This includes not only simplicity of wording and appropriateness of risk cover but also the services that come with the product and how easily the customers can access the products and services. It also includes new ways to settle claims, e.g. by providing a specific service rather than paying cash which can have two benefits: the customer could potentially enjoy a service that otherwise would not be offered in his neighbourhood and insurance risk could be mitigated by reducing moral hazard.

2. Distribution skills

In order to extend reach and accessibility, the industry needs to move beyond the traditional sales channels (brokers and agents) and work with different kinds of partners that reach the target market and are trusted by them. Examples include supermarkets, other retail outlets, utilities, microfinance institutions, trade unions, church groups, and other community-based organisations. This implies that understanding the needs of the end customer is not enough. If one wants to establish a stable, long-term partnership with a distribution channel, understanding the needs and interests of that partner is equally important. Questions to address include: how can the insurance products enhance the core value proposition of the distribution channel to its customers? What can the insurer do to make dealing with it easy and effortless for the distribution channel? What kind of training is required for the staff of the distribution channel? What kind of marketing material is to be used?

3. Administration

An absolutely essential skill is how to link all the parties together. Serving the low-income market requires capabilities to administer and service massive amounts of policies and claims in the most cost-effective manner. How can workflows be designed to minimise manual labour, to make best use of the infrastructure of the distribution channel, to contribute to the mitigation of insurance risk, and to include third party service providers in an efficient manner? And what are systems requirements to be able to handle millions of small policies and claims at low cost?

1.3 Zurich Bolivia demonstrates many of the required skills successfully

As the first Zurich business unit to enter the microinsurance business (long before it was called that) and the pioneer in its country, in the last years Zurich Bolivia has learned and developed from experience many of the skills that are required and outlined above. The remainder of the paper is a description of the

beginning and development of Zurich Bolivia's microinsurance business with a focus on proposition development, distribution skills and administration. It is to a large extent based on a case study written in 2007 by Craig Churchill (ILO) and Hugo de Grandchant (Zurich Bolivia)¹.

2 THE MICROFINANCE REVOLUTION IN BOLIVIA

2.1 Bolivia – a short overview

Bolivia is located in the centre of South America and has a surface area of approximately 1 million square kilometres. It is one of the poorest and least developed countries in Latin America. Following a disastrous economic crisis during the early 1980s, reforms spurred private investment, stimulated economic growth, and cut poverty rates in the 1990s. The period 2003-05 was characterised by political instability, racial tensions, and violent protests against plans – subsequently abandoned – to export Bolivia's newly discovered natural gas reserves to large northern hemisphere markets. In 2005, the government passed a controversial hydrocarbons law that imposed significantly higher royalties and required foreign firms then operating under risk-sharing contracts to surrender all production to the state energy company. In early 2008, higher earnings for mining and hydrocarbons exports pushed the current account surplus to 9.4% of GDP and the government's higher tax take produced a fiscal surplus after years of large deficits. Private investment as a share of GDP, however, remains among the lowest in Latin America. The decline in commodity prices in late 2008, the lack of foreign investment in the mining and hydrocarbon sectors, and the suspension of trade benefits with the United States will pose challenges for the Bolivian economy in 2009.²

Bolivia has a population of 9.2 million and a labour force of 4.5 million people. 2008 estimated GDP is US\$19 billion (US\$44 billion on a purchasing power parity (PPP) basis) or US\$2,000 (PPP: US\$4,700) per capita. 2008 GDP real growth rate was 4.8% with an inflation of 11.5%. Unemployment stands at 7.5% (urban) and the 10% households with the highest income have 47% of total income while this figure for the 10% households with the lowest income is 0.3%.³

The agricultural sector produces 11% of GDP and employs 40% of the labour force. Industry produces 37% of total GDP with 17% of the labour force, and services account for 52% of GDP and 43% of the labour force.⁴

¹We would like to thank the SDC and the ILO for their kind support of the case study.

²URL= <https://www.cia.gov/library/publications/the-world-factbook/geos/bl.html> (February 12, 2009)

³Ibid.

⁴Ibid.

2.2 *Bolivia's developing microfinance sector*

A timely convergence of events, personalities and donor funding in the late 1980s and early 1990s enabled Bolivia to emerge as the world's most productive microfinance laboratory. The experiences of the Grameen Bank, BRAC and others in Bangladesh might be more widely known, but Bolivia was responsible for moving microfinance from a development strategy into a commercial endeavour.

Emerging from Bangladesh, Bolivia and elsewhere, the primary innovation to make it possible to lend to the poor was a methodology whereby a group of poor persons, often women, agreed to guarantee each other's loans. By bundling many small loans together, this group approach made it possible to efficiently lend to the poor while overcoming the fact that this market lacked collateral. Furthermore, since group members were expected to know each other already and be able to vouch for one another, the group lending methodology reduced the screening costs for the microfinance institutions (MFIs).

Bolivia's major contribution to this innovation was to make it possible for MFIs to become regulated, and therefore provide valuable savings services and access the capital markets to fund their growth. In 1992, to satisfy a growing demand for its services, the microcredit non-governmental organisation (NGO) Prodem created Banco Solidario S.A. (BancoSol), the first commercial bank in the world targeting the low-income market.

But Bolivia did not stop there. From the experiences of regulating BancoSol, applying commercial bank approaches to regulation and supervision that were ill-suited to microfinance, in 1995 the Superintendency of Banks created a new category, the Private Financial Funds (FFPs). Incorporated as companies, these organisations specialise in the intermediation of resources between small depositors and low-income borrowers. With the creation of the FFP category, most microfinance NGOs reconstituted themselves as anonymous societies, which enabled them to collect deposits from the public under the supervision of the Superintendency of Banks.

In 2007, following the example of BancoSol and the Bolivian regulatory environment, more than 40 NGOs around the world had created regulated financial institutions in numerous countries from Kenya to Cambodia, from Mexico to Mongolia. Bolivia has commercialised the global microfinance revolution.

With the constitution of the FFPs, the Bolivian financial system experienced significant deepening. Through these financial institutions, the private sector was able to reach out to new markets that were previously considered unbankable. In 2007, Bolivian MFIs – including microfinance banks, FFPs, microcredit NGOs and credit unions – served an estimated 800,000 low-income persons, roughly equivalent to 20 percent of the country's workforce. Such growth indicated that 78% of the customers in the Bolivian financial system

now come from microfinance institutions of one type or another.

Although significant progress has been made, additional strides are required to diversify the financial services available to the poor. In particular, few institutions provided services that enabled their clients to manage risks. Of 13 registered insurance companies in 2007, all of which were allowed to sell microinsurance products, only two (Zurich Bolivia and La Vitalicia) actually offered products in the market. And while the legal framework in Bolivia has been adapted as described above to create bank-type structures for the low-income market, this had not happened for insurance. Despite government interest in, and public verbal support of, the development of risk management products for the poor, there were no specific regulations that would facilitate the market's provision of such products.

MFIs were beginning to realise, however, that if their clients are better protected against risk, the financial institutions would have better portfolio quality, not to mention the inherent benefits of insurance to their customers. This is the message that Zurich Bolivia has been striving to convey for several years.

3 ZURICH BOLIVIA ENTERS THE LOW-INCOME MARKET

3.1 Overview of Zurich Bolivia

The Zurich Bolivia Group, hereafter referred to as “Zurich Bolivia”, consists of La Boliviana Ciacruz (general insurance) and Zurich Boliviana Seguros Personales (life insurance). La Boliviana Ciacruz has licenses to offer insurance for all lines of business (property, marine, motor, aviation, engineering, liability, specialties, health, and personal accidents). Zurich Boliviana Seguros Personales is licensed to offer insurance for individual life, group life, credit insurance (mortgage), personal accidents and health. Zurich Bolivia's business is segmented by type of client into corporate (mainly international companies), commercial (mainly local companies), and wholesale/individual. The wholesale/individual segment includes individuals purchasing their own policies, and companies that function as aggregators for their employees or clients, most of the time performing some of the administrative work such as premium collection. All three segments are served by three types of distribution channels: direct, brokers, and agents working exclusively for Zurich Bolivia (so-called tied agents). Zurich Bolivia is present, through branch offices, in eight of the nine capitals of departments in Bolivia (La Paz, Santa Cruz, Cochabamba, Sucre, Tarija, Potos, Oruro y Trinidad) and the intermediate city of Montero in the department of Santa Cruz.

3.2 *Zurich Bolivia's development of microinsurance activities*

Microinsurance can only be sustainable if affordable products can be sold that are useful to consumers and profitable for the insurer. One key factor in reaching profitability is a constant drive to lower costs per policy. In order to achieve this, it is imperative to achieve large scale operations by entering into strategic alliances with alternative (i.e. not brokers or tied agents) distribution channels such as financial institutions, NGOs, credit unions, supermarkets and other organizations with large customer or member bases. At Zurich Bolivia, the wholesale segment is responsible for these types of alliances.

Zurich Bolivia began its microinsurance activities in 1999 by providing BancoSol with a credit life product.

However, credit life only provides indirect protection to poor families as the bank is the main beneficiary and the surviving family members do not receive any benefits directly. Consequently, in 2003, Zurich Bolivia demonstrated its focus on proposition development and decided to provide a *pure* microinsurance solution, selling group life through strategic alliances with microfinance institutions. This cover provides a tangible benefit to the surviving family and helps them avoid falling further into poverty when they experience a loss.

Zurich Bolivia became active in microinsurance for a variety of reasons. The insurer's primary motivation was to generate a diversified portfolio that can provide sustainable and profitable growth. The traditional market for insurance in Bolivia – corporations and wealthy individuals – is not particularly large, nor is it expanding significantly. For this thin market, the competition among insurance companies is becoming increasingly intense. Yet the vast majority of Bolivia's workforce is employed or self-employed in the informal economy. Future expansion of the insurance sector depends on developing innovative ways to reach this market.

In the process of expanding the market, Zurich Bolivia also recognised the social advantages of providing insurance solutions to low-income households. With access to risk management products, people can protect themselves for certain risk events in a more efficient way allowing them to put their few assets to more productive use to generate income. By helping low-income households manage their risks, the insurer is making a valuable contribution to breaking the cycle of poverty. To do this, however, it needs to create wider market awareness about the value and benefits of risk transfer, with the intention of promoting a culture of insurance among poor households.

Demonstrating that Zurich Bolivia is supportive of the social agenda of the country to create inclusive financial markets also has the benefit of enhancing its reputation with the general public, Zurich Bolivia's customers and the government, and helps position it as an attractive and responsible employer.

Zurich Bolivia's first strategic alliance for pure microinsurance began in July 2003 with a life product designed for Prodem FFP. Several years after creating BancoSol, the NGO Prodem also created a private financial fund to serve the rural areas. Because of its strong management team and their willingness to innovate, this FFP was able to expand dramatically, even though it was operating in some of the county's most sparsely populated regions. Consequently, it seemed like an ideal company to start the untested endeavour of selling voluntary term life to the low-income market.

A few months after launching Seguro de Vida Prodem, Zurich Bolivia began selling an almost identical product, SolSeguro, through BancoSol. For both Prodem and BancoSol, Zurich trained the MFIs' customer service staff – the tellers and loan officers – about insurance and the product, and provided them with promotional strategies and product brochures. In both cases, Zurich Bolivia placed agents in the banks' larger branches to demonstrate the sales strategies and assist the banks' staff. However, the results from these two leading microfinance institutions could not have been more different.

After two years of lackadaisical sales, and only 1,000 active policies, Prodem and Zurich Bolivia terminated their alliance. In contrast, BancoSol sold 3,500 policies during the same period and was eager to introduce additional products. Upon reflection, the insurer realized that the key difference was the degree of commitment from senior management toward insurance. While Prodem was undoubtedly innovative, management was lukewarm about the value or importance of insurance. During that period, it was much more important for Prodem's management team to open up new branches and increase outreach, rather than to diversify its product offerings. Even a 15% commission for selling policies was not sufficient incentive to motivate Prodem's management to place a priority on insurance sales – in fact, management came to see it more as a distraction than an advantage.

At BancoSol, however, key individuals in the management team had a favourable opinion of insurance and the value that it could bring to the bank and to its customers. They believed that the bank's clients needed better risk management tools, and if its clients could manage their risks better, that would positively affect the bank's bottom line. BancoSol also saw insurance as a comparative advantage in Bolivia's competitive microfinance market, as a strategy for enhancing customer loyalty. It did not hurt that insurance also generated an income stream for the bank that was not risk based. To increase ownership and support of the project by the bank, Zurich Bolivia and BancoSol agreed to co-brand the insurance products. This is also an important factor in driving sales as the BancoSol name is well known and trusted by the low-income population. To operationalise its commitment to insurance, BancoSol agreed on a series of specific sales targets for its branches and closely monitored the results.

Zurich Bolivia did not limit itself to Prodem and BancoSol. It approached

all MFIs in the country to inquire about strategic partnerships. For a long time, few were interested, in part because insurance companies do not have a good reputation for providing quality service and paying claims. Of the major players, only Banco Los Andes was interested, but it eventually concluded a partnership with one of Zurich Bolivia's competitors because, as the prime competition for BancoSol, Los Andes was not comfortable having a common insurer. The reluctance of Bolivian MFIs toward insurance has begun to change, however, as projects funded by the Inter-American Development Bank and USAID are actively promoting insurance services for the poor.

Besides MFIs, Zurich Bolivia also tried to reach the low-income market through alternative delivery channels, such as utility companies. In Bolivia, however, the telephone or electricity companies, for example, are prevented from promoting or selling services other than the ones they are authorised to provide.

The continued efforts to explain that appropriate and affordable insurance is not only good for the end customer but, when designed correctly, also benefits the distribution channel's core business, an essential ingredient of a successful strategic alliance, helped Zurich Bolivia to increase the number of strategic alliances with both MFIs and other institutions from 8 at the end of 2007 to 20 at the end of 2008. In the future, Zurich Bolivia intends to approach additional non-regulated financial institutions, pharmacies and supermarket chains to reach the low-income market through unexploited channels.

4 THE MARKET

The primary market for microinsurance in Bolivia consists of low-income persons in urban and rural areas, with limited disposable income, who are highly sensitive to price. The vast majority of these persons work in the informal economy running unregistered businesses. Most have limited education and few have had previous experience with insurance.

Most poor people manage risk with their own means. Many depend on multiple informal mechanisms, such as community solidarity and rotating savings and credit associations to prepare for and cope with risks. Such systems, however, generally do not adequately protect against costly and unpredictable risks. Dealing with the effects of risks only after they materialise can result in desperate measures that leave poor households even more vulnerable to future risks. Facing severe economic stress, many poor people take out emergency loans from moneylenders. They may also deplete savings, sell productive assets, default on loans, reduce spending on food, and take children out of school.

According to a study by CentroAFIN in 2004, the potential microinsurance market in Bolivia primarily consists of the clients of microfinance institutions (see Table 1). Based on assessment of their interest and willingness to pay for

Table 1: Estimated Microinsurance Market by Type of Cover

Type of insurance	Percentage interested (%)	Potential market (# of people)	Average amount available per year per household (US\$)
Health	75.3	318,000	25.6
Death	31.1	130,000	35.1
Accidents for family members	48.8	204,000	28.1
Accidents for its employees	10.4	43,000	46.0
Theft at home	39.9	167,000	20.8
Theft at workplace	31.6	132,000	31.5
Fire	19.9	83,000	42.3

Source: CentroAFIN (2004)

particular covers, CentroAFIN extrapolated the findings to estimate the total market for microinsurance in Bolivia. The results indicate a high demand for health insurance.

5 PROPOSITION DEVELOPMENT, AN ONGOING PROCESS

Zurich Bolivia began its involvement in microinsurance by providing credit life solutions, which is quite profitable for the insurer. To date, 89% of Zurich Bolivia's credit life portfolio covers loans below US\$10,000, covering more than 120,000 persons, generating annual premiums in excess of US\$2 million. The loss ratio is around 55%.

However, to help low-income households better manage risks, and to expand its own market, in 2003 Zurich Bolivia decided to provide group life solutions sold through the microfinance banks. Unlike most insurance products offered through MFIs, which are typically linked to loans, these life insurance products were offered through customers' savings accounts. The monthly premium for this product is US\$0.99 and the benefit depends on the average savings balance (see Table 2).

In comparison to credit-linked insurance, a savings-linked product has important advantages for the insurer, delivery channel and customer. It enables the poor to have insurance protection without being in debt. Some microfinance clients continue to borrow repeatedly to expand their microenterprises, but others take breaks in between loans – and with credit-linked insurance, they would not have any coverage during the breaks. For the MFI, this type of insurance creates an incentive for depositors to increase savings balances since the more they have in their account, the greater the coverage. For the insurer, it increases the potential market, at least where MFIs have more depositors than borrowers, and it creates a more stable customer base with higher renewal rates.

Table 2: SolSeguro Product Details

Coverage	Benefits (US\$)		Insured Capital Benefit Calculation	Max age of cover- age
	Max	Min		
Death	15 000	300	Five (5) times the average balance of the last six (6) months in the related account.	65 years
Accidental Death Benefit	15 000	300	Five (5) times the average balance of the last three (3) months in the related account.	65 years
Burial Expenses	700	300	One (1) times the average balance of the last three (3) months in the related account.	70 years
Additional benefit for spouse and children	200	50	US\$50 benefit for every child (max. 4 children). In case of no children, applies a US\$200 benefit payable to the surviving spouse.	18 years (children). No limit (spouse)

Source: Zurich Bolivia

The proposition, SolSeguro, was designed over a period of six months in a series of meetings and workshops between Zurich Bolivia and BancoSol's marketing, product and commercial top executives with the aim of determining the adequate structure to fit the identified client needs and demands, the bank's objectives and our own goals regarding price, covers, expected number of policies and operational processes (underwriting/collections/payments). The bank's knowledge of their client base (e.g., age profiles, profiles of outstanding credit and deposit balances), focus group discussions, external surveys, international experiences, as well as Zurich Bolivia's own research, shaped the work.

One of the keys to being able to provide insurance to the low-income market profitably is through cross selling, increasing the premiums paid per household. Consequently, soon after launching the life products, Zurich Bolivia began developing additional propositions. The demand research from the CentroAFIN research indicates that three quarters of microfinance clients would be interested in health insurance, and this finding was confirmed through feedback from BancoSol and focus group discussions. Zurich Bolivia also had a strategic reason for introducing this business line, even though it will have considerably higher administrative costs. Since 95% of BancoSol's clients had never purchased a voluntary insurance product, Zurich Bolivia believed that it would be helpful if they could see it in action. Since health insurance has more frequent claims than life insurance, and since the insured can experience the benefit directly, such a product can help create an insurance culture among the low-income market, which would have a positive spin-off effect of increasing

Table 3: Health Insurance Product Details

Coverage	Insured Capital	Max age of coverage
SolSalud	Medical consultation at 100%. Auxiliary Services and Maternity at 80%. Hospitalisation and surgeries at 70%. Ambulance at 80% (urban area). Blood transfusion (up to US\$300) at 80%.	21 years for children / 65 years for spouse
SolSalud Plus	SolSalud coverage plus up to US\$500 per person per year and up to US\$2 500 per family group per year for medical expenses in case of accidents.	21 years for children / 65 years for spouse

Source: Zurich Bolivia

Table 4: Health Insurance Product Details

Plan Type (US\$/month)	SolSeguro	SolSalud	SolSalud Plus
1 Policy Holder	0.99	3.99	4.48
1 Policy Holder and 1 Dependant		6.99	7.97
1 Policy Holder and 2 Dependents		9.99	11.46
1 Policy Holder and 3 Dependents		11.99	13.95
1 Policy Holder and 4 Dependents or more		13.99	16.44

Source: Zurich Bolivia

sales for other insurance products.

In January 2006, after a few months of development and negotiations with all partners, Zurich Bolivia launched two health insurance products with BancoSol, SolSalud and SolSalud Plus. The health covers are provided by a specialized pre-paid health services company. Table 3 summarizes the benefits for SolSalud and SolSalud Plus, which are in addition to the benefits provided by SolSeguro. Account holders at BancoSol have the option of having life insurance (SolSeguro), life plus basic health coverage (SolSalud), or life, health and additional coverage in case of accidents (SolSalud Plus). Customers cannot choose the health coverage without the life insurance; although the US\$0.99 premium for SolSeguro is included in the health premiums (see Table 4).

Anyone between the ages of 18 and 65 who has a savings account in BancoSol is eligible for these covers. No medical examinations are required. The account holder only has to complete a short health declaration when they open the account. This inclusive approach is appropriate when serving the low-income market since the sums insured are so small, it is hard to justify efforts to screen out high risk clients. Furthermore, most persons opening up accounts do so because they want savings facilities, not because they want insurance coverage, which helps to control adverse selection.

Moving forward, Zurich Bolivia may also develop additional products. Micro

pensions, agriculture insurance and property coverage are all under consideration.

6 OPERATIONAL REQUIREMENTS

Various operational issues need to be addressed to make microinsurance successful, including premium collection and claims payment processes, institutional structures, incentives and so on.

6.1 *Workflows*

Sale and policy issuance

The sales process is very simple and is centralized in the bank's facilities. Once a client enters the bank a customer service officer of the bank or a bank teller promote the products by informing the client about the benefits and the costs. These bank officials are supported by a Zurich Bolivia tied agent who is in charge of their training and supervision and who rotates between several branches. Should a customer decide to purchase a product, he fills in an activation form which is immediately entered into the front-end system installed at the bank⁵.

Upon completion of the data entry, the bank teller prints out the Insurance Certificate compliant with insurance regulation and hands it to the customer along with other relevant documents such as processes to be followed, and a list of authorized physicians and medical facilities. As a result, the customer leaves the bank branch with all the necessary information and documentation. No examinations or additional approvals from Zurich Bolivia are required.

Premium collection

As part of the sales process, the client also signs an authorization form to debit his bank account with a payment amount equivalent to his insurance premium. He can choose between monthly or annual debits. Initially, the debit process (as explained in more detail in section 6.2) was run every 15 days. However, since some of the bank's customers use their accounts just to receive payments or loan amounts and immediately withdraw their total account balance within the next couple of days, Zurich Bolivia encountered problems with debiting the accounts and insurance premiums remained unpaid for extended periods of time and the customers needed to be chased. As a result, the process was changed to a daily run which eliminated this issue.

⁵See section 6.2 for more details on the IT solution.

Claims process

BancoSol is also involved in the claims process. In the case of death, the documentation is collected and, for the applicable average account balances, completed by BancoSol. The documents are then sent to Zurich Bolivia for final checking and settlement.

6.2 Information technology

Microinsurers must take advantage of ways of improving efficiency if they are to be honest stewards of microinsurance premiums. To facilitate the management of thousands of very small policies, Zurich Bolivia developed in-house IT applications. It has developed a web-based application called Front-End Wholesale, which is installed on a server located at the microfinance institution. With this application, BancoSol can issue, cancel and print insurance certificates.

In order to speed up the underwriting and issuance process and reduce manual intervention and potential sources of error to a minimum, the bank employee inputting the required data needs to only type in the account number, name and ID number. The Front-End Wholesale application then accesses the bank's client database and completes all the remaining information. Insurance-specific information such as the chosen insurance product, beneficiaries, dependants, payment frequency, etc. is then added by the bank employee.

After the clients' information has been entered into the IT module, at the end of the day an interface file is generated and sent electronically to Zurich Bolivia, which includes all the registers of issuances, renewals and cancellations. This information is obtained from the movements registered in the Front-End database. When Zurich Bolivia receives this file, the information is reviewed and validated. The following day, Zurich Bolivia sends a file back to BancoSol's collection interface to debit the premiums.

During the rest of the day, the application debits the corresponding clients' accounts, generating a favourable or unfavourable response. When the response is not favourable because of insufficient funds in the client's account, the system tries every day to debit the customers account until (i) there is enough money to pay the premium, or (ii) 60 days have gone by in which case the policy is cancelled.

Naturally, this solution required a significant investment. Zurich Bolivia estimates that it has already spent US\$50,000 on software and hardware to support microinsurance, but this investment should pay for itself within a year. In addition to streamlining processes and bundling many small transactions into automated procedures, the investment in IT shows BancoSol that the insurer is serious about this business and committed to making it succeed. By integrating its IT systems with the bank, Zurich Bolivia is also strengthening

the strategic partnership. Furthermore, this solution is a platform for growth; it has been used with other delivery channels and other products, thereby spreading the development costs.

6.3 Marketing, education and training

Most of BancoSol's clients have not had experience with insurance; therefore, considerable time and effort is required to convince them of the benefits. In the Zurich Bolivia-BancoSol relationship, the key to successful insurance sales is the bank's frontline staff, the tellers and credit officers. If these people are not convinced that insurance is valuable, they will not be very persuasive. Consequently, Zurich Bolivia focuses its energies in training the bank's staff to sell insurance, providing refresher courses every 3 months. In addition, in the bank's largest branches, Zurich Bolivia places one of its own people to demonstrate insurance sales practices and help answer questions. This approach was somewhat risky; BancoSol was so impressed with their skills, that the bank has since hired two of them away from the insurer.

Thus far, growth of voluntary products has been moderate. Almost 10% of the bank's depositors have chosen insurance. Many of those who have not opted for coverage still do not understand how it works or appreciate its value. Nevertheless, Zurich Bolivia is averaging 400 new policies each month, and expects that the health insurance products will improve sales. Plus, with improved communication and marketing tools, the penetration rate should increase substantially. To raise awareness and accelerate growth, Zurich Bolivia is in the process of developing testimonial advertising with clients explaining how they have benefited from insurance, which will be shown to persons waiting in line in BancoSol's branches. The printing of marketing material and the promotion of the products through television, radio and newspapers, have been made in conjunction with BancoSol.

Besides the customers' unfamiliarity with insurance, another key challenge is the low staff retention among the bank's sales promoters. This is being addressed through continuous training sessions and the creation of some incentives for the bank's employees. For example, for the best insurance salesperson in BancoSol, Zurich Bolivia is offering a paid weekend for 6 persons in a very nice hotel.

7 RESULTS AND CONCLUSIONS

The insurer believes that sustainable profitability around 15 to 30% in relation to gross written premiums (GWP) can be achieved in microinsurance, with 10% for administrative expenses, 20% for commissions, and a 40 to 55% loss ratio. As shown in Table 5, even though Zurich Bolivia has only been in the microinsurance business for a few years, it is already achieving these targets.

Table 5: Zurich Bolivia Organisation Basics – Trends*

	2007	2006	2005	2004	2003	2002
Total number of microinsurance insured lives	63,928	47,540	36,222	24,826	689	N/A
Micro-insurance premiums collected (US\$)**	993,303	661,098	376,311	331,681	246,399	113,705

Source: Zurich Bolivia

* This information excludes Credit Life clients.

** Including Seguro Mltiple (life & accident), AP Bancruz (personal accident), SolSeguro, SolSalud and SolSalud Plus (all pure microinsurance products, excluding credit life)

Operational results are adequate as losses are controlled below 30% when compared to GWP and commissions under 18%. SolSeguro has a 70% profitability (assuming a 10% administrative expense ratio). SolSalud and SolSalud Plus currently have profitability ratios between 40 and 45%.

For Zurich Bolivia, the key to minimizing the operating cost ratio is the strategic alliance with BancoSol, which enables the insurer to use the bank's infrastructure to reach the target market and to support the claims process. If Zurich wanted to access the market on its own, the investment in distribution outlets or other type of representation in each area would have made the product too costly.

Because of the small premiums, an automated administrative process is imperative. The use of Zurich Bolivia's IT application considerably reduces transaction costs by eliminating manual processes and minimizing reprocessing due to human error. This is where Zurich Bolivia has an important competitive advantage as it is the only entity in the market that has invested in the development of a specific IT tool to support and manage the channel, aggregating value and creating an operational inter-dependence between the insurer and the financial institution.

The success of this distribution channel is not guaranteed. Microfinance institutions are heterogeneous. Some are banks and finance companies, others are NGOs or credit unions. They have different motivations and priorities, and those priorities change over time. Of the dozens of Bolivian MFIs that Zurich Bolivia approached in 2004, only a few were interested in microinsurance. Today, many more are coming on board, although with varying degrees of commitment. Indeed, success in partnering with MFIs depends on the commitment level and effort of the MFI's top management. They have to embrace microinsurance, adopt it as their own, and manage it together with their traditional products.

Even though Zurich is Bolivia's microinsurance pioneer, it is not resting on its laurels. It is keen to have more and better information about the target market so it can develop better insurance products for the poor. It also wants to improve efforts to educate the low-income population about the functioning,

characteristics and value added of insurance. To accomplish that objective, it is imperative to provide ongoing training to the bank's customer service personnel, or to build the capacity of the bank to train its staff on insurance.

Microinsurance products have to be generated under non-conventional parameters, adequate for the low-income population; structured to be low cost, with minimum adequate coverage and easy to understand to immediately draw the client's attention. In addition, one product is not enough. Although products have to be kept simple so that staff can easily explain the products' features and benefits to an uneducated market, a diversity of products helps the insurer increase the amount of premiums it is collecting per household.

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PART III

Health Microinsurance

SEWA's Model of Microfinance as a Risk Management Instrument for the Poor

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ABSTRACT: The Self-employed Women's Association (SEWA) in India is a union of women workers in the informal economy. SEWA members are poor, own few or no assets and face multiple risks. SEWA offers a variety of financial services to its members for risk management and vulnerability reduction. Through SEWA's banking services, members can build their asset base and invest in an old age pension fund. SEWA Bank also provides business counselling and financial literacy training to its members to enable sound financial management practices and vulnerability reduction. SEWA Insurance offers it members an integrated insurance package that covers death, accidents, hospitalisation and asset loss. SEWA's strategies have developed in response to the specific needs of its members and have harnessed the power of collectivization and solidarity. Over the years, SEWA has faced a variety of challenges in the course of providing these services to poor self-employed women. The participation of the women members in all aspects of program design and delivery, and their accessibility to the Association's leadership, ensure that challenges that are faced are turned into opportunities for developing novel solutions.

KEYWORDS: Risk Management, Microinsurance, India, Social Protection

1 INTRODUCTION

The majority of the poor in India work in the informal economy, and receive negligible, if any protection from the government social security schemes. These schemes only benefit about 5-6% of the workforce that falls in the formal economy. The remaining 94% of the workforce is bereft of any safety net during contingencies and old age (Remesh, 2007). Ironically, it is these unprotected poor families that are most vulnerable to natural and human-made shocks (Collins, Morduch, Rutherford, & Ruthven, 2009). There is increasing

recognition that in addition to improving the employment opportunities for the poor, there is a need to reduce the adverse effects of the shocks that they are exposed to (World Bank, 2001).

In recent years, insurance, or microinsurance, is gaining ground as a strategy for risk protection for the poor. This relatively new area is getting increasing support from national governments, donor agencies, insurance companies, non-government organizations and member-based organizations. The Self-Employed Women's Association (SEWA) in India was one of the early organisations to identify the need for insurance among the poor. However, SEWA saw insurance as one prong of a more holistic approach for reducing the vulnerability of the poor. In SEWA's view, the vulnerability of the poor can be reduced if they have access to a wide range of financial services, much like those available to the non-poor, such as savings, loans old-age pension and insurance.

In this paper we present a case study of the SEWA's integrated approach to risk management comprising financial services and allied programs offered through SEWA Bank and SEWA Insurance. In the next section we provide a brief background on SEWA. This is followed by a discussion on SEWA's approach to risk management through microfinance. We then discuss the services of SEWA Bank, followed by those of SEWA Insurance. The following section carries a discussion of the challenges faced and the strategies adopted to address these challenges. The concluding section ties together the key lessons learned.

Two of the case study authors have each been with SEWA for over 20 years, and the third author was part of the SEWA team for over five years. The data and analysis in this paper takes advantage of the knowledge and understanding of the authors regarding these services. Unfortunately there are few formal evaluations of these programs to supplement the discussions – those that are available have been included.

2 SELF-EMPLOYED WOMEN'S ASSOCIATION

The Self-employed Women's Association (SEWA) is a trade union of 1.1 million¹ women working in the informal economy and was started by Ela Bhatt in 1972. SEWA "is an organization of poor, self-employed women workers... who earn a living through their own labour or small businesses... (and who) do not obtain regular salaried employment with welfare benefits like workers in the organized sector" (Self-Employed Women's Association, 1999). The organisation has two main goals: to organise women workers to achieve full employment, i.e. work security, income security, food security and social security; and to make women individually and collectively self-reliant, economically independent and

¹Membership as of January 2009

capable of making their own decisions. Headquartered in Ahmedabad (Gujarat, India), SEWA has members in seven states across India.

SEWA's approach and the vast array of activities it is engaged in are rooted in the needs of its members. It recognised that the primary need of informal economy workers is regular work and decent pay. SEWA believed that for the workers to pursue their livelihoods productively, they need to be organised. It therefore brought together informal economy women workers into a union, for collective strength, voice and visibility. SEWA also saw the need for a variety of support services for workers to get full employment and become self-reliant. The SEWA Bank was established in 1974 to provide financial services to SEWA members. Trade-specific cooperatives of women engaged in the same occupation or trade were organised and provided with livelihood support services such as skill training, access to raw materials and markets. Since SEWA members are women, they need a safe place for their young children while they are at work which led to setting up the SEWA Child care. To address the health needs of its members, SEWA initiated a community health program in 1982. Members are poor and live vulnerable lives. They have unstable incomes and negligible assets or capital to fall back on. Death, sicknesses in the family, natural and human-made disasters throw their precarious lives off-balance. For this, they needed risk protection, and SEWA initiated insurance in 1981.

In a broad sense, all of SEWA's activities, aimed at strengthening the livelihoods of its members, are risk-reducing. In this paper we focus specifically on the financial services of SEWA as risk-management strategies for its members.

3 MICROFINANCE AS AN INSTRUMENT OF RISK MANAGEMENT AT SEWA

Needs of members

Workers in the informal economy typically have very few or no assets. Most are daily wagers and live a subsistence life style. At various points in their life cycle, they need lump sums of money for different events. Some events are anticipated, such as weddings and funerals, whereas others are unexpected. For both types of events, the common strategy is to borrow from moneylenders. The terms of the loan are usurious, and once they take a loan, it becomes difficult for them to get out the indebtedness. This further increases their vulnerability, and any unexpected adversity pushes them further into poverty – this is the vicious spiral of poverty (Vyas, n.a.).

Strategy for risk management

SEWA believes that the financial strategy for risk management has to be three-fold. First, members have to transform their asset-less situation into one where they own assets. Asset ownership reduces vulnerability in two ways – it increases their income earning potential, and is something that the worker can fall back on in times of adversity. Second, members have to plan ahead of time for anticipated financial needs so that they do not fall into a debt trap. By planning for anticipated financial needs, members are able to tide over high expenditure events such as marriages. Third, members need financial protection for unanticipated adversities, and risk pooling through insurance is the preferred strategy. SEWA thus offers three categories of risk-managing financial products to its members: savings accounts, loans and microinsurance, (Microinsurance: Improving Risk Management for the Poor, No 1, 2003).

All of SEWA's services are geared towards women. Thus only women can maintain savings accounts and get loans from SEWA Bank. While the spouses of workers may accompany them to the bank, particularly in the early stages of their membership, the client and signatory is the female worker. Similarly, the primary member in SEWA's insurance program is the woman worker. Her husband and children may also buy insurance coverage if she is a member, but a male on his own, cannot get insurance coverage.

In the sections below we describe how the services of SEWA Bank and SEWA Insurance work in tandem to provide risk management tools for SEWA members. SEWA has over 30 years of experience in implementing these schemes. Over the years, it has faced several challenges in operating and implementing the schemes, and in response to these, has made changes and modifications to address these challenges. In the process, much valuable learning has occurred which can be usefully shared with other players in this field.

4 RISK MANAGEMENT SCHEMES OF SEWA BANK

SEWA Bank is a cooperative bank and was formed in 1974, to inculcate the habit of saving, providing credit and promoting insurance benefits. These aims are tied to SEWA's broader objectives of aiding women in building their capital and asset base to enable poor self-employed women to be economically strong and self-reliant. SEWA Bank's initial services were savings, loans and insurance. Over the years, it has diversified its product range to better meet the needs of its members. Two important innovations have been providing financial literacy to members, and its promotion of cost-saving and eco-friendly technologies among its members.

Savings Program

The need of the poor to save, and the creative ways in which they do it, is well documented (Rutherford, 2000). Rutherford has shown that the poor are in fact willing to pay someone to keep their savings safely. It is also recognised that savings is perhaps the most important risk management strategy, and a safe place to save is not commonly available to poor households (Morduch & Sharma, 2001). Unlike most microfinance programs which started with credit activities, SEWA's program started with an emphasis on building member savings. Since its inception, the number of depositors has been three to four times the number of borrowers (N.A., 2008).

SEWA Bank offers various savings schemes including regular savings, term deposit schemes and a range of specialty savings products to meet specific needs of its members. Some of the savings schemes are for anticipated expenses. The *Mangal Prasang Yojana* (Special Occasion Scheme) and the *Kishori Gold Yojana* (Buying Gold Scheme) are aimed at savings for weddings in the family. The *Chinta Nivaran Yojana* (Worry Riddance Scheme) helps women save for crisis and unexpected expenditures. Members can also save for housing purchases and repairs.

A large proportion of SEWA's members are daily wage earners. In 1999 SEWA Bank instituted the *Jivan Asha* scheme, under which members can make daily deposits into a savings account.

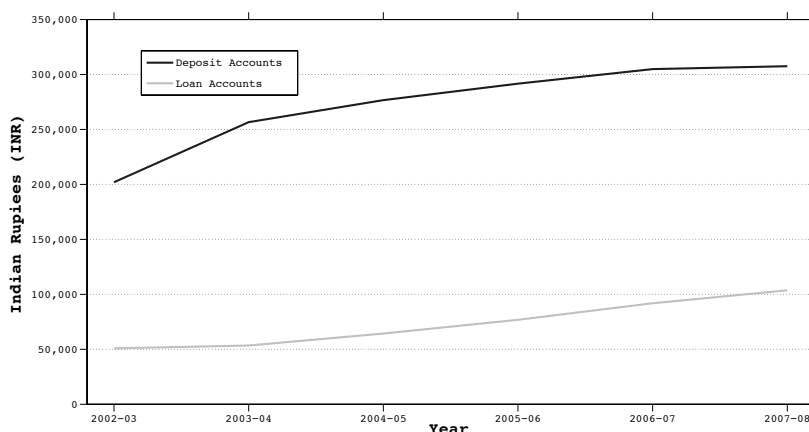
Loan Program

Loans are another method of managing risk, especially when they are used to strengthen livelihoods. Members use the loan facility of SEWA Bank to start or expand existing businesses to maintain income flows into the household. The *Sanjeevani* (rebirth) Loans are targeted at wives of laid-off mill workers. These mill-workers have been unable to find new jobs, and many of these households rely primarily on the wife's earnings for their sustenance. These loans are coupled with business counselling to enable the borrowers to start new businesses or upgrade existing ones.

The bank also gives housing loans, because a secure house is a woman's most prized asset. "My house is my asset, my savings, my workplace and my place of rest. Improved shelter increases my productivity and security" says Manjulaben, a *bidi* roller.

SEWA Bank also gives instant loans to women against the collateral of their gold jewellery. Sometimes a worker may not have a savings record or a credit history at the bank. In such cases, a woman may obtain a loan against her gold jewellery.

The Bank's loan facility enables women to build their assets in another way. Often daily wagers rent tools or equipment for use because they do not have



Source: Information Booklet: SEWA Bank 2008

Figure 1: Growth in depositors and borrowers in SEWA Bank

their own. A loan from SEWA Bank enables the worker to purchase her equipment, e.g. the hand cart on which she sells vegetables, and thus increase her financial stability.

When a member takes a loan, she is told about the insurance program, and given the opportunity to purchase life and accident insurance. For this she has to deposit Rs. 500 from her loan amount into a fixed deposit. The interest from this amount goes towards her insurance premium. Often, this is a member's first introduction to insurance services at SEWA. Once introduced, most members continue enrolling in the insurance program even after their loan is repaid.

Micro Pension Scheme

Old age pensions are another mechanism for risk management for SEWA members. In 2006, SEWA Bank joined with Unit Trust of India-Asset Management Company (UTI-AMC) to initiate a micro-pension plan for SEWA members. Members contribute a fixed monthly amount, as low as Rs. 50 (less than one US dollar at the current exchange rate), into a retirement account. The pension benefits begin at the age of 58. This has been a first for informal economy workers who typically have to rely on their children for support once their working life is over.

Financial literacy

SEWA imparts financial literacy to its members as a part of its risk management strategy for women workers. Women workers in the informal economy

earn and engage in financial transactions from an early age. Their unstable work patterns result in a short term, often day-to-day, perspective with regard to finances. They have limited opportunities and exposure to planning for the future or against unexpected losses. An important strategy in building the risk management capabilities of the members is to teach them some basic skill in financial planning, so that they can take an active role in managing the risks in their lives.

In 2002, SEWA Bank initiated Project Tomorrow, aimed at imparting financial literacy to its members. The project aims to ensure "... that women are active and knowledgeable participants in their financial decisions and households are able to fully utilise and leverage the financial services available to them" (Financial Education for SEWA Bank Members: A Facilitator's Guide, 2003).

Through simple cases, role plays and games, members are introduced to the basic principles of money management and the importance of building up their assets and savings.

E.g. By having one less cup of tea each day, a worker can save Rs. 6 a day.
This translates to Rs. 2190 in a year.

Business Counselling

At first glance, business counselling is not a typical risk management strategy. However, in SEWA's approach, an activity that reduces the vulnerability of its members becomes a risk management tool. Through its business counselling services, SEWA Bank aims to strengthen the livelihood activities of its members by teaching them business-related conceptual and practical skills. The business counselling programs impart knowledge to women on how to start a business and expand an existing business. SEWA Bank has developed an entire training program with modules on accounting, marketing and making a business plan. Members are introduced to the concepts of entrepreneurship, to the different types of business activities, e.g. trading, manufacturing and services and the nature of business cycles. The training teaches skills in costing one's product, maintaining accounts and preparing financial statements ("Making an Entrepreneur: Trainer's Guide," N.A.).

Project URJA

SEWA's holistic approach to addressing the diverse needs of women workers is reflected in the promotion of low cost and eco-friendly technologies through its bank. In 2006, SEWA Bank initiated Project URJA (which means 'energy' in Hindi) in partnership with SELCO, a company that designs solar and bio-gas run cooking and lighting devices. These devices are energy and cost efficient,

and thus help reduce household expenditure which in turn reduces the economic vulnerability of the household. This project also promotes entrepreneurs. For example, to have the products reach its members, SEWA Bank trains willing members who have entrepreneurial inclinations in the use of one or more of these devices. The trained member then purchases a small number of these devices with a loan from the bank, and sells or rents them to women workers (“Refuelling the Lives of Women,” N.A.). This tapping of social capital that is formed by virtue of the unionisation is one of the less recognised by-products of microfinance activities (Matin, Sulaiman, & Saleque, 2007).

5 RISK MANAGEMENT SCHEMES OF SEWA INSURANCE

Soon after its inception, SEWA realised the need for risk protection among poor families, and approached insurance companies to explore the possibility of insurance for its members. Life insurance was the only type of coverage that the insurance companies were willing to offer at that time. Consequently SEWA started offering life insurance in the late 1970s. Members’ need for health insurance and asset insurance remained unmet until 1992, when SEWA was able to launch an integrated insurance scheme covering life, accident, health and asset insurance. Until recently, SEWA Insurance only sold an integrated product covering life, accident, hospitalisation and asset loss. In 2009, SEWA Insurance launched a stand alone health insurance policy.

Initially insurance was available only to the women members of SEWA. Over time, members wanted the coverage to be extended to their husbands and children. In 1996 SEWA introduced life insurance for the husband’s of SEWA Insurance members, followed in 1999 by the introduction of health insurance for them. In 2003 SEWA introduced health insurance for children of insured members. SEWA’s insurance product has evolved in line with the demands of its members, a necessary pre-condition for a successful program. (Churchill, 2006)

To enrol in SEWA Insurance, members have to pay an annual premium. The premium can either be paid annually, or through a fixed deposit option. Members who pay the premium annually have to renew their membership each year. If a member does not pay her premium for a particular year, she loses her insurance cover for that year. A small percentage of members use the fixed deposit mode of payment. Under this option, a member makes a one-time fixed deposit in SEWA Bank. The annual interest from the fixed deposit is credited as the member’s annual insurance premium. The member’s fixed deposit amount remains intact, and can be withdrawn by the member when she exits from the scheme.

SEWA Insurance is voluntary, and members may purchase the insurance only for themselves, or for their entire family, depending on their ability to pay. SEWA Insurance encourages family coverage, both in the interest

of protecting the members' families and for the financial sustainability of the insurance program. Family coverage increases membership without significantly increasing the cost of selling insurance, because a single sale to a member brings her family into the program. Family coverage also widens membership and reduces the risk of adverse selection where only the family members more likely to fall sick would buy insurance.

SEWA Insurance uses the 'partner-agent' model of microinsurance. The insurance is purchased from insurance companies (partners) and sold and serviced by SEWA (agent) to its members. Claim settlement is retrospective for life and asset loss claims - the member has to submit a claim after the loss has occurred and is paid the coverage amount after satisfactory filing of required documents. In the case of health insurance, SEWA has moved towards a system of prospective or 'cashless' payment: members intimate SEWA Insurance as soon as an insured member is hospitalised. A trained *aagewan* (the word means 'leaders' in Gujarati) from SEWA Insurance visits the hospitalised member and settles the hospital bills within 24-48 hours of the member being admitted.

The integrated insurance package

SEWA recognised that its members face a variety of risks, and therefore from 1992 onwards, has been offering an integrated insurance package which includes life insurance (for death due to natural or accidental reasons), hospitalisation insurance and asset loss insurance. The integrated package is available in three variants, ranging from the least expensive (Scheme 1) to the most expensive (Scheme 3). Each of the three schemes cover the same set of risks, the difference is in their cost and the amount they pay in the event of a loss. Table 1 provides the premium and coverage details for all three schemes.

Life insurance covers death due to natural and accidental causes. Hospitalisation insurance is the most commonly used coverage in the integrated package; the incidence of hospitalisation exceeds that of asset loss and death. The health insurance program is combined with a community-based preventive health care program to reduce the burden of sickness on the poor and the financial burden on the health insurance program. The preventive health care program thus serves as a risk-reduction strategy.

Asset insurance provides financial protection to the insured when their homes or assets are destroyed or damaged due to flooding, hurricanes, earthquakes, communal riots and such natural and human-made calamities.

In the case of life insurance and asset loss insurance, the member who has suffered the loss is required to submit documentation to SEWA Insurance as evidence of the loss suffered. The member is then paid the insurance compensation. Until 2003, hospitalisation insurance was offered on a reimbursement basis. Members had to pay out of pocket for hospital expenses to be subsequently reimbursed on submission of the required documents. In

Table 1: Insurance Schemes at SEWA Insurance

	Insured	Premium	Life	Health	House and Asset	Accidental Death
Scheme 1	Woman	175	10000	2000	10000	40000
	Man	125	10000	2000		40000
	Child	100		2500		
	Family	400				
Scheme 2	Woman	250	30000	2000	10000	75000
	Man	225	30000	2000		75000
	Child	100		2500		
	Family	575				
Scheme 3	Woman	375	30000	6000	20000	75000
	Man	350	30000	6000		75000
	Child	100		2500		
	Family	825				

Note: Amounts in Indian Rupees (INR)

2003 SEWA Insurance offered ‘Cashless Hospitalisation’ on a pilot basis in selected areas. Under this system, the hospitalised member receives payment for expenses within 24-48 hours of being hospitalised thereby reducing or eliminating members’ out of pocket expenses. This system was extended to all of Ahmedabad city in 2006.

6 CHALLENGES FACED AND STRATEGIES ADOPTED

Door-step banking

For several years, SEWA Bank operated out of one location. While having a bank facility was a huge leap forward for SEWA members who could now avail themselves of formal banking services, they had to travel to the bank in order to make use of these services. For this, they had to take time off work, and pay for the bus or auto charges to travel to the bank. Both these expenses cut into their small incomes.

To address this problem, SEWA undertook several initiatives. In 1978, it introduced mobile vans to areas with high member concentration to facilitate cash collection. Also, to make its services more accessible to members, the Bank opened branches closer to the member’s homes. Currently, SEWA Bank has three branches in Ahmedabad city. Another initiative SEWA started in 2000 was training a cadre of field workers who would carry the bank’s services to the women’s doorsteps. The field team consists of ‘*bank-saathis*’ (literally bank-companions), who are supervised and supported by ‘hand-holders’. *Bank-saathis* and hand-holders are selected from SEWA’s member communities and

trained to take the bank's services to the members. The hand-holders also counsel members about financial planning with the objective of reducing their vulnerability to risks.

The *bank-saathis* providing door step service has been valuable to members. However, the Bank had to develop appropriate systems to ensure that the small financial transactions occurring at each door-step were accurately recorded and transferred to the central system. SEWA is now considering using hand-held electronic devices to reduce the accounting burden on the *saathis*, the hand-holders and the central team.

Marketing insurance

Vulnerability to risk does not directly translate into a demand for microinsurance (Brown, 2001). Marketing insurance to poor families is one of the bigger challenges in the insurance program. The poor are used to managing their lives on a day to day basis. Insurance requires them to think of uncertain and unpalatable events that may or may not happen sometime in the future. It is difficult for them to part with a portion of their meagre current funds to protect themselves from future perils. To plan for something that may happen years later, or may not happen at all, requires a leap of faith. Insurance marketing, therefore, includes educating the members about the concept of insurance and the details of how the scheme works. Over the years, SEWA has experimented with various strategies to market insurance. In this section we discuss the more effective strategies that have been used.

The oldest method at SEWA has been *door to door marketing* by SEWA *aagewans*. These women are leaders in their community, and are the interface between SEWA and the community. This strategy works because a family is approached directly at their door-step and explained the details of the scheme. Often the *aagewan* is known and trusted by the person to whom she is selling the insurance. This personalised approach is especially useful for first-time buyers. Often, first-time insurance buyers may purchase the insurance without fully understanding the details of the scheme. They may buy it because of their faith in SEWA as a union that carries out various activities for the benefit of its members. This strategy is a highly resource-intensive activity in terms of person time and transportation costs.

SEWA also markets its insurance scheme at *gram sabhas* (village level meetings) which are regularly held in each village. These meetings are attended by a large number of village residents and provide a cost-effective way of informing the community about the scheme. The public presentation of the scheme among village leaders and elders also enhances its acceptance and credibility among persons not familiar with SEWA.

SEWA experimented with various other methods to complement this door to door approach, with the objective of reducing the burden on the *aagewans*.

One such method was that of mailing postcards to current members informing them about the need to renew their insurance. This was followed up by a visit to collect the premium.

In rural areas, where SEWA has promoted self-help groups (SHG), insurance premium collection is integrated with the SHGs activities. SHG members save a fixed amount at their monthly meetings. To reduce the burden of a one-time premium payment, members can deposit smaller amounts throughout the year towards their annual premium.

Insurance claim settlement

Initially, the claims of SEWA Insurance members were settled by the insurance company. SEWA found this unsatisfactory for two reasons. First, the insurance company took a long time to settle claims, and the member had to wait for unreasonably long periods to get the monies due to them. Second, the insurance company's claim settlement rules were not always appropriate for SEWA members. For instance, the hospitalisation insurance required that members be admitted to a hospital which had at least ten beds. Many SEWA members live in remote rural areas where the medical facilities that admit patients are much smaller. The insurance company had to modify its rules in this regard. Similarly, in the case of asset loss claims, the insurance company was not equipped to service the claims in a timely manner. For instance, many SEWA members live in slums and their homes are semi-permanent structures without proper addresses. If floods had damaged a member's home, the surveyor would have a hard time locating the member's home. Also, they had not understanding of assessing the damage to these types of houses which used a variety of semi-permanent or local building materials. Another problem was that by the time the physical conditions made it possible to approach the flooded area, the member would already have patched-up some of the damage so that she and her family could continue to live in the home.

For all these reasons, SEWA Insurance negotiated with the insurance company to formulate its own claim review teams for asset loss and hospitalisation claims (Garand, 2005). For asset loss claims, SEWA has trained a team of staff members and *aagewans* who swing into action the minute there is a natural disaster. The claims review team visits a disaster site immediately after the event and makes an assessment of damages for all insured members.

For hospitalisation claims, SEWA Insurance trained and set up a health claims committee that was made up of representatives from SEWA's member community. SEWA also appointed a doctor to support the claims committee in its review of claims. As a result of an in-house team for claims settlement, claims were settled faster and no legitimate claims were rejected.

Anytime there is a disaster, large numbers of claims come into SEWA, and timely and fair claim settlement becomes a big challenge. For instance, in the

floods in Gujarat in 2006, SEWA Insurance had to process 6,000 house damage claims in a span of a couple of months. Assessing flood damage is a specialised task, and requires visiting each claimant to verify the veracity of the claim submitted.

Fixed Deposit insurance membership

The fixed deposit option for paying premiums has the advantage of lowering the administrative costs for collecting premiums each year. It also provides uninterrupted insurance coverage to members year after year, because the annual premium is automatically taken from SEWA bank and paid to the insurance company. This method, however, has two challenges. One is its affordability as it requires a large cash outflow in one go. Second, SEWA has found that once members had paid the fixed deposit, they or their family members may not always remember that they have insurance coverage. Caught up in the struggles of daily living, it is not uncommon for a member to forget that she has purchased insurance in a previous year.

To address the first problem, SEWA Bank developed a loan product for members who wanted to pay using the fixed deposit option. For the second problem, SEWA needed to ensure that members were reminded of their membership so that they could avail themselves of the insurance in the event of a loss. For this, SEWA now generates member lists by area and by *aagewan* on a regular basis. Each *aagewan* thus carries information about all the insured members as she travels around the community.

Computerisation of data

The bank and the insurance program both have to manage large bodies of data. At the Bank this includes details of members like name, age, address, occupation etc., and a record of all the financial transactions of each member. Similarly for the insurance program, in addition to the details of each insured member, the database has to store all the insurance claims related data. Until the mid-90s, most of the data was maintained in hand-written registers, with some computerisation. As membership grew, it became increasingly unwieldy to manage the program without computerising the data. Computerisation of the database was a challenge for two main reasons.

Firstly, at that time, SEWA could not find suitable computer programs that could be used in either the Bank or the Insurance programs. They had to be tailor made. Not only, but they had to be regularly modified and updated as SEWA's programs are constantly evolving in response to the members' needs. The second challenge was that SEWA Bank and SEWA Insurance staffers were not computer savvy, and came with modest educational qualifications. SEWA consciously selects women staff from socio-economic backgrounds close to its member community. SEWA is a member-owned and member-managed

institution, and it wants that it also be run by its members to the extent possible. Computerisation of the operations thus involved large-scale capacity building of the staff team to make the transition from manual record-keeping.

Annual insurance campaign

As mentioned above, until 2007, SEWA Insurance had an annual enrolment campaign for the policy year starting January of each year. Existing members renewed their membership during this time and new members were enrolled. This enrolment campaign usually ran from October-December of each year. There are two main advantages to limiting the enrolment to a single time period. One, the *aagewans* who serviced the insurance felt that it was easier for them to keep track of the insured members if there was a single policy period. If enrolment was open throughout the year, there would be multiple policy periods. For instance, one member's policy might run from January to December, another from March to February etc. In the early years, the members also often forgot or were confused about the coverage period. A member would believe she is insured, even if she had not renewed her membership. If members could enrol at different times of the year, it would be difficult for the *aagewan* to keep track of insured and uninsured members.² Two, the *aagewans* had to spend a lot of time and energy enrolling members, explaining the scheme and sometimes making two or more visits to a member to collect the premium, given that the scheme is voluntary and each member has to be approached individually. The *aagewans* felt that if the enrolment drive occurred more often than once a year, it would cut into their time for servicing claims.

In the early years, when membership was small, this system worked satisfactorily. However, as membership grew, this became a challenge for several reasons. One, the *aagewans* had to reach a large number of members – both old and new – to collect their premium. Members were reluctant to pay premiums in October or November for a policy starting only in January. They would ask the *aagewan* to return at a later date, which was impossible for her to do, since she had to reach a large number of people. A second problem in waiting to collect all the premiums towards the end, was that the data entry into the computerised data base could not be done in time to then give it to the insurance companies. A third problem regarded members' expectation about the policy starting period. Some members expected that coverage would begin the day they paid the premium.

In 2007, after consultation with the *aagewans*, SEWA Insurance decided that enrolment in Ahmedabad city would occur year-round. The main facilitating factor for this was the computerised member database. The computerised

²The SEWA Insurance office has computerised information on the current membership. However, it is not always possible to communicate instantly between *aagewans* in the field and the office in Ahmedabad.

database meant that member lists could be generated easily, including separate lists for separate policy periods. The *aagewan's* could use these lists to conduct their enrolment drive by policy period.

7 DISCUSSION

SEWA's experience of using microfinance for risk management has many lessons that can be usefully shared. Its approach is rooted in the specific context of workers in the informal economy. This context is characterised by low, unstable incomes, non-existent social security systems and illiteracy. SEWA's approach has addressed the limitations of this context by harnessing the power of collectivisation and solidarity. In addition, one of SEWA's greatest successes has been its holistic approach to the needs and vulnerabilities of the woman worker.

SEWA constantly strives to strengthen its efforts to bring greater security in the lives of its members. SEWA's understanding of 'risk' in the context of its members has recognised the specific uncertainties faced by this category of worker. Even the terminology used for the products is aimed at striking a chord with the members and consequently increasing their affinity to these services. It has gone beyond providing services like savings and insurance by linking these with educational inputs and entrepreneurial opportunities, all aimed at reducing the vulnerabilities of its members.

One of the important factors that have contributed to the success of SEWA's programs is the easy accessibility of its key managers. Any member of the bank or the insurance program can approach the key managers for clarifications, complaints, or simply to meet them. This has led to a high degree of trust among members. In the final analysis, SEWA's services work because they are rooted in the needs of its members and are delivered in a convenient and timely manner.

Over the years SEWA's microfinance program has faced a variety of challenges which have been used as opportunities for improvement. SEWA's motivation for starting an activity is its relevance to the members, and the difficulty of the task is rarely a deterrent. Challenges are seen as opportunities and addressed as they come up. All decisions about changes and modifications to existing systems are made in a participatory manner, with all players being brought on board. While this makes the process of decision-making somewhat longer, the implementation becomes much smoother. The solutions adopted are often novel, and gradually become part of accepted wisdom.

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Penetration by Lenient Method

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ABSTRACT: The penetration by lenient method (PLM) can be taken as a good model for implementing any community-based or large work group microinsurance program, specifically in the health insurance industry. Though the social groups that may benefit from these programs generally include low income people or the poor, and therefore people who might be supposed to share the same social background, even within such groups there is a discrepancy in their economic challenges and priorities. The purpose of applying the PLM is to allow poor people to benefit from a product and reap its benefits. This is accomplished by bringing customers that need and can afford a product (i.e. the more well-off segments of the population) quickly into the program. This provides time for other, more vulnerable people to accept and buy into the concept and the product, which in turns ensures that the program is successful. Such health insurance programs, almost certainly adhere more to a commercial model rather than to that of an NGO type project. Once such slow penetration is understood by the first segment of the population, many other products can be introduced to the lower end of the social pyramid. At the community and low income earners level, word of mouth and testimonials are the most effective tools.

Most businesses, including those active in the finance sector, are keen on entering the low end market. For example, banks are getting more and more interested in businesses operating in micro-finance and insurance, such as the Indian insurers ICICI and LIC, which are working their way into the village self-help groups. In recent insurance forums, a large number of insurance companies have expressed strong interest in reaching non-traditional insurance programs as the standard insurances market faces saturation. Many developing and under-developed countries, which are at the bottom end of the market pyramid, have not as yet been affected by this phenomenon.

KEYWORDS: Microinsurance, Health Insurance, Market Penetration, Distribution, Outreach, Uganda

1 BACKGROUND

The microinsurance market differs significantly from that of traditional insurance. Products must be tailor-made to adapt to local communities that often

present a broad range of geographic, socio-economic and culture characteristics. Given that programs need to be very personalized, it is difficult to duplicate a successful program from one country or location to another. Unlike traditional insurers, who often replicate standard products such as fire, theft and accident insurance, with only minor adaptations to their local markets in different countries, successfully replicating programs for microinsurance is a far more complex issue. For example, some of the new products being developed for small communities include health, weather indexes and credit life insurance, which have proved successful in specific countries and cases, but which do not suit traditional areas that are covered by traditional insurers.

Most of the success stories come from the Asian market, which benefits from two basic advantages. Firstly, it is generally characterized by a large number of people living in densely populated areas. Secondly, many Asian countries have a micro-economy, or parallel economy, for low income social groups who, traditionally, bestow greater value on their money. In India and Bangladesh a few dollars can go a long way, whereas in Africa the cost of living is greater, which also entails that operating costs – such as labor, medicines, utilities and infrastructure – are higher. To exemplify this, suffice it to say that during a presentation of microinsurance programs in Asia, while the premiums per person were being projected, the reaction of participants was: “That’s not microinsurance, African premiums belong to a program for rich people!”¹. This perfectly illustrates how such programs are perceived by Asian people.

This paper aims to explain the Penetration by Lenient Method (PLM), which is based on the concept that health microinsurance programs need to be more lenient in their acceptance criteria than traditional insurance programs to prove valuable to their customers and achieve scale, which, in turn, will allow for sustainable levels of client volumes to be reached and, hence, be profitable for the insurers. The model is based on eleven years of personal experience at Microcare² and the combination of qualitative and quantitative information gathered over such period of time.

1.1 Need

Microinsurance is a term that is increasingly used to refer to a type of insurance characterized by low premiums and low caps or low coverage limits, sold as part of a typical risk-pooling and marketing arrangement and designed to service low-income people and businesses that are not served by standard social or economical entities. The need is seen as being especially acute in both the

¹Dhan foundation Microinsurance conference

²Microcare – a registered insurance company focusing on health insurance – started as a non-profit institution to provide alternative ways of offering healthcare solutions to low income people in Uganda. Today, a leading health insurance company covers both formal and informal groups.

developing and under-developed countries belonging to the Asian and African markets.

1.2 Objectives and Scope

The major objectives and scope of microinsurance are listed below:

1. Offer micro-financial services aimed at low-income people and communities, characterized by low premiums and coverage limits;
2. Offer a micro-finance service that allows the poor to insure their belongings, such as livestock;
3. Create a mechanism for pooling a whole community's risks and resources to protect all its members;
4. Implementation of the Penetration by Lenient Method for community-based or large work groups microinsurance programs;
5. Ensuring sustenance from insurance bodies during adverse periods and conditions;
6. Introduction of a few community-oriented programs which will play a vital role in earning people's loyalty to the new concepts of microinsurance;
7. Implementation of microinsurance through "preventive health programs".

2 THE PLM METHOD

The Penetration by Lenient Method is an investment concept in which the provider decreases the price of the product in order to attract the consumers' interest and make the product affordable whilst allowing customers to become acquainted with it and, subsequently, spread the word. The PLM can be taken as a good model for community-based or large work groups to implement any microinsurance program, specifically those related to the health insurance sector. The main concept behind the PLM is having marginal or no-profit entities strategically tap an untapped market at its initial stage to then slowly move towards attaining optimum sale potential. The term "lenient" not only refers to finance but also involves adjusting the mindset of the insurers to suit the environment of the targeted microinsurance clients.

The way PLM works is similar to that of other products that have been dealt with in the past. For instance, two decades ago in the Asian markets, some common products such as tea, coffee and shampoos, were considered luxury items. To penetrate into the lower market segment, the *sachet concept* was introduced. The cost per unit (or sachet) was much lower than for large quantities (such as bottles) to adapt to the limits of what was affordable, given that the lower segment of the market could only afford to buy individual units of product rather than larger quantities. The suppliers, therefore, adopted a

Table 1: The PLM table

	Product knowl- edge	Market pene- tration	Group purchase level	Product price	Sensitization & Promotion	Benefit & Usage	Profit & Loss
Year 1	nil	entry level	30% min	same	high	high	break-even or marginal loss
Year 2	medium	optimum level	70% or less	same	medium	reduced usage	break-even or marginal profit
Year 3	complete	entire commu- nity	over 90%	same or marginal reduc- tion	low & com- munity inter sensitize	matured usage	marginal or medium profit

turn-over concept and reduced the price at the initial stages of the long-term sales process to then charge fifty paisa per pack for the following three years. At a certain point, these luxury items, having become general consumption goods, turned into needed products even for poor people, which allowed the prices to be raised again. Such small-packaged products helped boost the presence of the so-called fast moving consumer goods in the country, increasing the distribution reach of the makers of such goods.

One must not disregard the fact that such groups of people generally share a common social background, notwithstanding which their economic challenges and priorities may vary greatly. If the process is carried out slowly, allowing time for more vulnerable people to buy into the concept and product, this will not only ensure the success of the program, but will also allow poor people to enjoy the benefits along with the product.

2.1 The Working of the PLM concept

Table 1 shows how the PLM concept works. A gradual progression in market penetration over a period of three years is given as an example. People's acceptance of the concept and their buying power improves steadily over a period of time. Whilst this progress takes place, non-participating members have the opportunity of witnessing the benefits attained by the adhering members, which will eventually lead them to also purchase the product.

The PLM plan may entail a slight loss during the first year or even the second year. However, as the premium level steadily increases and older members become more mature users of the health services, the program will begin to become profitable. Which is to say that during the initial stages, the program will require a high input level but, once it reaches critical mass, after three years, it will reach its peak and produce a profit that will compensate any initial losses.

2.2 Percentage Analysis

Product knowledge at the beginning of the program is expected to be close to zero. To change and improve this state of affairs product awareness and marketing campaigns will be required as they would for any other consumer product.

One of the main concept behind PLM is 'leading by example' paired with the power of the 'word of mouth' strategy: both work very well in many social segments and, especially, in the less well-off ones. For the majority of people, the most effective way of being convinced that a product is a good one can be summed up in the old adage "seeing is believing". The first 30% to join the program will be those who can afford to do so and those who are the neediest. Gradually, through community pressures and changes in priorities as the benefits of joining are seen by others, the prices can be marginally reduced to provide group incentives for purchasing the product and therefore attract more customers. Briefly, the combination of the power of testimonials and reduction in prices will guarantee a more evenly spread access to the program.

The mature stage of the process is reached when 90% of the group has adhered to the program, which is expected to occur after three years. At this point, insurance customers will have acquired a good level of satisfaction and most groups will reach a point where they begin to see health insurance as a necessity and not as a luxury. Once this point is reached, adherence to the program will not be subject to forms of common abuse and people will access treatment only when they really need it.

2.3 Applications of PLM

This program will almost certainly follow a commercial model rather than that of an NGO type project. Once such slow penetration is stabilized in the market, many other products can be introduced to the lower end of the social pyramid. The majority of the commercial organizations such as those operating in the finance sector, like banks, are keen on entering the low end market and are becoming increasingly interested in micro-finance and insurance companies, such as ICICI and LIC of India who are making their way into village self-help groups.

In recent insurance forums, large numbers of insurance companies expressed their interest in reaching non-traditional insurance programs since the general insurance market is facing saturation. In many developing and under-developed countries the bottom end of the pyramid market is still untouched and untapped by insurance programs and therefore represents a large potential market, which can prove to become very profitable, not to mention the benefits that can become reachable in terms of, say, health programs for poor people.

2.4 *Benefits of PLM*

Claims utilization will improve as a result of two factors:

- as members renew their scheme, the initial enthusiastic users will settle down and become more mature (initial 30% of people adhering to the program);
- when the entire group joins, the sickness risk will be spread evenly as explained above. The first 30% of the group to join are those who are sick and therefore in imminent need of the program whilst the last 40% are those who are healthy.

2.5 *PLM Concept and Microcare*

Microcare largely targets rural and urban poor people as their clients, covering the central and western regions of Uganda. Its clients are mainly from MFIs, existing Community Groups and Burial Societies. The whole family is covered thanks to women, since they are active members of MFIs and community groups. In order to avoid adverse selection, an approach based on minimum 70% enrolment of groups needs to be adopted. In villages, since the premium is set low, business is based on an 'all or no one' basis for each family.

Health insurance products offered include coverage for inpatient and outpatient, maternity, accidents and all pediatrics and gynecological conditions.

Based on Microcare's community experience, it takes three years for a group to enroll all its members. When the entire group joins, the risks are evenly spread.

The other important finding that Microcare has gleaned is that insured members seek early treatment and, consequently, repeat visits are reduced because illness is addressed at its early stage, which can lead the way to abusing the system.

As group members become more comfortable with the concept of insurance, they start looking for additional insurance to cover such things as funerals, fire and life. It is at this point that other much needed insurance products can be introduced with the same PLM method. A key factor in this approach is that of making the most of members who can be used to raise the awareness of non-participants and set up the group as an insurance agent or make the group chairperson an agent for retention.

3 APPLICATION OF THE PLM IN THE AFRICAN/UGANDAN RURAL MARKET

3.1 *Indigenous Risk Sharing*

Africa has a risk sharing culture that applies to everything, whether good or bad. When a person gets married, people pool their money to make a contribution. When someone dies, the same people pass round a contribution note in communities and even in offices to collect money. It is a tradition that I experienced in person when I first moved to Africa from Asia and I have to say that it seemed extremely foreign to me and difficult to understand.

Such risk sharing is a good way to support community solidarity but, when the incidence of HIV was at its peak during the 1990's, at the rate over 30%, risk pooling became an exceedingly heavy burden for many people who had difficulties contributing with the frequency required to match the increasing number of funerals. The mechanism especially favors wealthier people who can count on larger contributions from wealthier communities, whilst the poorer ones end up getting very little, if anything at all. Since the demand for pooled contributions is much greater among lower income people than their ability to actually provide it, the indigenous risk-sharing mechanism is not sufficient in providing protection to vulnerable communities. Instead, it has become a way for wealthier communities to show off their social status through their social contributions rather than a true form of indigenous risk sharing.

3.2 *Engozi Burial Societies*

There exist several community groups in Uganda, one of which is the 'Engozi'³. These are mostly divided into villages and use the pooling system to provide transport for people. Microcare was introduced to the Engozi groups by the UCBHFA⁴: its largest microinsurance program was implemented in such groups and represented the starting point of its wider microhealth insurance program. It took a full seven years to bring two thousand members into the program, but only three years to scale up to forty thousand people. Prior to joining Microcare's program, people from these communities would quote proverbs like "when you eat alone, you die alone". Now, following the introduction of the microinsurance program, people say "Why do you contribute for your dead body? Why not contribute when you are alive?". It was at this point that the fundamental PLM concept was fully understood by the people addressed by most community-based programs.

³Engozi means stretcher. They are tradition community groups in Western Uganda used to carry sick people, dead bodies for burial, as well as brides during wedding ceremonies

⁴UCBHFA Uganda Community Based Health Financing Association

3.3 *A potato in hand*

In Africa, especially in rural Uganda, even if people are very poor, they seldom starve. People live without having any cash in hand. Food comes from their kitchen garden and relatives send salt and soup. In the early days of microinsurance programs in Western Uganda, community-based program offices were able to assess peoples' level of affordability. During one of such market surveys, the team met a sick woman in her home who was not covered by the health insurance scheme and asked her the reason why she had not joined such a medical scheme. She said: "I have no money. Would you accept these potatoes and accept me in the program?" It therefore became apparent that there was an alternative way of collecting premiums that hitherto had not been taken into consideration.

Poor people have little cash and what little they have they value highly and it is extremely difficult to have them part with it unless they gain a real benefit for it or see a immediate return. However, having cash in hand is not always a positive thing and can become a threat, because it can pave the way to descent into alcoholism and other forms of abuses, as is often the case in poor and vulnerable communities all over the world.

As an example: the Land O'lakes program introduced a 'milk-to-health' program where health insurance premiums were paid to cooperatives, which then transferred the money into individual insurance accounts for each member. Later on, at the Ishaka hospital, a health insurance program was introduced. A similar 'tea-to-health' program targeted tea factory workers, tea growers and small tea farmers. Some pay their premium as labor contributions, some in tea leaves to the cooperatives. This kind of 'thinking out of box' helps to understand and address microinsurance needs. In rural Uganda, people now understand risk better and it is easier to market insurance products there than it is in urban Uganda where people are mistrustful of each other and there is a lack of community cohesiveness. This may be because the urban people that settled there came from different geographic regions, races and cultural backgrounds.

There are people willing to pay for insurance though not necessarily in cash and when a wider and differentiated choice of payment methods is offered, poorer people are given a real chance to access such insurance services. Nothing better exemplifies this than the sick woman who stretched out her hand full of potatoes offering them as a means of paying for insurance, wholeheartedly proving her willingness to join the insurance program.

3.4 *Banana culture*

Uganda is said to be the worldwide capital of banana supply. The irony of the banana plant is that it provides a source of revenue, but people who deal in the cultivation of bananas and who eat them as their staple food, have a

lower work ethic standard, are undisciplined and unable to form themselves into organizations. The banana plant is very easy to harvest; it does not require replanting after a harvest; it gives ten seedlings after the main plant dies; it grows throughout the year and has no seasonal restrictions. Moreover the plant cannot be stored for a long time. It has to be eaten soon after harvesting. To many Ugandans, money is just like bananas: the seasons are flat year round and money needs to be consumed as it comes in. Which is why to many Ugandans the very idea of saving sounds strange. When microfinance was introduced to Uganda, people had a hard time forming a habit of saving. Indeed, MFIs had to make savings a compulsory part of their programs to compel people to save.

4 COMPLEMENTING METHOD

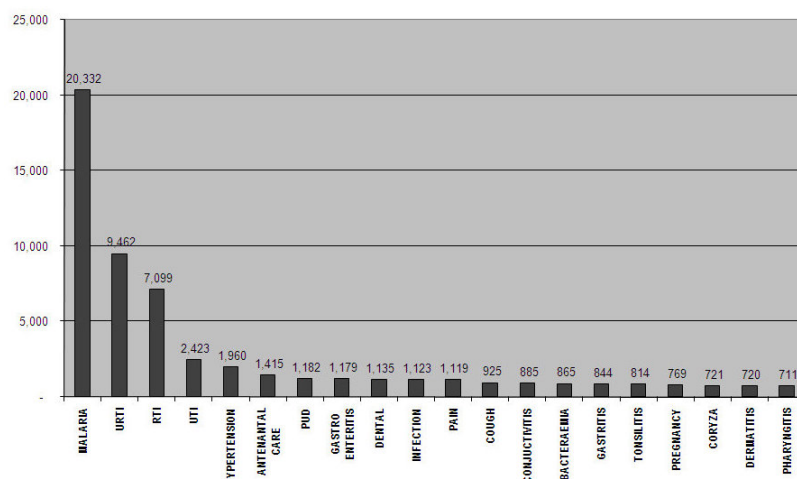
4.1 Preventive components

“Talk about health assurance rather than sickness insurance.”

In Uganda, it takes a long time for poor people to build trust in the insurance concept. Nevertheless, once they like the program, their loyalty is remarkable. One of the best ways to retain clients is to apply the *health assurance* principle, which has the added bonus of also providing a cut on treatment costs (see Figure 1).

Such a principle is based on educating people on how to prevent diseases. Diagnosis like malaria can be controlled by preventive measures. Experience has shown that when a community is educated in the use of mosquito bed nets, malaria treatment is reduced from 72% to 58%. The average cost for treating malaria is about 18,000 shillings which is equivalent to USD 9. A double bed net costs only USD 5. An insurer can subsidize the cost of distributing nets by offering education that make people aware of the value of the nets and use them. If free bed nets are provided, the risk is they might not be used, and supplies could also run out.

There are other preventive health programs that can also be effective and which focus on the education on prevention of STDs and water-borne diseases through pure water purification programs. In most developing countries, there are already NGOs that are committed to working on such issues. Identifying institutions and NGOs to provide preventive education is another key to the success of microinsurance programs. This can be achieved by allocating to them a portion of the premium which, in turn, will reduce claims and repay itself. Preventive health program not only save insurers money on claims, but can help retain clients.



Microcare data 2007 from the Kisiizi health insurance program
y-axis = amount in Ugandan Shillings (UGX); x-axis = the top 20 diagnosis

Figure 1: The top 20 Diagnoses

4.2 “Clean up” Health Insurance

Most people joining health insurance programs do so as an immediate means of “cleaning up” their accumulated health problems such as fibroids, hernias, hydroceles, etc. But care should also be taken in that the acceptance criteria for health insurance policies do not include limitations that are too numerous or overly restrictive. In fact, if too many pre-existing conditions are excluded, it will be difficult to sell policies, which is particularly true in Asian countries. It is a chicken-and-egg (“no-win”) situation. Sometimes people need to be allowed to get the “clean-up” insurance for marketing purposes. But how can the losses inherent in such policies due to higher sickness claims be underwritten? Commercial re-insurers, for example, will not absorb such high risk programs. When a high loss for a given period is expected, there needs to be an assigned pool of funds to cover it, that is a separate budget, which can be achieved by allocating an excess loss on such adverse selections. But consider that a conservative insurance actuary will tend to advise that such clean-up cases be eliminated.

Long term medical insurance providers require that a client must be subscribed to a program for three years in order for the company to sustain and balance the risks. This time frame allows members to “clean up” their accumulated medical conditions and also allows room for the company to make a profit on the insurance product. Clients with accumulated health needs will be the first to join and the first to leave the program and the insurance company will end up doing charity work. This is due to poor planning strategies on the part of the insurance company. The fact is that poor people always want a lot for less,

hence medical insurers should devise strategies to lock in patients for longer periods in order to spread out their losses.

Another reason why costs in the early phases of a program can be high is that even healthier patients tend to “overuse” health services in the first 18 months of a program. Since many of these people have had limited access to doctors in the past, they often appreciate the care and attention they get from doctors in the early phases of the program and simply overdo it. They may visit a doctor just to feel valued and cared for, perhaps as a form of emotional or psychological “clean up”. The strategy to be adopted should consist in collecting premiums when incomes are higher, such as during harvest seasons, and to create policies that are for a minimum of one year.

5 THE ROLE OF SUBSIDIES AND CROSS SUBSIDIES IN MICROINSURANCE

People in Uganda have a limited culture in terms of savings or in contributing in cash for an unseen benefit. This fact constitutes a limitation factor for risk management programs, especially when it comes to paying for insurance premiums. For Ugandans, making such payments is the lowest priority. Understanding the concept of insurance alone can take a lot of time – anywhere from three to five years. Any risk taker would like to get the last forty percent of clients as a priority, that is the percentage of healthy participants referred to in the section 2.4 “Benefits of PLM”.

One of the PLM concepts is to allow such adverse selection to take place in order to allow the community to experience the insurance concept. Undoubtedly there will be losses during this period. Careful planning, therefore, is required regarding the time span in which such selection needs to be allowed and, simultaneously, on the work to be carried out on community self-marketing and preventive health programs, as well as on the addition of more incentives for existing members, finding high claims and using the people who benefit from such claims as testimonials to the community. It takes a long time for a community to accept a salesman, but they can quickly relate to a satisfied customer.

The PLM can be an effective form of building a large and loyal client base, but it requires a commitment by the organization to provide some subsidy or cross subsidy for a period of time, as more and more new patients enter the program, they may overuse the health services in the early years. This is not always compatible with investment goals or even with the scenario of donors who provide grants to microinsurance programs. By the time the program comes to a mature stage, the majority of funding will have come to a halt and that’s why most projects fail. Unlike microfinance, which can reach sustainability rather quickly, microinsurance takes longer time.

6 CHALLENGES IN MARKET PENETRATION

One key requirement of micro-health insurance schemes is that clients sign up as a group in order to avoid adverse selection. The existing product offered by Microcare requires at least 70% of the group to join in the initial signing process. Given the many constraints which already hinder uptake in this market (such as lack of customer knowledge and understanding of the product), the 70% sign-up requirement has proven to be a very high hurdle for clients to overcome. Experience has shown that an average response rate within the groups is about 50%, which means that many potential clients are turned away as they do not meet the 70% insurer's minimum requirement.

Microcare is discussing applying more lenient sign-up conditions, dropping the minimum group requirement to 50% to match the average response rate and provide more opportunity to people and more clients to the company. This measure would allow for the group to gain first-hand experience of the product and offer those members who are benefiting from health insurance to educate the rest of the group on its advantages based on personal, and therefore much trusted, experience. However, the cost effectiveness of the PLM strategy for enrolling clients is yet to be documented and may require a "sponsor" that is interested in providing the poor with broad insurance coverage in its early stages to prove its effectiveness.

6.1 *Rural and Urban Demand*

The health needs and expectations of rural people are different from those of urban citizens. Rural communities are more reserved and have lower expectations on products and services; urban people, by contrast, are exposed to greater competition and have higher expectations for products and services for lower prices.

Microcare works with community groups in rural areas and MFIs in urban areas. Their growth rate in the rural program is steady but they have a very high turnaround of clients in the urban programs. A recent client survey shows that different approaches are required for urban and rural clients despite the fact that their economic situations are similar. Some of the Asian programs had analogous experiences. Urban programs use a more commercial approach which includes: limitation of certain accumulated diseases and proper ceiling limits for hospital admissions; increasing the scope of cover inclusions as the program becomes mature; swapping dependant members on renewals which continually increases the claims costs. The Microcare's insurance program caters for main members, spouses and a minimum of two children although the average family size in Uganda is six people.

6.2 *Monitoring the Program*

What is the use of controls when there is such a high level of service expectation? There will definitely be a tendency to abuse the system. To access a high level of service, a constant 'watch dog' program needs to be implemented. To monitor impact and performance, quality data must be collected in order to have a proper vision. It is important to invest wisely in an information system that periodically generates reports. Many such dashboard models have helped to supply information and generate reports on a weekly basis (Table 2).

Some important indicators to monitor include premium versus claims, projected claims on a quarterly basis against previous quarterly experience, top 20 diagnosis, high usage clients and their main claims and diagnoses. This information can also help identify what preventive work needs to be performed since it is all about health insurance, not sickness insurance!

7 CONCLUSION

A number of interesting conclusions can be drawn from this paper. The first is that a group risk approach to Microinsurance works better than an individual risk program since the concept of risk pooling already exists in most low income communities and groups. Another conclusion is that a great deal of leniency should be applied with regard to the minimum number of participants to mitigate risk, allowing adverse selection for a period not longer than three years. Lastly it is apparent that allowing group member to inter-sensitise the benefits and group premium sharing goes a long way in increasing the number of participants in a program.

Any microinsurance program has to be a long term plan. It takes time to educate poor people about a new idea even if it addresses their immediate needs. Preventive education can go hand in hand with this effort and help to reduce the incidence of claims.

Poor people value their money (cash) more than the products in hand (livestock, agricultural products), therefore innovative payment forms can help attract more people to the insurance products. Insurance models have to be a common effort and project between a microinsurance company, community groups and cooperatives. They should not have high subsidy and exit strategy to pull out the subsidy and fix a normal premium will be difficult.

The best way to market health microinsurance products is still an issue that is much debated. The product demand has not surfaced completely, yet the underlying needs for health care coverage are increasing day by day to protect the risks of the poor people. For so long as poverty is not eradicated, the conflict between needs and affordability will be eternal. Making risk planning a priority for poor people poses a big challenge and is time consuming. Poor people 'understand by seeing' benefits. Penetration by Lenient Method will

Table 2: Dashboard Sample

Insurance Company – Dash Board (Claim Ration Analysis)					
Summary	No of Lives	Premium	Claim Count	Claim Amount	Claim Ratio [%]
CLIENTS CLAIM RATION	4,487	1,169,504,762	11,203	880,142,900	75
COMPANY A	234	57,529,438	1,087	56,564,444	98
Corp Standard Enhanced					
01/Jan/08 To 31/Dec/08	234	57,529,438	1087	56,564,444	98
COMPANY B	108	33,565,845	428	23,112,000	69
Corp Comprehensive Enhanced					
01/Nov/08 To 31/Oct/08	36	14,640,039	212	9,072,000	62
Corporate Basic					
01/Nov/01 To 31/Oct/08	72	18,925,806	216	14,040,000	74
COMPANY C	1,077	296,169,657	2,356	188,243,956	64
Corp Comprehensive Enhanced					
01/May/07 to 30/Apr/08	541	193,654,872	1,123	125,121,978	65
Corp Standard Enhanced					
01/May/07 To 30/Apr/08	536	102,514,785	1,233	63,121,978	62
COMPANY D	30	10,005,641	55	8,250,000	82
Corp Comprehensive Enhanced					
01/May/07 To 30/Apr/08	30	10,005,641	55	8,250,000	82
COMPANY E	273	26,689,060	345	18,285,000	69
COMPANY F	2,795	755,550,761	6,988	593,937,500	79

Sample taken from Microcare model. Premiums and Claim Amounts in Uganda Shillings (UGX).

enable them to participate and understand the risk planning to a large extent and alternative forms of payment will ease the cash problems and bring a cooperative level of understanding about risk management.

Voluntary Affiliation to Micro Health Insurance and Social Capital among Resource-Poor Persons: Initial Evidence from India

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ABSTRACT: The key question underlying this study is whether community-based micro health insurance schemes (MIUs) are able to mobilize social capital to encourage voluntary affiliation to health insurance of resource-poor persons in the informal economy.

Based on data from a 2005 household survey in four locations in India, we examine whether there is an association between insurance status and several indicators of social capital, and whether this association is a general phenomenon or, rather, dependant on attributes of the community or of the local MIU. This is done by looking at preferences of respondents to seek borrowing and advice from formal versus informal sources, levels of trust towards community members versus outsiders, and the factors influencing respondents' decision to affiliate voluntarily to an MIU or not.

This paper offers two main conclusions: firstly, trust seems to be a vital (yet insufficient) precondition for success in achieving broad-based voluntary affiliation to microinsurance. Secondly, local attitudes vary greatly across locations, and our data does not lend credence to the notion that social capital can be taken for granted and always translated into predictable actions by local communities towards acceptance of health insurance. However, our findings suggest that interactions of the community with a solidarity promoting organization (such as an MIU), even when it comes from the outside, can enhance trust and social capital.

KEYWORDS: India, social capital, microinsurance, community-based health schemes

1 INTRODUCTION

The key question underlying this study is whether community-based micro health insurance units (MIUs) are able to mobilise social capital to encourage voluntary affiliation of resource-poor persons in the informal economy. The question is of great importance because this assumption is implied in certain publications on micro health insurance (Dror and Jacquier, 1999; Zhang *et al.*, 2006) and more generally in the social capital/microfinance literature (Yunus, 1998; Van Bastelaer, 1999; Van Bastelaer, 2000; Gomez and Santor, 2001; Wilson, 2002; Ito, 2003; Karlan, 2005).

Microinsurance is a term used to refer to insurance characterized by low premium and low coverage limits, designed for low-income individuals or groups who are active predominantly in the informal sector of developing countries. “Micro” here refers to the level of society reached through this mechanism (grassroots levels) and the low average claim load. However, microinsurance does not mean a small pool size of the insured; insurance functions best when it diversifies risk by pooling. Micro also refers to the low premiums that are affordable to the target population (Micro Insurance Academy, 2008).

The phenomenon of community-based microinsurance is growing rapidly. A landscape study of micro insurance in the world’s 100 poorest countries estimated the number of persons covered in 2006 at some 78 million, of which 35 million were covered by micro health insurance (Roth *et al.*, 2007). Another study estimated that some 40-50% of those earning less than US\$1 a day and 50-70% of those earning between US\$1-2 a day (together representing 52.4% of the population in India) could be expected to buy microinsurance (United Nations Development Programme, 2007). A third estimate, by McKinsey, suggests that aggregate consumption in India will register a fourfold increase between 2005 and 2025, with healthcare spending as a percentage of overall consumption projected to increase from 7% to 13% during the same period (McKinsey Global Institute, 2007). This suggests that as the segment of persons earning less than US\$ 1 per day will decrease, the demand for micro health insurance could rise.

Microinsurance drew attention when microfinance – often considered a related activity – gained considerable mainstreaming after Prof. M. Yunus and the Grameen Bank were awarded the Nobel Peace Prize in 2006 “for their efforts to create economic and social development from below” (Norwegian Nobel Committee, 2006). Many international agencies hope that MIUs will propel insurance coverage in low and middle income countries (WHO, 2000; Davies and Carrin, 2001; van Oppen, 2000; Bennett, 2004). One scholar even called microinsurance “the next revolution” (Morduch, 2006).

“Social development from below” could mean compensating for shortfalls of top-down systems in many low-income countries, mainly due to a heavily overburdened public health infrastructure, and insufficient or inexistent supply of commercial health insurance in the informal sector, because supposedly (i)

the poor are not aware about insurance (Consultative Group to Assist the Poor, 2003; Churchill *et al.* 2006; Leftley and Mapfumo, 2006), (ii) unwilling to pay for it (Allianz Group, 2006), or (iii) could be prone to higher levels of adverse selection and moral hazard (Radermacher *et al.*, 2006).

Social Capital has attracted the attention of scholars of a wide range of disciplines including Sociology (Portes, 1998; Woolcock, 1998), Economics (Manski, 2000), Political Science (Putnam, 1995), and History (Neem, 2009). There is a consensus in the literature that social capital is a multifaceted concept, which is however loosely defined. In a development context, social capital is described as a characteristic of communities, in terms such as trust, norms and networks (Putnam, 1993; Fukuyama, 1995; Woolcock and Narayan, 2000; Bowles and Gintis, 2002). We follow Putnam's definition of social capital as "*features of social organisation, such as trust, norms, and networks, that can improve the efficiency of society by facilitating coordinated actions*" (Putnam, 1993).

This definition helps explain how, in the context of microinsurance, the community can mobilise social capital to take actions based on knowledge or information that are available locally, notably sanctioning antisocial behaviour. In microinsurance, this is linked to the notions of moral hazard, adverse selection and fraud. While these exist in all types of insurance, they are particularly problematic in health insurance due to the more subjective nature of the insured events¹. As such, higher levels of efficiency in coordinating local actions (e.g. settling claims based on local knowledge readily available in the community) can enable the community to overcome (health) problems even when insurance would normally be exposed to market failures based on imperfect information (Dror and Jacquier, 1999; Bowles and Gintis, 2002).

A recent review of MIUs and social capital (Mladovsky and Mossialos, 2008) suggests that in developing countries, trust and local community networks (proxies for social capital) have a significant impact on effectiveness of MIUs.

The authors of this conceptual framework cite two studies that provide field evidence to measure social capital and assess its effects on MIUs. The first field study focused on Chinese farmers' willingness to join a community based health insurance (Zhang *et al.*, 2006). Social capital was measured by indices of trust and reciprocity at community level. That study concluded that farmers' agreement to join a newly developed (government subsidised) community-based

¹According to Radermacher *et al.*, 2006, moral hazard occurs when people with insurance use more services than they would if they did not have insurance only because they know that they are protected. Adverse selection occurs when the risk profile of the group insured is worse than what would be expected from assessing the general population. Health insurance is particularly prone to fraud throughout the world, whatever the client income levels. Even in highly sophisticated markets like the USA, health insurers dedicate substantial resources to fraud detection and control, and there are several documented cases of MIUs collapsing due to fraud. For a detailed discussion on moral hazard, adverse selection and fraud in the context of micro health insurance, see Radermacher *et al.*, 2006 (pp. 68-70, 78-79).

health insurance scheme was significantly and positively associated with social capital. However, at the time of that study it was impossible to compare stated vs. actual willingness to join because the new scheme was not yet in existence.

The second research paper cited by Mladovsky and Mossialos (2008) explored whether informal risk sharing networks in Vietnam crowd out public voluntary health insurance, using data from 1999 (Jowett, 2003). To determine reliance on informal risk-sharing networks, respondents were asked where they borrowed funds in the last 12 months: formal (e.g. banks) or informal sources (e.g. family and friends)? The results suggested that informal financial networks may crowd out formal government-promoted health insurance. Another issue that emerged from this paper was that proxies for social capital (social cohesion, measured through a coefficient of network density and heterogeneity) yielded significant yet opposite results in different provinces.

The objective of our study is to add evidence-based analysis of the impact of social capital in the context of health financing. We examine the preferences of respondents to seek borrowing and advice from formal versus informal sources, levels of trust towards community members versus outsiders, and the factors influencing respondents' decision to affiliate voluntarily to an MIU or not. We use data from a 2005 household survey in four locations in India to show whether there is an association between affiliation with MIUs and several indicators of social capital, and whether this association is a general phenomenon or, rather, dependant on attributes of the community or of the local MIU.

2 MATERIALS AND METHODS

2.1 Household survey data

We conducted a Household (HH) survey in four locations in three states (Maharashtra, Karnataka and Bihar) in India where micro health insurance units (MIUs) operate. The data was obtained through field interventions from April to September 2005 under the project “Strengthening micro health insurance units for the poor in India”. In view of the focus of that project, the survey included both insured and uninsured respondents. A brief overview of each organisation is provided below.

2.1.1 Sampled MIUs

BAIF Development Research Foundation (BAIF)

BAIF Development Research Foundation was founded in 1967 in Urulikanchan (a rural area of Pune District in Maharashtra). BAIF's mission is: “to create opportunities of gainful self-employment for the rural families, especially disadvantaged sections, ensuring sustainable livelihood, enriched environment,

improved quality of life and good human values." (BAIF, 2007). BAIF has a special focus on empowering women, notably through founding self-help groups (SHG) which offer savings, credit and insurance facilities for their members.

BAIF's MIU, named Swayam Sahitya Bema Samiti, is an unregistered NGO. Membership of BAIF's MIUs is restricted to women members of the SHGs, and their families if they so wish. BAIF's SHGs are recognized by banks for formal lending, through bank accounts in the name of a SHG committee, the members of which are elected to function in a cooperative like manner.

Insurance operations (e.g. premium collection, identification of members) are handled informally by SHG members who reside in the same village and who know all other members (and are known by all other members) so that the tight social structure of the membership makes the operation possible.

More details on the Swayam Sahitya Bema Samiti scheme are given in table 1.

UpLift India Association (UpLift)

UpLift India Association (UpLift) is "*a network of nine organisations involved in activities improving and strengthening the livelihood of the poor since the year 2000*" (UpLift, 2007). The target population of UpLift is urban slum dwellers in Pune, Maharashtra, who have an annual income of INR 30,000 or less. UpLift was formally registered as a Section 25 (Not for Profit) Company in December 2004.

UpLift's MIU, called Community Based Health Mutual Fund, was created in 2003. It aims "*to facilitate access to quality health care at appropriate rates ... to low income/poor families*" (UpLift, 2007). Membership in the scheme is restricted to members of UpLift's microfinance operations, who choose to affiliate to the insurance on a voluntary basis². Members can (and are actively encouraged to) enroll their entire household, and are offered a lower premium if the entire household joins.

UpLift involves members in insurance operations, for instance through participation in claims committees, where reimbursements are scrutinized by the members prior to payment. UpLift emphasizes self-help and mutual solidarity throughout their operations, which are organized accordingly in a tier system (group level, cluster level, NGO level) where sense of mutual responsibility is fostered through relations between friends and neighbors.

More details on UpLift's Community Based Health Mutual Fund are given in table 1.

²This has recently changed to mandatory affiliation (after the HH survey).

Yeshasvini Cooperative Farmers Health Care Scheme (Yeshasvini)

Yeshasvini Cooperative Farmers Health Care Scheme was launched at the end of 2002 and became operational in 2003, officially registering in October 2003 as a Charitable Trust. The Trust and its insurance scheme are based on the initiative of Dr. Devi Shetty, a renowned cardiac surgeon and chairman of Narayana Hrudayalaya Hospital in Bangalore (Yeshasvini, 2007).

Membership in Yeshasvini's insurance scheme is open to all cooperative society members (in rural areas of Karnataka), who have been members for at least 6 months before joining. Though voluntary in theory, some co-operatives societies choose to automatically enroll all their members, making the scheme *de facto* compulsory to members of those cooperatives. In other cooperatives, affiliation remains voluntary. All insured members may enroll their spouse and children on a voluntary basis as well.

With over 2.3 million members as of November 2007, Yeshasvini is the world's largest MIU, promoted through active support and subsidies from the cooperative department of Karnataka. It operates through a network of 135 affiliated hospitals located across the state of Karnataka, where members can avail themselves of a wide list of surgeries (1600 defined surgical procedures). Members, through their local cooperative societies, also participate in the operations of the scheme by signing up members, collecting and depositing premiums etc.

More details on the Yeshasvini Cooperative Farmers Health Care Scheme are given in table 1.

Nidan

Nidan was founded in 1996 and has since "*been working on various development issues with informal workers belonging to the poorest section of society*" (Nidan, 2007) (unorganized/migrant workers, street vendors, rag pickers etc.). Nidan services rural and urban poor in Bihar, which is among the poorest states in India. It is a charitable society (NGO) registered under the Societies Registration Act.

Nidan engages in various activities such as legal aid for its members, advocacy, and microfinance. Its microfinance activities started with women thrift and credit cooperatives, owned and controlled by members themselves.

In 1999, after the death of three members that adversely affected their families as well as the entire SHGs, Nidan launched a new social security programme composed of health insurance and other maternal and child health services outside the insurance package.

More details on Nidan's health insurance scheme are given in table 1.

Table 1: summary description of sampled MIUs*

	Baif	Uplift	Yeshasvini	Nidan
Legal format	NGO (Unregistered for the insurance operations)	Section 25 (Not for Profit) Company	Charitable Trust	Society (NGO).
Insurance type^a	In-house (Mutual)	In-house (Mutual)	Charitable Trust with TPA ^b	Partner-Agent (through affiliation with SEWA ^c and their insurance contracts)
Members	Woman SHG members in the community (rural villages)	Members of the community (urban slum)	Members of cooperative societies and their families (rural and remote rural villages)	Members of the community working in the informal sector (urban slum and rural villages)
Membership (in 2007)	2,824	26,222	2.3 million	26,247
Insured unit	Individual	Household & Individual	Individual	Individual
Membership restrictions	Age restrictions: 18-70 years (insurance can be renewed until 75).	Middle and high income groups	Non-members of cooperative societies and their families	Age restrictions: 18-55 years (insurance can be renewed until 60).
Premium	INR 250 p.p. (including life-insurance and scholarship for some children) and INR.100 as government subsidy	INR. 100 p.p INR. 60 p.p. if whole family joins; INR. 120 p.p. if only some members join	INR.120 for adults and Rs.60 for unmarried children younger than 18. Possibility to pay in kind.	INR. 100 for the medical treatment package INR. 225 for the hospitalisation package

*Sources: ECCP household survey data, FGD and KII, conducted in 2005 and analyzed in 2006. The project was jointly implemented by Ficci, University of Cologne and Erasmus University Rotterdam. Analysis of the benefit packages was conducted initially by students within the ECCP project.

^aFor a detailed discussion on the various types of insurance, see Radermacher and Dror (2006)

^bThird Party Administrator: TPAs are organizations that process health care claims without carrying insurance risk. Hospitals or provider organizations desiring to set up their own health plans will often outsource certain responsibilities to TPAs. (Wikipedia, 2008)

^cSelf Employed Woman Organization; for more information on SEWA see <http://www.sewa.org/>

Table 1: summary description of sampled MIUs* (continued)

	Baif	Uplift	Yeshasvini	Nidan
Coverage of hospitalisation costs	Max. INR. 5000 per person per year (paid only in case of hospitalisation of more than 24hrs)	70% of cost of hospitalisation for the 11 most frequent diseases up to a maximum of INR5,000 (depending on disease);	Predefined surgeries and all costs connected for common ward. 2 times per year max. INR. 100,000 p.p.	80% of the costs of hospitalisation up to max. INR. 2000 /6000 per person (depending on BP and paid only in case of hospitalization of more than 24hrs)
Free choice provider	Yes but in private hospital deductible of 30% - public hospital no deductible.	A network of providers is established. Guidance is offered to consult the member on treatment and provider options.	Only listed hospitals can be used.	Only listed hospitals can be used. Exceptions in case of emergency.
Coverage of consultations (outpatient care)	No, but cost reduction at BAIF community health centre	No	Yes	No
Coverage of consultations (specialist)	n.a.	n.a.	Yes, in case patient is admitted for surgery	Only in case of hospitalization
Coverage of prescribed drugs	Only as part of hospital treatment.	Only as part of hospital treatment.	Only drugs during and after the operative period.	Only as part of hospital treatment.
Benefit exclusions/benefit restrictions	Pre-existing diseases, AIDS and any expenses incurring during the first 30 days.	All diseases not mentioned in the list. Pre-existing diseases and illnesses directly related to them.	Inpatient admission without surgery. Transplants, burn cases, chemotherapy, cosmetic surgery, road traffic accidents, vaccination, dialysis, ambulance services.	Maternity-care.
Claim settlement	Reimbursement.	Reimbursement.	In kind (cashless system).	Reimbursement.

n.a. = information not available

*Sources: ECCP household survey data, FGD and KII, conducted in 2005 and analyzed in 2006. The project was jointly implemented by Ficci, University of Cologne and Erasmus University Rotterdam. Analysis of the benefit packages was conducted initially by students within the ECCP project.

2.1.2 A summary description of the sampled MIUs

It is noteworthy that the four organisations followed different approaches/models with regards to insurance provision (including in-house/mutual, partner-agent, and charitable model/provider driven), as well as other operational aspects of their schemes. The essential characteristics of the four MIUs are summarized in table 1.

2.2 Sampling methods

Sampling followed a cross sectional design in a two-stage sampling method: in the first stage we selected locations purposively, from among schemes that agreed to participate. In the second stage, several villages (or urban areas) within each location were randomly included, and at each location about 10 insured HH (selected according to the systematic circular sampling method) plus about 10 uninsured HH (selected by using the “Right Hand Rule” of field movement) were surveyed. We surveyed some 350 insured and 350 uninsured HH per location. The HH survey included a total of 2,808 HH, representing a total of 15,090 individuals.

2.3 Statistical Methods

The household survey data was analyzed using SPSS v.12; nonparametric statistical analysis (statistical significance tests) were performed using the Chi-square method (also known as chi-squared distribution or χ^2 -distribution), one of the most widely used theoretical probability distributions in inferential statistics.³

2.3.1 The questionnaire

Prior to the full survey, the questionnaire was peer-reviewed in Germany and cognitively pre-tested in India. It included, inter alia, sections on HH demographics, education, income, expenditure and self-reported illness episodes in the HH within the three months prior to the interview, as well as questions relating to social capital. The present study is based on the analysis of the following questions:

1. Respondents’ preferences regarding interaction with formal vs. informal interactions within the community

Question 1: “Suppose you need to borrow a large amount of money; where would you first try to borrow it?” (Hereafter “Borrowing”)

³For more detailed information and further reading on Chi-Square, please see http://en.wikipedia.org/wiki/Chi-square_distribution

Question 2: “Whose advice do you trust and follow in financial matters like spending, savings and borrowing money?” (Hereafter “Financial Advice”)

Question 3: “Whose advice do you trust in general matters e.g. on new techniques, new developments and so on?” (Hereafter “General Advice”)

2. Respondents’ levels of trust towards community members and outsiders

Question 4: “What do you think about the following statement? If given the chance most people in your community like neighbours and colleagues would try to take advantage of you.” (Hereafter “Distrust community”)

Question 5: “What do you think about the following statement? If given the chance most people outside your community would try to take advantage of you.” (Hereafter “Distrust outsiders”)

Respondents could reply by choosing one of the following:

1. Strongly Agree
2. Agree
3. Disagree
4. Strongly Disagree

We aggregated the results into two categories: positive responses (choices 1&2) which mean that members distrust their interlocutors, and negative responses (choices 3&4) which mean that members tend to trust their interlocutors.

3. Reasons for joining or not joining insurance

Question 6: “Why have you/your household decided to join the scheme?”

Question 7: “Why have you or other members of your household not insured in the scheme?”

Insured were asked only Q.6, and uninsured were asked only Q.7. The two cohorts were given differently worded options to choose from (each respondent could check as many options as relevant). The responses were then grouped along three categories, which represent proxies for Trust/Familiarity (Hereafter “Trust”), Quality of Healthcare (Hereafter “Health”), and Financial Protection (Hereafter “Finance”). Trust and familiarity are grouped here as they are two social aspects that complement each other in terms of the functional decision to join or not to join, and are distinct from the financial consideration as well as from the (perceived) quality of care that could be accessed, which were the subject of different series of questions. Insured respondents had one option in the “Trust/Familiarity” and “Healthcare” categories, and two options in the “Finance” category. Uninsured respondents had two options available for choice in each category. The list of responses, grouped by category, is presented in Table 2.

Table 2: Reasons for joining or not joining an MIU

Category	Insured (joined)	Uninsured (did not join)
Trust/Familiarity	Somebody told me to do so	Have not heard about the scheme I do not trust it
Healthcare	Good quality of care offered	Benefits are not good Health care provided of bad quality
Finance	Offers financial protection Cheapest way to get care	Too expensive Why pay before I am sick?

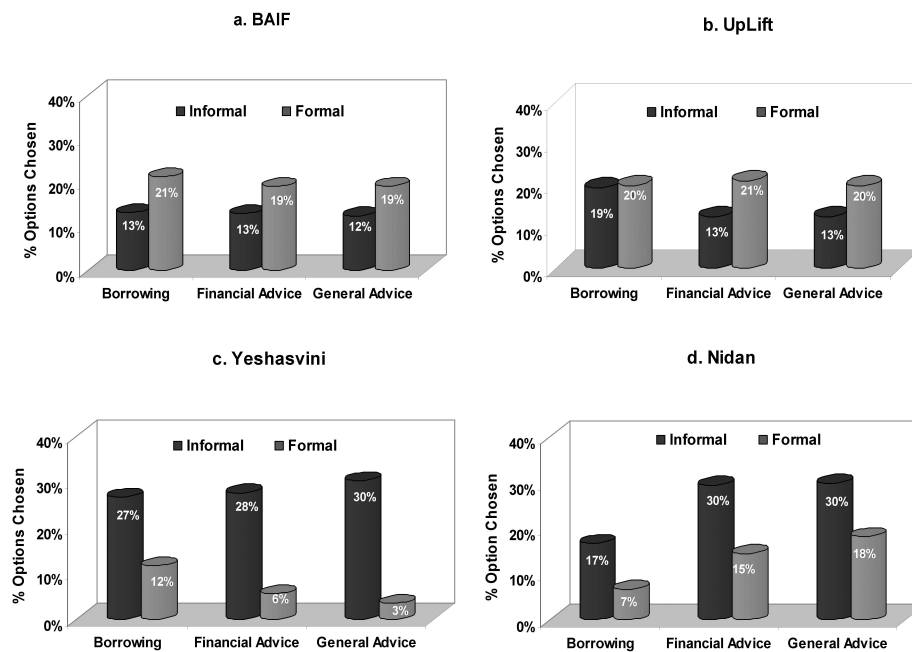


Figure 1

3 RESULTS / FINDINGS

The aggregated results for respondents' preferences regarding interaction with formal vs. informal interlocutors within the community suggest a consistent pattern of preferences in each of the locations. The replies are shown in figure 1. We note that the directions of these preferences are different in the locations; in the Maharashtra locations (BAIF & UpLift) the formal contacts were preferred, whereas in Karnataka (Yeshasvini) and in Bihar (Nidan) the informal contacts were chosen more frequently.

Table 3: Respondents' trust in community members and outsiders

Locations *	BAIF		UpLift		Yeshasvini		Nidan	
	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured	Insured	Uninsured
Question 4: Distrust Community	Total Replies	349	358	344	351	354	349	351
	Positive Replies	125	145	104	138	205	336	343
	Negative Replies	224	213	240	213	141	13	8
	% Positive	35.82%	40.50%	30.23%	39.32%	59.25%	96.28%	97.72%
	Significance Chi2 Test Insured v. Uninsured	NS**		NS		NS		NS
Question 5: Distrust Outsiders	Total Replies	349	358	344	351	346	349	351
	Positive Replies	124	131	102	135	183	332	337
	Negative Replies	225	227	242	216	163	17	14
	% Positive	35.53%	36.59%	29.65%	38.46%	52.89%	95.13%	96.01%
	Significance Chi2 Test Insured v. Uninsured	NS		NS		NS		NS

* Locations are identified by the name of the microinsurance unit operating there

** NS = Not Statistically Significant

Considering the definition of Putnam (1993), one could assume that grassroots populations would display higher levels of trust towards members of their community than towards outsiders. Surprisingly, we did not find significant differences between the replies to questions 4 and 5 (Table 3). This finding means that the hypothesis of higher trust levels of community members towards peers within their community, versus toward outsiders is rejected. However, there is a significant difference in the level of trust between locations, for instance from around 70% of replies indicating trust in UpLift (insured) to less than 5% in Nidan (both insured and uninsured).

3.1 Is the decision to join an MIU random?

This issue was explored in the household survey through Q6 and Q7. The data provided by the insured is plotted in figure 2.

The vast majority of insured respondents mentioned that access to quality healthcare was a reason for joining the MIU. The positive response rate to the question on quality of healthcare was higher than other topics in three of the four locations (ranged from 65% in BAIF to 85% in UpLift); even in Yeshasvini, the only location where quality of healthcare did not top the insured respondents list, nearly 40% of respondents stated that this was the reason they joined the insurance. Clearly, respondents said the insurance enabled them to access better healthcare than they could afford without it⁴.

It is noteworthy that quality of care predominated over financial protection consideration, which is often viewed by researchers and policy makers as a main function of insurance (Ranson, 2002; Jtting, 2003; Ekman, 2004). In fact, financial protection was not mentioned as the first consideration in any of the locations, and was the second choice (statistically significant) only in UpLift, with a just over 35% of respondents explaining that they joined insurance for that reason.

Trust was another major reason to explain the motivation to join insurance, albeit relatively much less powerful. Trust was ranked first in Yeshasvini, by over 55% of respondents, and 2nd in Nidan and BAIF (with nearly 45% to just over 10% respectively).

Among the uninsured cohorts, the overwhelming reason for not joining an MIU across all locations was lack of trust/familiarity. The numbers are fairly consistent across locations (ranging from 39% in BAIF & UpLift to 43% in Yeshasvini). The data are shown in figure 2.

⁴The attitudes of respondents towards joining a health insurance scheme when they thought that the quality of providers was good could imply that clients had sufficient choice of providers. However, the survey did not include a direct question on the impact of choice of providers, on willingness to join, or other questions that allowed us to assess cost-benefit considerations from the clients' perspective.

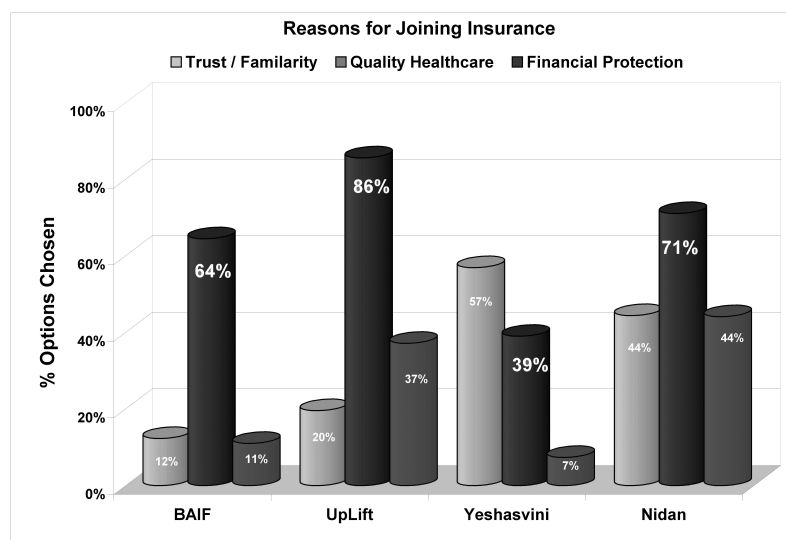


Figure 2

“Finance” replies emerged as second reason for not joining, in three of the four locations; however, this reason is a distant 2nd choice (18% of respondents mentioned this as their reasons for not joining in Nidan, 7% in UpLift and only 3% in Yeshasvini).

4 DISCUSSION

The literature on social capital and microfinance attributes much of the success of microfinance operations (e.g. high repayment rates) to the impact of high levels of social capital and trust within communities of borrowers (Gomez and Santor, 2001; Rankin, 2002; Fukuyama, 2002). By extension to microinsurance, one could have expected higher levels of trust within communities versus trust in outsiders (a proxy for social capital). However, it has been shown in Table 3 that respondents in this study – regardless of location and insurance status – said they trusted outsiders about as much as (or even more than) community members. Therefore, the assumption that social capital exists in all rural communities and is less present in urban areas is not supported by our dataset.

Papers that analysed willingness to pay (Dror *et al.*, 2007), and the unsuitability of a “one size fits all” health insurance solution (Dror, 2007) concluded that it is necessary to take account of local conditions so that decisions on benefit package design would be pertinent for the target population. Our findings go in the same vein. We have shown that levels of social capital are also remarkably different across locations; for instance, while over 95% of respondents in rural Bihar (both insured and uninsured) believed that outsiders (as well as insiders)

would take advantage of them if given the opportunity to do so, less than 30% of the insured population in the slums of Pune replied positively to the same question. Consequently, the assumption that outsiders seeking to establish relations with community populations need only find the right intermediary within the target community who could “deliver” the community is not upheld by this study. Rather, our evidence suggests that social capital can not easily be instrumentalised by outsiders, or by insiders for that matter.

Furthermore, the UpLift cohort expressed the highest level of trust, where only 30% of UpLift’s insured expressed distrust in community members. Compare this to the 96% of Nidan members who expressed distrust (Table 3). UpLift is an urban MIU that actively promotes solidarity principles amongst its slum-dwelling members, and it is the only location where membership in an MIU is associated with higher levels of trust – both towards community members and towards outsiders – compared with the uninsured cohort in the same location. This suggests that the interaction of the community with a solidarity promoting organisation, even though it comes from the outside, can enhance trust and social capital.

Sources that examined borrowing habits of the poor noted a clear preference of informal sources for borrowing money, ranging from a high of >90% (Supriti *et al.*, 2002) to a low of 65% (Singh, 2007). The main reason for this preference was that borrowers could secure loans with social capital rather than providing physical capital or collateral.

In the light of this high preference for informal borrowing based on social capital, one could expect a similar preference for informal sources in our survey. It should be remembered that this issue was tested in our population through three qualitative questions on financial and general interactions. Replies did not always tally with this expectation (figure 1). In each location there was remarkable consistency in the replies on preferred interaction. In Yeshasvini, where affiliation to the insurance was related to membership in a cooperative, respondents expressed the strongest reliance on informal contacts. Nidan, the poorest cohort in our sample, also expressed preference for informal contacts. However, we do not find any preference for informal sources in the Maharashtra schemes; in rural BAIF, we find a statistically significant preference for formal sources on all three questions. It should be noted that SHGs of BAIF have access to banks thanks to the organisation’s registered status. In urban Pune, UpLift members (slum dwellers) also did not prefer informal sources in any category, and maybe they have easier access to professional/formal sources of financial and general advice and support thanks to their urban location.

This suggests that where groups have access to formal sources of finance or advice, they do not necessarily or consistently prefer informal interactions. As a matter of fact, in Bihar, where the highest levels of distrust towards community members were recorded (Table 3) the respondents also reported a high preference for informal contacts. This suggests that people prefer what

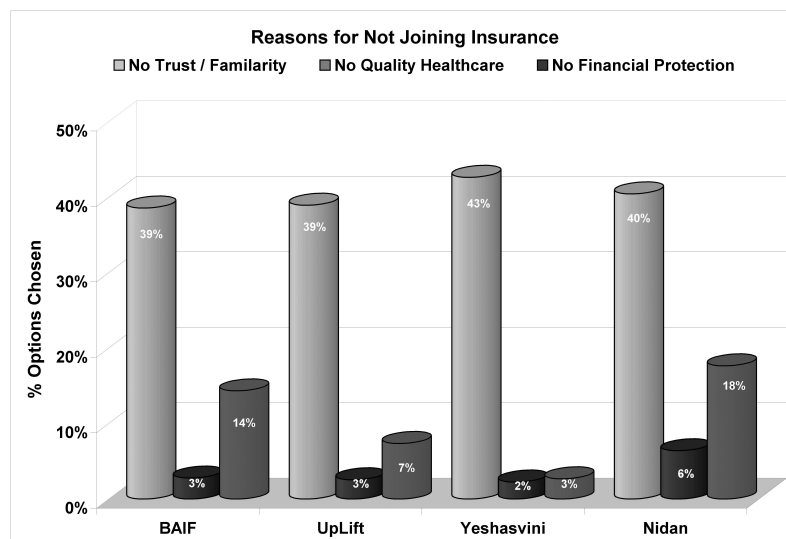


Figure 3

they can get: if they only have reasonable access to informal contacts they report those as their preference, but where they can access both, informal preference is no longer clear or consistent.

It should be remembered that in India, formal lending institutions charge significantly lower interest rates than informal lenders. This could offer a logical reason why those who can access formal lenders prefer them. However, the preference for formal sources with regards to advice raises an interesting question about the perception of informal sources as perhaps less reliable compared with formal or professional ones. This is an area that has received very little attention in the literature, and merits more investigation because of the important policy implications it could hold.

Finally, it should be remembered that levels of trust may influence individual decisions to join an MIU. Consider here that the uninsured clearly reported that the main reason for NOT joining an MIU in all locations was lack of trust/familiarity (figure 3). We conclude from these replies that an insurance provider that does not enjoy the trust of the target population would have little scope to affiliate many persons to insurance for as long as affiliation is voluntary.

On the other hand, trust/familiarity alone would not suffice to secure broad-based affiliation to MIUs either. It has been shown in figure 2 that quality healthcare was cited as the main reason for joining the insurance scheme in all locations except Yeshasvini (where it was the second most important reason for joining). This suggests that clients want quality of care, which they feel

they can better access through affiliation to an MIU. That said, since lack of quality healthcare was only very marginally mentioned as a reason for not joining an MIU by the uninsured (figure 3), one can question whether quality of care alone would be enough to sway people to join an MIU, or whether other conditions would need to be fulfilled as well. We conclude that the combination of trust/familiarity and quality of care would be the winning formula.

Interestingly, financial protection, which is usually considered to be the ultimate value proposition of insurance for clients, was not perceived as an important factor by the vast majority of respondents. This can perhaps be explained by the narrow coverage that clients could expect under the benefit packages in the schemes that operated in their location, which implied that even when insured, people still had high out-of-pocket expenditures (to pay for medicines, primary care, tests, medical travel, and above cap costs). Another reason might have been the inability of MIU promoters to explain the concept of financial protection to their prospective clients.

5 CONCLUSION

In summary, this study offers two main conclusions: firstly, that trust/familiarity seems to be a necessary (yet insufficient) precondition for success in achieving broad-based voluntary affiliation to microinsurance. The second main conclusion of this paper is that local attitudes vary greatly across locations. Hence, our dataset does not uphold the belief that social capital among low-income populations that are already affiliated to some community-based activity can be taken for granted. On the other hand, our study suggests that trust, familiarity and social capital can be enhanced by the interaction of the community with a solidarity promoting organisation (such as an MIU), and in such a case it does not seem to matter that such support comes from the outside.

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PART IV

Disaster Microinsurance

Robust Decision Making for Sustainable and Scalable Drought Index-Based Microinsurance in Ethiopia: Reducing Weather Related Disaster Risk With Rural Agro-Insurance

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ABSTRACT: Climatic and socio-economic vulnerability pose significant challenges to development, often requiring large-scale solutions to overcome. Index-based microinsurance for weather risk transfer is one potential element of sustainable and scalable management solutions. Agent-partner microinsurance models are particularly attractive since they can be distributed as low-cost products on an individual basis in remote areas. Loan-bundled index products can also support access to microcredit as a form of collateral that mitigates weather-related default. An agent-partner, index-based microinsurance product design was explored as a risk management tool for drought in Ethiopia. This research used scenario-based computer modeling and qualitative interviews to test the supply and demand-side sustainability of index products. Robust decision methods were used to consider uncertainty in the estimates of product design and financial sustainability. Model structure and inputs were informed by commercial product designs in India, and the earliest stages of pilot study work in the Tigray region of Ethiopia, undertaken by the HARITA (Horn of Africa Risk Transfer for Adaptation) project involving over a dozen partner organizations coordinated by Oxfam America.¹ The modeling compared the financial sustainability of both standalone and loan-bundled microinsurance products. Interview work with farmers and potential suppliers assessed opportunities and tradeoffs of products. Overall results indicate that practical recommendations for implementing an agent-partner model in Ethiopia include the need to: (i) improve index quality for more robust risk assessments (ii) consider initially offering standalone microinsurance products with established

¹Ethiopian farmers, the Relief Society of Tigray, Nyala Insurance Co., Dedebit Credit and Savings Institution, Mekele University, Ethiopia's National Meteorological Agency, Tigray Regional Food Security Coordination Office, Tigray Cooperative Promotions Office, the Institute for Sustainable Development, Swiss Re, International Research Institute for Climate and Society, the Rockefeller Foundation, the Index Insurance Innovation Initiative at UC-Davis, Goulston & Storrs LLP, and Weil, Gotshal & Manges LLP.

demand and supply-side impact criteria (iii) address demand and supply-side capacity constraints and (iv) gauge domestic interest relative to other index insurance model designs. To achieve sustainable scaling of drought index-based microinsurance in Ethiopia and elsewhere, these and other issues should be considered. Innovative product distribution based on an existing public-private program addressing food insecurity, use of satellite data and emerging financial resources for climate change adaptation offer possible solutions for increased product performance and affordability in Ethiopia.

KEYWORDS: Microinsurance, weather risk management, robust decision making, Ethiopia

1 DROUGHT INDEX MICROINSURANCE FOR WEATHER RISK MANAGEMENT

1.1 Vulnerability context

Extensive climatic and socio-economic vulnerability challenges the wellbeing and livelihoods of low-income agriculturalists that make up the majority of rural populations in developing nations. In African regions, recurrent droughts, exacerbated by socio-economic and political instability, resulted in the largest number of people affected and lives lost from natural disasters between 1980 and 2008. One of the best-known examples is Ethiopia's 1984 drought, which claimed the lives of between 300,000 and 1 million people and affected over seven million (IFRC, 2003: 1, EM-DAT, 2008). While only subtle changes in rainfall were observed during this period, extreme poverty and lack of full recovery from previous droughts, institutional weakness and civil conflict catalyzed humanitarian crisis (Fraser, 2007: 503). Anthropogenic climate change may magnify such sensitivity to environmental change by increasing risk of weather related disasters (IPCC Assessment Report 4, 2007, 433-467).

1.2 Microinsurance risk management tools

Insurance products offer one strategy to manage these threats by transferring weather risks to financial service providers. In the last decade, a new form of insurance has been developed based on a payout index correlating losses (e.g. crops or livestock) to a weather parameter/s. Derived from available historical weather and loss data, these index-based risk transfer products (IBRTPs) have shown promise as weather risk management tools with theoretically lower transaction costs as direct investigation of losses is avoided (Barrett et al., 2008, 1766).

Initially explored in North America and Europe, index-based insurance is being tested in developing country contexts as low-cost, low-payout "microinsurance" products (Ulardic, 2008). Experimental pilots with standalone index

microinsurance products provided learning experiences from which viable, countrywide industries emerged for early adopters like India (Gunaranjan, 2008). Further pilot innovations introduced index microinsurance products tied to small loans to serve as a form of collateral for poor borrowers. Loan-bundled microinsurance has the potential to increase client pools of lenders who are reluctant to extend services given default risks associated with rain-fed farmers (Linnerooth-Bayer et al., 2007: 54). Early pilot experiences with bundled products in Malawi have been qualified successes and reached around 2,500 farmers in the third season (Mapfumo, 2009).

Given the weather risk reduction and livelihood enhancing potential of standalone and loan-bundled index microinsurance, providers are engaging in strategic work to scale conventional project-level efforts (Bryla, 2008). Scaling concepts involve the expansion of client pools or “outscaling” to diversify the covered weather risks geographically, and “upscaling” to transfer aggregated risk pools to insurance or reinsurance companies. Success stories amongst pilot and program-level experiences to date have resulted in important lessons of what makes index microinsurance products sustainable at various scales. Sustainability criteria fundamentally require that products involve affordable costs and low risk levels to both suppliers and vulnerable clients (Ibarra and Skees, 2007: 67). However, developing scalable index product designs that satisfy supply and demand-side sustainability criteria have proven a continued challenge in remote, low-income areas of the world. In countries like Ethiopia, this challenge is exacerbated by endemic natural climate variability and resource constraints, among others. The following section explores such practicalities in the context of theoretical advantages and disadvantages of weather index products.

2 WHY INDEX MICROINSURANCE FOR AGRICULTURALISTS?

2.1 *Agro-insurance context*

While use of insurance products for transferring weather risks holds much promise, practical realization of sustainable and scalable products in developing country contexts is an ongoing effort. For this study, the theoretical context of IBRTPs provides insight into why weather index microinsurance in particular is being explored for agriculturalists, and the principle challenges facing design decisions to date.

Among agricultural microinsurance products, two design categories predominate: i) indemnity or loss-based and ii) area yield-based. Under traditional indemnity insurance, products might cover single or multi-peril (e.g. precipitation, pests, and temperature) crop losses measured directly during on-farm visits. In contrast, area yield-based insurance products cover populations in a defined geography within which area-wide losses are vulnerable to simultaneous or “covariant risks” such as drought. Area-based payouts occur when estimated

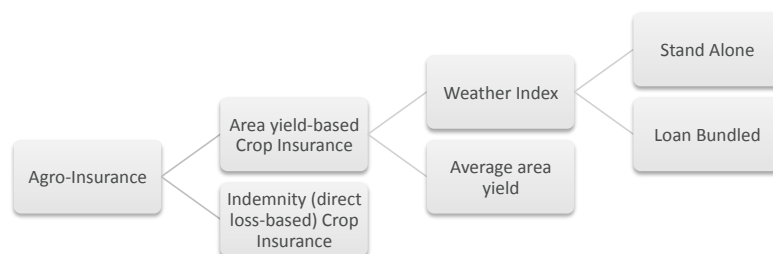


Figure 1: Conceptual landscape for agro-insurance products

yields produced in the area fall below a critical threshold. Depending on the product type, loss thresholds might be measured directly based on average area-wide yields or indirectly, based on a predetermined weather index indicating environmental stress for a select crop/s (Carter et al., 2007: 3) (See Figure 1).

For farmers and insurance providers sensitive to environmental change, the type and design of an insurance product has significant implications. Decisions ultimately depend on these actors' risk aversion and preferences in relation to product cost, coverage and delivery features. Given variance among these preferences, overall product sustainability requires that products are tailored to local contexts.

2.2 Potential advantages and disadvantages of index microinsurance

Lower costs and risk levels account for the arguable sustainability and scalability of weather index microinsurance. With payouts triggered by a predetermined index rather than after individual claims investigations, affordability of index products is predicated on low transaction costs to suppliers and correspondingly low premiums for poor clients. Moral hazard, or the risk of farmers deliberately increasing their risk exposure in anticipation of insurance payouts, is also reduced by the objective and tamper-proof index. Adverse selection of clients due to asymmetric information about farmers' real risk exposure is similarly avoided when reliable historical weather data are available (Skees et al., 1999: 3). From demand and supply-side perspectives, index microinsurance therefore, has theoretical advantages in terms of lower premiums and supplier costs, and increased transparency. The versatility of index products is complimented by their potential to lower risks associated with small loans through loan-bundled products, and also to be outscaled to low-income clients and upscaled to spread aggregated risk pools among insurers and reinsurers (See Figure 2).

Index microinsurance products are not without implementation challenges, however, as pilots are outscaled to more clients and coverage areas. From the perspective of farmers, the primary challenge is heightened exposure to conditions of "basis risk" characterized by a poor correlation between

Potential advantages	Potential challenges
<ul style="list-style-type: none">• Affordability• Transparency• Versatility• Scalability	<ul style="list-style-type: none">• Basis risk• Large-scale payouts• Capacity constraints• Institutional environment

Figure 2: Potential advantages and challenges of index microinsurance

individual and area-wide losses estimated by the payout index. By measuring loss indirectly based on a proxy, index products have greater potential for inaccuracy and high levels of basis risk. In the case of drought index-based microinsurance, high basis risk exists when precipitation deficits registered by a local meteorological station are not representative of actual deficits experienced on the ground. Therefore, a drought could result in crop losses but no payout and vice versa (Carter et al., 2007: 3-10).²

For providers, index contracts increase exposure to covariant risks that may lead to large-scale payouts that can undermine the solvency of a supplier’s risk portfolio (Skees et al., 1999: 6). For example, under one Indian company’s scheme, covered areas can reach an over 40 km radius from a single station, exposing the insurer to a large-scale payout if drought occurs simultaneously across a large geographic area (Gunaranjan, 2008). Additionally, given limited data, adverse selection can arise when suppliers are unable to characterize risks for a particular area accurately. Reinsurance can mitigate these inherent risks.

Hence, while index-based products may increase affordability by lowering transaction costs, these advantages are offset by increased basis risk exposure for clients and covariant risk and/or poorly characterized risk portfolios for providers without reinsurance. While such risk exposure is often associated with issues of insufficient historical weather and yield data, and low-density networks of meteorological stations, financial and technical capacity constraints of clients and providers pose additional challenges.

Stemming from capacity issues is the related obstacle of identifying appropriate delivery channels for insurance provision. For index products (explored in later sections), risk aggregators and clients must be closely linked in order for aggregators to market and administer products effectively, ensure timely payouts, and support product improvement based on customer feedback. Pilot experiences in index-based microinsurance indicate that suppliers must be

²Covariant or idiosyncratic individual loss not directly related to weather, such as pest or plant pathogen infestations, are also a significant source of basis risk which drought index insurance does not protect against.

Table 1: Drought index-based agro-insurance models (existing and proposed) in Ethiopia

Model Developer	Scale	Client	Distribution Channel	Product Function	Technical Approach	Pilot Stage
WFP/ World Bank	Macro	Government	Government (PSNP program)	Livelihoods protection (safety net), famine prevention	Station data index (LEAP software)	Phase II, beyond proof of concept
HARITA project partners	Meso/ micro	Farmers	Govt (PSNP)/ Private providers	Livelihoods building (cargo net)	Station data index & satellite data	Phase II, beyond proof of concept

context appropriate. This may involve distribution by a domestic insurer, a microfinance institution (MFI), government agency, civil society organization, or other entity providing microinsurance directly or indirectly (as an intermediary agent) (Manuamorn, 2007: 2). The ease of suppliers to access and regularly communicate with often remote and difficult to reach customers adds additional delivery challenges.

Compounded by underdeveloped regulatory environments for insurance and banking industries in many developing countries, implementation of index-based microinsurance requires a host of theoretical and practical tradeoffs from both supply and demand side perspectives (See Figure 2).

3 DESIGNING SCALABLE DROUGHT INDEX INSURANCE PRODUCTS FOR ETHIOPIA

3.1 Distribution models in Ethiopia to date

Accounting for approximately 50% of GDP and 80% of employment, Ethiopia's drought-prone agricultural sector has been a subject of particular focus for experimental drought index agro-insurance products at various scales (Demeke et al., 2003: v). For the purposes of this study, two Ethiopian pilot programs were focused on: a country-scale 2006 pilot designed by the World Food Programme (WFP) and the World Bank (WB) and the HARITA (Horn of Africa Risk Transfer for Adaptation) project coordinated by Oxfam America (OA), which has just completed implementation in the Tigray regional province (Victor, 2010). These pilot programs might be considered cousins in that they share similar conceptual underpinnings, distribution channels, and technical approaches. However, they are markedly different in their client focus and corresponding product scale and function (See Table 1).

Fundamental differences between the two models are perhaps best characterized by classifications of IBRTP approaches relating to poverty traps developed by

Barnett et al., 2007. The WFP/WB work is a “safety net” model to prevent farmers falling back into poverty traps, based on a macro (national)-level focus on livelihoods protection and famine prevention using existing government relief channels. In contrast, HARITA’s farmer-oriented, livelihoods building design has elements of both the safety net and “cargo net” model. The HARITA model aims not only to help prevent vulnerable farmers from falling further into poverty traps during times of drought, but also provides tools so that farmers can lift themselves out of poverty (Osgood, 2009). A poverty trap occurs when farmers pursue low-risk, low-return activities and forego critical consumption (e.g. sending their children to school) to avoid liquidating productive assets (e.g. draught animals) during times of environmental stress or shocks when family or communal safety nets are weakened (Barnett et al., 2007: 9). Frequent shocks lead to both chronic and transient food insecurity (Hess et al., 2006: 4).

The WFP/WB safety net addresses worsened poverty traps by distributing contingency funds supplied by reinsurers and/or donors if widespread drought is registered by 26 meteorological stations across the country. When the indices are triggered, payouts are distributed through government relief channels established by Ethiopia’s national Production Safety Net Programme (PSNP). PSNP is a national program where food or cash transfers are delivered in exchange for a specified number of labor days on projects benefiting a local community. The program started in 2005 and reaches close to 8 million Ethiopians, providing predictable relief transfers for predictable needs of chronically vulnerable individuals. The WFP/WB index insurance safety net provides support to this otherwise predictable system when unpredictable drought shocks result in additional needs for transiently food insecure participants. During the WFP/WB’s first pilot phase in 2006 with Axa RE, no payouts were triggered and the experience was considered a successful proof of concept for drought index-based humanitarian insurance in Ethiopia (Hess et al., 2006: 4-8).

Although the WFP/WB model provides an important drought risk transfer option for the Ethiopian government, because it is not specific to local areas or individual households, farmers cannot base management decisions on anticipated coverage. In contrast, the HARITA model develops locally specific indices and engages farmers at the micro level and insurers, and potentially banks and microfinance institutions (MFIs), at the meso level. For farmers, the model provides PSNP participants the option of working extra days in exchange for a microinsurance contract that distributes payouts through the PSNP. Non-PSNP participants have the option to purchase insurance in cash. The HARITA approach reaches both PSNP and non-PSNP farmers, providing a hybrid safety and cargo net for chronic and transient food insecurity. Farmer-level contracts help provide farmers with an additional risk management tool for individual decision making.

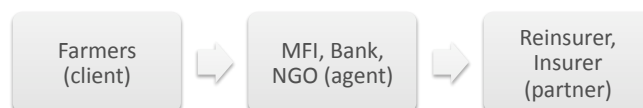


Figure 3: Conceptualized agent-partner model adapted from (Manuamorn, 2007: 24)

Administration of in-kind premium payments involves domestic insurers as risk aggregators. In the future, the HARITA model will potentially incorporate small loans offered by banks or MFIs that insured farmers might not be offered otherwise (Victor, 2009). Livelihoods protection through weather risk transfer, and responsible risk taking and livelihoods building through insurance bundled loans are therefore possible with the HARITA approach. Moreover, the WFP/World Bank model's primary function is to reduce the impacts of bad weather years while the HARITA model proposes to do this at local scales and also help make the good years even better (Osgood, 2009).

3.2 Future model development and lessons from India

Over the last five years an analogous trajectory to that of HARITA in Ethiopia has evolved in India's weather index microinsurance industry as micro-level commercial products, outscaled across the country, aim to better meet individual farmers' needs. The design featured in India's private sector is known as an "agent-partner" model whereby an agent with strong community links markets and delivers insurance to client farmers, and a partner designs products and provides capital input (Diaz Nieto et al., 2006: 12) (See Figure 3).

In the case of India, the company ICICI Lombard is a notable leader in the private index microinsurance business, upscaling over 50% of covered risks to international reinsurers and selling nearly 1 million contracts as of March 2008 (Argarwal, 2008, Skees and Collier, 2008: 38). In partnership with the MFI BASIX, as well as other community-level agents, ICICI offers a range of weather index microinsurance products. These include multi-peril and multi-phase (crop growing phases) products based on temperature, rainfall and relative humidity indices for select crops (Argarwal, 2008). In order to outscale coverage to rural areas where long-term weather data is limited, ICICI has piloted indices that use satellite-based imagery to measure vegetation 'greenness' using a Normalized Difference Vegetation Index (NDVI) and moisture data. These data are combined with soil and meteorological (rainfall and temperature) station data to assess crop health. Through this hybrid satellite-station-derived index, loss estimates are more robust and triggered payouts made within 30 days, compared to the yearlong claims process under the current government crop insurance program (Argarwal, 2008, ICICI interview with Rediff News, 2008).

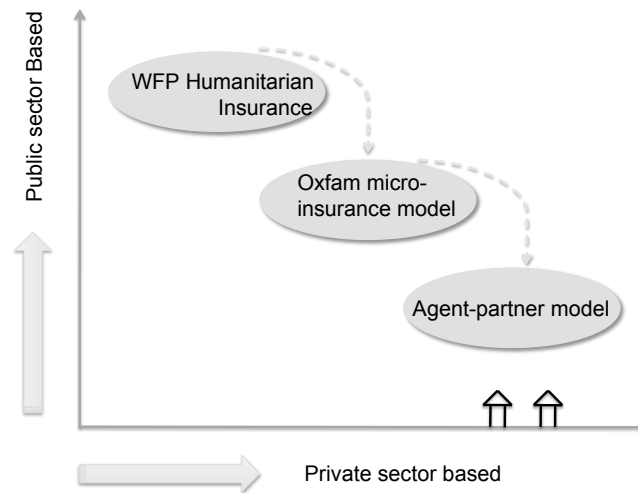


Figure 4: Conceptual landscape of “safety net” (WFP/WB) and progression towards more privatized “cargo net” weather index microinsurance models in developing countries.

Closely resembling HARITA’s proposed model for an Ethiopian program, ICICI’s innovative approaches are illustrative of ways in which financial risk transfer services can be offered that transcend traditional aid-based humanitarian relief systems in developing countries. The relevance of such solutions is underscored by growing evidence that “crisis-management” disaster risk response paradigms, exemplified by large-scale, ex-post food-aid transfers, may cause more long-term harm than short-term good. Concerns are supported by disincentives for local production and public and private investment from artificially low price signals observed after large aid influxes (Del Ninno et al., 2007: 427). Moreover, public-private models for index agro-insurance, ranging from the WFP/WB macro-level “safety net” approach to the partial and full privatization of HARITA’s and ICICI’s meso/micro-level “cargo net” designs, represent constructive alternatives to traditional interventions (See Figure 4).

4 A STYLIZED AGENT-PARTNER MODEL FOR ETHIOPIA

4.1 *Criteria for a sustainable agent-partner design*

Short and long-term objectives and potential impacts are critical to sustainability considerations for elevating index-based microinsurance pilot initiatives to larger scale programs. No matter the country context, one overarching consideration relates to long-term affordability of products for both clients and suppliers (Ibarra and Skees, 2007: 65). Given the strong livelihood building or

“cargo net” potential of agent-partner models, the following conceptual case study assesses the financial sustainability of scaling a stylized agent-partner index microinsurance model in northern Ethiopia. To this end, financial sustainability is interpreted as actors either breaking even or increasing their incomes over simulated scenario futures dictated by a range of deeply uncertain exogenous variables. Both standalone and loan-bundled index microinsurance products are considered. It should be noted that while certain elements of the ongoing HARITA pilot were drawn from ‘for model’ design, the stylized model explored in the case below is not representative of the HARITA pilot design that is actually being implemented. For detailed information on the actual HARITA pilot, please visit www.oxfamamerica.org.

4.2 Case study region

Information for a conceptual agent-partner model was based on the Adi Ha *tabia* (sub-district) within Kola Temben woreda (district) in the Tigray regional state of Ethiopia (See Figure 5). Adi Ha and Tigray were identified based on their vulnerability to drought (the focus of ongoing work by HARITA project partners in the area), and the extensive reach of Dedit Savings and Credit Institution (DECSI), a microfinance supplier throughout the region (Teshome et al., 2008: 8, Victor, 2008). Regional vulnerability was manifest during prolonged droughts of the early 1970s, 1980s and in 2008 when minor *Belg* rains failed and the major *Kiremt* rains were late, disrupting crop cycles and worsening existing food insecurity (REST, 2008: 2). Exceptionally high commodity prices coupled with high domestic inflation rates exacerbated this insecurity, making food and inputs even more unaffordable for farmers (Hailu, 2008). Similar to the HARITA pilot work, the endemic grain *teff* was selected as an ideal index crop given its central importance to the food security and livelihoods of Adi Ha and Ethiopian farmers in general (Teshome et al., 2008: 8).

5 ADDRESSING DEEP UNCERTAINTY

5.1 Scenario-based assessment of index product design decisions

The methodologically diverse field of strategic decision-making theory provides useful analytical frameworks to assess the performance of design decisions for agent-partner index microinsurance in Tigray, Ethiopia. Within this field, concepts, methods and tools designed to confront a large degree of uncertainty based on a systematic decision framework for robust decisions (Rosenhead, 1989, among others) has emerged from literatures on scenario planning (Van der Heijen and Kees, 1996), robust design (Ulman, 2006), imprecise probabilities (Walley, 1991), and Info-Gap methods (Ben-Haim, 2006).

Applied within appropriate contexts, these methods can serve as powerful

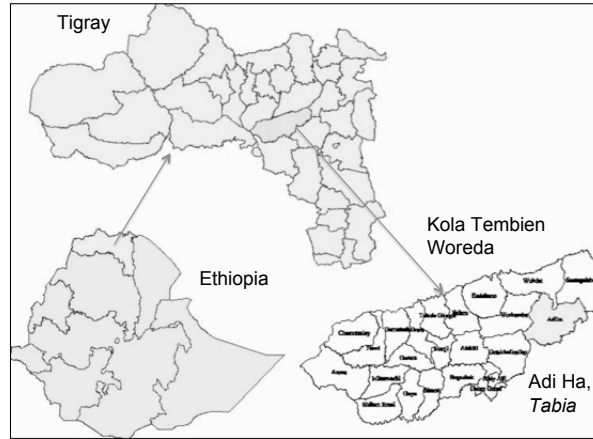


Figure 5: Adi Ha *Tabia* within Tigray Regional State, Ethiopia. Adapted from Teshome et al., 2008: 18.

support tools for decision makers. Contexts are identified based upon how well defined the probability distributions characterizing influential uncertain factors are (e.g. rainfall), as well as the values held by decision makers (Postma and Liebl, 2005: 161-165, Lempert et al., 2006: 515). Under conditions characterized by uncertain parameters with well-defined probability distributions, traditional optimization approaches that maximize expected utility are appropriate. Conversely, under conditions of poorly defined or unknown probabilities for parameters with deeply uncertain values, strategies robust across many uncertain scenario futures can be appropriate (Groves and Lempert, 2007: 73).

While the usefulness of scenario-based methodologies might be criticized given no likelihoods are associated with scenario outcomes, they can nevertheless provide a valuable conceptual framework to guide decision-makers in conditions of deep uncertainty. Significant sources of uncertainty surrounding weather index microinsurance, including long-term levels of demand and poorly understood rainfall regimes, lend theoretical appeal to non-probabilistic methods for sustainability assessments. This study used a quantitative scenario-based approach called Robust Decision Making (RDM - detailed below) to assess the financial demand and supply-side sustainability of a conceptual agent-partner pilot program scaled throughout Tigray.

5.2 Robust Decision Making (RDM)

Robust Decision Making (RDM) is an analytic, scenario-based approach for strategic decision-making. In contrast to standard decision theory, RDM seeks to identify strategies that are robust, rather than optimal, over many

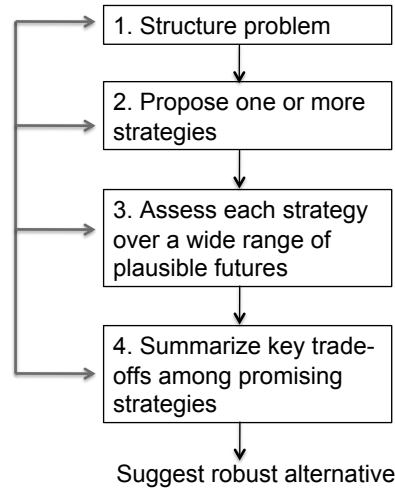


Figure 6: RDM process (from Groves, D. G., Lempert, R., Knopman, D., and Berry, S. (2008). “Preparing for an Uncertain Future Climate in the Inland Empire: Identifying Robust Water-Management Strategies.” DB-550-NSF, RAND Corporation, Santa Monica, CA.)

future states of the world (Lempert, Popper, and Bankes, 2003; Groves and Lempert, 2007: 77). RDM uses quantitative models, or scenario generators, to evaluate how different strategies perform under large ensembles of scenarios reflecting different plausible future conditions (often hundreds to thousands of cases). RDM seek robust strategies through a vulnerability-and-response-option analysis.

An RDM analysis begins, similarly to a standard probabilistic analysis, by structuring the problem. But instead of then characterizing the uncertainties as a prelude to ranking the decision making strategies, an RDM analysis first proposes alternative strategies and then characterizes the uncertainties according to their effect on the choice among these options (Figure 6). To accomplish this, analysis begins with a set of alternative strategies and then assesses each over a wide range of plausible futures. Each future is defined by a particular combination of values for the uncertain input parameters to the model. Statistical procedures then determine those combinations of uncertainty parameters most important to the choice among the strategies. Once the RDM analysis has isolated the combinations of uncertainties most important to comparing the policy options, it identifies the key trade-offs among the most promising strategies. At this stage, RDM may employ probabilistic information to illuminate such trade-offs. For instance, the analysis might suggest that decision-makers choose one strategy over another as long as future precipitation is sufficiently likely to remain above some threshold, helping the decision-makers decide whether this is a risk they are willing to take.

Ideally, an RDM analysis helps identify a robust strategy, one that performs reasonably well compared with the alternatives over a very wide range of uncertainties. If none of the strategies initially considered emerges as robust, the information about key uncertainties and trade-offs can be used to suggest new and potentially more robust strategies. In many cases, this type of analysis can be very helpful, allowing decision-makers to identify and agree on a robust strategy, even if the uncertainties are very large. The success of an RDM analysis often depends on the ability to find strategies that have this robustness property. If no such strategies exist,³ the results of an RDM analysis may not prove particularly useful or satisfying to decision-makers. However, when no robust strategy exists, the method may provide some guidance to decision-makers on where they need to invest in research to reduce key uncertainties or find ways to expand their options.

6 ASSESSING AGENT-PARTNER MODEL SUSTAINABILITY

6.1 *Stakeholder engagement*

As a first step in the RDM method, viewpoints and values held by stakeholders relevant to a decision making challenge were elicited to capture the range of future scenarios for quantitative model development and crafting robust pilot designs. This information can be conveniently summarized using an “XLRM” framework, representing the exogenous factors (X), policy levers (L), performance metrics (M), and relationships (R) that comprise a modeling system (Lempert et al., 2003: 64-67).

Stakeholders relevant to potential agent-partner index microinsurance design decisions were engaged using a variety of qualitative methods. Four stakeholder groups were identified and included farmers, MFIs, insurers and reinsurers. Group representatives were either directly involved in ongoing HARITA project work in the area or represented relevant interests to fields of microinsurance and microfinance (See Table 2).

Primary qualitative methods included semi-structured telephone or personal interviews with individuals as well as focus group discussions (FGDs) with farmers during fieldwork conducted in the Tigray region from July 6-17, 2008. For the three FGDs conducted, between 5 and 10 farmers were chosen using stratified purposeful sampling based on income, age, and gender to ensure a diversity of viewpoints were represented (Baxter and Eyles, 1996: 505). Sessions were assisted by Tigrinya translators made available by the Relief Society of Tigray (REST) and involved two groups in Lemlem, and one group in Adi Ha.

³Lempert and Collins (2007) described some conditions under which robust strategies do not exist.

Table 2: Interview details of four stakeholder groups

Stakeholder group	Organization	Date	Method
Farmers	OA pilot	6-11 July, 2008	Focus group discussion
Microfinance institutions (MFIs)	Dedebit Credit and Savings Institution (DECSI)	12 July, 2008	Personal interview
	Poverty Eradication & Community Empowerment (PEACE) MFI	15 July, 2008	Personal interview
	Addis Credit and Saving Institution	16 July, 2008	Personal interview
	Wisdom MFI	17 July, 2008	Personal interview
Insurers	Nyala Insurance	10 July, 2008	Personal interview
	ICICI Lombard	3 July, 2008	Phone interview
Reinsurers	PartnerRE	30 June, 2008	Phone interview
	Munich RE Foundation	3 July, 2008	Phone interview
	Swiss RE	30 July, 2008	Phone interview

6.2 Conceptual model development

Based on qualitative and quantitative research, a Microsoft Excel-based scenario generator was developed to represent the elements of the analysis as summarized by the XLRM framework. Respective categories of uncertainty parameters (Xs) and decision levers (Ls) were comprised of multiple input variables assigned specific ranges based on gathered information.

6.3 Model scenario generation and strategy selection

Scenario “landscape creation” and analysis was conducted using the model. Landscapes represent ensembles of X values simulating uncertain future scenarios over which ensembles of decision levers (Ls) or strategies are tested. 1000 different scenarios were generated by a method known as a Latin Hypercube Sampling which, for each simulation, uses algorithms to combine a single value for each X and L sampled from assigned ranges to generate equally probable future scenarios (Lempert et al., 2003: 118).

Once generated, software conducts sensitivity analyses to help modelers identify strategies that appear successful across different future landscapes. Strategy success is defined by specified criteria of “good”, “mediocre” and “bad” outcomes based on M performance measures. Therefore, a computer helps direct modeler attention to combinations of X and L values that produce agreeable M outcomes. Once identified, additional stress testing methods are carried out on candidate robust strategies by considering alternative values of

key Xs and Ls, while keeping others at specified nominal values. Based on results of stakeholder engagement, tailored strategies (specific combinations of L values) of interest were also tested across 1000 simulations created from the X input ranges. Computer-guided and user-tailored strategies were then compared based on how positive or negative their impacts were on measurements of strategy success. Ultimately, strategies that generated the best M outcomes across the different future landscapes were judged to be robust (Lempert et al., 2003: 76-85).

7 CONCEPTUAL MODEL DEVELOPMENT

7.1 *Model structure*

Structurally based on the XLRM framework, and concepts of demand and supply-side sustainability, a scenario-based model was created using interview results and relevant literature. Informed by stakeholder feedback and interest, scenarios capture outcomes of both standalone and loan-bundled drought index-based microinsurance schemes.

From the perspective of supply-side sustainability, the MFI DECSI was identified as the most appropriate delivery channel for the model given its extensive presence in the Tigray region and its interest in microinsurance products. Model scenarios were structured around 15 consecutive contract years, since most microfinance products are bought and/or renewed on an annual basis.

7.2 *Exogenous uncertainty parameters (X)*

Drawn from interviews conducted with farmers, MFIs, insurers and reinsurers, 14 X parameters were incorporated as model variables. These variables fall within three primary categories: demand, environment, and market-related exogenous uncertainties. Each of the 14 Xs were identified and assigned ranges by stakeholders given their importance for calculating index insurance payouts and premiums, and influence on farmers' risk preferences, which drive demand. Parameters capturing the latter dynamic include base year demand for standalone and loan-bundled schemes, as well as an annual demand change ratio that operates over the 15-year model horizon.

In terms of environment-related uncertainty, the first key X factor represents cumulative rainfall for the 20-day-long crop phase (2 dekads) covered by each annual contract. This parameter marks a key grain filling stage for *teff* plants during which sufficient rainfall is critical for successful production outcomes. This period was identified by HARITA technical advisors at the International Research Institute (IRI) at Columbia University and its importance confirmed with Adi Ha farmers during fieldwork. The second key environment-related X

factor is the number of droughts that might occur within the 15-year period. Historical burn analyses conducted by IRI in 2008 using the 7 years of available Adi Ha rain gauge data, and some surrounding stations, estimate 1 drought is probable every 7 years (Osgood, 2008). Given the uncertainty inherent in deriving reliable probabilities from limited data, particularly in light of future climate change, it was important to model the full range of drought scenarios possible over 15 years. Equally important was capturing non-drought-related risks facing farmers using a “basis risk” X parameter representing negative production impacts caused by risks such as pests, pathogens, hail, poor soil quality, etc.

Lastly, market-related X factors include respective base year (year 1) prices and inflation rates for fertilizer, *teff* seeds and *teff* harvest prices. According to farmers, inflation rates of *teff* seeds and harvest prices track each other and were therefore assigned identical ranges.

7.3 Policy lever parameters (L)

To model a range of policy or decision lever (L) parameters across future scenarios, application of the XLRM framework resulted in the selection of 16 Ls following fieldwork. These Ls can be grouped under four major categories: pilot scheme design and corresponding contract, supplier costs, and farmer impact considerations. In terms of sustainability impacts, the choice of either a standalone or loan-bundled product has substantial implications for providers and customers, as previous pilot experiences show (Churchill et al., 2003: 1-222).

To capture contract design and pricing parameters, the model incorporated L factors foundational to both scheme design types including ranges for hypothetical insurance premium rates and maximum payout amounts set by suppliers, similar to Osgood et al., 2007. Additional Ls for loan-bundled schemes include the interest rate on the loan, ratio of contracts per microfinance institution (MFI), number of MFIs, and number of farmers per contract.⁴ These Ls are based on the capacity of DECSI branch facilities and, when maximized, represent natural supply-side limits on scheme outscaling in the Tigray region in which DECSI reports nearly full market penetration.

Depending on the extent of outscaling, i.e. the size of the risk pool, an “upscaling” parameter captures the supplier option to pass on risk to reinsurers at the cost of a reinsurance premium ratio. Other non-optional costs incorporated in the model include marketing, staff, office overhead, index consultation, and variable costs taken as different ratios of supplier premium revenues based on estimates reported from experienced providers at ICICI Lombard. For both staff and consultation costs, higher ratios were assigned

⁴Note: Model loan interest rates were fixed at 9% in light of recent DECSI negotiations with the Ethiopian government (Asefa, 2008).

in the first 5 years of the model since in-house expertise for index contract creation and staff education investments would be necessary expenses based on interview results.

A number of stakeholders interviewed felt Ethiopia was likely to join the WTO in the next 5 to 10 years. Based on this anticipation, domestic providers of financial services expect global competitors to enter the Ethiopian market offering products at lower prices. A “global competition” L factor reflects this by reducing supplier profit margins after the model’s first 5 years.

7.4 *Relationships between uncertainties and policy levers (R)*

In order to produce a model that is dynamic over a multi-year period, quantitative portions of the RDM process require mathematical functions that capture key relationships between uncertainty factors and policy levers. Three key functions were used for this purpose. The first relationship involves calculation of payments by farmers for financial services including microinsurance premiums and, in loan-bundled schemes, loan payments. Hypothetical premiums were calculated as a percentage of the maximum liabilities covered for a policy while loans were calculated according to the cost of inputs (fertilizer, seeds) per hectare, similar to methods used by Nyala Insurance in their area-based insurance pilot.

With regard to insurance payment calculations, although actuarial methods are typically based on the quantified amount of risk covered, the probability of payouts, and clients’ willingness to pay, these values were either unknowable or deeply uncertain at the time of research. Therefore, a range between zero and 100% was given to the premium percentage and 1,000 to 7,000 Ethiopian Birr for the maximum payout amount based on the size range of DECSI microcredit loans.

The second key relationship of indemnity payouts was calculated using a payment index based on rainfall deficit in equations 1 and 2 below.

$$[1] Payout = (1 - RainfallSum - Exit) / (Trigger - Exit) * MaxPayout$$

$$[2] Payout = (1 - RainfallSum - 0/85mm) * MaxPayout$$

Designed by Columbia’s IRI, this equation creates a linear payment index (See Figure 7) which triggers payouts if the cumulative rainfall in the last 2 decades of August (11th–31st) and first decade of September (1st–10) does not surpass the trigger value of 85 mm (McLaurin, 2008). In the event of no rainfall, the contract exit of zero is achieved and full payment of the maximum liability covered is paid.⁵

Lastly, the third key relationship explored in the model was the calculation

⁵These details do not reflect the actual contract that was transacted in the HARITA pilot. For technical details on the contract that was implemented, please visit: <http://portal.iri.columbia.edu>

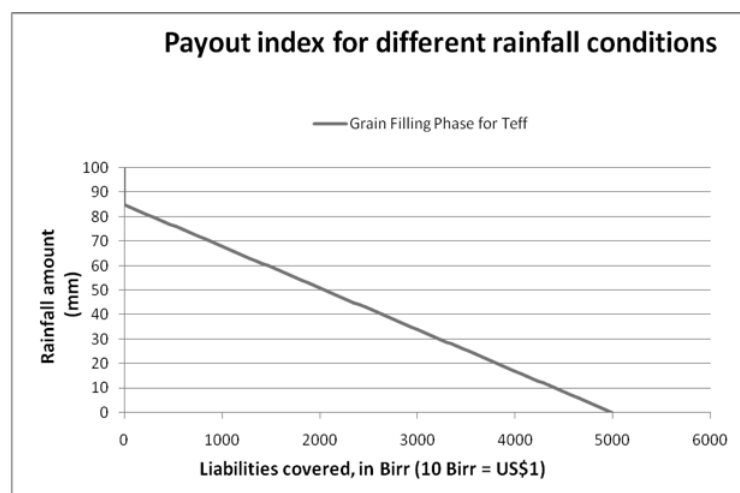


Figure 7: Insurance payout index for draft contract using 5000 Birr as an example of a maximum payout when zero rainfall (mm) occurs, adapted from McLaurin, 2008.

of farmers' gross revenues that were used to estimate welfare impacts of standalone and loan-bundled schemes. Under both scheme designs, average yields per season for farmers without inputs were calculated using production estimates from fieldwork discussions with farmer groups. For the loan-bundled scheme, a "fertilizer effect" was modeled based on quantitative production-enhancing benefits reported by farmers. Regardless of scheme type, all gross revenues were proportionally reduced when rainfall deficits below critical crop water requirements were simulated.

7.5 Measures for assessing strategy performance (*M*)

Arguably the most valuable contribution of the RDM process to hypothetical agent-partner model decision-makers is a diversity of performance standards or measures that, when satisfied, can indicate robustness of strategy outcomes across scenario futures. Five such measures were identified for the model and categorized according to supply and demand side sustainability measures over mid-term (>5 years) and long-term (15 years) periods (See Table 3). With regard to supply-side measures, the primary method of evaluation relies on the concept of loss ratios whereby a ratio of administrative costs and indemnity payouts over premium revenues is assessed. When this ratio is less than 1, schemes are considered financially solvent for suppliers (Skees et al., 1999: 2). Over the model period, if the number of years this ratio was satisfied is greater than the mid-term of five years (M1) or the ratio for the sum of total costs and revenues over the long-term period of 15 years is less than one (M4), then scheme design is considered sustainable.

Table 3: Measurement criteria of good strategy outcomes

Measure	Sustainability perspective	Relationship	Good outcome
M1	Mid-term supply	$(A + I)/P < 1$	> 5 years satisfied
M2	Mid-term demand	Partial profit = 0	> 5 years satisfied
M3	Mid-term demand	Partial profit = minimum yields target *harvest price	> 5 years satisfied
M4	Long-term supply	Total costs/profits over 15 yrs.	Ratio < 1 after 15 yrs
M5	Long-term demand	Avg. income/farmer over 15 yrs.	Avg. > 0 after 15 yrs

For demand-side measures, farmers' partial profits, calculated as gross revenues minus costs of scheme participation (premiums and/or loan payments), were used to measure strategy viability with increasingly ambitious standards of positive welfare impacts. Representing the basic measure of viability, when partial profits are greater than or equal to zero for more than 5 years (M2), schemes are considered "good" in the mid-term. M3 raises this standard based on a range of target yield outcomes (quintals) which providers could set as a minimum production requirement for scheme designs to be considered sustainable. Lastly, M5 represents the average income per farmer over the 15 year period and is considered "good" if it is greater than 0, i.e., scheme participation did not have negative income impacts overall.

According to these model criteria, ultimate scheme sustainability and strategy robustness is achieved when all M measures of success are satisfied over the model period.

8 RESULTS OF THE ANALYSIS

As part of an ongoing iterative process of model calibration and incorporating newly available stakeholder input, preliminary results were obtained from the analysis. Using Latin hypercube sampling techniques, stakeholder-specified ranges for uncertainties (Xs) and decision levers (Ls) were combined to generate scenario landscapes. Notably, more model development is necessary; particularly further iterations and calibration for scaling considerations.

Analysis of preliminary scenario outcomes examined foundational concerns of basis risk and index reliability highlighted by stakeholders as major sources of uncertainty impacting the sustainability of strategy outcomes at scale. Across scenarios, it was found that when the "basis risk" X factor is greater than 50%, target yield measures (M2, M3, M5) are undermined for standalone and loan-bundled index schemes as index inaccuracy and/or high non-drought-related risks obviate strategic welfare standards. Additionally, when seasonal rainfall

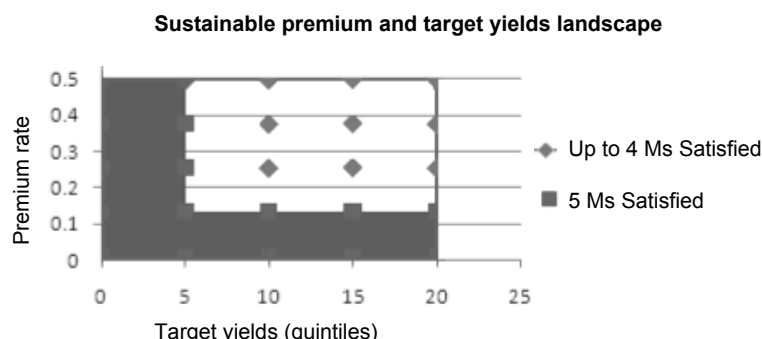


Figure 8: Premium rate and target yields (quintals) sustainability landscape

sums fall between 0 and 85 mm, triggering index payouts, both standalone and loan-bundled schemes satisfied supply-side solvency criteria (M1 and M4) for the majority of contract years (>10 years), even under multi-year drought scenarios (>1 year). In contrast, farmer welfare criteria were met for more years (>5 years) under standalone than loan-bundled schemes (M2, M3, M5) across simulated conditions.

With regard to computer-guided analyses of the 1000 initial ensemble landscapes, results revealed 5 key decision levers whose values were both highly sensitive to model uncertainties and very influential to the outcomes by which strategy success was measured (Ms). These levers include insurance premium costs, scheme type (standalone or loan-bundled), marketing or transaction costs, and target yields for farmers.

Outcomes across model scenarios revealed that potentially robust designs correspond with both premium rates above roughly 13% of liabilities covered and low target yields of 5 quintals (See Figure 8). This indicates that either of these values may be used as robust strategy criteria. This decision highlights an important sustainability tradeoff as farmers have the opportunity for greater income gains (5-20 quintals) when the 13% premium rate rather than 5 quintals is the chosen robustness criterion. Give the development benefits of higher incomes for subsistence farmers, selecting this premium rate criterion appears to be the most robust measure for ensuring sustainable product outcomes. Additionally, income benefits greater than 8 quintals, the average ideal yields without improved inputs reported by farmers, are only possible under loan-bundled strategies. This is because greater yields (8 and 20 quintals) can only be afforded by credit opportunities facilitating purchase of improved inputs (namely fertilizers) being incorporated into the model.

Building upon the above results, four modeler-guided experiments using the three most sensitive decision levers were tested within ranges of acceptable values identified by stakeholders as part of the iterative RDM process (See Table 4).

Table 4: Four experimental strategies tested. SA = standalone scheme, BUN = loan-bundled scheme.

Scheme type	Yield target (qunitals)	Premiums	Marketing cost ratio
SA/ BUN 1	Low (1)	Nominal (15%)	High (5%)
SA/ BUN 2	Nominal (8)	Low (1%)	High (5%)
SA/ BUN 3	Low (1)	Low (1%)	Low (1%)
SA/ BUN 4	Nominal (8)	Low (1%)	Low (1%)

Experimental results suggest that while basic criteria of successful strategy outcomes are possible, since both M1 and M2 are satisfied in standalone and loan-bundled schemes, higher performance criteria of M3, M4, and M5 prove more difficult to achieve. Using good (smiley face), mediocre (open circle) and bad (barred circle) symbols, three of the four experiments are shown to perform well by M1 and M2 measures (See Figure 9 and 10). Results indicate that, not surprisingly, low premium revenues combined with high marketing costs are not financially sustainable for suppliers. Likewise, good strategy outcomes across M2 confirm that farmer incomes will at least not decrease for roughly 7 years in loan-bundled schemes and hardly ever decrease over 15 years in standalone schemes.

However, as indicated by Figures 11 and 13, higher standards for income outcomes (M3, M5) are more difficult to meet. M5, measuring average income per farmer over the 15 year period, further reveals that standalone schemes versus loan-bundled appear to have more sustainable farmer income impacts overall (See Figure 13). Significantly, the opposite holds true for suppliers as M4 outcomes clearly indicate they benefit more from loan-bundled versus standalone schemes over the long-term (See Figure 12).

Overall experimental design results suggest that two of the three key decision lever (L) variables tested, including premiums and marketing costs, performed well between values of 1 and 15% and 1 and 5%, respectively. This finding compliments initial analysis, suggesting that premium rates of around 13% are arguably robust sustainability criteria, corresponding to target yields of greater than 5 quintals. However, further analysis iterations and calibration are necessary to confirm and refine these preliminary results.

9 DISCUSSION OF QUANTITATIVE AND QUALITATIVE RESULTS

9.1 Sustainable product design criteria

In theory, sustainable drought index-based microinsurance ideally provides an affordable and low risk management tool to both suppliers and clients, regardless of delivery scale. Through stakeholder engagement and the

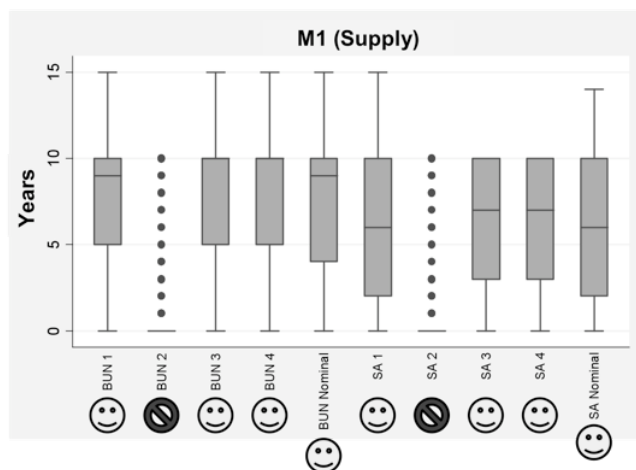


Figure 9: M1 performance of four strategy experiments for standalone (SA) and loan-bundled (LB) schemes. Nominal strategies are shown for reference purposes.

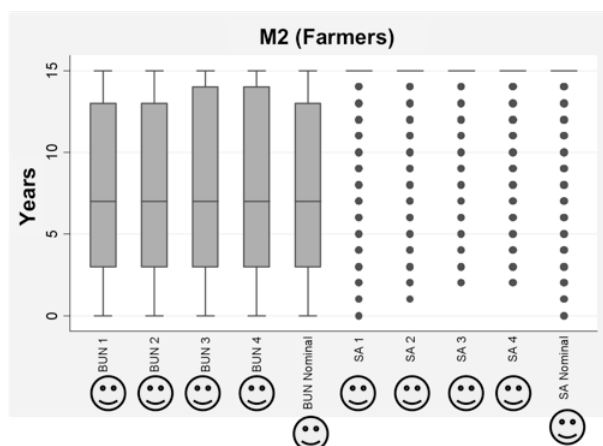


Figure 10: M2 performance of four strategy experiments for standalone (SA) and loan-bundled (LB) schemes. Nominal strategies are shown for reference purposes.

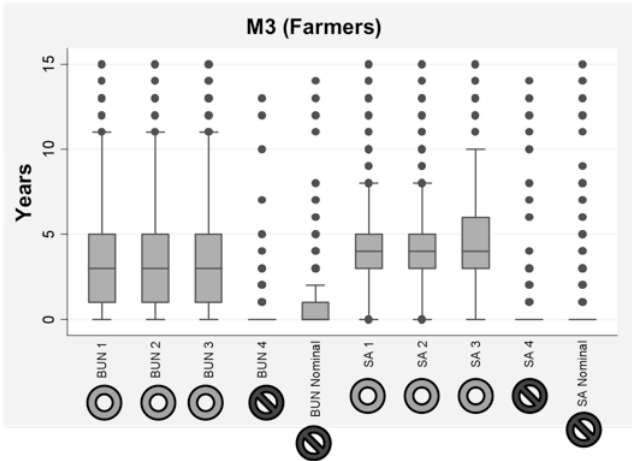


Figure 11: M3 performance of four strategy experiments for standalone (SA) and loan-bundled (LB) schemes. Nominal strategies are shown for reference purposes.

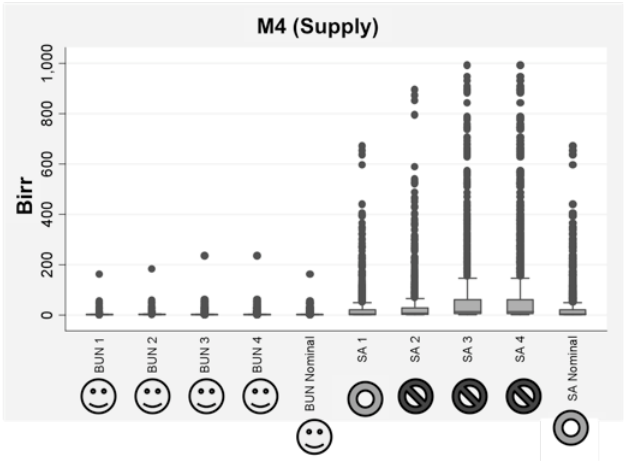


Figure 12: M4 performance of four strategy experiments for standalone (SA) and loan-bundled (LB) schemes. Nominal strategies are shown for reference purposes.

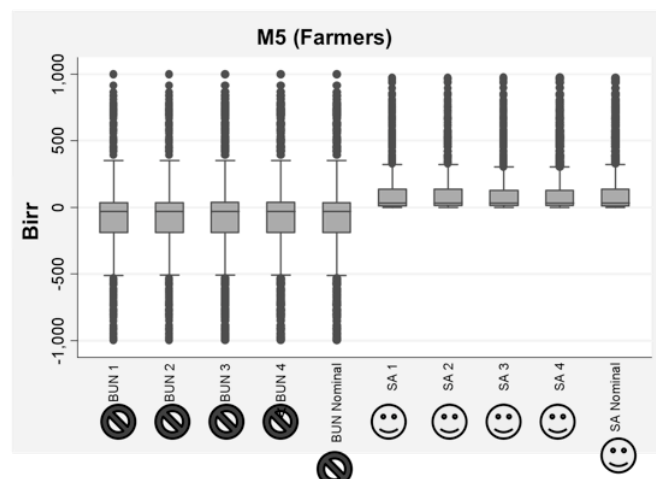


Figure 13: M5 performance of four strategy experiments for standalone (SA) and loan-bundled (LB) schemes. Nominal strategies are shown for reference purposes.

RDM analysis, these considerations were used to quantitatively explore basic criteria for sustainable microinsurance products. Results identify index reliability and correspondingly low basis risk levels as critical for sustaining high quality products that meet farmers' drought risk management needs without overwhelming supply or demand-side capacity. Significantly, however, qualitative results reveal that while potential suppliers agree on the theoretical basis of product sustainability, in practice these criteria are not equally satisfied. Informed by model findings for potentially robust strategies, these results have important implications for sustainable and scalable agent-partner microinsurance.

From a supply-side perspective, although the model's results reflected the importance of index schemes' financial solvency, criteria for assessing long-term financial sustainability differed among potential providers. In the case of international reinsurance companies and Ethiopian insurers such as Nyala, sophisticated actuarial methods are used to assess risks taken on with insurance products to ensure portfolio solvency. In contrast, domestic MFIs lack this underwriting capacity, evidenced by the fact that many MFIs sell credit-life microinsurance products without accounting for solvency measures in product pricing. Rather, low premium rates of 1 to 2% are used, regardless of risk considerations or loan size. Based on these qualitative findings, it is clear that reinsurance and domestic insurance companies, rather than MFIs, presently have the capacity to help develop actuarially sound insurance products.

Regarding demand-side sustainability criteria, while stakeholders expressed an interest in avoiding negative impacts of products on farmer livelihoods, among reinsurers and insurers no formal assessments were conducted, or planned,

to explore actual impacts on livelihoods. Despite the extreme seasonality of income insecurity manifest in the reluctance of farmers to take out loans for fear of default, only informal impact assessments are conducted. Even experienced providers (e.g. ICICI and Nyala) do not investigate policy non-renewal rates. In contrast, the Ethiopian MFIs interviewed in this study actively researched demand-side impacts of loan products through client feedback sessions and exit surveys.

In light of the potential for poorly designed index products to undermine livelihoods, the RDM analysis included these considerations by establishing farmer impact criteria using production outcomes as proxy measures for farmer income. The model demonstrated that high basis risk and unaffordable pricing, with the latter particularly evident in loan-bundled schemes, created hypothetical negative impacts on farmer welfare. Ultimately, qualitative results reveal that, in practice, potential suppliers of drought index-based microinsurance do not place equal emphasis on sustainable supply *and* demand-side impacts of insurance products. Results also suggest that reinsurers and Ethiopian insurers are best suited as risk takers and domestic MFI's as risk aggregators given their respective competencies in ensuring sustainable supply and demand-side impacts.

9.2 Key limitations for informing agent-partner model design

While the model provides a conceptual guide to underlying financial considerations of scheme sustainability, it must be recognized as an incomplete iterative process that requires more information based on stakeholder input and calibration. The model is limited in a number of important respects relating to provider and farmer impacts, among other sustainability and scaling considerations. One unrepresented supplier impact is the concept of portfolio pricing used by providers based on the risk exposure of different geographical regions. In the model, although schemes are fully outscaled, i.e. supply capacity is maximized across the Tigray region, covered farmer populations are assumed to have identical or 100% covariant risk exposure. In reality, drought risk exposure varies considerably across areas. This variability can in turn reduce risk exposures of insurers and reinsurers as microinsurance payouts are more sporadic and staggered, depending on seasonality and local conditions (Osgood et al., 2007: 14).⁶

From the perspective of farmers, limitations relate to both qualitative and quantitative variables as the model does not capture the extent of farmer understanding of schemes or farmer risk aversion to financial activities. The former challenge is compounded by considerations of illiteracy and innumeracy

⁶For work on assessing benefits of spatial pooling of microinsurance schemes to providers using Monte Carlo analysis, see Meze-Hausken, E., et al. (2008): Reducing climate risk for micro-insurance in Africa: a case study of Ethiopia, Journal of Environmental Change, (In Press).

that pose significant barriers to launching, let alone outscaling, insurance products (Teshome et al., 2008: 20). In terms of farmer risk aversion, it was not possible to model the impact of these variables. Additionally, it was also too early to be certain about the amounts of risk an insurer such as Nyala or a reinsurer would be willing to take on, or loan amount or interest rates DECSI MFI will ultimately charge if loan-bundled products are offered.

Although the RDM model was designed to account for these uncertainties, ultimately model sustainability criteria and pricing outcomes can only be proven truly robust when more information from stakeholders is available. Nevertheless, the promise of this model for livelihoods protection in Ethiopia and building justifies further design development.

9.3 Practical implications of results within the Ethiopian context

Despite spreadsheet model limitations, results highlight practical implications concerning the overall interest of stakeholders in drought index microinsurance, and how appropriate scaling these products is within the Ethiopian context.

The first implication derives from many stakeholders' tenuous interest in exploring index microinsurance as a financial risk management tool over other forms of microinsurance products. For interviewed MFIs and farmers, although weather-related risks were named as the greatest source of production risk and uncertainty, death of draught animals or farmer death is what *both* supply and demand-side stakeholders expressed interest in actively mitigating with insurance. In the case of DECSI clients, this is corroborated by results of a microfinance workshop where livestock and farmer life insurance were among the top three insurable risks DECSI and client farmers would like to explore with microinsurance products (MicroSave, 2007). This is also supported by widespread MFI experimentation with credit-life microinsurance products in response to family and group requests to address farmer death as a major cause of loan defaults.

For MFIs like DECSI, choosing to offer such products not only satisfies client demands, but is a more financially prudent investment than index products, given the resource constraints that are reportedly preventing expansion of current MFI loan services. Liquidity problems, exacerbated by the exogenous uncertainty of record economic inflation rates, make meeting current customer needs difficult, and allow for limited investment in new products or outscaling client pools. Furthermore, outside financial assistance is likely to be required to cover high marketing and transaction costs, as well as consultation and data processing investments required to build expertise in launching standalone and/or loan-bundled schemes. It is precisely these practical capacity constraints, in addition to concerns over trustworthiness of business partners serving as risk aggregators, which inspire caution among reinsurers to whom risk pools may be scaled up (Ibarra, 2008).

From a demand perspective, Ethiopian farmers' near or long-term interest in either standalone or loan-bundled products is highly uncertain outside of the Tigray region where the HARITA partners have completed feasibility and demand surveys. This in turn makes the sustainability of index products uncertain if scaled beyond the region. Two reasons undergird demand-side uncertainty, which HARITA is working to address in the study region. Firstly, the extent of farmer understanding of products is hindered by illiteracy and innumeracy, especially among women.⁷ Second, index reliability is extremely uncertain given that only seven years of historical rainfall data for Adi Ha were available for risk assessment. However, similar to ICICI Lombard pilot efforts, promising developments in the use of satellite data in combination with ground-level data were successfully explored to address this issue. Time and client experience will tell if products are effectively marketed, fairly and affordably priced, and not undermined by unreasonable levels of basis risk to maintain farmers' interest. The willingness of farmers to pay is also a significant source of future uncertainty, although HARITA's "insurance-for-work" (IFW) program has met initial success, suggesting that IFW is a potentially important breakthrough in making risk transfer products much more affordable.

In the context of fieldwork observations, it was clear that index microinsurance products needed to be complimented by other risk management activities. Moreover, many challenges to Ethiopian agriculture are rooted in non-weather-related production issues. In the case of Adi Ha, most farmers work on sandy soils and struggle with erosion, exacerbated by a lack of fallowing practices and intensified flooding which farmers attribute to extensive deforestation in the last 30 years, and possibly climate change. More immediate and perhaps effective interventions than index microinsurance may include addressing land preparation, conservation, use of irrigation, improved seed varieties or other production activities. Therefore, initial or complimentary risk reduction interventions need to be weighed along with risk transfer tools like index insurance. These efforts are key pillars in the HARITA project's actual pilot efforts.

10 OVERCOMING SUSTAINABLE SCALING CHALLENGES TO INDEX AGRO-INSURANCE

10.1 *Basic elements of success*

Based on experiences to date and study findings, significant opportunities and challenges arise with index agro-insurance at scale. To overcome challenges in the Ethiopian context, particularly for agent-partner models, basic elements of success appear to include: product affordability, flexibility and predictability

⁷Though it should be noted that in the HARITA project partners' actual experience with popular education methods, understanding in Adi Ha was not a major concern as evidenced by high uptake rates among female-headed households.

for farmers, quantifiable and reliable cost and risk estimates for suppliers, and political and financial support at international, national and sub-national levels.

10.2 Product affordability, flexibility, and predictability for farmers

Anecdotal evidence from field research, namely reluctance to take out even small loans due to default concerns, suggests that Ethiopian farmers are highly risk averse. One study in the Ethiopian highlands found that more than 50% of surveyed households were “severely” or “extremely” risk averse (Yesuf and Bluffstone, 2007: 21). Fueling this risk aversion is the country’s endemic poverty. In 1999/2000, an estimated 44% of the population was living below the poverty line, with the majority dominated by rural farmers (Demeke et al., 2003: 1). Given such severe economic stress, affordability of financial products is key to sustaining demand for products targeting farmer clients. RDM model results analyzing both standalone and loan-bundled index microinsurance revealed that affordable premium rates proved a significant challenge over the long-term. This is in large part due to extremely low production returns from micro-plot farms ranging between 0.5 to 2 hectares in Tigray and the majority of Ethiopian regions.

In light of affordability challenges, innovative distribution models with easy to understand and flexible payment options constitute a basic element of product sustainability and scalability. HARITA’s proposed alternative of using productive labor to buy a microinsurance policy through Ethiopia’s Production Safety Net Programme is one such example. Beyond affordability issues, successful models also rely on the predictability that policies will perform well when unpredictable drought events occur. These concerns underscore the importance of contracts based upon an accurate payout index. In order to benefit from index schemes, there must be significant correlation between droughts signaled by collected data and those experienced on clients’ farms. If this correlation is poor, farmers will not benefit from index insurance as a predictable weather risk transfer tool for improved management decisions, and they will not reinvest in policies.

10.3 Quantifiable and reliable cost and risk estimates for suppliers

As a business opportunity, and given motivations to engage with financially underserved and vulnerable rural populations over large scales, governments, insurers, reinsurers, and other groups are interested in weather index microinsurance. Providing attractive alternatives to costly indemnity insurance, index products offer promising models for minimizing risks of moral hazard, adverse selection, and high transaction costs with respect to poor rural clients. Further challenges posed by these products relate to data availability and associated tradeoffs between index quality and basis risk. Since the majority of developing

countries have sparse and often incomplete long-term historical rainfall or yield records, developers are experimenting with hybrid solutions combining satellite and station data for more robust indices. Such solutions may not only improve index quality at limited cost, but also help standardize scaling methods for data integration (Osgood, 2009). Scalable technical advances may also help lower capacity-related market entry barriers to potential commercial providers such as MFIs that have close community links but limited financial and human resources. Significantly, under agent-partner models, improved transparency and reliability of indices may impart more confidence in local-level agents; further incentivizing insurers and reinsurers to take on upscaled risks.

10.4 Political and financial support for scaling

The importance of government and financial support of sustainable index products at scale cannot be underestimated. Predictable political and financial operating environments are necessary for commercial providers of index products in particular. In Ethiopia, government roles in the microfinance, insurance and banking industries are important for scaling considerations.

At the sub-national level, municipal and regional government involvement in the microfinance industry impacts potential channels for microinsurance delivery based on agent-partner models. In the case of Tigray, the regional government as well as civil society owners require that the leading MFI, DECSI, fulfill the region's own credit needs before outscaling beyond Tigray. As a result, despite DECSI's being one of the largest non-banking institutions in the world, its owners restrict service expansion beyond Tigray (Assefa, 2008). Hypothetical scaling of weather index-based microinsurance throughout Ethiopia with DECSI as an agent is therefore infeasible in the near future; it is unclear that other MFIs could play this role although the PSNP might be a possible alternative.

At the national level, supporting efforts of the Federal Democratic Republic of Ethiopia (GFDRE) have involved domestic and joint international initiatives addressing poverty, food insecurity and climatic vulnerability. Notable poverty and food insecurity alleviation efforts include 1996 proclamations legalizing microcredit, and the ongoing PSNP program, among others (Gobezie, 2005: 4, EC Press Release, 2009). Climate initiatives include a Master Plan to double the density of Ethiopia's meteorological station network and implementation of its national adaptation program of action (NAPA) under the United Nations Framework Convention on Climate Change (UNFCCC) (Tadege, 2008). Through the NAPA initiative, Ethiopia selected drought index and/or crop insurance as its lead adaptation project. However, no delivery model had been identified for executing the insurance proposal (Tadege, 2008).

In the context of sub-national government involvement in finance and insurance industries, and national WFP/WB pilot experiences, the preferred short-term

approach of the GFDRE to index products appear to be based on large-scale public relief channels. The extent of private/public-private development of alternative agent-partner models is uncertain but promising in light of emerging climate change adaptation funds through the UNFCCC and private sector financing. This is supported by positive experiences in the HARITA project to broaden the reach of index products through cash/work-based premium payments; providing affordable services to potentially large client pools in Ethiopia.

11 CONCLUSIONS AND RECOMMENDATIONS

Extensive climatic and socio-economic vulnerability challenging Ethiopia's development requires large-scale solutions that are sustainable and robust against uncertain futures. In this regard, drought index-based microinsurance represents a risk management tool with much potential in Ethiopia. Agent-partner delivery models represent a promising approach to weather risk transfer and poverty reduction, particularly when complimented with risk reduction activities, namely sustainable natural resource management. Based on a conceptual agent-partner model scaled in the Tigray region of Ethiopia, a scenario-based robust decision making method explored, but does not confirm, the sustainability of this approach. Findings revealed important tradeoffs and design considerations that product developers should consider for sustainable pilot or program-level designs. However, more operational experience and design testing is needed.

Key results from quantitative robust decision-making analysis indicate that standalone versus loan-bundled index schemes are more affordable for clients given the limited financial capacity of subsistence farmers. This highlights a decision tradeoff regarding the affordability of different index insurance products with cash-based premium payments. Qualitative results indicate that while MFI and insurance stakeholders are interested in the potential benefits of drought index-based microinsurance, financial capacity is lacking among potential local suppliers to develop these products without some level of outside support. There are also opportunity costs associated with investment in index products given substantial interest among farmers and MFIs in credit-life microinsurance and other production-related risk reduction tools.

Based on quantitative and qualitative results, recommendations can be made regarding the strategic timing and delivery method of weather index insurance provision in Ethiopia. In the near-term, public channels (e.g. PSNP) will likely continue to be the focus of national government actors and their partners. Given existing political will, donor support and established delivery models, public channels facilitate immediate and large-scale solutions to development challenges posed by weather risks. In the mid- to long-term, interested domestic microfinance and insurance industries should continue to develop

service quality, client pools and sound business practices to build capacity for offering sustainable microinsurance products using agent-partner models. The HARITA project's weather index pilot work in Tigray is one such example as local public/private partners develop farmer-focused and innovative services, including work-based premium payments for PSNP and non-PSNP participants, along with risk reduction activities.

Based on model results, providers might consider offering standalone index microinsurance coupled with supply and demand-side assessment criteria to ensure index quality and basis risk do not jeopardize sustainability. Providers might also consider loan-bundled products and upscaling financial risk as reinsurance companies build confidence in on-the-ground delivery agents if sustainability criteria are met. Moreover, national investment in weather infrastructure and innovative satellite-based methods for index development may lower upfront capital requirements, strengthening suppliers' financial capacity to accelerate product outscaling and lower basis risk.

Although the future of weather index insurance is unpredictable, experience to date and study results demonstrate the value of applying basic principles of financial demand and supply-side sustainability to future scaling efforts. These represent first steps towards more holistic index insurance designs that promote constructive development at large scales through weather risk transfer and reduction.

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Practical Experiences in Improving Affordability and Delivery Channels of Weather Index Insurance for Kenyan Smallholder Farmers

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ABSTRACT: Weather index insurance has the potential to make microinsurance for smallholder farmers against adverse weather events, such as drought and excess rain, commercially viable. By using weather stations and agronomical models instead of farm inspections to monitor crops, index insurance can drastically reduce per-farmer transaction costs. Pilot projects around the world have demonstrated that this model is feasible, but to scale it up, efforts are needed in two areas. First, premiums need to be made more affordable. One way of doing this is to develop partnerships with agribusinesses willing to sponsor part of the premium, given that the insurance supports the well-being of their clients and can increase their sales. Second, new cost-effective delivery channels need to be developed that are practical and relevant for farmers. Input retailers offer a viable alternative to traditional insurance agents or microfinance institutions because they are close advisers to farmers and have a business interest in their economic well-being. Moreover, as small commercial enterprises, input retailers are interested in new sources of revenue. To ensure that retailers can cost-effectively and securely collect premiums and pay out compensation to insured farmers, mobile and information technology are key and enable scale up. In a pilot project in Kenya, these two propositions were tested and in general were supported. It is also clear that the pilot project was just a start and that more work needs to be done to develop systems that are affordable and practically accessible to farmers across Kenya.

KEYWORDS: microinsurance, weather index-based insurance, agriculture, agribusiness, mobile technology, agro inputs distribution, Kenya

1 INTRODUCTION

Weather risks define the lives of smallholder farmers. Good years are remembered for their adequate rains, and bad years are defined by droughts or other adverse weather conditions. Agricultural microinsurance can effectively

reduce the impact of severe weather as well as support increased investment in farm productivity. Insured farmers find themselves able to buy certified seeds and invest in fertilizer instead of planting relief seed and forgoing investments in soil nutrients. In the years following droughts, insured farmers are therefore able to continue farming as before the drought, while their uninsured neighbors continue to feel the impact of drought for several seasons. Agricultural microinsurance can thus have a real impact on food security. For this reason, developing affordable and relevant agricultural microinsurance is critical, and the development of new instruments in this field is being closely followed.

Weather index-based microinsurance is a new instrument for managing disaster risk and has the potential to be revolutionary. By replacing costly farm visits with weather stations measuring rainfall as the indicator of drought conditions, weather index insurance is radically different from traditional agricultural insurance. This innovative product could make agricultural microinsurance for smallholder farmers sustainable and economically attractive to insurance companies in developing countries that had previously written off the agricultural sector.

Since 1999, when Skees, Hazell, and Miranda proposed the concept of weather index insurance for farmers in developing countries, several pilot projects have been launched. To create an impact similar to that of microfinance, the foremost challenge is to reach a sustainable scale. This paper argues that meeting this challenge relates to two questions:

1. How can agricultural insurance in drought-prone or otherwise vulnerable areas be made affordable?
2. How can insurance be distributed to farmers in a way that is practical and relevant to their livelihoods?

To address these questions, this paper begins with a background of weather index insurance in section 2. Section 3 discusses practical experiences related to the challenges facing weather index insurance and how they may be overcome. Key aspects of this practical experience include (1) partnerships with agribusinesses to make insurance products more affordable; and (2) alternative delivery channels using local input retailers and mobile phone and information technology. Putting these key aspects to the test, section 4 describes the initial findings from a pilot project in Kenya where smallholder maize farmers were offered drought insurance as part of an input package commercially sponsored by a large agricultural inputs company. Local stockists distributed the insurance, and registration was conducted through mobile text messaging.

2 INDEX INSURANCE: BACKGROUND ON A NEW INSURANCE PRODUCT

2.1 *Theoretical underpinnings*

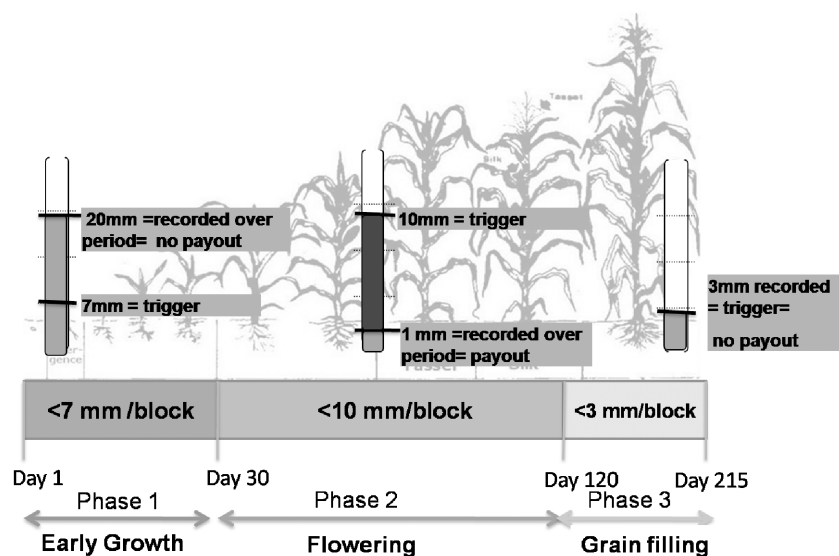
Weather index insurance is a new instrument with the potential to make insurance accessible to smallholder farmers. The innovative design feature of index insurance is its use of historical weather data and agronomic modeling instead of time-consuming farm inspections, to determine risk levels and to price premiums (Skees, Hazell, and Miranda 1999: 9). Local weather stations monitor an objectively measurable trigger, often rainfall, and these data are used to monitor the insurance contracts. This setup drastically reduces monitoring costs, thereby allowing even very small farms to be insured. Gathering the observations at the weather station also reduces the risk of moral hazard. Farmers have little incentive to neglect their farm once they have bought insurance because they receive no payout if the measured rains are sufficient. Finally, by using historic weather data and agronomic modeling, weather risks can be priced in a way that is acceptable to domestic insurers as well as to international reinsurers carrying catastrophic risks.

To understand the radical shift that weather index insurance represents, it is helpful to compare it with more traditional agricultural insurance, often referred to as multi-peril or indemnity-based crop insurance. Traditional agricultural insurance relies on on-farm monitoring of losses. The transaction cost of insuring a 1-acre farm, using farm inspections, is similar to that of insuring a 200-acre farm, but the premiums from the 1-acre farm would never cover the related transaction cost. From this transaction-cost perspective, multi-peril crop insurance for smallholder farmers is simply not economically sensible for a private insurance company (Skees, Hazell, and Miranda 1999: 11).

Providing traditional crop insurance for smallholder farmers poses other complications as well. Multi-peril crop insurance insures against a large number of risks but is often not priced on proper actuarial foundations – that is, the price is not related to the actual probability that the risk will occur. Thus, over the long term, the premiums do not necessarily cover the payouts (Skees, Hazell, and Miranda 1999: 10).

Multi-peril crop insurance also encourages moral hazard by farmers who have little incentive to take care of the farm once it is insured. In addition, adverse selection has historically been great: farmers at a relatively high risk are most motivated to subscribe to the insurance, leading to high loss ratios for the insurer (Skees, Hazell, and Miranda 1999: 9). Nevertheless, these products have been launched in many countries, often in conjunction with agricultural loans, and have generally been heavily subsidized by governments. Overall, the traditional products have resulted in extreme losses for insurance companies (Skees, Hazell, and Miranda 1999: 7).

Index insurance, in contrast, relies on historical datasets – generally 20-30



Source: Author

Figure 1: Example of a three-phase maize contract

years of weather data. The historical datasets are combined with agronomical data on crop development to price risks. The agronomical models used to simulate crop development vary and can be highly complex depending on the availability of weather data. The standard drought index, developed by Columbia University's Earth Institute and described in detail by the World Bank's Commodity Risks Management Group (Osgood et al. 2007: 13), uses the Water Requirement Satisfaction Index (WRSI) of the Food and Agriculture Organization of the United Nations (FAO) as an agronomical model to quantify rainfall deficiency. The crop model underpinning the index is location specific and adapted to local climatic circumstances. For a maize drought contract, the index generally translates into a three-phase contract, where different minimum rainfall requirements apply at each phase of crop growth. To ensure that contracts also reflect the frequency of rainfall, the phases are subdivided in blocks of 5 to 10 days for which a minimum level of rainfall is established. When measured rainfall is below the defined minimum threshold in a block, a payout is triggered. The length of each phase, its relative importance, and the minimum thresholds are determined using the WRSI FAO model based on local historical climate data, crop variety characteristics, and farmer feedback. Figure 1 shows an example of a three-phase contract for a medium-to long-maturing maize variety in central Kenya. New agronomical models are constantly being tested in the field to enhance the quality of modeling that underlies the indexes. The key challenge here is the availability of high-quality historical climate data because climatic data other than rainfall are often unavailable.

2.2 *Theoretical limitations*

Agricultural microinsurance using weather indexes is not without its own challenges. Two key conceptual limitations to the product are discussed: basis risk and coverage. Practical experiences show that these limitations can be overcome to a certain extent.

Basis risk is best illustrated by the following question posed by Kenyan farmers during index insurance training: “What happens if it doesn’t rain at my farm, but it does rain at the weather station? Do I then still get a payout?”

This situation perfectly demonstrates the concept of basis risk: it is always possible to have differences between what happens on the farm and what happens at the weather station. Such differences can result in farmers’ suffering losses and not receiving a payout, a situation undesirable both for farmers and insurers. The reverse situation is also true: if farmers take good care of their crops during poor weather, they can receive both a payout and a harvest. This outcome is desirable for the farmer but not for the insurer. One potential solution is to reduce the chance of basis risk by increasing the number of weather stations. This solution should be combined with a thorough analysis of the area’s climatic variations and potential different agroclimatic zones so that stations can take into account the differences that can occur within areas. Finally, in practice, weather index insurance contracts are designed to cover extreme climatic risks rather than small variations. Extreme weather events characteristically hit entire regions, and therefore basis risk may not be as problematic as anticipated.

Coverage is the second conceptual limitation of weather index insurance. Given the available data, only weather risks can be covered, and those risks are often limited to drought or excessive rain because complete temperature data are rarely available. As a consequence, farmers are still subject to many other risks. For example, tomato farmers in Rwanda were insured against drought and excess rain through index insurance but lost 80% of their crop to a disease outbreak. Such results can discourage farmers from taking insurance in subsequent seasons. In the case of the tomato farmers, they were trained about the limited coverage and therefore did not abandon the project.

An alternative product that can increase coverage is an area yield index, which uses district or communal crop yield statistics as the objective trigger. Area crop yield statistics enable insurance products to cover risks that affect regional yields, like widespread fires, locusts or disease outbreaks. These contracts however, depend on reliable, localized and timely historical statistics, which are difficult to come by in many developing countries (Skees, Hazell, and Miranda 1999: 16).

2.3 Implementing weather index insurance: Macro, meso and micro structures

Weather indexes can cater to different risk mitigation needs through various distribution and payout structures. Indexes have been used to cover government food security interventions at the national level. These structures are often referred to as “macro” structures. Other structures, known as “micro” structures, distribute insurance benefits to smallholder farmers directly (Hess and Syroka 2005: 3).

Macro structures have been piloted in Ethiopia through a partnership between the Ethiopian government and the World Food Programme (WFP 2006) as well as in Malawi (Swiss Re 2008). In macro structures, no individual farmers are insured. The government (or another institution) takes out one policy to cover immediate humanitarian expenses in the event of a catastrophe. This structure, thought to reduce the need for emergency funding appeals to the international donor community, makes funds readily available to governments or humanitarian organizations in times of disaster. In practice, parliaments in developing-country governments have found it difficult to justify the high cost of insurance premiums in the face of many other pressing expenses. Although international donor agencies could sponsor premiums, the perceived impact on disaster-stricken farming households is seen as less direct in macro structures because funding flows through various bureaucratic layers before reaching beneficiary farmers.

Meso structures also exist. In such structures, a company or organization takes out index insurance and uses it to hedge its own organization’s risk. Organizations whose activities rely on weather are likely to buy such insurance because the success of their business could be thwarted by adverse weather conditions. Many such meso structures are in place around the world.

When businesses or other organizations make the benefits of index insurance available to their individual clients or collect premiums on individual insurance policies, these arrangements are referred to as micro structures. The most common examples are microfinance institutions (MFIs) that offer microinsurance products alongside their other financial products. Well-documented cases of micro structures include Malawi’s local MFI Opportunity International (Hess and Syroka 2005; Osgood et al. 2007; Mapfumo 2009) and the Indian nongovernmental organization (NGO) BASIX (Hess 2003). This paper focuses on meso and micro structures.

3 PRACTICAL EXPERIENCES

3.1 *Requirements for practical implementation*

To implement effective weather index insurance in a macro, meso or micro structure, a number of elements need to be in place:

1. historical weather data and good infrastructure in the form of weather stations to price and monitor risks;
2. a high correlation between the risk covered and the measured index; and
3. a catastrophic risk that cannot be resolved effectively through other strategies.

These requirements mean that, first, reasonable weather data networks are needed in countries before pilot projects can reach any significant scale. Second, because the correlation between rain-fed agriculture and drought is much higher than the correlation between irrigated agriculture and drought, index insurance has generally covered rain-fed crops (cereals) rather than irrigated ones (horticulture crops).

Third and finally, these products tend to cover “extreme” disasters that only occur once every 10 or 15 years rather than more frequent weather risks, which may be more cost-effectively solved through improved farming practices.

Products can thrive only in locations where all three of these elements are in place. In other words, products should generally cover rain-fed cereal farmers against drought or excess rain in areas where such risks happen at 10 to 15 year intervals. In areas where other risks – such as pests and disease attacks – are more frequent, weather index insurance will find it more difficult to gain a foothold because the coverage may not be relevant to farmers’ needs.

3.2 *Practical experience from key pilot projects*

Many organizations around the world are currently initiating pilot projects. What follows is a brief discussion of two pilot projects that offer key lessons.

Indian smallholder farmers have been using weather index insurance contracts since 2003. India leads the developing world in these contracts, with coverage available for more than 25 crops (Kumbhat 2009: 5). Indian farmers can purchase insurance through various meso and micro distribution structures: as part of a loan, through product buyers, or voluntarily without a loan. Annually, more than 40,000 farmers purchase the insurance, and over the past five years farmers have bought 450,000 contracts (Kumbhat 2009: 5). Like any pilot project, weather index insurance in India has evolved over the past five years as insurers and distributors have learned more about market demand. The BASIS weather index insurance product started as a fairly simple and static crop-specific contract. Over time, BASIS has introduced more complexity in the product to reflect the dynamic nature of farming and

has allowed coverage of any crop (Rheddy 2009: 5-8). As insurers in India look toward scaling up weather index insurance, they face the challenges of constructing adequate weather data infrastructure, ensuring the affordability of premiums for target clients, keeping the costs of training and education low, and establishing product distribution networks (Kumbhat 2009: 14-20).

Africa's first weather index insurance pilot projects were conducted in Malawi to insure groundnut production in 2005 and tobacco in 2007. The initiative was developed by the World Bank's Commodity Risk Management Group, a local farmers' organization, and a group of MFIs. By 2009, 2,587 tobacco farmers were insured with this product (Mapfumo 2009: 12). In the pilot projects, the insurance was offered to individuals using banks and MFIs as distribution channels. The product was used to insure input loans taken out by farmers producing for buyers and exporters and was mandatory when farmers took out a loan with one of the banks participating in the pilot project (Osgood et al. 2007: 8). The Malawi structure uses insurance to fortify an existing value chain, with the other risks of production, such as crop management, taken care of by other partners in the value chain. This setup is the preferred environment in which to provide insurance products, but it depends on well-functioning value chains, of which there are few in Africa (Mapfumo 2009: 16). Furthermore, to the farmer paying for the insurance, it may appear that the insurance is designed to protect the bank rather than the farmer because the payout is channeled directly to the bank to repay any debts. In addition, the expansion of the Malawian product appears to be restricted by the premium price. One local bank offering the product dropped out because it found the premiums unaffordable. Furthermore, although weather data in Malawi are relatively good, a mismatch between station location and potential farmers has delayed expansion.

3.3 Barriers to scaling up: Affordability and delivery channels

Although evidence from most pilot projects is still relatively new, there are two clear obstacles to scaling up index insurance: (1) the affordability of the insurance product; and (2) the delivery channels.

3.3.1 Challenge 1: Affordability of agricultural insurance

In 2007 the Kenya FinAccess survey found that 69% of Kenyans find insurance generally unaffordable (FinAccess 2007). Although the cost of general insurance is perceived as high, the actual cost of agricultural insurance is indeed high: insurance is expensive when extreme weather events happen every 10 years.

In extremely simple terms, the price of agricultural insurance is determined by the frequency of the risk covered: if a farmer loses 100% of his crop once every 10 years, an insurer will ask for a premium of 10% at the start of each

year for 10 years to be able to cover the 100% loss in the tenth year when disaster strikes. Furthermore, this price does not include any transaction and distribution-related costs, which could quickly add another 2-5%. Although this price may be “reasonable” to pay for full coverage, the context of farming in developing countries makes it unaffordable. A farmer’s wallet is subject to many demands, particularly at the start of the season when the farmer buys inputs and hires labor to prepare the land. Unfortunately, this is exactly when the premium needs to be paid.

The difficult timing of premium payments is only one part of the story. In developing countries, where buying insurance is neither the norm nor ingrained in the culture, insurance is a hard sell. In a survey conducted by the Syngenta Foundation for Sustainable Agriculture among farmers in central Kenya in 2009, more than one-third of farmers who had never had insurance said they saw no need for it. A quarter of surveyed farmers said they found insurance too expensive, and a third responded that they found insurance difficult to understand and therefore did not buy it. The survey was conducted in an area that had been hit with two consecutive droughts, where farmers should have been interested in mitigating their risks. But farmers saw only the upfront costs of insurance and not the direct benefits, in contrast to credit, whose benefits are clearer to farmers.

Furthermore, the general opinion of insurance is that these companies are “brokers and liars” that “often find reasons not to pay claims.” This combination of a negative image of insurance and the lack of “insurance culture” makes farmers unlikely clients if they are not in the habit of buying insurance (McCord and Roth 2008: 40). There is a strong need for insurance marketing to create trust among farmers and to spread awareness of how insurance works and what benefits it can offer.

There are four possible solutions to the affordability issue. The first and simplest is to lower the premium price. This solution, however, has a direct and negative impact on the scope and value of insurance coverage. Premiums can be lowered by covering a less frequent risk – in other words, instead of covering an event occurring once in 10 years, insurance would cover only an event occurring once every 20 years. Or insurance could cover less than the entire sum lost in an event. Instead of covering 100% of losses, it would cover only 70%, leaving 30% of the risk to be carried solely by the farmer. These options increase affordability, but the question is whether the reduced coverage can be communicated to farmers. Farmers would need to understand the scope of the coverage precisely and lower their expectations accordingly. Without appropriate training and communication, farmers could easily feel cheated in years of total crop loss when they do not receive a matching payout. The goal should therefore be to structure insurance products with comprehensive enough coverage and affordable premiums and to combine them with appropriate training. Past experience shows that training needs to be simple and designed

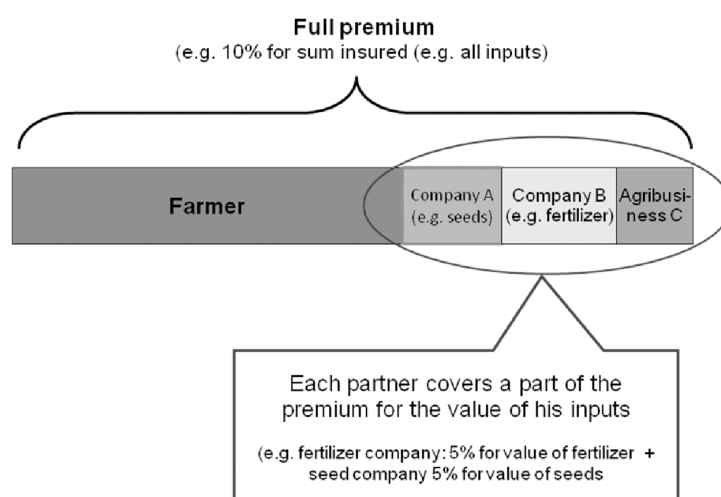
with the farmers closely in mind (McCord and Roth 2008: 41).

A second way to lower the cost of premiums is to subsidize agricultural insurance, either by government or by a donor agency. In developed countries, in particular the United States, subsidization happens on a wide scale. Without these subsidies, argue McCord and Roth (2008), agricultural insurance would not even be offered in the United States because premiums would be prohibitively high. These subsidies have proven difficult to remove, and the U.S. experience shows that over time subsidies increase rather than decrease, making them a permanent way of financing insurance (Skees 2003).

Solving the cash flow difficulties that exist at the start of the season is the third method of increasing affordability. The premium payment could be deferred through a premium financing product provided by a financial institution. In this case, the bank would pay the full premium upfront to the insurer so the farmer could spread premium payments over a longer period of time. Although this option is viable and does not lead to reduced coverage, it depends on farmers having access to financial institutions that offer advanced financial products. Such institutions are still in limited supply in many rural African communities. When a farmer lacks access to a financial institution but sells to a contract buyer, the buyer could pre-finance premiums. In this case, the farmer would repay the advanced premium at the end of the season when he or she delivers the produce to the buyer. A contract buyer could benefit from this arrangement because in case of crop failure, the buyer would still receive the insurance benefit, which may well cover any loans the farmer has taken out. Several such structures are already in place, but a dearth of contract buyers, particularly in Africa, has made it difficult to scale them up.

The fourth solution is a premium-sharing arrangement. In this case different parties, all of which have an interest in the farmer's not losing income in adverse weather events, pay part of the premium according to their vested interest, as illustrated in Figure 2. Such vested interests exist first and foremost with input companies, which suffer alongside their clients when rains and crops fail. In the years following adverse events, their clients keep their own seed instead of buying certified seed, reduce fertilizer use, and increase family labor. If insurance is offered together with inputs, farmers may be more willing and able to invest in improved farm inputs even after a bad season. In the long term, insurance could increase productivity and food security in this way.

The input suppliers regard the offer of insurance as a marketing tool. When they contribute premiums, they do so on the condition that the offer is exclusive to them and not offered by their competitors. Developing a premium-sharing consortium was the basis for Kenya's drought insurance pilot project launched in March 2009. (Section 4 will discuss how a seed and crop protection company paid the premiums in return for offering insurance with their products.)



Source: Author

Figure 2: Sample premium-sharing arrangement

3.3.2 Challenge 2: Distributing agricultural microinsurance

So far MFIs and multipurpose NGOs have been the preferred distribution partners for weather index insurance products. There may, however, be other more relevant distribution channels. Local input retailers, also referred to as *stockists* or *agro vets*, could administer insurance over the counter to farmers.

Input stockists are small businesses selling a variety of inputs: seeds, herbicides, fertilizer, and often veterinary products. These small trading businesses not only sell inputs, but often offer advice on farm management, spraying services, and credit (Chianu et al. 2008: 16). Stockists have found that offering additional services is key to sales, because customers may not understand the benefits of improved inputs and therefore may not purchase their products. The stockists serve customers located near their stores and often cultivate close relationships with their clientele. Farmers visit their shops frequently, sometimes even several times a week. Depending on the stockists' size, their customers could range from large-scale producers to smallholder farmers.

As mentioned, insurance is generally a hard sell to farmers. If insurance is linked to products, like seeds and fertilizer, that a farmer already values and buys, he or she may be more likely to buy insurance. Since the farmer will already be visiting the stockist and spending money there, convincing a farmer to spend a small extra sum on insurance there may be easier than if the farmer had to buy insurance at a separate specialized outlet.

For a stockist, distributing insurance makes sense as well: their revenue and turnover are closely related to climatic circumstances because their clients buy

products only when it rains. Without rains, a stockist's turnover simply halts. When stockists are the ones providing credit to farmers, when the rains fail, their businesses quickly run the risk of going bankrupt. Insurance products can actually secure revenue for stockists because farmers can buy inputs even in seasons following adverse weather conditions. Furthermore, insurance can encourage stockists' sales by making farmers feel more secure about investing in inputs in areas where the weather has been unpredictable. Moreover, when insurance is offered only by selected, certified, and trusted stockists, this arrangement can increase customers' loyalty to stockists and increase sales to these businesses.

It is estimated that Kenya alone has about 8,400 stockists, 1,250 of which have received business training and certification (CNFA 2009), compared with 930 bank branches (*Daily Nation* 2010). Between 2003 and 2005 the number of stockists grew by nearly 16% in western Kenya alone (Chianu et al. 2008: 167). As African agriculture develops, the number of stockists is likely to grow, creating a network of small businesses that are by their nature close to farmers and scattered inside rural communities. Section 4 will discuss the experiences of Kenyan stockists as weather index insurance distributors.

Distributing insurance through stockists requires that they have a safe and secure way to collect premiums and pay out compensation. Relying on transfers and collections of cash in rural areas is insecure and prohibitively expensive. For offering insurance on a large scale, the only option is to use technology to ensure that transactions are completed safely. Stockists can distribute insurance with inputs, but safe payment of premiums and payouts can be ensured using mobile phone technology.

Mobile phone penetration in Africa is increasing exponentially; the number of mobile phone users had reached 300 million by June 2008. This number represents a penetration rate of 30.4% (Africa and Middle East Telecom Week 2008; Bhavnani et al. 2008: 7). Africa now has more mobile subscribers than North America, which has 277 million (Bhavnani et al. 2008: 7).

High mobile phone penetration has led to the development of other services and applications that can operate on mobile phones. For insurance purposes, the development of mobile banking services is key. Such services allow for payments to be made and received through mobile phones. In Kenya, the mobile payment service M-PESA, operated by Safaricom, was launched in 2007 and now has more than 7 million customers and 10,000 agents (*Daily Nation* 2010). Though the average transaction in Kenya is less than US\$40, more than US\$8.5 million is moved each day (Greenwood 2009). A similar payment system called Wizzit already exists in South Africa. As competition among mobile phone operators increases, they look to differentiate their services. Kenya already has a second mobile payment services company called Zap, launched in 2009 by Safaricom's competitor Zain.

As mobile phones and mobile payment systems spread across Africa, this technology can form the backbone of microinsurance transactions. Section 4 provides insights into how mobile phones were used to register insurance in a Kenyan pilot project.

4 KENYA DROUGHT INSURANCE PILOT PROJECT

4.1 Pilot project design

In April 2009, nearly 200 farmers in the drought-prone area of Nanyuki, 250 kilometers north of Nairobi, insured their investment in maize inputs against the effects of drought. It was a first: index insurance had never before been used in Kenya. The pilot project was launched by the Syngenta Foundation for Sustainable Agriculture in partnership with Syngenta East Africa Ltd., UAP Insurance Company Ltd., and the Kenya Meteorological Department.

The pilot region was selected for a number of reasons. First, the availability of historical weather data – including 24 years of rainfall, temperature, wind, and solar radiation data – enabled crop models to be developed and indexes to be priced by international reinsurers. Second, a long-running climatological research program in the area allowed for the approximation of two pilot agroclimatic zones, each covered by one weather station. Third, farmers in the area were generally maize growers whose prime risk is drought, and index insurance works well for covering that crop and that risk. Fourth, farmers in the area had been trained in conservation agriculture (CA) techniques to reduce their vulnerability to climate risk.

The pilot project used existing farmer groups to spread information about the insurance product and offer training. These groups were already using CA techniques which had been communicated to them by NGOs and the Ministry of Agriculture of Kenya and they formed a relevant and cost-effective platform for communicating the insurance offer.

The adoption of CA was critical to the pilot project because farmers in semi-arid areas need to adopt improved farming techniques to be able to harvest any crop. In CA, farmers do not plow the land, but instead use minimum tillage methods (Kaumbutho and Kienzle 2007: vii). By leaving the land undisturbed, farmers conserve the water in the soil. In addition, farmers apply mulching materials and leave organic matter on the field after harvesting to improve soil fertility. CA can thus enable farmers to secure an income from farming in normal years, and in years with extreme weather, insurance can step in. In the pilot project, only farmers who were willing to adopt CA were eligible for insurance.

Insurance in the pilot project was linked to a package of 8 kilograms of Syngenta maize seed – sufficient to plant one acre – and came at no extra cost to the CA farmers. This seed was a drought-tolerant, fast-maturing hybrid variety called

Duma 43 that was sold at local stockists. Duma 43, also known as SC 403, was bred in Zambia by Seed Co and ranked first in trials held by the International Maize and Wheat Improvement Center (CIMMYT) for maize varieties in low-nitrogen-holding soils (Smalberger and du Toit 2001: 203). In the first pilot project, Syngenta East Africa Ltd. paid the full insurance premium on the condition that insurance was offered exclusively on Syngenta's seed. When a farmer bought 8 kilograms of seed, the stockist would give the farmer an individual insurance code, which the farmer would send via text message to the insurance company to activate the insurance. Only 6 of about 30 stockists in the area were selected to distribute the insurance in the pilot project, based on their reputation and certifications. The payout in the pilot project was based on two weather stations and two rainfall drought index contracts. These contracts were based on the model used by the World Bank's Commodity Risk Management Group in India and Malawi, although the agronomical models were tailored to fit the particular growing cycle of maize in Kenya following consultations with farmers and maize breeders. In very dry areas the contract had four phases rather than the usual three, to better reflect the crop's sensitivity to rainfall.

Box 1: Six steps to get insured

1. **The farmer hears about seed/drought insurance** through training on conservation agriculture provided by an NGO, the Ministry of Agriculture, a stockist, or another source.
2. **The farmer buys certified Syngenta maize seeds from a selected stockist** and gets a voucher card and a unique identification number for each 8 kilograms purchased.
3. **The farmer sends a text message** with his or her ID number to activate the insurance coverage and is registered in a database.
4. **Syngenta East Africa Ltd. and UAP Insurance Company Ltd. draw up a contract** based on the number of acres registered in the database.
5. **The weather is monitored at the station**, and the Kenya Meteorological Department transmits the data to UAP, which uses the data to calculate any payouts at the end of the season.
6. **In case of a payout, the farmer receives a text message and claims compensation at the stockist**, where his or her ID number serves as a voucher against which the farmer can get Syngenta seeds or other products for the next season.

The value of the voucher depends on the severity of the drought as defined by the insurance company based on the rainfall formula specified in the contract.

In case of a payout, farmers were informed through a text message and could pick up compensation in seeds or crop protection products from the stockists. Compensation was in kind rather than in cash because this arrangement was seen as more secure for a stockist-based transaction. Box 1 outlines the individual steps of the insurance process.

4.2 Pilot project implementation and findings

The following activities were key to successful implementation of the pilot project:

1. extensive farmer training;
2. an agribusiness willing to sponsor premiums;
3. carefully selected and trained stockists;
4. development of a mobile information technology platform to allow stockists to act as distributors;
5. simple, agronomically sound index contracts; and
6. investment in the installation of automated weather stations.

4.2.1 The role of training

Farmers were trained during field days, farm group meetings, and other community events. Brochures for farmers were developed in local languages to illustrate how index insurance works and what it would and would not cover. Training was conducted largely by NGOs and Ministry of Agriculture extension staff because they were respected and trusted members of the community. These trainers somewhat mitigated the poor reputation of insurance in the communities.

Training was pivotal for uptake of the insurance: 92% of insured farmers participated in training, and 96% reported that the training made insurance understandable. Moreover, 45% of surveyed farmers who had not participated in the insurance pilot project reported “not having heard of the offer” as the main reason for not participating. The trainers found that it was relatively easy to gauge whether a farmer understood the offer based on the questions the groups asked. As soon as farmers asked how the weather station would measure the rainfall or how they could protect themselves against diseases not covered by the product, it was clear that the audience grasped the concept. Until an actual payout was received at the end of the pilot project, however, farmers did not fully trust the product, and building that trust was as important as the training.

Using existing farmer groups for training is possible but not very cost-effective because training sessions often need to be repeated and uptake of insurance per group trained is low compared with the cost. Campaigns using mass media and

field days are therefore expected to play a more prominent role in the future. To build trust, this training through mass media and field campaigns should be conducted by trusted local partners.

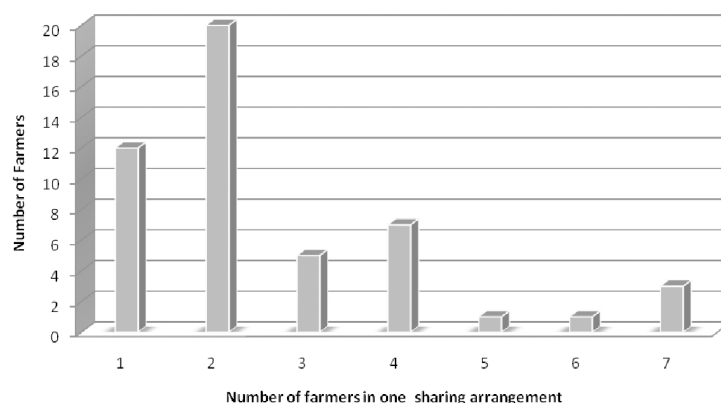
Clearly, a large investment will need to be made before insurance becomes a culturally ingrained habit. This investment cannot come only from the insurance industry; governments also have a role to play in improving financial literacy, trust, and awareness. The public and private sectors together need to develop creative solutions that make insurance a tangible and attractive option for smallholder farmers. For example, when the pilot project began, participating farmers referred to insurance as “the thing that came with the seeds”; following the payouts, they referred to it as “insurance.” Payouts made the difference in farmers’ understanding of and confidence in the concept of insurance.

It should be noted that insurance training cannot replace training in farm management practices. In the Kenya pilot project, training in conservation agriculture was still necessary. Surveys conducted by the NGO that trained farmers in CA practices showed that insurance promoted the uptake of CA: 47% of the farmers insured were first-time adopters of CA. A prerequisite, however, was the previous training of these farmers in CA techniques. There is some evidence that insurance can promote adoption of new farm management techniques, but investment in solid agricultural extension is still needed. Its costs are too high, however, to be carried solely by the insurance company.

4.2.2 Solutions developed by farmers to make insurance affordable

In the pilot project, insurance was offered to farmers at no additional cost with respect to the price of the seed, but the seed was not free or inexpensive. The insured seed was a fast-maturing hybrid seed with high drought tolerance, with the result that that even in semi-arid areas it could produce reasonable yields. These crop characteristics are highly valued in semi-arid areas, and they come at a cost. For farmers who previously used their own seed, the additional US\$20 investment was significant. Therefore, although farmers were not asked to pay any premiums, those who wanted to participate in the pilot project had to make an additional investment in seed.

The arrangement with Syngenta East Africa Ltd. had obvious advantages in terms of affordability of insurance premiums, but it had limitations too. Farmers did not take up the insurance offer if they were not interested in the specific seed or found the required 8 kilograms of seed too expensive. These factors explain to a large extent why insurance was taken up by only 200 farmers even though 1,500 farmers had been trained. A survey among farmers who had participated in the insurance training but did not purchase the seed showed that the high price of the seed package was the main reason (52%). Many farmers reported that they might have participated if they had been



Source: Syngenta Foundation Nanyuki Farmer Field Survey 2009.

Figure 3: Shared insurance cards

allowed to insure only 2 kilograms of seed.

Farmers who were most interested in gaining access to the insurance did so by sharing the 8 kilograms of seed with their neighbors or family. Thus, although 124 farmers were registered, further questioning revealed that nearly 200 farmers were actually insured. It is estimated that close to 70% of the farmers registered for the insurance were sharing the 8 kilograms of seed with one or more other farmers (Figure 3). Spontaneous organization of farmers into sharing arrangements is unusual in Kenya, particularly following the 2007 post-election violence, which led to the breakdown of many trust relationships.

As the pilot project moves forward, it is clear that the barriers to entry for buying insurance need to be as low as possible so that farmers can try out the product. The 8-kilogram seed threshold is not needed from an insurance perspective; the next pilot project will have to allow for more flexibility.

Although farmers may be reluctant to buy 8 kilograms of a variety they are not familiar with, surveys show that 45% of the farmers were first-time buyers of the insured maize variety. The pilot project and survey results show that offering insurance with 1 kg of seed may be more attractive and generate substantially higher uptake. The high percentage of first-time buyers suggests that insurance can help agribusinesses market their products, making it worth their while to sponsor premiums beyond the pilot phase.

4.2.3 Practical evidence from stockists in insurance delivery

Preliminary evidence makes clear that adding insurance to stockists' product lines can be successful and generate additional revenue for stockists. Surveys show that because only six stockists were selected, 65% of the farmers insured

went to a different stockist than usual to buy their inputs. Seventy percent of insured farmers said they preferred to get insurance from their local stockist, whereas 20% said they preferred to get it from an insurance agent, the traditionally accepted point of sale for insurance. That said, stockists are an appropriate channel for insurance only when it is linked to a product they are used to selling and can sell fast. Because they were used to selling seed, insurance became part of the usual business process, and stockists could see the added flow of revenue through increased seed sales.

Like farmers, stockists needed training on the insurance product and on the registration and payout system. The stockists were guided through the transaction processes and given follow-up training once farmers started buying seeds and registering the product. Effective training of stockists allowed them to communicate accurate messages to farmers, enabling both groups to understand how insurance worked and how it could benefit them. Follow-up training on how to use the information technology (IT) system is expensive, however, and future pilot years will show whether this cost falls over time and thus whether this system can be cost-effective.

In terms of making the payouts, the pilot project was conducted at an opportune time. In the pilot season, Kenya experienced one of its worst droughts since 1984, and the payout mechanism was therefore tested in the first pilot year. The payout process, as well as the registration process, requires technology to ensure security. Working with input dealers and a multilayered input supply chain is complex and demands technology-enabled solutions. Completing payouts in kind requires a sound input supply chain and logistics. In practice the logistics of payouts sometimes proved problematic, leading to delays that discouraged farmers and even led them to doubt that payouts would be made. Following these experiences, the partners in the project have started to consider making payouts in cash rather than in kind and directly to farmers through mobile banking technology. Surprisingly, however, once the farmers had been paid and received their inputs, most voiced their interest in receiving future compensation in seeds rather than in cash. Both options therefore deserve further investigation.

4.2.4 Practical experiences with mobile phones in insurance delivery

The pilot project demonstrated not only farmers' keenness to register through text message and mobile technology, but also the difficulties a farmer-based IT system can create. Some farmers tried more than four times to send their registration code, often failing because of spelling errors. Nonetheless, surveys showed that 70% of farmers found registering through text message to be easy. Administrative processes backed by mobile technology are clearly the best way to work within the stockist distribution channel. Clear instructions with a fast and simple application centered on the stockist rather than the farmer will be key for future products.

For the pilot project, a database system was developed to register transactions and send out messages to insured farmers. This IT-backed registration process provided for close tracking of farmer registrations, but also gave the opportunity to track the input dealers' insurance-related transactions. In the future, when agribusinesses do not cover the full premium and farmers have to make a co-payment, such back-end technologies will play an even more important role. They will have to register mobile payments and can be employed to safely distribute compensation while keeping transaction costs low. As such, using an IT and mobile platform holds great opportunity for scaling up.

4.2.5 Experiences from launching indexes in the Kenyan insurance market

With regard to insurance processes, index insurance is a radical shift from the traditional multi-peril crop insurance. Introducing the concept to an insurance company thus requires additional support. Without support, insurance companies do not fully understand such products and their associated risk and are therefore unlikely to make them part of the company's mainstream product range. As part of the pilot project, training in the agronomic models that underlie the contracts was held for the underwriting staff of the participating insurance company, UAP Insurance Company Ltd., and the Kenya Meteorological Department. The training and support helped insurers understand the risk they were covering and made them comfortable taking these risks on their books. Another element that was important in getting the Kenyan insurance companies on board was pricing the indexes in the international reinsurance market. Local insurers did not yet have the capacity to fully price the risk themselves. Getting the product pricing from an international reinsurer gave the Kenyan insurer confidence in the product.

Completing this effort, two fully automated weather stations were renovated to ensure timely collection and reporting of weather data. With these fully automated weather stations, both the insurer and the reinsurer could have confidence in the measurements being taken, as well as the assurance that the data would be available in time. Manual rain gauges are not an option in this situation because they are easily manipulated and often result in time delays.

The training sessions on index contracts and agronomic modeling were well attended and made it clear that stakeholders had the capacity to understand complex models and structures. The training however, required a high level of agronomic understanding, which most insurance companies still lack. The agriculture underwriting staff of the pilot project's local insurance partner, UAP, was clearly a frontrunner in the market. Executive staff at UAP were closely involved in the process of formulating the contracts, demonstrating their interest in understanding all the details of the contracts. This interest cannot be taken for granted, and it shows the readiness of the insurance partner to create these products for the long term. Discussions with Kenyan reinsurance players showed that although they were not yet able to price such products,

they were willing to take the first step and take some of the risk onto their books. Finally, the Kenyan regulatory authorities were also willing to allow such a product on the market. The pilot project demonstrated that expanding index insurance in Kenya will not be limited by a lack of interest from the insurance market.

5 CONCLUSION AND WAY FORWARD

Weather index insurance is still new; the pilot project in Kenya was a first step in developing new distribution channels and partnerships to improve affordability. Though strides have been made, it will be years before index insurance reaches the scale required to be commercially sustainable. The Kenya pilot project pioneered the viability of using input dealers as insurance distributors, using agribusinesses to sponsor insurance premiums, and convincing farmers to pay for insurance through linkages with inputs. Although the pilot project generally supported the initial hypotheses, it also showed that more steps must be taken to make index insurance an easy, over-the-counter, retail product.

Refining and strengthening the transaction processes based on the lessons learned in the pilot project are the first steps to reaching large numbers of farmers that can make the product economically viable. Key changes for the next phase will include (1) introduction of co-payments by farmers, further testing their willingness to pay; (2) the expansion of agribusiness partnerships, broadening the package of inputs covered; and (3) further development of the test messaging platform to allow for registration and insurance of different seed quantities and safe electronic payment of premiums and payouts. Implementing these changes will require further testing and the setting up of systems that can handle more complex transactions on a larger scale. These steps are all feasible but will require investments. Because it will take time before such investments pay off, a mixture of public and private funds will be needed.

The rising interest in agricultural microinsurance has already encouraged public-private partnerships, and over the next five years, agricultural microinsurance will likely take off in a number of countries. Near-term advances will probably take an unexpected form, using a distribution channel that may well surprise the agricultural microinsurance community. For the future, it is important for all partners to realize that this field is still in flux and that new ideas must constantly be tested and allowed to evolve.

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Shock-Coping and Household Finance in Rural Vietnam: Evidence and some Implications

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ABSTRACT: This study approaches shocks and finance from a household's point of perspective. It aims to enhance the understanding of shock profiles of households in rural Vietnam and the coping actions they take to recover in the aftermath of shocks in the current rural financial market setting.

Doing so, this study, firstly, reviews the related literature to identify the limitations to formal households finance in developing countries as well as its coexistence with informal finance. Secondly, based on an extensive household survey database we provide empirical evidence on the shock profiles of rural Vietnamese households (types of shocks, their frequency and impact on income and assets), the vivid coexistence of formal and informal household finance, the utilisation of financial and other coping actions as well as the subjective recovery of households after shocks.

We find that households are commonly affected by shocks to health, drought, flooding, livestock disease, heavy rainfall, crop pest and death of a family member. In response, households resort to coping actions such as taking credit, the use of savings and the depletion of assets, claiming on formal and informal insurance and increasing labour supply, of which taking credit is distinctively the most common. In the absence of widespread insurance markets, credit is used as an insurance substitute. However, households subjectively do not find taking credit an effective coping action for post-shock recovery (as compared to, for instance, self-insurance through savings).

With respect to the shock profiles revealed by the data, we conclude the study by discussing the potential of recent innovations in microinsurance (e.g. index-based insurances) for improving the living conditions of rural Vietnamese households.

KEYWORDS: Coping actions, household survey data, microfinance, rural Vietnam, shocks, subjective recovery

1 INTRODUCTION

The static characteristics of poverty are well known: low income and consumption levels, undernutrition, the lack of ownership of assets, low human capital, deprived access to markets and health care, gender biases, a high number of dependents, and others. These characteristics have been the subject of works by academics and practitioners trying to understand and improve the living conditions of the world's poor over the last decades. Recent developments in theoretical and empirical poverty research put more emphasis on the dynamic aspects of poverty. Adverse events such as excessive rainfall, flooding, drought (rather covariate shocks) and illness or death of a wage earner (rather idiosyncratic shocks) have the potential of leaving long-lasting and devastating effects on the welfare of the near-poor and the poor.¹ The occurrence of shocks impairs income streams, erodes the asset bases of households and forces them to take action for recovery in the aftermath of a shock.

Microcredit has been traditionally viewed as a powerful tool in the struggle against poverty. It opens investment and thus, income-generating opportunities for the near-poor and poor deprived of credit access due to the lack of collateral. Given the increasing awareness of the dynamics of poverty, microcredit expanded into microfinance and the financial services provided came to be seen not only as an opportunity for income generation and capital accumulation, but also as a tool for the poor and near-poor to manage their risky livelihoods.²

Vietnamese households are vulnerable to natural disasters. As most households in rural areas generate their income from agricultural activities, their welfare depends on the mercy of nature. Covariate shocks matter for their livelihoods, and so do idiosyncratic shocks.

A wide range of formal finance such as credit, savings and insurance is only about to become available to households in rural Vietnam. They have to compete with informal finance that has developed in the presence of incomplete financial markets and the absence of sufficient social protection.

¹See, for instance, Dercon (2004a) for a study on the long-term impact of drought and rainfall shocks on consumption, Alderman et al. (2001) for a study on the impact of health shocks on educational outcomes of children and Hoddinott and Kinsey (2001) for a study on the consequences of drought-induced child age undernutrition for adults.

²Throughout the study we take microfinance to be formed by microcredit, microsavings and microinsurance. Against this classification, it could be argued that microfinance and microinsurance should not be similarly categorized as banking and insurance are different financial sectors with different regulations and different providers. However, the focus of our study is households and the portfolios of financial services they can opt to resort to rather than the financial sectors. From a household's point of perspective it does not matter what financial service is provided by which sector. However, it does matter whether households have the option to resort to particular financial services if they want to. Similar views on microfinance are expressed elsewhere (see, for instance, De Aghion, and Morduch, 2005: 14p.).

Ex-post to a shock, the literature discusses four major coping actions for the immediate transformation of assets and endowments into income:

- Borrowing, e.g. through microfinance institutions (MFIs), moneylenders or networks of family and friends³
- Use of bank account and cash savings and/or depletion of assets such as livestock or stored crops⁴
- Claiming on market-based insurance or non-market, reciprocal insurance arrangements within families and networks (including gifts and money transfers through remittances, etc.)⁵
- Increasing labour supply, that is, an increase in the amount of work time put into income-generating activities⁶

This study aims to enhance the understanding of the nature of uncertainty that threatens the livelihoods of poor and near-poor households in rural Vietnam and the set of measures they rely on to cope with shocks in their aftermath. It is predominantly concerned with an ex-post rather than an ex-ante perspective.⁷

This study proceeds as follows: it puts household finance and its limitations into a developing-country context (section 2), describes the collected household data and study provinces in Vietnam (section 3.1), and characterises formal and informal household finance in rural Vietnam (section 3.2), identifies the types of shocks households face and their impact on income and assets (section 3.3). It provides evidence on coping actions households take and emphasises the utilisation of credit as an insurance substitute (section 3.4). It explores household-subjective post-shock recovery (section 3.5). Further, the potential of recent innovations in microinsurance for the improvement of the living conditions of rural Vietnamese households is discussed with respect to the shock profiles revealed by the data (section 4). The last section consists of a summary and conclusion (section 5).

³See, for instance, Udry (1994) for a study on the use of informal credit as an insurance substitute.

⁴See, for instance, Rosenzweig and Wolpin (1993) for a study on the selling of bullocks and Udry (1995) for a study on the selling of stored crops as coping actions.

⁵See, for instance, Rosenzweig and Stark (1989) for a study on migration, marriage and risk-sharing between households.

⁶See, for instance, Kochar (1995) for a study of labour supply in response to shocks.

⁷Research on household behavior under uncertainty divides into an ex-ante and ex-post perspective. The former analyzes household behavior before a shock might occur, that is, it describes and analyzes the actions households take to minimize risk or, put differently, the impact of a shock in the event of its occurrence. Crop or occupational choices usually reflect such a behavior (see e.g. Morduch, 1995, for a variety of examples for ex-ante income smoothing). Risk-averse peasants seem to prefer low-yield, low-risk crops to high-yield, high-risk crops. This efficiency-loss in income due to risks can result in poverty traps. In contrast, the ex-post perspective analyzes actions households take to cope with shocks after they have actually materialized.

2 HOUSEHOLD FINANCE IN DEVELOPING COUNTRIES

Finance relates the concepts of time, value and risk. Household finance explores how households use financial means to achieve their objectives. In this study we particularly focus on the use of financial means for recovery in the aftermath of shocks. Quite indisputably, availability and access to financial means in developed and developing countries differ. And so do households and their financial objectives.

If financial markets were to be complete, basic economic theory states that risk-averse households would insure completely against uncertain future states of the world at fair insurance prices. They could also save or borrow unrestrictedly for investment and consumption purposes. However, financial markets are incomplete and offer only a limited set of contracts that can be used to transfer value across time and states of the world. Consequently, households in developing countries have to arrange with two characteristics of financial markets:

Firstly, access to formal finance is limited. The reasons for the undersupply of formal finance to households in developing countries are manifold – just to give some examples: remoteness, discrimination, financial illiteracy and, particularly, transaction costs and information asymmetries (causing adverse selection and ex-ante and ex-post moral hazard). Households may resort to formal finance through financial institutions.⁸ If these organisations provide financial services such as credit, savings and insurance to poor and near-poor household, they are called microfinance institutions (MFIs). These institutions differ from traditional banks by their degrees of specialisation on non-traditional bank clients, their organisation, legal structure, range and terms of provision of financial service, branch and distribution networks and ownership structure.

And, secondly, the existence of a variety of informal finance as an alternative to limited formal finance. Households may use informal finance through arrangements that are not based on formal contracts enforced in a codified, legal system but on operation rules among the participants of such an arrangement. Examples are informal credit and insurance, credit interlinkages between business partners and rotating savings and credit associations (ROSCAs)⁹.

⁸In some countries (for instance Vietnam) MFIs introduced by foreigners are said to have semi-formal status only (e.g. because they cannot refinance their businesses through central banks). For the sake of the arguments that follow, we treat formal and semi-formal institutions alike.

⁹ROSCAs are formed by groups of individuals agreeing to borrow and save together for a period of time. These agreements emerged under different names in a variety of countries, such as Ho/Hui (Vietnam), Susus (West Africa and elsewhere), Tontines (Cambodia and elsewhere), Arisan (Indonesia), Xitique (Mozambique) etc.

2.1 *Limitations to formal finance*

2.1.1 *(Micro)credit*

Rural households use credit either for investment (e.g. seeds, fertiliser, housing) or consumption purposes (e.g. to compensate income losses after a shock). Firstly, information asymmetries and, secondly, transaction costs are well-known obstacles to the functioning of rural credit markets. In a developing country setting they might even make formal financial institutions inclined to offer a zero-supply of credit in rural credit markets.

Information asymmetries cause problems in terms of adverse selection and moral hazard. Adverse selection in credit markets exist, if financial institutions charge high interest rates because they cannot distinguish between borrowers with more or less risk of default. Consequently, less risky borrowers leave the market and only the more risky remain. Financial institutions can only opt for a further increase in interest rates or to exit the market.

The consequences of moral hazard are similar. Ex-ante moral hazard exists if financial institutions cannot observe how much work effort the borrower is putting into the generation of income for repayment of the loan. Ex-post moral hazard exists if borrowers hide the successful generation of income to the financial institution and opt for default. Raising the interest rate to compensate for moral hazard caused loan defaults; financial institutions might change the ratio of work effort to debt in such a way that borrowers do not take credit. Anticipating this, the financial institution does not offer credit at all.

Secondly, transaction costs can render small-loan transactions unprofitable for financial institutions. Even though borrowers might be judged creditworthy by formal financial institutions, they remain “unbanked” due to the proportionally high costs of small loan transactions (Johnston and Morduch, 2008).

Financial institutions have helped overcome the problems of information asymmetries through innovative lending technologies such as group lending and dynamic incentives for individual lending.

In group lending, borrowers form credit groups in which each borrower accepts responsibility for the repayment of the loans of the other group members. This principle of “joint responsibility” is based on the idea that group members have more information about each other than the financial institutions has. This implies that adverse selection will be diminished because less risky borrowers prefer to form groups with other less risky borrowers. Thus, the less risky borrowers will not leave the market, because they do not have to subsidise the more risky borrowers. As a consequence, interest rates are lower and there will be less credit rationing.

Based on dynamic incentives borrowers may also obtain individual loans. Accordingly, borrowers will not obtain loans from the same financial institution in the future if they default. Part of this approach to microcredit is progressive

lending: if borrowers manage to repay their loan they may obtain bigger loans in the future.

It can be said that depth and outreach of financial services have improved over the last years, but financial exclusion of both households and enterprises still exists to a high degree (Beck and Demirgüç-Kunt, 2008).

Today, rural credit markets in developing countries are found to be located somewhere between two types of rural credit markets described by Conning and Udry (2007). The first type is divided into a formal and an informal fragment due to asymmetric information between financial institutions and borrowers. Hence, households without collateral have hardly any access to formal credit markets. In this setting, credit supply to rural households is reduced to moneylender and networks of family and friends. The second type is characterised by external interventions into the credit market attempting to overcome the credit rationing of households without collaterals. These interventions may stem from financial institutions targeting non-traditional banks or policy-oriented government banks.

Early attempts to promote access to credit in rural areas were typically conducted by government banks targeting loans to specific sectors, types of economic activity or socio-economic groups. In a widely cited work by Adams et al. (1984), these kinds of financial institutions are heavily criticised: firstly, because government institutions cannot escape high default rates. Secondly, because influential borrower groups exercise political pressure on government institutions. Thirdly, because the common capping of interest rates reduces the attractiveness to save and therefore the amount of funds available for lending. They conclude that, rather, the informal credit sector should close the gap. However, this view is attacked by, among others, Hulme and Mosely (1996) who argue that public intervention may not be bad in such a market failure situation since the informal sector does not manage to fill the gap.

2.1.2 (Micro)savings

Formal savings take up an important role in economic development, on both the macro and the micro level. The accumulation of savings in financial institutions allows banks to intermediate funds for investment purposes and therefore generates economic growth. On the micro level, households save for a number of reasons such as the self-financing of investment, school fees, the purchase of jewellery, land and housing. Households also save against uncertain future events such as health shocks or funerals.

With respect to savings, it is sometimes argued that poor households might actually be too poor to save, as immediate consumption needs have priority over savings for households close to subsistence. However, as De Aghion and Morduch (2005: 160p.) argue, this reasoning is flawed because even the poorest households recognise the advantages of savings when they are

forward-looking. Indeed households have found a number of ways to save. However, these are mostly informal. There are many reasons why savings for capital accumulation and precautionary motives in developing countries are discouraged. Quite typically inflation in developing economies is higher than in developed economies. This entails low or even negative returns on precautionary savings held at home and not in interest-bearing bank accounts. Furthermore, bank accounts are not tailored to the poor. They are designed as long-term deposits for the purpose of capital accumulation and are not flexible instruments that encourage precautionary savings for unexpected economic hardship (Dercon, 2004b). Conning and Kevane (2004) put forward a moral hazard argument: households might find MFIs not trustworthy. They are afraid of the deliberate falsification of saving entries in passbooks. As a consequence, households do not save in bank accounts and savings cannot be intermediated in the financial system.

2.1.3 *(Micro)insurance*

By paying a premium, insurance allows households to secure a certain level of income and/or assets across uncertain future states of the world. Academics and practitioners see a number of obstacles to the provision of insurance. While the former are mostly concerned with the consequences of information asymmetries, the latter deal with transaction costs, premium collection, reinsurance and the distribution of services (amongst many others).

Information asymmetries result in adverse selection and moral hazard. In traditional insurance designs the former can be reduced through group insurance technologies, while the latter is diminished by the incorporation of co-payments and deductibles in insurance contracts. A more recent innovation in microinsurance, index-based insurance, avoids information asymmetries by conditioning payouts on publicly observable, easily measured, objective, transparent and independently verifiable indexes that lie outside the influence of insurers.

Transaction costs are proportionally higher for smaller insurance policies and therefore less attractive to commercial insurers. The reason is that administrative unit costs of insurance policies remain the same, irrespective of the size of the policy.

For practitioners, premiums are hard to calculate, particularly if data is insufficient or unavailable. Risks are difficult to quantify, particularly in developing countries where data is either insufficient or unavailable. Further, it is difficult to insure covariate risks if risks cannot be distributed across space and types of risk, as insurers do not have good access to secondary markets for reinsurance and their branch network is limited. Calculating appropriate insurance premiums is a necessity for the sustainability of insurers. In the absence of subsidies, good financial risk management is a precondition for

the insurers' existence in the long run. An insurer is sustainable if expected insurance claims and administrative costs do not exceed reserves and collected premiums. However, as Wipf and Garand (2007) point out, insurers in developing countries often lack actuarial expertise and good quality data. Consequently, they act overcautiously and charge too much for their policies. In contrast to this, insurers calculating their premiums according to actuarial principles offer greater value for lower premiums (Dercon, 2004b).

The costs of acquisition of information remain high, even if the problem of adverse selection and moral hazard can be circumvented by an appropriate insurance design. Wipf and Garand suggest that the database of an MFI should contain information on the institution and branches, customers, beneficiaries, covered dependents (for health insurance), coverage, premium-, claim- and policy-history. Aside from producing their own data, MFIs can also consider secondary data sources such as population statistics and comparable schemes.

Socio-economic profiles of the target population can be produced based on data collected by the MFIs but also from secondary data sources. To our knowledge households surveys such as the Living Standard Measurement Series (LSMS) of the World Bank are not widely used as a data sources yet. These data sets, often available in the form of panels, are available for a variety of developing countries including Vietnam. These data sets are typically nationally representative and allow the creation of demographic, health and socio-economic profiles of the target population.

And, finally, the lack of financial education poses another complication. McCord et al. (2001) show that poor people might have difficulties in understanding the insurance policies they own. Even after the event of an insured shock, many poor did not file their claims.

The supply of insurance depends on institutional arrangements, financial management and the possibilities for reinsurance, premium calculation and the distribution of services. All these factors induce insurers to calculate premiums for insurance policies that are unaffordable to the poor and vulnerable, or not to offer insurance at all.

2.2 Informal finance

Financial services suitable for risk mitigation and coping with shocks are, particularly in rural areas, rare in low-income countries. As a consequence, households in low-income countries have developed informal institutions which are widely used for risk-sharing, shock-coping and the provision of savings, credit and (mutual) insurance. Formal and informal institutions coexist (Besley, 1995). This section examines informal credit, savings and insurance.

Households may obtain informal credit from a moneylender as well as family and friends. Based on a number of case studies, Hulme and Mosley (1996:

70pp.) deduce that moneylenders are reluctant to lend to applicants whom they do not know. Loans from this source were typically short-termed (1-3 months), were predominantly used for consumption purposes and came, on average, at a higher interest than loans from other sources. However, unlike their formal competitors, they do not cause opportunity costs for training time for and group formation as well as travel time and cost for households in remote areas.

There are some parallels between taking credit from moneylenders and networks of family and friends (typically it is used for consumption purposes). However, the main difference is that loans from family and friends come at low or zero-interest. In addition, it is not uncommon that these loans are lent with open repayment. A number of studies find that informal loans from these sources are commonly use to deal with shocks (see, for instance, Udry, 1994, Fafchamps and Lund, 2003 and Schindler, 2010).

Another common type of informal credit (although not typically used for shock-coping) is the interlinked credit transaction between traders and business partners.

In the case of savings, households have found a number of informal ways for saving and capital accumulation such as ROSCAs, jewellery, cash at home, livestock, stored crops or even housing. In particular with respect to informal savings, a caveat has to be added. Platteau (1997) argues that it is impossible to save under certain social arrangements, e.g. informal risk-sharing arrangements, as family and friends in the network will always stake a claim on the generated surpluses and therefore prevent the accumulation of savings.

A hybrid form of savings and credit are ROSCAs, in which members put funds in a pot on a regular basis. The allocation of the pot can be based on a number of mechanisms such as bidding or a lottery. ROSCAs typically do not allow for the distribution of loans at any time and therefore serve capital accumulation rather than insurance purposes.

3 HOUSEHOLD FINANCE AND SHOCKS: EVIDENCE FROM VIETNAM

The following sections describe the formal and informal financial relations of households in rural Vietnam, the shocks affecting them, the coping actions they took (with special focus on the use of credit as an insurance substitute) and finally compare the subjective effectiveness of the coping actions from a households' point of perspective. Whenever appropriate, we relate these special findings to the related literature in section 2.

3.1 Study provinces and data collection

This study is based on household survey data collected by the interdisciplinary research group DFG-FOR 756 on “Vulnerability in South-East Asia” (sponsored by the German Science Foundation) and the Centre for Agricultural Policy (CAP) in Hanoi in 2007. For this, 2195 households in three particularly vulnerable Vietnamese provinces – Ha Tinh, Hue and Dak Lak – were visited and interviewed. Respectively, 720, 718 and 757 households out of a province population of 1.09m, 0.764m and 1.405m were interviewed (for these and the following statistics, see table 1 in the appendix). Households were selected through a three-stage-cluster sample design matching the administrative units in Vietnamese provinces: districts, communes and households.¹⁰

Ha Tinh belongs to the Northern provinces. It is subdivided into eleven districts and has a long stretch of coastline, wide rice plains and mountainous areas. Hue is located in central Vietnam. It has ten districts with coastal areas, rice plains and mountainous areas, the latter of which is predominantly populated by ethnic minorities, while the ethnic Vietnamese, the Kinhs, live in the former. Dak Lak is a landlocked province consisting of thirteen districts. It is geographically set in mountainous areas and rice plains. As in Hue, it has a large population-share of ethnic minorities.

These provinces share a number of common characteristics, most importantly their proneness to natural disasters and the high dependence of households on income from agricultural activities. Between 2002 and 2006 the Emergency Database (EM-DAT) reports four major natural disasters in Ha Tinh, seven in Hue and one in Dak Lak. Agricultural income is highly volatile due to the dependence on climate conditions. Roughly half of the household income (and even more in Dak Lak) in the three provinces stems from agricultural sources such as crop and livestock production. Income from off-farm self-employed work ranks second in the contribution to average household income. Wages and remittances roughly account for one-sixth.

The data collection took two months and was preceded by an extensive interviewer training to minimise interviewer and respondent biases. Further, the questionnaire was pre-tested in all three provinces and revised for the final data collection. Visiting sample households, the interviewer collected the following information: individual-based details on household members with respect to demographics, education and health as well as household-based details on shocks, risks, land use, livestock, aquaculture, off-farm employment, non-farm self-employment, borrowing and lending, public transfers, insurance, household expenditures (as a proxy for consumption), household wealth and housing conditions. Typically it took between two and three hours to answer all sections of the questionnaire.

¹⁰With the exception of Hue, household sample selection is fairly self-weighting and therefore representative of the general population in these provinces.

3.2 Formal and informal household finance in rural Vietnam

3.2.1 Household credit

Some facts on household credit, monetary savings and insurance are presented in table 2 in the appendix. Formal and informal loans have an almost equal share in loans distributed. The dominant MFIs are the Vietnam Bank for Agriculture and Rural Development (VBARD) and the Vietnam Bank for Social Policy (VBSP). They are also the dominant formal lenders in rural areas. They provide almost 80 percent of the formal loans rural households take. The Vietnamese credit market is characterised by interventions.

VBARD has 2096 branches in all sixty-four Vietnamese provinces, serving virtually all of the more than 600 districts. VBARD's primary focus is small rural enterprises and middle-income earners. However, many rural clients are poor. Up to a threshold, VBARD offers individual loans to borrowers based on dynamic incentives.

VBSP has provincial branches in all sixty-four provinces, 662 transaction offices at district level, plus 8076 commune-level transaction points. It reaches out to the poor through agreements with mass organisations such as the Farmer's Union (FU) or the Vietnamese Women's Union at the commune level. VBSP interest rates are heavily subsidised. VBSP typically employs a group lending scheme. Other sources of formal credit are the People's Credit Fund (PCF) and some commercial banks. The outreach of the latter in rural areas is, as of yet, very limited (World Bank, 2007).

Credit rationing might not look like a pressing issue (e.g. VBARD provides credit up to 10m Dong without asking for collaterals). However, the ratio of approved to unapproved formal loans is roughly six to one and therefore too low to be ignored. Access to credit in rural Vietnam is tightly connected to the outcome of the land-market reform in the 1990s during which the government gave land titles to households. Consequently, a class of landless poor emerged which is not well served with credit either by market or non-market institutions (Ravillion and de Walle, 2008: Chapter 7). More specifically, households possessing land titles (and therefore collateral) borrow substantially higher amounts of credit from formal sources, while households without land titles scrap loans in the informal credit sector (Kemper and Klump, 2009). In addition, a study on the socio-economic characteristics of credit rationing in the Vietnamese credit market finds that a lack of reputation, the dependency ratio of households and the amount of credit applied for by the household increase the probability of being credit rationed (Duong and Izumida, 2002).

The informal sector plays an important role in the rural credit market. Nearly 50% of the recorded loans come from informal sources. Loans through the network of family and friends account for the provision of nearly 50% of all informal loans. Quite generally, this seems to be the most attractive source of credit as these loans typically come at zero or very low interest, are quickly

available and have very flexible repayment schemes. Moneylenders also provide quick and flexible loans, but at high interest rates. Their loans account for 28% of all informal loans. Another important type of informal credit, the interlinked credit transaction, exists in the business relations of producers and traders but is not used for shock coping.

In total, 72% of the surveyed households participate in the credit market, of which 47% only borrow from formal sources, 30% only from informal sources and 23% from both formal and informal sources.

3.2.2 Household savings

Households in rural Vietnam save and accumulate capital in a number of ways: livestock holdings, crop storage, jewellery, through ROSCAs, cash holdings at home and bank accounts. In terms of monetary savings, only 5% of all households in our sample indicated the possession of a bank account. Almost the same number of people participates in ROSCAs (Ho/Hui or Phung in Vietnam), while 20% save cash at home. Possible limitations to formal and informal household savings were discussed in section 2.2 and 2.4.

3.2.3 Household insurance

In almost 40% of all households, at least one member has some sort of insurance coverage. Health insurance is the most widespread form of insurance and coverage can be obtained through three different schemes: firstly, through social health insurance. Civil servants, state enterprise workers, military and communist party officials are covered at government expense. Private companies with more than ten employees are required to enrol their workers in this scheme as well. Secondly, through voluntary health insurance. However, voluntary enrolment rates are low, therefore, school children and students are obliged to enrol compulsorily in the voluntary scheme. And, thirdly, health insurance coverage can be obtained, through government fee exemption programs (free health cards or, more recently, HERP, the Hunger Eradication and Poverty Program). These programs are targeted at poor households.

Other, but less common, insurance policies are life insurance and disability insurance. Property insurance is rarely found. It accounts for less than 1% of all insurance policies. Possible reasons for the undersupply of formal insurance were discussed in section 2.3.

3.3 Shocks and impact

To gain a better understanding of idiosyncratic and covariate shocks, appropriate data was collected in Vietnam. In the shock section of our survey, the interviewer explained shocks as events that led to massive losses in income and/or assets. If respondents did not name one (or more) of these events,

interviewers were trained to read out a comprehensive list of shocks. If households were affected by more than one shock, they were asked to order them in increasing order of magnitude. This kind of data was collected in a retrospective module of the questionnaire where interviewers asked households to recall these events for the period between 2007 and 2002. Recalling information for major events works fine as long as appropriate “signposts”, in this case the beginning of the cropping season starting at the same time each year, are provided (Hoddinott and Qisuumbing, 2003).

Between the beginning of the cropping seasons in 2007 and 2002, 3898 shocks were recorded for 2195 households (see table 3 for details). Three quarters of the households were affected by at least one shock. The seven most frequent shocks were illness of a household member, drought, flooding, livestock disease, heavy rainfall, crop pest and death, all of which accounted for roughly 75% of all shocks. Compared to the sample mean household income of \$3631 (2007 PPP) in Ha Tinh, \$4143 (2007 PPP) in Hue and \$6429 (2007 PPP) in Dak Lak, shocks causing average income losses between \$545 (2007 PPP) and \$2239 (2007 PPP) have had a very large impact on the well-being of households. Droughts had the biggest impact on household income, on average \$2239 (2007 PPP) were lost due to this shock. Crop pests had the second biggest impact on household income. It caused average losses of \$1567 (2007 PPP). The other major shocks, namely illness or death of a household member, flooding and heavy rainfall are fairly similar in magnitude. These shocks caused income losses of between \$500 (2007 PPP) and \$900 (2007 PPP). Health shocks and death stand out in terms of asset losses.

3.4 *The use of coping actions*

With the exception of flooding, borrowing was the most important coping action for shocks (see, again, table 3). For one-third to one-half of all shocks, households relied on borrowing as coping action. Besides borrowing, using savings and asset depletion stand out as coping action for idiosyncratic shocks to health or death of family members. Increasing the supply of labour is found to be an important coping actions for climate-related shocks such as drought, flooding and heavy rainfall (over a substantial period of time), but also for crop pests. Claiming on market and (reciprocal) non-market insurance played a minor role as a coping action. With respect to all shocks, between 7 and 30% did not take any coping action. This type of shock had a less severe impact on households and therefore did not cause any coping action.

3.4.1 *The use of credit as insurance substitute*

Very few households rely on either formal or informal insurance arrangements. Looking at table 5 for the most important actions households took to cope with their worst shock allows us to distinguish between formal and informal

insurance arrangements. Accordingly, only five households relied on some sort of formal insurance to deal with a shock. This figure seems dramatically low, particularly considering that illness of a household member is the most common shock and health insurance is the most widespread type of insurance (more details on this in the next section).

This raises the question of whether credit is utilised as an insurance substitute in the absence of properly functioning market-based insurance. Elsewhere, there is evidence for the use of credit as insurance substitute. MFIs in Bangladesh offer contingent loan repayment to their customers in the face of natural disasters. Shoji (2010) finds that the contingency of loans helps customers to avoid cuts in food consumption. In an informal credit market setting, Schindler (2010) finds that market women in Ghana actively use informal credit as a coping action after a shock. Udry (1994) finds similar evidence for Nigerian households.

In our study provinces, more than 70% of the households participate in the credit market, 58% of which took one loan, 27% two loans, 10% three loans and 5% more than three loans (see table 4 in the appendix for these and the following statistics). Multiple borrowing is evident.

Although microcredit has traditionally focused on supporting the generation of income streams for poor households, surveys find that the predominant proportion does not go into entrepreneurial activities. Thus, low-income households use loans for household needs, including school fees, medical treatment, daily consumption needs, and social and holiday expenses (Johnston and Morduch, 2008). Health shocks are not the only cause for borrowing. Our data indicates that more than 40% of the borrowing households took one or more loans to cope with a shock. In decreasing order of frequency, health shocks, drought, flooding, livestock disease, heavy rainfall, crop pest and death of a household member entailed borrowing activities of households. Households engage in multiple borrowing for multiple purposes. The use of credit as insurance in the absence of functioning insurance markets is an important purpose.

3.5 A subjective well-being approach to post-shock recovery in rural Vietnam

Shocks are associated with a negative change in well-being. Recovery, in turn, is associated with a positive change in well-being. This section takes a subjective approach to the analysis of the effectiveness of coping actions.¹¹

Slightly modifying the six epistemological principles for the analysis of the subjective well-being by Rojas (2007) to the case of the subjective effectiveness

¹¹An intersubjective (and more rigorous) approach to the analysis of the effectiveness of coping using formal and informal credit and savings for the smoothing of transitory income fluctuations based on the same data set can be found in Kemper (2009).

of coping actions and post-shock recovery we base our analysis on the following principles:

Firstly, a person's well-being is essentially subjective, and so is the perceived recovery after a shock. Secondly, each person is the authority to assess his/her well-being and consequently, to assess post-shock recovery. Thirdly, the subjective well-being as well as subjective post-shock recovery is directly declared by persons. Fourthly, well-being and subjective recovery after shocks deal with persons in their specific circumstances. Fifthly, as for subjective well-being a person's self-assessment of recovery is taken as a point of departure. Causes for recovery and thus a change in well-being are identified bottom-up. Sixthly, this calls for a broad approach to the study of changes in well-being.

For the analysis, we grossly simplify, and call a coping action effective if households subjectively perceive recovery to take place within a year or less, and ineffective if subjectively perceived recovery takes more than a year. In principle, we assume shocks to be non-permanent. As an example: a chronic disease can be permanent for a household member. However, it is non-permanent for the household if other household members increase their labour supply to make up for the loss in earned income.

Table 5 in the appendix provides some statistics on the post-shock recovery of households concerning their worst shock. The sample of shock-affected households is almost equally split between the two recovery groups: 48% subjectively took one year or less to recover, 52% more than a year. The evidence implies that borrowing, heavily used, is not subjectively perceived as an effective coping action. Almost 80% of the formal borrowers and almost 70% of the households borrowing from moneylenders belong to the group that took more than a year to recover, while 60% of households borrowing from family and friends belong to the group that needed more than a year to recover. The reason for the ineffectiveness of borrowing might be the following: formal loans take weeks to be processed. Interest rates from formal lenders, and particularly moneylenders, impose an additional burden on the recovery. Informal loans through networks usually come at zero or very low interest rates. However, loans from family and friends are generally small in size compared to formal loans. Needy households are constrained by the budget of other households. Further, opting to ask family and friends in the village for a loan can be impaired or eliminated as a consequence of village-wide shocks. Finally, formal or informal lenders might not be willing or able to provide the full amount of credit applied for by households. The data shows that households face credit constraints in borrowing from both formal and informal sources. Pursuing borrowing as a coping action, the household's well-being generally depends upon the decisions of others.

Of the coping actions related to using savings and asset depletion, the use of monetary savings stands out. Almost 80% of the households taking this coping action subjectively recovered within a year or less. Of the households relying

on crop selling, 60% recovered within a year or less and 40% took longer. More than three quarters of the households selling livestock or other assets needed more than a year to recover. In the presence of covariate shocks, the depletion of assets (livestock, stored crops, etc.) might not be an effective coping action as asset prices are typically correlated. If too many households rely on, say, livestock selling as a coping action, local prices for this asset will collapse. As opposed to asset selling, monetary savings have some clear advantages. The money is quickly available, particularly if households save cash at home (however, if households save cash at home they implicitly accept paying a risk premium as these savings lose both purchasing power due to inflation and interest payments gained from other forms of savings). Self-insurance through (precautionary) savings seems to be a fairly effective coping action.

Claiming on insurance policies is subjectively perceived as an effective coping action, as 80% of these households recovered within a year or less. However, only five households out of 1603 affected households indicated that filing an insurance claim is their most important coping action. There is an interesting interpretation for the case of health insurance. Despite a fairly wide coverage of health insurances, high out-of-pocket expenditures in the case of illness of a household member remain a frequent cause of economic hardship. Wagstaff (2007b) shows that health shocks have a strong impact on household income. The effect of hospitalisation on medical spending is large, even for households with insurance coverage. One explanation for high average out-of-pocket spending despite health insurance coverage are the expenditures that accompany treatment: informal payments for access to better services and transport, and accommodation costs that arise for rural households travelling into urban areas (Wagstaff, 2007a).

One out of seven households relies on increasing labour supply for shock-coping. Evidence for the subjective effectiveness of this strategy is mixed, 45% recovered within a year or less and 55% took longer. Similarly, the evidence for the subjective effectiveness of relying on the network (remittances, gifts etc. from family and friends) and government transfers is mixed.

It is often argued that increasing labour supply is more effective in rural areas since agriculture typically provides more short-term employment opportunities than working for wages (see e.g. Wagstaff, 2007b).

Surprisingly, three quarters of the households deciding to take no action subjectively recovered within a year or less. A closer look at the data reveals for most of these households that their affectedness was comparatively less severe. Taking a coping action was not an urgent matter.

These results are confirmed by the estimated conditional probabilities for subjective recovery by coping action presented in the rightmost column of table 5. In particular, borrowing from formal sources, family and friends or moneylenders increases the conditional probability of belonging to the group

of households that subjectively recovered in more than a year by respectively 28.69%, 11.46% and 23.49%. In turn, taking savings as a coping action reduces the conditional probability of belonging to the group of households that subjectively recovered in a year or more by 23.49%. “Conditional” means that we account for a number of other factors affecting the probabilities such as household, employment and shock characteristics in the estimation procedure.¹²

The analysis of subjective post-shock recovery has shown that households relying on monetary savings as a coping strategy tend to recover faster than households pursuing other coping actions. There are a number of advantages in using savings as a coping action, particularly in the absence of insurance coverage to frequent (covariate) risks. Unlike asset prices (e.g. livestock), the use of savings as a coping action is not correlated across households. In the presence of covariate shocks, households do not have to rely upon other households that might be equally affected. And, unlike borrowing, interest payments do not impose an additional burden on households during recovery.

However, there are also some shortcomings to self-insurance. Households face economic hardship when the actual loss due to a shock exceeds the expected loss and thus, the amount of savings held due to precautionary or other motives. Self-insurance is likely to fail if shocks should happen repeatedly. Inflation erodes the purchasing power when precautionary monetary savings take place at home and not in interest-bearing bank accounts. Using savings for self-financing of farm and non-farm self-employment makes it hard to withdraw investment in time of need. Given these limitations of savings we give further thoughts to potential improvements which insurance can bring to rural Vietnamese households.

4 HOUSEHOLD SHOCK PROFILES AND THE PROVISION WITH INDEX-BASED INSURANCE: A DISCUSSION

The preceding data analysis has yielded one major result with respect to formal insurance: with the exception of health insurance and, to some extent, life insurance, households hardly possess any insurance policies.¹³ Given the shock profiles of the rural households in our sample, it follows that households were uninsured against most of the shocks that affected them. If the past shocks captured in our sample are fairly representative and serve therefore as a predictor for the future shocks, it must be concluded that rural Vietnamese households are largely uninsured against the risk they face. This section, therefore, intends to briefly discuss a possible role for index-based

¹²More details on the estimation procedure for the conditional probabilities are given in the notes belonging to table 5.

¹³And, even though health insurance is widespread, its use as the most important coping action is virtually nonexistent.

insurance in the reduction of the risks Vietnamese households are exposed to. Doing so, we describe household shock profiles and point out for which risks insurance is available – and for which not. For uninsured risks, we discuss the potential of index-based insurance and briefly review the experience with its implementation from elsewhere.

Our survey showed that poor and near-poor households in the study provinces mainly suffered from the following shocks (in decreasing order of frequency): illness of a household member, drought, flooding, rainfall, crop pest and livestock disease. The order changes slightly for the impact of the shock on household income (in decreasing order of shock-related income losses): drought, crop pest, death of a household member, livestock disease, illness of a household member, flooding and heavy rainfall. Economic hardship caused by the materialisation of these events can be eased through the provision of insurance. However, at the time of data collection, only illness and death of a household member were covered by available insurance policies.¹⁴ For weather-related risks such as drought, heavy rainfall and flooding or other risks such as crop pest or livestock disease no insurance policies were available, although the data clearly shows that shocks of this types affect households in large numbers. Elsewhere, risks of this type are covered by index-based insurances. Could these risks also be covered in Vietnam?

Index-based insurance is a recent and promising innovation in microinsurance. It helps solve some of the issues that complicate the supply of traditional insurance. Insurance payouts are conditioned on publicly observable, easily measured, objective, transparent and independently verifiable indexes. If a suitable index is found and data is available, the probability distribution of the event is straightforward to estimate. As a consequence, the incidence of both adverse selection and moral hazard decreases and monitoring costs are reduced. Furthermore, proponents argue that index insurances are administratively inexpensive and enable quick payouts. However, indexes can only be a proxy for income losses. Basic risk is only reduced if the materialised losses of households are correlated with the index. With the rare exception of some pilot projects, index-based insurance is rarely existent. Some exceptions are weather and livestock index insurance (see Goslinga, this volume, and World Bank, 2005, for some case studies) and flood index insurance (see Rohregger and Rompel, this volume).

The implementation of rainfall index insurance in India is well studied. A number of obstacles were found:

¹⁴For the case of life insurance, the finding is not untypical for a developing country. In a study on the provision of microinsurance in the 100 poorest countries, Roth et al. (2007) find that life insurance policies are the most widespread type of insurance policy. Compared to other insurance types, premiums are fairly easy to calculate, it creates fewer problems with moral hazard, does not depend on effective and efficient infrastructure (unlike health insurance) and can easily be combined with other microfinance services.

Firstly, a recent study by Gine et al. (2007) highlights that uncertainty about the insurance policy itself – resulting from lack of information – can be a major obstacle for the success of rainfall index insurance. Take-up rates are higher among wealthy households with a good connection to village networks. In turn, less wealthy, less informed and credit-constrained households with a high degree of risk-aversion refrain from buying this insurance policy.

Secondly, another problem with rainfall index insurance is that the vulnerability of crops towards extreme climate conditions and geographical and agricultural settings varies. Given the variety of factors affecting crop output it is not self-evident that the index is correlated with materialised losses and, hence, basic risk might not be reduced. Even without extreme rainfall, agricultural output strongly differs for sloping and non-sloping, as well as irrigated and non-irrigated agriculture and the use of fertiliser and pesticides. So far, rainfall insurance typically only perceives too little rainfall as a cause of crop failure. However, too much rainfall can be crop damaging too, as the experience of rural Vietnamese households shows.

And, thirdly, some studies find that, despite the apparent risk exposure of rural households, take-up rates of rainfall index insurance products are fairly low. Possible reasons include credit constraints, low levels of trust and existing informal insurance (see Gine and Yang, 2009, and Cole et al., 2009).

Index-based livestock insurance is implemented in Mongolia. It is linked to historic local data on livestock mortality and chooses a public-private partnership for this insurance.¹⁵ The World Bank (World Bank, 2005) pilots the combination of market-based insurance and social insurance for the case of livestock index insurance based on regional historic mortality rates. Accordingly, small losses have to be covered by the households, while intermediate losses are covered by private insurers offering a base insurance policy at market rates. This policy is triggered if mortality rates lie between some specified lower threshold and upper exhaustion point. The government will compensate for catastrophic losses. That is, the mortality rate exceeds the exhaustion point.

We have to add a concluding caveat concerning the arguments put forward in this section. The initial statement that insurance coverage against certain risks can ease the economic hardship of households hinges on the premise that households truly demand insurance coverage (as opposed to, say, taking credit). Unfortunately, the Vulnerability in South-East Asia database did not collect information that helps to reveal the true insurance demand of Vietnamese households. Consequently, we neither know which risks Vietnamese households would like to insure, nor whether they want to insure risk at all.

¹⁵See Alderman and Haque (2007) who detail this idea for this and other risks for low-income African countries.

5 SUMMARY AND CONCLUDING REMARKS

The preceding sections discussed the limitations to household finance in a developing country context, explored the characteristics of the rural financial markets in Vietnam, and gave evidence on the type and magnitude of shocks rural households face, discussed the use of credit as an insurance substitute and compared the subjective effectiveness of coping actions across shocks. This section provides a summary and conclusion.

5.1 Main results of the household survey

The household survey on shocks, financial and other coping actions and their subjective effectiveness has yielded the following major results:

1. Agricultural activities are the most important source of household income.
2. Household income is highly volatile due to covariate shocks such as drought, flooding, heavy rainfall, crop pest and livestock disease and idiosyncratic shocks such as illness or death of a household member.
3. Appropriate insurance policies for these types of shocks are unavailable or, in the case of health insurance, insufficient to discontinue large-scale shocks to expenditures.
4. Households engaging in credit markets are also likely to engage in multiple borrowing activities. Credit is used for a number of reasons, including the use of credit as insurance substitute. Shock-borrowing plays an important role.
5. In the absence of sufficient social protection, households rely on a number of coping actions through both market and non-market institutions. Some households use savings or deplete assets, some rely on family networks. Roughly one-fifth of the households increase their labour supply, but borrowing represents the dominant coping action across all sorts of shocks.
6. Households relying on self-insurance through monetary savings subjectively recover faster on average.
7. Subjective post-shock recovery points toward the ineffectiveness of borrowing as a coping strategy since households pursuing this action, on average, perceive a larger time period for recovery. This also applies to asset depletion, insurance and other coping actions.
8. For affected households in the survey, transfers of government or international relief organisations have played only a minor role in the aftermath of (large-scale) shocks.

Traditional microfinance focuses on improving living conditions of poor and near-poor households through the generation of new income streams and the accumulation of savings. It enables these households to increase their overall income through more productive investments and accumulation of wealth.

In shock-prone environments such as the Vietnamese provinces of Ha Tinh, Hue and Dak Lak this is not sufficient to give households a permanent break from poverty. The right mix of financial services is necessary to allow households to manage their volatile incomes. To this end, capacities for savings as self-insurance have to be improved. Further, index-based insurances have the potential to reduce basic risk from weather-induced shocks and livestock disease as long as losses and indexes are correlated. However, these insurances do not exist in Vietnam and leave households formally uninsured for these frequent shocks. And, even if formal insurance coverage exists, as for illness and death of household members, these shocks still have a strong impact on household income and entail significant welfare reduction. The current rural financial market setting leaves Vietnamese households vulnerable to idiosyncratic and covariate shocks.

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APPENDIX

Tables 1 to 5.

Table 1: Characteristics of study provinces and income decomposition of survey households

Study provinces			Survey households		
Ha Tinh	Hue	Dak Lak	Ha Tinh	Hue	Dak Lak
			Mean (s.d.)	Mean (s.d.)	Mean (s.d.)
Population Size (a)	1.09m	0.764m	1.405m	Annual income in \$ (2007 PPP) per household (c)	6429.14 (7880.31)
Interviewed households (c)	720	718	757	By source:	
Major natural disasters (b)				Agriculture	1816.86 (4474.18)
2006	Storm 1.46m affected in 4 provinces			Self-employment	678.56 (5203.81)
	Storm, 0.015m affected in 3 provinces			Wages	586.55 (1473.07)
	Flood, 0.01m affected in 3 provinces			Remittances	551.1 (2194.08)
	Flood, 0.05m affected in 14 provinces				
2005	Storm, 0.0085m affected in 3 provinces	Flood, 0.027m affected in 9 provinces		Monthly income in \$ (2007 PPP) per-capita, (c)	85.03 (166.25)
2004		Storm, 0.5m affected in 5 provinces			132.39 (190.77)
2003	Flood, 0.001m affected in 4 provinces	Flood, 0.22m affected in 5 provinces			
2002	Flood, affected in 2 provinces	0.29m affected in 2 provinces			

Source: (a) Rural Census 2006, General Statistical Office (GSO), (b) International Disaster Database, (c) Vulnerability in South-East Asia Database.

Table 2: Formal and informal household finance

	Credit			Savings and Insurance				
	Unit	Count	Percentage	Unit	Count	Percentage		
Credit								
	Total recorded loans	loan	2609	100	Total household	hh	2195	100
	Formal	loan	1384	53.05	Saving households	hh	828	37.72
	Informal	loan	1225	46.95	Non-saving households	hh	1363	62.28
	Formal	loan	1384	100	<i>As share of total hh:</i>			
	VBARD	loan	674	48.70	Bank account	hh	112	5.10
	VBSP	loan	414	29.91	Cash at home	hh	396	18.04
	Other	loan	296	21.39	Ho/Hui or Phung	hh	108	4.92
	<i>As share of formal loans:</i>							
	Rationed	loan	236	17.05	Total household	hh	2195	100
	Defaulted	loan	136	9.82	Households with one or more insurance policies	hh	831	37.86
	Informal	loan	1225	100	Households without insurance policy	hh	1364	62.14
	Moneylenders	loan	341	27.84	Total insurance policies	policy	2242	100
	Family and friends	loan	610	49.80	Life insurance	policy	396	17.66
	Other	loan	274	22.36	Health Insurance	policy	1672	72.57
	<i>As share of informal loans:</i>				Disability health insurance	policy	198	8.83
	Rationed	loan	177	14.45	Property insurance	policy	12	0.54
	Defaulted	loan	79	6.45	Other	policy	9	0.39
Credit market participation								
	Total households	hh	2195	100	Total household	hh	2195	100
	Borrowing households		1576	71.80	Households receiving remittances	hh	508	23.14
	Non-borrowing households	hh	619	28.20	Households without remittances	hh	1687	76.86
	<i>Of borrowing households:</i>							
	Only formal credit	hh	737	46.76				
	Only informal credit	hh	474	30.07				
	Both formal and informal credit	hh	365	23.17				

Source: Vulnerability in South-East Asia Database.

Table 3: Recorded shocks, associated losses and coping actions

Shocks			Coping actions by type of shock (percentage)								
Type	Unit	Count	Percent- age	Aver. income loss by shock in \$(2007PPP)	Aver. asset loss by shock in \$(2007PPP)						
				Mean (s.d.)	Mean (s.d.)	credit	Savings & assets	Insurance& reciprocity	labour	Did nothing	other
Total shocks	shock	3898	100	1307.04 (4536.19)	634.96 (1659.93)	40.78	13.37	3.08	16.16	15.74	10.87
Health	shock	898	32.04	752.28 (1564.76)	664.05 (1403.39)	49.49	24.64	6.91	8.36	6.58	4.02
Drought	shock	617	15.83	2239.69 (4088.96)	278.85 (1015.95)	49.43	9.27	0.49	23.41	12.52	4.88
Flooding	shock	374	9.59	745.65 (1365.28)	420.99 (903.07)	26.45	5.08	3.41	29.41	18.72	16.93
Livestock disease	shock	361	9.26	826.05 (1278.56)	495.03 (1056.11)	33.8	11.37	0	15.79	29.09	9.95
Heavy rainfall	shock	298	7.74	545.42 (1582.23)	659.73 (1274.77)	26.19	15.49	3.71	16.5	19.53	18.58
Crop pest	shock	275	7.05	1567.5 (2519.38)	490.78 (1687.06)	38.77	11.27	1.81	19.64	14.55	13.96
Death	shock	125	3.21	953.07 (2396.58)	1153.31 (1086.64)	54.04	18.55	6.45	2.42	14.52	4.02
Other	shock	950	24.28	2201.36 (9134.10)	963.05 (2658.68)	43.02	14.39	2.38	13.2	20.33	5.78

Source: Vulnerability in South-East Asia Database.

Table 4: Multiple and shock-induced borrowing

	Borrowing characteristics		
	<i>Unit</i>	<i>Count</i>	<i>Percentage</i>
Total households	hh	2195	100
Non-borrowing households	hh	619	28.2
Borrowing households	hh	1576	71.80
<i>Of borrowing households by</i>			
<i>number of loans:</i>		<i>1576</i>	<i>100</i>
One loan	hh	905	57.42
Two loans	hh	433	27.47
Three loans	hh	159	10.09
More than three loans	hh	79	5.01
Borrowing households	hh	1576	100
Households borrowing, but not for shocks	hh	907	57.55
Households borrowing one or more loans because of a shock	hh	669	42.45
<i>Of shock-borrowing households by</i>			
<i>shock:</i>		<i>669</i>	<i>100</i>
Health	hh	191	28.55
Drought	hh	144	21.52
Flooding	hh	45	6.72
Livestock disease	hh	53	7.92
Heavy rainfall	hh	41	6.13
Crop pests	hh	42	6.28
Death	hh	28	4.19
Other	hh	125	18.68

Source: *Vulnerability in South-East Asia Database.*

Table 5: Subjective recovery by coping action for worst shock

Coping action	Households per coping strategy				Recovery		
	Unit	Count	Percentage	Unit	One year or less	More than a year	Conditional probability
Total households	<i>hh</i>	2195	100				
Households affected by one or more shocks	<i>hh</i>	1603	73.03				
Households not affected by shocks	<i>hh</i>	592	26.97				
Households affected by one or more shocks	<i>hh</i>	1603	100	<i>hh</i>	765	47.72	838
Borrowing							
Formal	<i>hh</i>	202	12.60	<i>hh</i>	45	22.27	157
Family and friends	<i>hh</i>	305	19.03	<i>hh</i>	127	41.64	178
Moneylenders		162	10.10	<i>hh</i>	50	30.86	112
Use of savings and asset depletion							
Savings	<i>hh</i>	140	8.73	<i>hh</i>	109	77.85	31
Sold stored crops	<i>hh</i>	32	1.99	<i>hh</i>	19	59.38	13
Sold livestock	<i>hh</i>	57	3.55	<i>hh</i>	14	24.56	43
Sold other assets	<i>hh</i>	18	1.12	<i>hh</i>	4	22.22	14
Insurance							
Used insurance	<i>hh</i>	5	0.03	<i>hh</i>	4	80.0	1
Help from family and friends	<i>hh</i>	50	3.12	<i>hh</i>	26	52.0	24
Other							
Increased labour supply	<i>hh</i>	247	15.41	<i>hh</i>	111	44.93	136
Government transfer	<i>hh</i>	25	1.55	<i>hh</i>	14	56.0	11
Did nothing	<i>hh</i>	239	14.91	<i>hh</i>	179	74.90	60
Other coping action	<i>hh</i>	121	7.55	<i>hh</i>	63	52.06	58

Source: Vulnerability in South-East Asia Database. The values in the rightmost column denote conditional probabilities for subjective recovery in more than a year for the respective coping actions. Example: If a particular household chose savings, then the conditional probability of belonging to the group of households that subjectively perceived recovery to take more than a year reduces by 23.49%. The conditional probabilities of the coping actions are estimated in a so-called linear probability model, * and ** denote statistical significance at the 10 and 1 percent level. They do not sum to unity. Further covariates such as household, employment and shock characteristics were also included in the estimation but are not shown to save space. Please refer to any Econometrics textbook for details on the linear probability model.

Microinsurance and Public-Private Partnership in the Context of Catastrophic Risk Management: Examples from Indonesia

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ABSTRACT: Whereas disaster risk management has for a long time been largely focused on ex-post strategies, such as disaster aid after a crisis has occurred, in the light of the more frequent and intense natural disasters a re-orientation towards more long term prevention and mitigation strategies, such as microinsurance can be observed. This especially concerns the poorest sections of the world's population, which are usually hardest hit by natural catastrophes while at the same time having neither formal insurance cover nor any other suitable access to support.

Private commercial partners are perceived as important actors in developing and offering such disaster microinsurance schemes, thereby complementing and strengthening instruments (insurances, transfers, etc.) provided by the state. For the last five years, the German Technical Cooperation (GTZ) has sought cooperation with private commercial insurers and re-insurers in this field. Combining commercial interests of accessing new markets with the development objective of increasing the capability of people to deal better with social and economic risks and protect them from falling into poverty, public-private partnerships have proven beneficial for both sides.

This article describes the development and dynamics of microinsurances in general and public-private partnerships on microinsurance in particular. Experiences in the field of disaster microinsurance in Indonesia will serve as an example. Analysing the learning experiences made, as well as challenges faced both on an organisational and implementation level in two projects, the article aims to discuss the role, impact and limits of PPPs in developing sound instruments of disaster risk management.

KEYWORDS: microinsurance, disaster risk management strategy, social protection, public-private partnership, index-based insurance, Indonesia, disaster preparedness

1 BACKGROUND

Poor people are most exposed to the risks of every-day life, such as sickness, unemployment, death, old age or natural disasters. At the same time, they are the ones least able to protect themselves against their consequences, thereby perpetuating poverty and threatening future income growth. This especially concerns people living and working in the informal sector who have only limited access or are totally excluded from any form of public or private social protection interventions¹, such as social insurance schemes for health, old age and unemployment, or social assistance programmes for specifically vulnerable groups.

Over the last decade, microinsurance schemes have gained increasing importance in filling this gap ensuring that a household does not find itself further impoverished when a family faces a financial crisis due to death, sickness, old age or unemployment. Microinsurance is usually understood as “(...) *the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved.*” (Churchill, 2006: 12). The term ‘micro’ therefore, does not refer to the small size of the risks involved – usually microinsurance schemes cover only a single risk – or the size of the risk carrier, which can vary substantially in size from small-scale, geographically limited community-based insurance schemes to large-scale schemes provided by commercial insurers and serving a few hundred thousand people. Microinsurance refers to insurance products that are tailored to the needs of the poor both in terms of risks insured as well as their limited financial capacity (see also Roth et al. 2007).

Different microinsurance models and risk carriers can be distinguished. They can either be community-based, self-financed schemes that are often administered autonomously by their members, a model which is usually often utilised in community-based health insurance schemes. Microinsurance products are also provided by NGOs, mutuals and cooperatives. In recent years, commercial insurers have discovered the microinsurance market, providing a growing share of microinsurance products in developing countries. They offer specific small-scale microinsurance products² mostly in the field of life or property insurance (Roth, McCord and Liber, 2007; Radermacher, 2008; Churchill 2006).

As a response to the growing challenges of climate change, microinsurance has also been assuming an increasingly important role as a risk management

¹According to the ILO, major reasons for exclusion are: 1) Administrative bottlenecks: Extension of coverage of public insurance schemes to include informal workers would require a complex administrative structure, as the sector is very heterogeneous: informal sector workers are usually less organised and often spatially scattered over a wide territory. 2) Capability to pay: The payment of regular contributions is difficult as informal sector workers usually have a very volatile income. 3) Legal restrictions: The social security law usually does not foresee the inclusion of informal sector workers (Van Ginneken 1999).

²For a more detailed debate on community based (health) insurance schemes see Fontenau and Galland (2006), for commercial microinsurance schemes see McCord (2006).

strategy in a disaster context (see for example Melcher and Linnerooth-Bayer, 2006; Loster, 2009). The increased intensity and frequency of natural disasters has shifted the interest of international development partners and donors away from short-term catastrophic measures after a catastrophic risk has occurred (ex-post strategies) towards a more comprehensive disaster risk management approach including strategies that help to reduce overall disaster risk and strengthen disaster preparedness (ex-ante strategies) (see for example GTZ, 2002). Apart from the development of disaster risk management plans, construction of secure housing or emergency aid after a catastrophic event, this also includes long term social protection strategies, such as microinsurance schemes. Again, the poorest people are being concerned the most. Many poor households are engaged in farming, the returns on which are strongly affected by weather events, such as droughts and flood (Hoddinott, 2009). A disproportionately large number of poor people live in highly risk-prone areas, for example city dwellings that are close to river banks, and experience regular flooding. Microinsurance can bridge the financial losses occurring and risks related to natural disasters, such as business disruption, the repair/cleaning of housing after a flood or increased health care expenditures incurred as a consequence of flood-related diseases (Wipf 2009; Loster 2009). It is, however, especially the long-term impact of microinsurance in helping to activate and restore peoples' self-help capacity which is considered of specific relevance in dealing with disaster risks.

Beyond the perspective of the individual household, microinsurance has also raised the interest of private, commercial insurers in international cooperation. Looking for new markets in low income countries and emerging economies and responding to an increased need for insurance as a coping strategy in a disaster context, private companies have become important stakeholders and partners in disaster risk management, providing technical expertise, knowledge and experience in insurance and marketing. Whereas German Technical Cooperation has initially been focusing on the development of microinsurance schemes in the health sector, microinsurance has also gained momentum as an instrument of disaster risk management in recent years (GTZ, 2002). In this context, the German Technical Cooperation (GTZ) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) has also sought cooperation with private commercial insurers and re-insurers in developing microinsurance products for catastrophic risks³. Seeking to combine both interests, i.e. increasing the market portfolio of insurance companies, while strengthening social protection by enhancing the capability of people to deal better with social and economic risks, public-private partnerships (PPPs) have proven beneficial for both sides.

³For a more detailed description on public-private cooperation within the German Development Cooperation see <http://www.gtz.de/en/leistungsangebote/2362.htm> (November 2 2009)

Focusing on the experience of two public-private partnerships that GTZ has been involved in, this article aims to discuss the role and impact PPPs can have in developing sound instruments of disaster risk management, as well as the challenges this instrument might face. The article is divided into three sections: the first part discusses some conceptual aspects of PPP in development cooperation and presents two case studies; the second part is concerned with the content of the projects and lessons learned with regard to implementation aspects. The focus of the article however, falls on the instrument of public-private partnerships itself, which is discussed in the third section. The dynamics and challenges that may evolve in this kind of partnership, especially concerning organisational and managerial aspects as well as success factors shall be highlighted.

2 PUBLIC PRIVATE PARTNERSHIP – A NEW TOOL OF DEVELOPMENT

The de-regulation of national economies and markets and the globalisation of international finance and business activities mainly through multi- or transnational corporations (TNCs) have significantly changed the role of private business in development cooperation. The involvement of the business sector in development rose enormously during the 1990s, largely in connection with the search for cheaper labour, modest social and environmental standards, and cheap material resources. At the same time, businesses were searching for promising entry-points and new markets in Africa, Asia and Latin America (for example Deacon 2007, Osborne, 2000). The increased role of private businesses in development has also to be viewed in the context of the overall reduction and decentralisation of government structures and functions in many developing countries, which were usually part of the overall privatisation policy. In the absence of functioning administrative structures, the private sector gained an increased role as “government gap filler” in providing social services and infrastructure development, thereby supplementing public service provisions (Miraftab, 2004; Khanom, 2009; Osborne, 2000).

These two developments also mark the framework within which public-private partnerships evolved as a new development arrangement: while they can take a myriad of forms and arrangements (see for example Osborne, 2009; Khanom 2009), public-private partnerships in a development context are characterised by a collaborative arrangement between the public and private sector working towards a commonly agreed objective – usually the production and/or delivery of public goods and services (Khanom, 2009: 6). Aiming at promoting development through maximising the benefits of both the private and the public sector, the comparative advantages and strengths of both sectors help to overcome each others’ weaknesses and create synergies that turn out to be beneficial for all partners involved, including the poor target population (for example World Bank 1999; Brinkerhoff and Brinkerhoff, 2002; Besley and Ghatak, 1999),.

The reasons for private partners becoming involved in partnerships with the public sector are normally twofold: while relaxed social, labour, and environmental standards are often considered a comparative advantage that makes investment in developing countries attractive, private businesses increasingly realise that the lack of social standards or social security schemes can turn out to be a major obstacle for long-term investments in developing countries. Corporate social responsibility with regard to improved social conditions in the country of investment may, in this respect, also be beneficial to the workforce employed, for example through increased access to health care or better labour standards (Deacon, 2007). Here, the know-how and expertise of public partners may be an advantage.

This type of self-imposed responsibility, however, is only one side of the coin. More often, it is pure business interest in what has been labelled the “bottom of the pyramid” or BoP-approach (Prahalad, 2004), which motivates companies to engage in partnerships with development partners. Using an economies of scale approach to reach the lower segment of the market in developing countries, the BoP approach argues for a stronger cooperation and combination of business and developmental interests in order to reduce poverty in a profitable way (*ibid.*).

Looking at the use of public-private partnerships as a development tool in German Technical Cooperation, both aspects can be found. While recognising the needs and interests of the private sector when investing in developing countries and emerging economies, German Development Cooperation perceives private businesses as an important strategic partner for poverty reduction which fits within its core-objectives. Especially in the fields of support of income and employment measures, the development of local economies, sustainable use of natural and other resources as well as the transfer of technologies, private companies are considered important development partners (BMZ, 2009). Private partners, in turn, usually seek cooperation with GTZ for reasons such as increased access and exploration of new markets, income gains, securing access to natural and human resources, quality of products, certification of production processes and corporate social responsibility (*ibid.*).

The identification of the comparative strengths of both sectors and, consequently, the assignment of respective roles and responsibilities seem to be a clear-cut endeavour, which – once fixed and negotiated – will run smoothly, as most of the literature on public-private partnerships seems to suggest (for a critical perspective see Besley and Ghatak 1999). However, experiences show that the failure to create positive synergies in public-private partnerships or win-win-situations cannot be reduced to technicalities or badly negotiated management and contractual arrangements. While a careful clarification of mutual interests and goals as well as human, financial, and technical capacities is indeed an important precondition for a PPP to succeed, the case studies below show that the social, political, and cultural contexts in which PPPs

take place and are implemented are of specific importance in understanding the dynamics of success and failure of PPPs. Furthermore, we will see that the inherent conflict of profit-driven interests of the private sector on the one hand, and welfare-driven interests of the state/community or development organisations on the other, provides a continuous challenge in public-private partnerships which requires specific attention. The important role of the state as a guarantor for a level playing field and mediator between private and public sector interests in order to ensure equitable access to public goods and services will be given specific attention (Miraftab, 2004).

2.1 Case Study I: Development of Disaster Risk Awareness Tool with Maipark

GTZ has been involved in two different partnerships with private business in the field of microinsurance for disaster risk management. Both projects have been implemented in Indonesia, one of the largest emerging economies in the world and at the same time a country that, due to its geographic location, is highly prone to natural disasters such as earthquakes, volcano eruptions, flooding and tsunamis.

The first PPP concerns a so-called integrated PPP, which has been developed in the context of a local GTZ project with a local private partner without the major involvement of GTZ headquarters. The cooperation was established between the Indonesian re-insurer PT Maipark – a risk re-insurance company covering earthquake, volcanic eruption and tsunami risks throughout Indonesia – and a local good governance GTZ programme engaged in the development of innovative policies and service delivery at the local and regional level in the context of the decentralisation process. One of the areas this programme is engaged in, is the development of disaster risk management plans at a local level.

The objective of the partnership was the development of training modules for better disaster risk perception and promotion of insurance as a mitigation tool. By building a “culture of prevention” (Heydel et al. 2007) through increased awareness, people were supposed to be encouraged to invest in preventive measures such as earthquake insurance. In this manner insurance penetration rates were meant to increase, thereby reducing people’s vulnerability and breaking the “cycle of poverty” that disaster can trigger.

The core of the PPP was the development and testing of a disaster risk awareness training tool for promoting disaster prevention through insurances and other measures. The training tool has been implemented in Bantul District, Central Java, a district highly prone to earthquakes. The tool was based on a manual for distribution as well as a training module for the trainers and contained eight different components, ranging from preventive measures such as earthquake-resistant buildings and the elaboration of evacuation plans, to

risk coping and mitigation strategies (What to do in case of an earthquake?) and post-disaster measures (Where can I get quick support after a disaster?). Insurance was given special consideration, particularly regarding insurance literacy, i.e. what is insurance, how does it function and what advantages does it provide?

The division of labour turned out to be quite easy in this case, mainly due to the fact that the number of partners involved was small and the project goal was rather simple. The local GTZ governance project provided its long-standing expertise on disaster risk management strategies for the development of sensitisation materials, including a comic and the Training of Trainers module. It also functioned as a door-opener to the potential target group in the region through its project structures that have previously been established. Maipark in turn offered the insurance product that had been adapted to the low-income market. Inserting the training material into a well developed network of insurers and organisations throughout Indonesia of which Maipark was a member, the disaster awareness training tool became widely distributed throughout the country, ensuring its sustainability in the long run.

2.2 Case Study II: MicroInsurance Products for Catastrophic Risks: Flood insurance in Jakarta with MunichRe

In 2007, GTZ entered a public-private partnership with MunichRe, one of the biggest re-insurers in the world. This PPP had a more complex and ambitious goal, i.e. the development of microinsurance products against catastrophic risks, including insurance services. On the basis of a need assessment and feasibility study on disaster microinsurance conducted in 2007 (Heydel et al. 2007), both organisations decided to develop a flood product to be offered in Jakarta.

Jakarta, the capital city of Indonesia, is highly prone to flood risks. Approximately 13 rivers flow through it. In addition, more than 40% of its topographical surface is below sea level. The combination of deforestation in the upper catchments of the rivers and the lack of adequate flood prevention measures, e.g. drainage, lead to a situation where floods are easily triggered by heavy rain and the moon cycle (ProFI 2009). The last major floods took place in 2002 and 2007, inundating a vast area in Jakarta Province flooding more than 70,000 houses and forcing more than 420,000 people to migrate. A large number of people were hospitalized due to flood-related illnesses such as upper respiratory tract infections, diarrhoea and dengue fever. Among the various social groups, low income households suffered the strongest impact of the flood. Most of them had to relocate. Additionally, as the majority of low-income households work in the informal sector, the opportunity of generating income was lost due to the interruption of business activities.

The insurance product which has been developed jointly by MunichRe and

GTZ is a so-called index or trigger-based product. Contrary to indemnity products, where the amount of benefit is calculated at the time of the loss, trigger-based products set the amount of benefit before-hand by deciding on a specific trigger upon which a specified amount of benefit is being paid out. The “Kartu Perlindungan Banjir Manggarai Siaga Satu” or “Alert 1 Manggarai Protection Card” (as the policy is called) is correlated to a 9.5 meter water level at the Manggarai Flood Gate in Central Jakarta. When the flood reaches this 9.5m mark, every policy holder receives a pre-determined claim payout. In the case of the flood product, this payout is five times the premium paid by the insured. This trigger-based type of insurance contract allows the product to become cheaper, since it is easier to handle than traditional indemnity-based products, where the amount of claim pay-out is related to the specific damage incurred. In the case of a trigger-based product, every policy holder receives the same pay-out, irrespective of the individual damage that has occurred. This allows for very easy, fast and less bureaucratic claims pay-out, as the process of claiming damage, assessing its extent and controlling (whether it really has occurred) is not necessary. Fast pay-out modalities are of specific importance in a post-disaster situation, where people are dependent on swift and non-bureaucratic support.

The first step in the product development was a comprehensive needs assessment and feasibility study in several districts of Indonesia, jointly undertaken by MunichRe and GTZ. Based on the results of the study and the discussions that followed, a pilot region was selected. The selection of the pilot region was based on the identified risk, availability of geostatic data that would allow for a thorough and sound product development, and the availability of appropriate delivery channels.

The technical design of the product has largely been done by MunichRe, who, with an index-based product, chose a very innovative approach to a lot of ‘old’ challenges in disaster risk management insurance products. In fact, the trigger-based microinsurance flood product is the first one of its type in the world. Munich Re also provided the geostatic data, the availability of which usually provides a major challenge to the development of insurance products in low-income countries, both in terms of risk calculation and adequate pricing. In contrast to other low-income countries, for Jakarta this has not been the case: accurate records of water levels had been kept for years, which made the product easy to price (Wipf, 2009).

Additional microinsurance expertise was provided by the target group itself through a participatory product development approach led by GTZ, which was quite new for both, MunichRe and its local insurance partner Wahana Tata. In the context of focus group meetings the product was presented and openly discussed with the future potential target group in order to test the acceptance of the product and/or identify major gaps for improvement. This process was repeated with potential additional partners and delivery structures,

such as international donors and NGOs working in disaster risk management in Indonesia.

Training and awareness provided another major part of the activities. An insurance literacy comic has been developed by GTZ and trainers who organised sensitization workshops on microinsurance as an innovative disaster risk management tool were trained. These trainings also included sensitization on insurance in general. The actual marketing of the product itself has been developed by Wahana Tata. Marketing and local sales agents were trained, who organised marketing events in the pilot areas subsequent to the awareness raising events.

The product was launched in May 2009 in particularly flood-prone areas in Jakarta. Wahana Tata was responsible for marketing the product, which included the training of sales agents, who are also in charge of the claims process and payment service in cases where the trigger is reached.

As delivery channels, the local mayors and heads of local community development committees have been identified. Being responsible for communal disaster risk management in case of flooding, and due to their high political position in the community, they appeared to be ideal selling partners. However, as will be discussed in more detail below, distribution channels are continuously being adapted.

The product is now being tested for one year (May 2009 to April 2010). After an evaluation of the experiences during the pilot phase and possible modifications and adjustments, a roll-out of the product is planned to other areas.

3 THE RATIONALE FOR A PUBLIC-PRIVATE PARTNERSHIP: INTERESTS, CAPABILITIES AND COMPLEMENTARITIES

A public-private partnership (PPP) should rank better than each partner would on its own in regard to the interests to be pursued. Consequently, looking at PPPs in terms of their added value for the achievement of mutual and individual interests is a necessary precondition for the establishment of such a partnership. This is also important in order to do away with false expectations.

The rationale for GTZ to engage in the partnership with MunichRe was the flood product's potential to operate as an important tool for social protection and poverty reduction, since microinsurance gains increasing relevance as a risk management tool in a disaster context. Additionally, while GTZ can lean on a consolidated experience in microinsurance related to health risks (Huber et al., 2005), providing insurance to protect people against the economic and social shortfalls as a consequence of natural hazards is a relatively new field of action for the organisation. This was also a major consideration for entering into a partnership with MunichRe, one of the biggest re-insurers in the world and a major global player in insuring disaster risks. Apart from

the underwriting which is taken over by the re-insurer, the most important competitive advantage of MunichRe was its vast expertise in the development of disaster insurance products, including the availability of geostatic data to develop and price a product adequately. Although MunichRe's experience with the instrument of microinsurance was rather limited, its long-standing experience in the field of disaster risk management provided a vast resource potential for innovative solutions from which the product development and product design in fact profited greatly. Finally, MunichRe opened the door for GTZ to the local insurance market. Wahana Tata, a local insurer MunichRe already had working relations with for years in the normal insurance business, was identified. Besides sharing the underwriting risk for the product, Wahana Tata is responsible for the promotion and marketing of the product as well as insurance service delivery.

For Munich Re, the reason for entering the partnership with GTZ was mainly related to the interest of accessing yet "untapped" markets in developing countries, and in relation to this the testing of new innovative product ideas, such as disaster microinsurance. GTZ's technical expertise and experience in terms of development and delivery of microinsurance schemes, and its knowledge of and expertise in accessing the target group and the local market provided in this respect important assets for MunichRe. The PPP is being implemented by the local GTZ programme 'Promotion of Small Financial Institutions (ProFI)', which, at the inception phase of the PPP, had already been running for more than five years. ProFI aims at a stronger integration of poor households and small enterprises into the financial system. It supports the Indonesian central bank and other microfinance interest groups at the national level, in provinces and municipalities by developing directives, strategies and regulatory frameworks for small scale financial institutions. Through institutional development and staff training the programme promotes the development of local financial systems and networks, enabling microfinance institutions to provide more financial services. These large networks of microfinance institutions comprising a few thousand people, provided a potentially interested target group for the insurance product – all the more since clients of microfinance services had already been sensitised to financial products and would be more prone to accept insurance as a new innovative risk management strategy.

Furthermore, MunichRe was interested in sharing the risks of the financial and human resource costs of entering a new, high-potential but unknown "market" with a partner who already had experience in working there. The technical know-how of GTZ and ProFI in developing micro-credit and microinsurance products and their experience in implementation, particularly in regard to service delivery as well as awareness and sensitisation aspects, were perceived as important assets on the part of MunichRe for the development of a sound product. Moreover, the fact that GTZ as a public institution works very closely with local governance structures was advantageous in the context of the

PPP, particularly the necessary licensing of the product and the government's interest in microinsurance as a complementary disaster risk management strategy.

In the case of the PPP on disaster awareness training with Maipark, the content of the training tool developed by both partners reflects the complementarities of private and public interests in a nutshell: GTZ's interests were mainly focused on increasing awareness and disaster risk perception for geo-risks among the civil society, which in turn should encourage people to actively protect themselves against risks and change their chain of activities. In this way, the hope was also to increase the active participation of the local population in the development and implementation of local disaster risk management plans. Maipark's interests were geared towards the marketing effect of such a training in order to promote its insurance product and to increase insurance coverage in the target area.

3.1 Success Factors and Major Lessons Learned: The Implementation Level

Public-private partnerships seem to provide a highly attractive and innovative solution for tackling specific development challenges, particularly in regard to their realisation, which appears to be quite plain and simple: complementary interests and comparative advantages and strengths in terms of financial and human resources, know-how and expertise meet to achieve a certain outcome or expected impact, they are added up, and success is guaranteed. Reality is often much more complex and dynamic: people in charge may change, as may the responsibilities and the actual priorities of the partners involved. In addition, PPPs are embedded in various – often highly dynamic and volatile – social, political and institutional settings, which strongly influence its outcomes and success (Paye and Nasser 2007; Khanom 2009).

Rather than categorically accept or reject PPPs, *“one must ask under what political, social and economic conditions and institutional environments, and with what processes, can PPPs succeed or fail as synergistic relationships that benefit all partners, including poor populations and their allied organisations?”* (Miraftab 2004: 91). Against this background, the following sections present major success factors and lessons learned in regard to the content of the product and the public-private partnership as a development tool in a disaster risk management context.

3.1.1 Risk Assessment and Awareness Study

A feasibility study and needs assessment of microinsurance is usually the first step in a microinsurance programme cycle. This was also the case with the described project between GTZ and MunichRe. A broad feasibility study encompassing various regions in Indonesia and involving three consultants for a period of three months was commissioned by GTZ and MunichRe. Although

the study provided valuable results for the selection of the risk for which a product was developed, the selection of the pilot region and the selection of the insurance type (the index-based insurance product), it was not able to provide a response to other challenges that arose. Specifically, these were the availability of reliable geostatic data, a sufficiently dense network of delivery channels with a certain level of expertise in financial and/or insurance literacy, and a sufficiently high demand on the part of the target population for the future product. Whereas all of these aspects had been addressed individually for the pre-selection of the potential pilot regions where the feasibility study took place, little consideration was given to these aspects in their entirety. Addressing those issues in advance would have avoided a lot of additional work. It would have also allowed to get more clarity about what seemed comparative advantages at first, but turned out to be of no use when it came to implementation, such as access by GTZ to a broad based MFI network for delivering the product which did however not cover the area which finally has been chosen as the pilot site. Rather than starting off with a feasibility study in pilot areas, the selection of which were based on very broad criteria, future feasibility studies would therefore need to focus much more on these aspects as additional selection criteria for choosing potential pilot regions. Only then should in-depth feasibility studies be carried out. This would significantly save costs and time and also allow a much more accurate picture of potential risks and opportunities for the product implementation to be obtained. In this way, additional challenges such as the need to look for alternative delivery channels, which still have to be trained – as has been the case in the current pilot project – could be largely avoided or better anticipated.

Another important lesson learned is that a public-private partnership needs to incorporate the wider institutional setting in which it develops and delivers its products right from the start. This includes potential cooperation partners such as local NGOs, additional microfinance networks or international cooperation partners, and local governance structures. The incorporation of these partners, their expertise and know-how in the field of disaster risk management programmes from the beginning would have provided important additional assets, both in regard to the product development (feedback) and for the future scaling up process of the product.

3.1.2 Delivery Channels

The availability of delivery channels is crucial for the success of a microinsurance product. In the partnership with MunichRe the identification of delivery channels was mainly done by GTZ. Traditionally, microfinance institutions (MFI) with a broad and dense network structure in place are ideal delivery channels for microinsurance products, since they are also experienced in selling financial services. Furthermore, in this case, the local GTZ microfinance programme which served as the implementing agent, already had close contacts

with partner organisations through their other project activities, thus providing an ideal entry point for the promotion of a flood insurance product. However, this comparative advantage turned out to be largely insignificant in the implementation phase. In the absence of an adequate network of MFIs in the selected pilot region, alternative structures had to be identified. While the local mayors and heads of development committees in the small townships appear to be highly motivated sales agents and have a strong ownership of the product, the “market potential” they represent is much smaller than the large microfinance networks would have been.

This example shows that not all types of delivery channels are suitable. It is therefore important to ensure, already in the assessment phase, whether identified delivery channels have the potential geographic outreach in order for the product to be widely disseminated within the pilot region. This consideration concerns not only the pilot phase. From the very beginning, a potential scaling up of the product to other regions, and therefore the need for a broader network of delivery channels, should be taken into account. At the same time, it is important to ensure that delivery channels have the necessary managerial and overall capacity to disseminate such a product. If this is not the case, capacity development through additional trainings needs to be provided. Local training institutions can play a crucial role, especially in regard to the scaling up process. They may have an important multiplier role concerning awareness and insurance literacy (Krippner, 2009).

3.1.3 Product Development

One of the major success factors of the project is the innovative potential of the product, which could only be realised through the combined effort and expertise of public and private partners. On the one hand this concerns the index-based type of product and, on the other, the development process of the product which closely involved the potential target groups right from the start.

Still, major lessons can be learned: participatory product development needs to start with the assessment phase, where initial ideas for the risks to be insured and the product design itself are collected. For an attractive product to be developed that will, in the end, be bought by the target population, the demand for a risk management instrument needs to be checked against the actual need for such a product already in the assessment phase. People might find protection against the recurrent floods very attractive and naturally prioritise them. However, in the end it might turn out that other products covering different risks or risk situations and/or a different product design may have a higher mitigation impact than those claimed by the target population.

The participatory involvement of the target population as well as the delivery channels in the design process is also of specific importance in order to ensure that (1) the pricing is such that the product is financially sustainable and at

the same time provides a useful protection mechanism for the population; (2) that a demand in buying this product really exists; and (3) that the product also covers the need and interests of the delivery channels. A microfinance institution may, for example, be less interested in a flood insurance product that covers the individual clients, but not their loan portfolio (Krippner, 2009).

While the target population has been involved extensively in the product development process, it would have been advisable to also include the primary insurer from the beginning in order to create a stronger degree of ownership and motivation. This would have also allowed better use to be made of the intimate knowledge that the partner had of the local insurance market and institutional context which both GTZ and MunichRe were lacking and which would have facilitated the implementation process in many ways.

3.1.4 Awareness and Public Campaigns / Political Dialogue

Sensitisation and awareness, particularly in regard to understanding innovative products such as index-based microinsurance are important for a successful implementation.

In many developing countries the concept of insurance as an individual risk management strategy is not widespread among the population. Poorer people, especially, do not see a benefit in paying in advance for a risk that might occur once in a lifetime or never, particularly in the face of their own limited resources and often highly volatile income sources. Increasing insurance literacy by providing information on how insurance works and why it can be an important risk management instrument is therefore key. By enabling people to identify the quality and usefulness of a product, insurance awareness campaigns also have an important function of educating consumers. This is of specific importance in countries like Indonesia where insurance has a very bad reputation, being linked to incidences of corruption and fraud or delayed or refused pay-outs. In contrast to the first project where GTZ and Maipark, the local insurer, carried out the sensitization campaigns together, awareness and sensitization were completely separated from the marketing and promotion campaign for the actual insurance flood product in the Munich Re cooperation. With the separation of both processes, it was hoped that interested people would not feel pressurised to buy the product, but rather empowered in being able to decide for themselves based on their newly acquired knowledge on insurance as a risk management strategy, particularly in the context of the recurrent flood risks.

Furthermore, awareness campaigns need to go beyond the target population, involving the whole public sphere by including the local political setting as well as public opinion through transparent and timely provision of information. Product approval for flood microinsurance in Jakarta through the insurance commission turned out to be a lengthy process. This was mainly due to the fact that microinsurance was a very new concept to them, particularly index-based

products, for which no other comparable product yet existed. This required a lot of awareness building on the part of both partners, GTZ and MunichRe, to explain the type of product and the way it functions.

It is equally vital to involve government bodies working in the field of microinsurance and disaster risk management. They may prove to be important strategic partners for future cooperation, guaranteeing an integration of the project into a wider policy framework and ensuring that goods and services developed continue to be accessible to the public. In the present case, this means an integration of flood microinsurance into a public disaster risk management.

3.2 Success Factors and Major Lessons Learned: The Organisational Level

There is strong criticism that too often the debate around public-private partnerships is reduced to questions of technical planning and execution (for example Miraftab, 2004). While this criticism is justified, experiences show that a well developed project design and management structure is, however, equally important for PPPs to function well. This also includes the provision of sufficient financial and human resources in order to be able to manage and implement such programs in an effective and efficient way.

3.2.1 PPPs as a Multi-Stakeholder Endeavour: The Need for a Clear Division of Labour

As has already been mentioned, public private partnerships seldom involve merely two partners. Usually a public-private partnership reveals an extensive network, encompassing a series of actors who, in part, have their own secondary interests to consider and which are not necessarily related to the outcome of the project. This broader institutional environment and the political and administrative culture within which these PPPs are implemented should not be underestimated (Khanom 2009; Payne and Nassar 2007)

For one, it usually extends far into the organisational landscape of the cooperating partners and encompasses a variety of different units and organisations within them (vertical slice). Even if one only focuses on the two main cooperating partners, already a myriad of different organisational units are involved. In the case under review this meant both organisations' headquarters on the one hand, where strategic decisions are taken, and, on the other, the implementing units on the local level – the local GTZ governance project and the local insurance partner of MunichRe. If there is not a strong and effective communication flow between the central and local level and if the debate on strategic decisions does not involve the local structures, tensions may rise which could subsequently hamper the success of the project. This particularly concerns the degree of ownership of the PPP at the local level. Tensions usually also center around the knowledge gap between what is desirable and what can

actually be realised at the local level.

In addition, expectations might be too high at the central level regarding the number of activities the local structures have to get involved in. It is therefore extremely important to consider the context in which a PPP is taking place. In most cases it is hardly a stand-alone endeavour with a separate organisational structure and an adequate human and financial resource base. More often such initiatives are embedded in the overall project structure and the daily business of a company or a development project. This means that PPPs are usually an additional task to day-to-day business, involving a lot of additional work and administrative processes. To ensure that the project runs smoothly with motivated personnel, it is therefore important to provide an adequate financial and human resource base.

Going beyond the institutional setting of the primary public and private partners and looking into the wider environment in which PPPs are embedded, there are a lot of additional actors and institutions involved (horizontal slice). For MunichRe these necessary partners were (1) a primary insurer with an Indonesian license who would be able to sell the product; (2) distribution channels that had to be identified and trained; (3) and finally, government structures, such as the insurance commission to license the product. All three were crucial for the realisation of the project. However, as was already mentioned, the local insurer was, especially in the beginning, not properly integrated into the process. The partnership was then extended into a triangular relationship, which found its expression in regular meetings at the local level between the primary insurer and the GTZ implementation structure as well as a closer cooperation between MunichRe and the former. Only then was it possible for Wahana Tata to act more effectively and assume full ownership.

The full integration of other important additional stakeholders – also formally through a contractual arrangement or a memorandum of understanding – is therefore crucial for a smooth and sustainable partnership. This holds true not only for relatively simple projects, such as the insurance awareness project with Maipark which only involved two additional partners (local government structures and the Indonesian insurers' network), but especially highly complex structures like the MunichRe project. In order to organise such a complex project structure, which at the outset of the project might not be assessable and within which a division of labour might not be that simple, operational planning involving all the relevant stakeholders seems to be a good approach which will provide a clear vision of the respective roles and responsibilities. Given the complex and highly volatile settings in which PPPs usually take place, such a planning process would need to be repeated from time to time in order to take account of the project dynamics and new developments as well as to make sure that common project goals set out at the beginning are still commonly owned.

3.2.2 Putting Public Private Partnership in a Public Context

PPPs do not exist in a political or contextual vacuum but are embedded in a broader social, political, and ideological context that needs to be taken into consideration (see for example Besley and Ghatak, 1999). In many countries Disaster Risk Management has become a highly politicized issue, as the increasing occurrence of disasters and required protection by the population put governments under pressure to act. At the same time, the topic also ranks high on the international development agenda and in the insurance business industry.

In such a highly competitive and politicized environment, the synergies that might be achieved through public private initiatives in regard to both improved disaster risk management and increasing business opportunities for private partners, might easily get lost or result in an imbalance between public and private interests. Integrating public private partnerships into broader policy processes or frameworks, such as national disaster risk management or social protection frameworks and regulations, is therefore important. Otherwise they remain stand-alone initiatives with no sustainability on either end. Development partners are usually working closely with a partner country's governance structures, for example through an advisory role regarding policy development for risk management. Hence they have a key role in creating such interlinkages, even to the extent of creating additional business potential for the private market within overall public risk management strategies in the partner country, such as was also envisaged with the MunichRe project. The integration of PPPs into public policy processes is also important in ensuring that both business and public interests are guaranteed. In particular, the welfare aspect of sustained and equitable access to goods and services for the whole society, including the poor and marginalised, has to be insured.

The disaster risk training programme that has been developed together with Maipark shows how the involvement in a public context creates a long-term impact on both sides – albeit different than expected at the outset. GTZ's aim was to raise awareness of risk perception among the population. The close integration of the PPP's activities into government disaster risk management policies increased ownership of the programme with the local government actors and credibility within the local population. Furthermore, this guaranteed the sustainability of the project beyond the timeframe of the PPP. Through the partnership with local governments and the awareness campaigns, Maipark was able to improve its business image. Although an impact evaluation has shown that the sales rates for the actual disaster product did not improve enormously, this still had an important spillover effect in their normal day to day business.

3.2.3 Taking Advantage of Capabilities and Readiness to Learn

Sharing expertise, knowledge and experiences in order to overcome apparent weaknesses of the respective partners in achieving a development goal is a key aspect of public-private partnerships in development (Khanom, 2009). Therefore, taking advantage of the capabilities and capacities of the different actors involved and looking into how they can best be combined is important. This involves a strong readiness to learn, recognise and accept weaknesses, which requires creating a relationship of trust and mutual recognition. This may turn out to be challenging, especially between public and private partners with different ideologies and administrative and organisational “cultures”. The need for mutual recognition becomes specifically relevant when it comes to partners with a lesser “voice”, such as the poor target groups. Comparative advantages of their knowledge and expertise might not be immediately realised or valued to the extent necessary by each partner. A participatory product approach as was chosen for the development of the flood product in Jakarta, for example, involved continuous interaction with the target population in order to discuss the product drafts at its different stages. This was something completely new to the commercial private partner MunichRe and was, in the beginning, perceived somewhat as a delay of the project progress. The importance of integrating this information into the development of a good quality product that fits the needs and is useful to the target population was only realised after a while and, in the end, provided a lot of valuable insights for the final product development.

3.2.4 The fine line between business interest and development goals

What is described here as the fine line between business interest and development goals possibly constitutes the most difficult challenge of PPPs. Although business and welfare interests are often in an inherent conflict, public-private partnerships are expected to bring them together in the most complementary way, creating synergies that should ideally reflect a perfect balance. Reality is of course more complex. Usually, many more interests are at stake that may go far beyond the actual project for which the partners have joined hands. These often divergent interests may even be found within the partners’ own structures and have a negative impact on the project outcomes.

One example for these competing interests is the expectation expressed by MunichRe that GTZ would take over the marketing of the flood product in Jakarta. The wide training experience of GTZ in social marketing would indeed have provided the ideal expertise that Wahana Tata needed to promote such a product to a hitherto unknown target group. However, for GTZ the main aim was to raise insurance awareness and literacy among the target population without promoting a specific product. The latter would run counter to GTZ’s

principle not to promote the core business of its private partners in a public-private partnership (GTZ 2008).

This example shows that, although in principle the mutual interests may seem clear, public and private interests are more complex and the partners' intentions blurred when being applied to specific project activities and a specific context. It is therefore very important to define interests, expectations and aims of the different actors involved in the project as clearly as possible from the beginning. Furthermore, it is important to realise that such a process is dynamic and needs to be re-negotiated in the course of the project cycle, as priorities might change or new activities that have not been considered in the beginning, become necessary. This in turn can only be achieved if a continuous communication process is established which involves all actors and which are allocated enough time and resources.

4 CONCLUSIONS

Private partners are an important strategic ally for international cooperation in the field of risk management. Providing additional financial resources, know-how and expertise for the development of preventive or protective measures, private industries can play a key role in complementing public efforts by boosting its impact or providing innovative solutions to developmental problems. Examples are the disaster risk perception training and the increased coverage of risk mitigation and protection tools that have been presented in this article.

Yet one should be careful to not overestimate the role and results, or to oversimplify the functioning of public private partnerships. The case studies discussed above illustrate that PPPs are very complex endeavours. This is all the more the case, if activities involve various partners and if these partners are located in geographically different and often distant areas. Furthermore, it appears that within PPPs particular attention needs to be paid both to implementation and managerial levels. Investing enough time in planning and development seems to be of utmost importance. Communication and readiness to learn as the project continues are additional key factors for a successful partnership.

The involvement of all actors in the process is essential for the success of a public private partnership. In particular this concerns the participation of the target group, which is often forgotten as they are not directly involved in the project activities at the planning stage. However, as the example of the flood microinsurance in Jakarta shows, their interests, needs and know-how are of utmost importance if a PPP wants to succeed in providing adequate and affordable services, which are accessible to all and, at the same time, guarantee economic success.

However, the entire outcome of a PPP cannot be attributed to the technicalities of planning. The social, economic, and political context, as well as the institutional and ideological settings in which project partners are embedded, have a significant impact on the degree of ownership of project partners, their readiness to engage in project activities and finally the project outcome. A careful review of the larger institutional and socio-political environment is therefore crucial to ensure that the specific needs, aims and expectations of the different partners are taken into account to develop a successful and sustainable partnership.

This article has provided some insight into the preconditions of how joint efforts by public and private partners can have a positive impact on and improve the expansion of public services. In order to guarantee sustained access to these goods and services and to ensure their quality, the integration of PPPs in a wider public context appears to be important. This means, for example, the integration of the project into a legal framework or, for the specific cases presented above, into a public policy framework for disaster risk management.

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Resilience Against Disasters and Microinsurance – Managing Urban Risks in Jakarta

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ABSTRACT: The perceived increase of major disasters over the last years combined with the expected negative impact of climate change put disasters in the focus of topical interest. Low-income households are portrayed as being particularly vulnerable against disaster risks, as they are apparently forced to settle in hazardous locations and they often lack in economic resources to cope with disaster impacts. Against this background, microinsurance is widely recognized as an important instrument to sustainably manage disaster risks and to cushion the potential impact of climate change. However, empirical data on the situation of low-income households in Jakarta shows that resilience is a major factor that influences vulnerability in a positive way. Although city dwellers live in hazardous locations and face regular floods, people have developed the capacity to cope with risks and adapt to a changing environment. The core of local resilience is mainly reflected in collective strategies that allow communities to compensate the lack of financial resources. In this context, it can be assumed that after a major disaster microinsurance has a positive impact on the availability of financial resources on a household level. However, it also becomes apparent that a sole focus on microinsurance might run counter to collective strategies and thus weaken resilience against disasters on a community level.

KEYWORDS: Community Resilience, Disaster Microinsurance, Jakarta / Indonesia

1 INTRODUCTION: THE SHIFT IN PARADIGM IN DISASTER MANAGEMENT

A series of major disasters have occurred over the past decade: the Indian Ocean Tsunami in 2004, Hurricane Katrina in 2005, the Yogyakarta Earthquake in 2006, Winter Storm Kyrill in Europe 2007, the Sichuan Earthquake in 2008 and the Earthquake in Italy in 2009, just to name a few. These disasters are of different origin and have happened in different parts of the globe. They also caused considerable economic damage and claimed thousands

of lives. Given the high frequency and severe impact of disasters in the last decades, it is often debated whether disasters occur more frequently today than in the past (e.g. Zenklusen 2007: 6, Bankoff 2003: 5, Burton et al. 1993: 11). However, there can be no conclusions drawn from these debates since virtually no comprehensive historical statistics on disasters and their impacts exist. Yet a good source for data on disasters is the insurance industry since insurance companies have assessed major disasters and their impacts for the last six decades.

The insurance industry provides, for example, statistics that indicate a significant increase of insured losses due to “natural” disasters over the last 30-50 years. However, an increase of insured losses does not necessarily indicate an increase of disaster events or intensity of disasters. Increasing population densities, increasing assets located in hazard zones and increasing insurance densities contribute to this trend. It is easy to imagine that a flood happening in colonial Batavia in the early 20th century (around 115,000 inhabitants) would have had a different impact than a similar flood that could happen in the early 21st century in the mega-urban region around Jakarta (24 million inhabitants). The transformation from colonial Batavia to a mega-urban region shows that urbanization led to bigger population numbers and a higher population density, which again results in bigger impacts of comparable disaster events. As a consequence, the discussion on increasing numbers of disasters can be contested. The increasing impact of disasters on societies in terms of financial losses and casualties, however, seems to be unambiguous (Bankoff 2003: 5). In addition to that, current discourses on the consequences of climate change point out that the frequency of extreme events are expected to increase in the future. Thus, the impact of disasters in the last decade and the discussion on the future impact of climate change place the focus of topical interest squarely on disaster risk management (Munich Re 2006: 12-17, Zimmerli 2003: 8-9, IPCC 2001: 421).

In a global comparison, disaster impacts do not seem to be equally distributed. Less developed countries are considered to suffer more from disasters and potential consequences of climate change. The IPCC states that “developing countries tend to have greater vulnerability and less adaptive capacity than developed countries” (IPCC 2001: 441). A range of factors such as limited economic resources are listed to justify a higher vulnerability of less developed countries. But even within less developed countries it is observed that impacts and costs of disasters are not shared equally by a society. In particular, the poor seem to suffer most from disaster impacts for reasons that can be related to, for example, the physical environment in which the poor live and their specific socio-economic situation. On the one hand, it is observed that the poor experience disasters frequently because they are forced to settle in marginalized locations that are prone to hazards of various types. On the other hand, they barely have access to economic resources to cope with the impact of disasters, such as insurance. It is also argued that the poor increase their

own vulnerability as they are forced to degrade their environment in order to make a living (Adger 2003: 388, Bankoff 2003: 91-103, IPCC 2001: 441, Zaman 1999: 194).

Vulnerability studies aim to measure a society's degree of vulnerability to disasters. Early studies tried to identify indicators that influence vulnerability. For low-income people, it is/was often explained by economic factors or the probability of certain risks (Bankoff 2003: 16-17, Hewitt 1997: 167). Against this background, reducing vulnerability became the prime objective in any disaster management strategy. Technical instruments, such as early warning systems, were seen as a solution to reduce such risks. However, from this viewpoint, the poor are regarded as passive victims as they seem to be completely at the mercy of disasters. In contrast to that view, contemporary studies on vulnerability point out that societies developed coping strategies and capacities to adapt to a changing environment over time. Hereby it is suggested that vulnerability shouldn't solely reflect negative factors, but also positive ones. In current studies on vulnerability, these positive factors are summarized under the term *resilience* and integrated into the concept of vulnerability (see Turner 2003). Resilience can be defined as "the capacity of a system to experience shocks while retaining essentially the same functions, structure, feedbacks, and therefore identity" (Walker 2006: 7). From a resilience perspective, it is emphasized that some societies develop capabilities to absorb shocks and capacities to adjust to a changing environment and thus reduce their vulnerability to disasters. This shift from a risk-centered approach to resilience has also influenced disaster risk management on a practical level. Actors in disaster risk management currently do not focus solely on disaster risk reduction, but also aim at strengthening resilience of societies (Voss 2009, Adger 2006: 268-269, Walker 2006: 7, Adger et al. 2003: 186, Turner 2003: 8075).

While identifying new strategies for integrated disaster management in less developed countries, access to insurance solutions for low-income households is being increasingly discussed (Munich Re 2008, Mechler et al. 2006, Bankoff 2003: 91, Gunderson et al. 2002: 263, IPCC 2001). With this paper I would like to contribute to a better understanding of the roles of (micro-) insurance in disaster management, its contribution to more resilient societies and its limitations. In what follows, I will first describe the general role of (micro-)insurance in disaster risk management. Subsequently, I will present the vulnerability and resilience situation low-income people face in the mega-urban context of Jakarta. The data I present in this chapter is part of my Ph.D. research on low-income neighborhoods in the inner-city area of Jakarta. I mainly used the method of participatory observation to collect data in two different neighborhoods over a period of six months. In the final chapter, I will briefly summarize the role of microinsurance for more resilient societies based on the findings of my research at the local level.

2 THE ROLE OF (MICRO-) INSURANCE IN DISASTER RISK MANAGEMENT

For the year 2008, careful estimations assume that worldwide disasters claimed 240,500 lives and financial losses resulting from disasters amounted to USD 269 billion. Thereof, the share of insured losses totaled USD 52.5 billion. A closer look at the geographic location of disaster events unveils the regional differences behind these figures. In 2008, around 98% of disaster victims were claimed in Asia. In three disasters alone – cyclone Nagis in Myanmar, the Sichuan earthquake in China and typhoon Fengshen in the Philippines – the death toll reached 228,400. In contrast to the high number of casualties, Asia contributed to only 6% of insured losses due to natural disasters. The majority of insurance claims were related to hurricanes, tornados and thunderstorms in the US and winter storms in Europe. The regional discrepancy between casualties and insured losses that were observed in 2008 is in line with long-term trends. Since 1950, 80% of the fatalities have been registered in Asia according to statistics provided by the insurance industry. However, Asia only contributes a 10% share to the insured losses over the same time. This discrepancy can be explained by the high concentration of economic values in more developed countries such as the US and countries in Europe. It can be further observed that the insurance density in Asia's less developed countries is still very low (Swiss Re 2009: 3 and 8, Munich Re 2008: 45-48, Freeman 2002: 2, IPCC 2001: 42). Since most statistics on financial and insured losses are published by the insurance industry, one has to be aware of a possible bias. Yet, the generally high frequency of disasters and the low insurance density in less developed countries in Asia might raise the question of how people respond to disasters in the absence of insurance and what role insurance plays in general when it comes to disaster risk management.

In less developed countries, disaster losses are, for the most part, borne by individuals and the state (Kreimer et al. 2000: 4). If a society is regarded as being unable to cope with disaster impacts on an individual basis, various actors enter the disaster management cycle. First of all, governments in less developed countries often act as an informal "insurer" of uninsured losses by providing governmental support during the phases of emergency response and recovery, such as services provided by the military or police. Under certain circumstances, national governments might be unable to sufficiently cope with the impact of a disaster. In this context, Freeman (2000: 39) introduces the term "natural-hazard-resource gap" to describe the inability of a state to finance post-disaster reconstruction. When disaster losses exceed the ability of a government to fulfill its obligations, international and non-governmental organizations, such as the International Federation of Red Cross and Red Crescent Societies or the World Bank, tend to be asked for support in disaster response and/or recovery. Therefore, international organizations act as an informal "reinsurer" of last resort (IPCC 2001: 441, Burton and Kates 1993: 190-192). However, governments and disaster victims cannot rely on external

aid, as international organizations are not always able to step in. “Donor fatigue” is used in this context to describe the situation where unchanging donor funds are not sufficient to cover an ever increasing amount of disaster losses (Bankoff 2003: 88). In a few cases, international organizations are even prevented from becoming active, although resources are available. This could be observed, for instance, when international organizations were not allowed to enter Myanmar in the aftermath of cyclone Nagis.

The discussion on the limited capacity of national governments¹ and international organizations in managing disasters, particularly in the recovery phase, seems to be mainly a question of available funds. Shifting risks from individuals and governments to the private market is discussed as a possible solution to overcome the resource gap (Freeman 2000, Pierro and Desai). Linking poverty reduction with disaster risk management is seen as another solution, since increasing the resilience of poor households against disaster risks as part of regular development projects is expected to prevent the poor from falling deeper into poverty following major disasters (see Schmidt et al. 2005). Learning from the experience of more developed countries where insurance emerged as one of the most prominent instruments to manage risks, insurance is also seen as a promising instrument to manage disaster risk in less developed countries. Insurance is on the one hand strengthening the available financial resources on a household level directly after a disaster happens, on the other, it is an instrument that allows a risk transfer to the private market (Hoogeveen 2000, Kreimer et al. 2000: 4).

There is a tendency that the private sector is increasingly being asked to share responsibility for achieving development policy goals (see GTZ). This new role of the private sector led to several public private partnerships (PPP) between public and private actors. As part of the PPPs on microinsurance, insurance as well as reinsurance companies, together with development organizations, are aiming at providing access to insurance schemes for low-income households. Within the development discourse, microinsurance is also discussed in the context of disaster risk management: first, individualized insurance cover is recognized as an important instrument to sustainably manage disaster risks in more developed countries. Second, insurance schemes are currently considered as being an important solution to cushion potential impacts of climate change. Third, the international donor community will face difficulties in financing emergency response and disaster recovery programs, as disasters are expected to increase over the next decades. In this context disaster microinsurance is discussed as an alternative solution. And finally, microinsurance is seen as an offspring of the microfinance movement which is considered a success in development cooperation (Hppe 2006: 13-14, Mechler et al. 2006: 5, Adger

¹The role of the government will not be subject to further discussion in this paper. Nevertheless, one has to be aware of the fact that governments play a crucial role in disaster management and some disaster insurance schemes already transfer disaster risk from national governments to the insurance industry.

2003: 399, Bankoff 2003: 91-92, Gunderson et al. 2002: 286, Hoffman 1999: 144).

However, insurance cannot be seen as a panacea. Insurance schemes are complex and face several technical challenges ranging from issues such as actuarial calculation, claims handling, distribution/outreach to lean, back office administration. Moreover, insurance schemes can create difficulties for both insurance companies and policy holders when, for example, insurance schemes are not priced adequately or when policy holders are not aware of exclusions in their insurance products (Hoffmann 1999:145, Burton and Kates 1993: 190-192). In the following I would like to ignore these issues and address a different challenge. Assuming that insurance is a result of a western discourse on risks and disasters, I would like to show that microinsurance schemes run the risk of ignoring the local understanding and perception of risks as well as the way people adapt to risks and cope with disasters in a traditional way. In order to ground my concern, I will describe the everyday life of low-income households in Jakarta in the next chapter with a focus on the vulnerability context and the forms of resilience that developed over time.

3 MANAGING DISASTER RISKS IN A MEGACITY: LOW-INCOME HOUSEHOLDS IN JAKARTA

3.1 Megacities and Disasters

Discussions on disaster insurance for the poor are mainly driven by the assumption that the poor in less developed countries suffer comparatively more from disaster impacts than other parts of society or people in more developed countries. The introduction mentioned that the poor are considered to be particular vulnerable against disaster risks since they are forced to settle in hazard-prone locations and due to their limited access to economic resources to cope with disaster impacts. Despite these unfavorable living conditions, it can also be observed that some low-income households manage to survive in hazardous locations and seem to be resilient against major shocks. Accordingly, the value of disaster insurance schemes has to be analyzed against the background of existing coping strategies and the impact of insurance on existing forms of resilience of low-income households.

Megacities are interesting places to study vulnerability and resilience, as most megacities not only show high concentration of economic values and high population densities, but most of them are also located in hazardous locations such as coastal zones with exposure to negative impacts of climate change (IPCC 2007: 48, Munich Re 2004: 20). More than two-thirds of all megacities are located in less developed countries, where rural-urban migration dynamics are still vibrant (Kraas: 2007). Due to land speculation and increasing land prices in major megacities, the urban poor are forced to settle in locations that are neglected by other groups of society. These locations are often prone to

disaster risks such as floods along riverbanks or at the sea front. Additionally, many megacities are located in regions that show high seismic activities and frequent meteorological events.

3.2 The Risk Situation for Low-income Households in Jakarta

In the following, I would like to provide a deeper insight into the vulnerability and resilience of low-income households against major disasters by presenting the situation of low-income households living in so-called “kampungs” in the inner-city area of the Indonesian capital, Jakarta. Due to its function as an economic and political center, Jakarta is a prime city and attracts migrants from rural areas all over the country. Over the last century, the population has grown from less than one million to 8.6 million in 2004. Furthermore, urbanization escalated and incorporated surrounding cities. Today Jakarta is the core of the metropolitan area JABODETABEK, an acronym for the municipalities of Jakarta, Bogor, Depok, Tangerang and Bekasi, with a total population of 23 million people (Pwa 2007: 3, Evers and Korff 2000: 37, Nas and Grijns 2000: 2, Heintel and Spreitzhofer 1998: 27).

Low-income households in Jakarta are mainly concentrated in *kampung* areas. Kampung is the Indonesian word for village and was used in the past to describe the rural characteristics of low-income settlements in Jakarta. Today, urban kampung areas cannot be defined by rural characteristics anymore but rather by high population density, illegal land occupation and poor infrastructure. Most kampung dwellers are employed in the informal sector or in the low-income segment of the formal sector. Accordingly, most people living in kampungs can be classified as low-income. Around 60-70% of Jakarta’s population is estimated to live in kampung areas (Silver 2008: 130 and 147, Somantri 2007: 20 and 77-79, Evers and Korff 2000: 44).

Modernization dynamics and rapid urbanization came along with changing land-ownership and land speculation that, again, resulted in higher land and real estate prices. As the majority of kampung dwellers did not hold any land certificates, they became victims of land speculation. First kampung removals took place in colonial times when kampungs had to give way to European settlements. Kampung removal and demolition reached its peak in the 1980s and 1990s when the city center was redeveloped into a “golden triangle” with high-rise office towers, apartment buildings, shopping malls and toll roads. In some cases, kampung dwellers succeeded in organizing themselves and articulate their interests, but finally compensation payments weakened collective action against the government and kampung dwellers did not succeed in stopping the redevelopment of the inner-city area (Silver 2008: 6 and 33, Evers and Korff 2000: 174, 181, 228 and 235-237, Abeyasekere 1987: 90).

As a consequence of these modernization efforts, kampungs widely disappeared from the city center. The only choices left to kampung dwellers were to

move to the fringe of the city or to relocate to remaining kampungs. Most of the remaining kampungs were located in public spaces or hazardous areas that are not attractive for land redevelopment, such as settlements along riverbanks, railway tracks or under highways. The Ciliwung riverbed, for example, narrowed down from 15 meters to 5 meters as a result of inner-city migration, which was partly triggered by redevelopment of the city center. As a result of migration to hazardous locations, today's inner-city kampungs are highly vulnerable to disasters, such as floods and kampung fires (Silver 2008: 147, Caljouw et al., 2004: 10, Dorlans 2000: 257, Nagtegaal and Nas 2000: 281, Abeyasekere 1987: 221).

3.3 The Flood Situation in Jakarta

In 2007, heavy rainfalls caused floods that covered 70% of the city area. 70 people died and around 400,000 people were displaced. Financial losses amounted to USD 879 Million (Pwa 2007: 3). Public life came to a complete stop and the flood was even given coverage by the international media. The World Health Organization referred to the 2007 flood as the biggest flood in Jakarta during the last 300 years (WHO 2007: 1). However, the 2007 flood was not an isolated event, but has to be seen as part of a series of floods, such as the major flooding in 2002 and 1996. The causes of the flood situation in Jakarta are manifold: shared responsibilities lead to difficulties in river and flood management; deforestation at the headwaters results in higher water levels and sedimentation; 40% of the city area is located below sea level; excessive ground-water tapping causes land subsidence; redevelopment transformed green spaces into sealed surfaces and thus removed catchment areas in the city; the capacity of the river and drainage system cannot cope with dynamic urbanization processes; illegal buildings block the drainage system; 30% of household waste is dumped into the river system thereby clogging water drainage; and the uncontrolled urban sprawl caused growing population densities in flood areas (Pwa 2007: 3, Lubis 2007, Caljouw et al. 2004; Pichel 2004, Nagtegaal and Nas 2000: 279-287). This list of causes is not complete, but it indicates that the flood situation in Jakarta is a complex product of political, economical, social and environmental factors that cannot be reduced to monocausal explanations. On top of that, future forecasts indicate a worsening flood situation in Jakarta. A natural astronomic cycle is expected to have an impact on tides and sea levels. Over the coming years, the sea level in Jakarta will rise and reach its peak on December 6th, 2025. At that time, higher sea level together with land subsidence will result in permanent flooding of a strip that spreads 5 km from the coast into the city area (Meiler 2008, Pwa 2007: 24).

In disaster research, it is generally acknowledged that the history of a society is always connected to a society's vulnerability to hazards (Bankoff 2003: 12, 18 and 158, Holling 2002: 18, Oliver-Smith 1999: 30). In the case of Jakarta, Nas and Grijns (2000: 9) studied historical documents and finally

concluded: “the problems as well as the government policy of present-day Jakarta are deeply rooted in the history of the city.” Accordingly, setting the flood situation in the context of a temporal dimension is not only helpful to show the possible future impacts of the flood situation but also to analyze the root causes for this complex situation. Floods in colonial Batavia had been a problem since the Dutch colonial administration took over the city in 1619. The causes for the flood situation at that time seem similar to today’s causes: the low land level; the cutting of trees on the upstream; waste disposal of sugar mills through the river system. Accordingly, the colonial administration took measures to manage floods, such as digging a system of canals and carrying out drainage works (Caljouw et al. 2004: 2-3). Flood management also became an integral part of city planning after Jakarta’s independence in 1965. Today, flood management is not limited to Jakarta itself but is reflected in the planning for the mega-urban region JABODETABEK. Moreover, experts have realized that technical solutions would never succeed in making Jakarta flood-free. Consequently, social engineering is increasingly discussed and seen as an important aspect of flood management. The term social engineering is generally understood as including and manipulating people for non-technical aspects of flood management, such as the participation of potential flood victims in early warning or shifting resources to lower levels of administration (Caljouw et al. 2004: 15-19, Pichel 2004: 3-5).

3.4 The Situation of Low-income Households in Jakarta

The description of the flood situation in Jakarta indicates that people living in the city suffer from regular flooding. However, it does not provide any insight into the living conditions of city dwellers and whether low-income households are more vulnerable to urban disasters than other groups of society. Therefore, I would like to present some empirical data on the everyday life situation of kampung dwellers in the inner-city area of Jakarta. Early documentation describing the living conditions in colonial Batavia mainly describe the situation of European settlers. In the second half of the 18th century it was estimated that 50% of the newcomers from Europe would not survive their first year in Batavia. Foul and pestilential vapor emitted by stagnant water in swamps as well as in the river and canal systems were seen as the reasons for disease and death (Stockdale 2003). During the second half of the 18th century and the first half of the 19th century, Batavia seemed to provide unfavorable living conditions and the city was titled as “Graveyard for Europeans” (Abeyasekera 1987: 72) or as “one of the most unwholesome spots upon the face of the globe” (Stockdale 2003: 129).

In the 18th century, those taking notes of the living conditions of colonial settlers in Batavia were mainly Europeans. Everyday life in Batavia’s kampungs only became of topical interest in the early 20th century, when European settlements became consciously aware of the health and fire risks

spreading from surrounding kampungs. The colonial government only took action after 1925 and initiated activities to improve living conditions in kampungs, such as asphaltting roads, installing water pipes, providing sanitary facilities and carrying out immunization schedules (Silver 2008: 56 and 62-65). After independence, Sadikin was the first governor who introduced a Kampung Improvement Program (KIP), aiming at integrating kampung settlements into the concept of a modern city. However, problems related to land ownership were not resolved and finally most inner-city kampungs disappeared during the redevelopment of the golden triangle in the 1980s and 1990s (Silver 2008: 128-131, 137, 150 and 201).

Many studies on Jakarta analyze the situation of the urban poor in Jakarta from a macro-perspective. In order to obtain more insights into everyday life in urban kampungs, I conducted qualitative research in two *kelurahans*, which are the lowest formal administrative units in Indonesia. Kelurahan is often translated as ‘urban village’, as it has the same administrative status as villages (*desa*) in the rural context. Each kelurahan is home to around 20,000 to 50,000 people and is further divided into RWs (hamlets) and RTs (village associations) (Surjadi 2007: 4). The first kampung studied comprises four RWs along the west flood canal in Tomang/West Jakarta. This settlement is located on land owned by the state-owned electricity company PLN, which has installed overhead power lines along the flood canal. Since kampung dwellers do not possess any land titles they are considered to be occupying the land illegally. However, many families have been living there for several decades and the settlement came into being even before the canal was built in the 1920s. Accordingly, most dwellings are permanent houses made of wood and stone/concrete and are up to three stories high. Kampung dwellers usually find jobs in the informal sector and work close to or in the kampung as motorcycle taxi drivers, street hawkers or garbage collectors. The drainage system and tall buildings separate the kampung from the neighboring middle class, so that the kampung settlement can only be reached by small paths leading through middle class housing complexes or by using the road along the canal bank. Although it is spatially separated from the rest of the kelurahan, the kampung settlement is strategically located close to two main roads that cross the flood canal, and several shopping centers as well as traditional markets are located nearby. Street hawkers and people employed in the informal transportation sector can easily reach potential clients at the main road or in front of the shopping centers.

The second kampung is located along the Ciliwung riverbank close to the floodgate in Manggarai/South Jakarta (RW 04). Although the Ciliwung riverbank is densely populated up-stream, only people in RW 04 feel as one separated kampung. While other hamlets in Manggarai consist of middle-class and kampung settlements, hamlet RW 04 only comprises people living along the Ciliwung who do not hold legal land titles. The squatter settlement is spatially separated from other settlements by the Ciliwung river and a main road. The

socio-economic structure in the hamlet is heterogeneous. Along the main road people built solid houses and even opened small shops. Close to the river, one can only find semi-permanent buildings made out of wood. Some of these makeshift buildings are even built on stilts in the river. Kampung dwellers occupying these buildings are often garbage collectors who do not even own the building structures and can only afford a small rent. Most of the people in this kampung only find employment in the informal sector. The kampung is strategically located opposite a major train station, close to a bigger traditional market and close to an arterial road. Employment opportunities can be found as street hawkers or in the informal transportation sector.

Everyday life and the living conditions in both kampungs are comparable to a certain extent. In both locations, kampung dwellers are mainly employed in the informal sector and do not possess any land titles. The increasing population triggered a redevelopment of public space which resulted in a dense settlement pattern of informal building structures for housing as well as commercial purposes. The socio-economic structures in both kampungs are heterogeneous and homes vary from basic makeshift structures to solid, multi-story concrete buildings. In many everyday life situations – and particularly in situations where everyday life is interrupted – the majority of kampung dwellers depend on collective strategies within the community. People not only fall back on collective strategies for coping with individual problems, such as collecting money for health care costs, but also for problems that affect the community as a whole, such as improving infrastructure or flood management. The significance of collective strategies is also shown in the fact that the community expects newcomers to integrate in the neighborhood and join common activities. ‘*Kerja bakti*’ is one example of an institutionalized, collective community activity where a person contributes his labor to the community for building roads or for guarding the neighborhood at night time (Perkasa and Hendytio 2003: 150). The central institution coordinating all matters related to the community is the RW/RT system. The head of the RT is elected during a neighborhood assembly and represents the affairs and concerns of the neighborhood in hamlet meetings. Kampung dwellers usually trust the heads of the RW/RT system, since they live in the kampung and are often respectable persons such as government employees, successful (micro-)entrepreneurs or people who serve the common good. The headmen of the RW/RT system hold dual functions: not only do they coordinate activities within the community, but they also represent the community in the formal public administrative structure at the kelurahan level.

Financial difficulties are the main risk kampung dwellers fear. Most people are employed in the informal sector and depend on daily income generation to support their families. Any shock that would disturb income generation is thus perceived as a burden for a household. Shocks such as sicknesses could affect a single household, or the community as a whole in events such as floods or fires. However, life in kampung settlements is not only full of

risks for its inhabitants, it also provides chances and opportunities that at first sight, are not immediately apparent to external observers. Neighborhood associations usually comprise a path of houses inhabited by families originating from the same provinces or even villages. Particularly rural-urban migrants find kampungs a good location to gain ground in the city. As newcomers often originate from the same region or even belong to the extended family of established kampung dwellers, migrants are usually integrated easily into the neighborhood and get an introduction into urban life, before they have to live on their own. Moreover, kampungs are oftentimes strategically located so that entrepreneurs in the informal sector can easily find customers for the goods or transportation services they offer. In addition to that, urban redevelopment led to rising land prices and increasing populations in kampung areas. Although kampung dwellers do not hold land titles, an informal real estate market for public space exists. Rooms in multi-story houses, for example, are contracted to formal sector employees in the low-income segment, such as cashiers in shopping malls. Even makeshift building structures are rented out to informal sector workers such as garbage collectors. Given the relatively cheap prices for rent and food in kampungs, low-income earners can still afford living costs in the city center. Furthermore, kampung settlements are often close to the place of work so that people do not need to commute long distances. Finally, life cycle risks of individual kampung dwellers are often managed collectively. In many cases neighborhood associations, for example, support elderly people who are not able to generate their own income anymore. In Manggarai it could even be observed that kampung dwellers managed to establish a very good relationship with doctors who provide cheap medical treatment and, with the financial support of a television station, the community operates a school for adult education.

The description of both kampungs shows that the settlements are located in hazardous locations which are prone to flood risks, and settlement structures increase the vulnerability to kampung fires. However, living in an inner-city kampung also provides benefits compared to safe locations at the fringe of the city. Even in the city center, living costs are manageable for low-income households. Consequently, kampung dwellers hazard the consequences of living in a disaster-prone settlement in order to benefit from the opportunities provided. Besides, one should keep in mind that kampung dwellers have learned how to survive in this kind of hazardous location over the last decades and have developed their own strategies for coping with shocks, such as regular floods.

3.5 Kampung Dwellers: Vulnerable and Resilient to Floods?

The international media only covers floods in Jakarta if new historical water levels are reached. In everyday life however, floods affect most kampungs along the river and canal system several times a year. As described above, flood is not a new phenomenon – it has been part of city life since Batavia

was founded in the 17th century. Jakarta's city government, the citizens, and particularly kampung dwellers have developed their own strategies for coping with floods. The city council, for example, has established a formal crisis management department for emergencies including an early warning system for floods. The water level at prominent landmarks, such as floodgates in the city and also up-stream, are measured hourly. If the water level exceeds a pre-defined critical level at a certain landmark, warnings are automatically sent via mobile text messages to each kelurahan head in Jakarta. At the kelurahan level, a budget for emergency cases is available and consequently further steps are taken. Besides the formal early warning system, kampung dwellers have established good relationships with government staff at the floodgates and with kampung dwellers on up-stream settlements. Thus, people living in the kampungs often get informal warnings before they get information through the formal channels.

In the event of a serious warning or increasing water levels, kampung dwellers shift household articles and valuables to the second floor. More expensive items, such as motorbikes, are taken to safe areas in the city and children or elderly persons are taken to families or friends in other city areas. Procedures are well-rehearsed and the people that remain know where they can evacuate to in case they have to leave their homes. Some kampung dwellers move to families and friends in other areas or they find shelter in schools or praying rooms. Since most of the people depend on daily-generated incomes, loss of income is one of the biggest concerns during a flood. Accordingly, the priority in coping with the flood is to cover basic needs, such as drinking water, food and clothing. Evacuees usually share food, but also depend on external aid to cover basic needs. In case of serious or persistent floods, various actors become active to assist disaster victims with food, clean water, tents, clothing and building material: in looking to garner votes, political parties find a large number of people in a relatively small area. Showing solidarity during a disaster creates sympathy with political parties. For private companies, disaster aid is a relatively cheap measure to market their products to potential consumers. Civil society organizations, local NGOs, and individual initiatives also mobilize donations during an emergency. The importance of the densely populated kampungs and their inhabitants to external actors becomes visible in the form of flags, banners and billboards installed by political parties, private companies and civil society organizations. The heads of the RW/RT structure usually prepare a coordination post where aid and donations are registered. The community leaders are typically best informed about the situation in the kampung and about the people in need, so that aid is distributed to the victims appropriately. The RW/RT heads also coordinate aid and support coming from the government. When the flood situation has eased, people return to their homes. Since building structures are already flood-resistant, financial losses are usually low and people often only have to clean up their houses.

Finally it can be said that kampung dwellers do not perceive floods as a

major disaster but rather as something normal that is part of everyday life in a kampung. They have developed the capacity to adapt to flood situations and have their own strategies for adjusting to it accordingly. It also became apparent that kampung dwellers cannot pursue income-generating activities during major floods and, consequently, often depend on external aid which is generally available because of the importance of kampung dwellers in their role as voters, consumers or members of civil society organizations. In this context it is important to note that with the RW/RT structure, kampung dwellers have the opportunity to organize themselves and articulate their needs. As such, social networks and collective action compensate for the lack of financial resources.

4 DO MICROINSURANCE SCHEMES SUPPORT RESILIENCE?

The paradigm shift in sociological disaster research led to a more balanced view of vulnerability that is not only determined by negative factors such as poverty and the probability of a physical hazard, but also by positive factors which are encompassed under the term resilience. The empirical data presented in this paper suggests that inner-city kampung dwellers are indeed vulnerable in a traditional sense, as they live in hazardous locations that are prone to flood and fire risks. In addition to this, kampung dwellers often do not have the financial resources to cope with major shocks on an individual level due to their employment in the informal economy. However, the empirical data also suggests that over time people have developed abilities to adjust to the hazardous location and to cope with major shocks. The core of resilience is the capacity of kampung dwellers to act collectively. Which is where the RW/RT system is of utmost importance in two ways. Firstly, through the RW/RT system kampung dwellers are integrated horizontally so that major problems can be solved on a community level. Secondly, through the RW/RT system, kampung dwellers are recognized as a collective and are able to activate social networks. Accordingly, they have the chance to articulate and express their needs and demands to external actors (vertical integration). The fact that major shocks, such as floods, are perceived as something “normal” and part of everyday life indicates that kampung dwellers succeeded in building-up resilience.

In a more generalized way, I would like to hypothesize that low-income households certainly develop their own abilities to adjust to and cope with disasters. A lack of financial capital is usually replaced by social capital in the form of collective action. Communities not only pool and organize the scarce resources they have, but they also activate networks and access resources provided by external actors. In this context it is important to mention that if kampung dwellers take part in collective action they are by no means acting altruistically. In fact, by engaging in a certain form of collective action people expect to benefit in the event they might need future support. Kranton (1996:

832), among others, suggests that this form of reciprocal exchange can be compared with an insurance mechanism, since goods and services are exchanged over time.

Based on these generalized findings, I would like to draw some conclusions on the role of microinsurance in managing lifecycle and disaster risks. The study shows that for inner-city kampung dwellers in Jakarta, major shocks seem to be related to the informal sector such as potential risk of evacuation because of the absence of land titles as well as the risk of income or business interruption in the informal economy. Since insurance is a formal and regulated concept, insurance companies are hardly able to offer appropriate insurance schemes for risks related to the informal sector. Insurance companies, for example, are not allowed to offer an insurance scheme for an insurable interest that is illegal. Therefore, offering fire or flood protection for informal buildings would be illegal. Credit-life insurance is currently one of the most prominent microinsurance schemes that are offered in Indonesia. Hintz (in this volume) provides a balanced view on the impact of credit-life insurance, but he also points out that credit-life insurance “has done little to improve the asset situation of beneficiaries” and that individualized insurance could possibly lead to an “increase in social inequality”. Learning from my empirical findings, a similar concern can be expressed for other microinsurance schemes, such as a trigger-based flood protection scheme, that are currently being tested. Individualized insurance benefits might jeopardise the mechanism of reciprocal exchange since policyholders can manage flood risk on a household level through insurance. As a result, insurance against a specific flood event could run counter to the community’s resilience against shocks in general, as policyholders might not be interested in taking part in collective action.

While individualized insurance might be a perfect tool to strengthen resilience against a specific risk on a household level, it has been shown that, at the same time on a community level, insurance destroys traditional forms of resilience. The potentially adverse affects of formal microinsurance schemes on resilience of low-income communities, indicate that microinsurance cannot be regarded as a panacea in contributing to more resilient communities. Instead, public and private actors have to put more effort into understanding the specific resilience context of low-income households. Here, I would like to add that resilience is a concept that depends on many variables. Forms of resilience that work for a specific community in a specific location might not be appropriate in a different context. Resilience is also not a static concept, since resilience develops over time and forms of resilience that work today might not be appropriate to cope with future shocks such as possibly the consequences of climate change. The understanding of the local context has to go beyond a simplified “need and demand” or “impact” analysis, but rather it must take into account existing forms of resilience. If the context is not understood, microinsurance will run the risk of replacing and destroying community resilience. At the same time, microinsurance might not create sufficient resilience on a household level,

as insurance schemes only cover named perils and not every household in a community might have access to insurance. Finally, a shift in disaster risk management thinking is required – a shift from the view of passive disaster victims to the view of more or less resilient communities.

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Disaster Insurance for the Poor: All India Disaster Mitigation Institute and *Afat Vimo*

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ABSTRACT: In India, personal, household and small business assets are often unprotected against damage from natural hazards. The costs for relief and rehabilitation often rely on aid, but support from outside entities is often unpredictable – leaving the damaged assets of the poor by natural hazards difficult to replace – and making recovery difficult. Groups that fail to recover are more vulnerable to subsequent disasters. Insurance can cover some of the financial burden of many losses but is often unavailable to the poor due to the high transaction cost to affordable premium ratio.

Although data and analyses on effectiveness are still surfacing, microinsurance is one of a number of methods that has emerged to provide the safety and preparedness benefits of insurance to the poor. Microinsurance has emerged in a policy environment that has made recent progress towards disaster risk reduction and can put cash into the hands of affected households so they can begin rebuilding livelihoods. Recent insurance regulatory reforms by the Indian Government and the prioritisation of risk reduction by national and global practitioners have contributed to the viability and advancement of microinsurance for the poor.

Afat Vimo (Gujarati for ‘Disaster Insurance’) is an example of a microinsurance policy developed in this environment. This document discusses the role of this instrument in an attempt to transfer disaster risk from the poor to the commercial insurance market. The operating system is detailed as well as procedures of claims settlement. Successes have included the design of an affordable product, transparent payout, and linking microinsurance with disaster preparedness education. It is an important step towards reducing disaster risk (DRR). Current research on microinsurance is also discussed in relation to similar products in India. The *Afat Vimo* product currently covers over 3,700 pioneering policy holders.

KEYWORDS: microinsurance, risk transfer, disaster risk management, India

1 BACKGROUND

Due to the combination of high exposure to natural hazards and high susceptibility to damage, South Asia experiences significant losses to disasters perennially. Present studies estimate that more than 90% of the Indian population does not benefit from any kind of social protection (ILO, 2005: 1). Despite high and steady growth in the country, the cycle of disasters and vulnerability deprives many millions of poor of the improvements in living standards that might have accompanied such growth. Within Asia, 24% of deaths in India due to disasters occurred because of the country's size, population and vulnerability (GoI, 2002: 190). Since 2004 alone, India has faced several major disasters – the Indian Ocean tsunami, the South Asia earthquake, and the 2007 Bihar floods – which killed more than 12,000 (UN et al., 2006: 8), 1300 (UNISDR and CRED, 2006: 1), and 1000 (UNISDR and CRED, 2008: 1) people in India respectively.

Each year, India suffers disaster losses totalling just under a US\$1 billion according to World Bank studies (Lester and Gurenko, 2003: 1). On average, direct natural disaster losses amount to 2% of India's gross domestic product and up to 12% of central government revenues (Lester and Gurenko, 2003: 1). These estimates do not fully include losses incurred by informal sector businesses and workers, which constitute a major proportion of the economy in India. The Calamity Relief Fund of the Government of India on average spends US\$ 286 million annually towards providing relief to the victims of disasters. Over the past 35 years, India has suffered direct losses of US\$30 billion; losses are also increasing: US\$9 billion in direct losses were suffered between 1996 and 2000 alone (Lester and Gurenko, 2003: 5).

Assuming that the impact of natural disasters remains high, how will India be able to cope, not to mention use the benefits of economic development to uplift the millions of poor? Just as it is the poor countries that are most adversely affected by natural hazards, the poor within countries face the greatest difficulties (Lester and Gurenko, 2003: ii). Their small but important assets are often not secured, reinforced, and their financial risks are not spread across insurance markets. According to the Munich Re, the proportion of disaster losses in 2005 covered by insurance were 51% and 30% for the Americas and Europe, respectively (MunichRe, 2005: 9). Over the same period, only 5% of losses faced in Asian countries were covered by insurance. Moreover, even within Asia, it is mostly the wealthy that purchase and use insurance.

In recent years, however, there are signs of change. Penetration grew from 1.93% in 1998-1999 to 3.5% in 2006¹ and life microinsurance is estimated to reach nearly 14 million individuals (Sinha and Sagar, 2009: 16 & 71). A

¹Insurance penetration is expressed as premiums paid as a percent of Gross National Income (Micro Insurance Academy, 2009). Moreover, accelerated regulatory changes are taking place and more are to come to invite greater role of private and foreign investments in insurance sector.

study by UNDP on the demand for microinsurance in India projects that the market size could include up to 70% of those earning between US\$1-2 a day (UNDP, 2007: 2). Social programmes that extend microinsurance access to poor households are emerging as potentially viable mechanisms to minimise the financial exposure of the poor to disasters. But high risk households are often not aware of the benefits that simple insurance can provide. Viable microinsurance products must be affordable and available to informed customers.

India recently became one of the first countries to introduce microinsurance regulations, creating incentives for regulated insurance companies to service traditionally under-served segments of the population (rural and poor households). Although exact numbers are not known, it is expected that these regulations have encouraged further investment and penetration, especially around indexed insurance products which sold over 650,000 policies in 2008 in Rajasthan state alone (Barrett et al., 2007: 6). Risk transfer has also been gaining international attention, which can assist domestic insurers with reinsurance and in refining global best practices in the emerging field of microinsurance. The 2009 Global Assessment Report on Disaster Risk Reduction, listed the development of local insurance markets as a key issue in the Report's "20-point Plan to Reduce Risk" (UNISDR, 2009a: 6).

2 THE DEVELOPMENT OF AFAT VIMO

It has been the experience of the All India Disaster Mitigation Institute (AIDMI) that the poor, especially the poor amongst disaster victims, are repeatedly exposed to and affected by disaster. Studies have shown that disasters can significantly increase poverty. For example, a study conducted on the influence of drought spells on income poverty indicated that the proportion of households in India that are in poverty for 3-5 years jumps from 5.5% to 14.8% when the households face frequent small-scale losses to disasters (UNISDR, 2009b: 8). The poor also lack access to many formal financial services including loans at competitive rates and insurance.

Over 18 months after the 2001 Gujarat earthquake, a majority of relief beneficiaries were still exposed to significant disaster-induced financial losses. Studies including a 2002 survey in Gujarat revealed that access to risk transfer is correlated with sustainable economic recovery among victims (AIDMI, 2002). Yet the survey found that only 2% of those they surveyed had insurance of any kind.

Based on this finding, AIDMI designed a microinsurance scheme to augment their ongoing Livelihood Relief Fund activities. The resultant scheme was the product of discussions and negotiations with insurance providers who were interested in supplying low-premium insurance policies to poor clients. Two regulated Indian insurers currently underwrite *Afat Vimo*: the Life Insurance

Corporation of India covers life aspects and the United India Insurance Company provides general coverage.

3 AFAT VIMO: A PRODUCT FOR THE POOR

Microinsurance products are becoming increasingly important for disaster risk reduction. If designed and administered properly, it is believed they can transfer financial risk from vulnerable individuals to the insurance market. While rigorous scientific assessments of the impact of microinsurance are not yet available² (Radermacher et al., 2009: 2; Micro Insurance Network; 2009), current experience suggests that microinsurance may promote increased levels of resilience by (ProVention Consortium et al., 2009: 11):

- increasing access to finances after shocks, thus strengthening coping and reducing the likelihood of disastrous impacts,
- providing greater discretion to households and small businesses in pursuing coping and recovery strategies, and
- serving as an incentive for DRR.

By bundling several hazards in one contract, premiums paid for better-understood hazards reduce the rates of less predictable ones such as earthquakes, as otherwise, people would not be so sure to pay for the less understood hazards. *Afat Vimo* is a version of microinsurance designed for poor households in disaster-prone areas; it protects people from the impacts of hazards on their assets by providing pre-determined cash payouts in the aftermath of a disaster. This is done in return for monthly premiums, which are paid to the insurance companies through AIDMI.

4 AFAT VIMO: THE PRODUCT, OPERATIONS, OPPORTUNITIES AND CHALLENGES

The scheme covers damages or losses on a very wide range of disasters including earthquakes, floods, fire, cyclones, being struck by lightning, landslides, et al. (19 types). The product was first sold in April 2004 and now covers over 3,700 pioneering policyholders. Though the number is small for India, it is sufficient to start finding out how such ideas can and will operate on the ground in reality. *Afat Vimo* is offered as a single package with an annual premium of around \$4.50 (including administrative charges) and a total potential benefit of \$1,560 across the various components of the coverage. All clients receive the same level of coverage. Table 1 provides an overview of the the *Afat Vimo* Scheme.

²A current impact assessment with the ProVention Consortium, the International Institute for Applied Systems Analysis, AIDMI, and microinsurance partners in South Asia is currently being conducted. Additionally, The Micro Insurance Network has

Table 1: Afat Vimo Overview

Aspect	Characteristic
A. Coverage	
Maximum liability for accidental loss of life	Rs. 20,000 (~\$416)
Maximum liability for damage to house	Rs 10,000 (~\$208)
Maximum liability for damage to house contents	Rs 10,000 (~\$208)
Maximum liability for stock-in-trade	Rs. 10,000 (~\$208)
Maximum liability for personal accident	Rs. 25,000 (~\$520)
Total Coverage (A1+A2+A3+A4+A5)	Rs. 75,000 (~\$1560)
B. Administration	
Annual premium per policy holder	Rs. 172 (~\$3.50)
Annual membership/renewal fees (5.81% of the premium amount)	Rs. 10 (~\$0.20)
Service Charge (22.09% of the premium amount)	Rs. 38 (~\$0.79)
Total cost of Afat Vimo for Policyholder (B1+B2+B3)	Rs. 220 (~\$4.50)
Total Annual Administrative Charges (B2+B3) are 27.90% of the premium amount	Rs. 48 (~\$1.00)

Afat Vimo has been developed and remains a product for the working poor. Actuarial calculations are assessed by the underwriting insurance company for the policyholder group, instead of individuals or households, based on the client profile. Typical policyholders have the following characteristics:

1. low-income – average annual income between US\$370 to US\$410;
2. average assets worth US\$450;
3. average monthly savings balance between US\$5 to US\$10; and
4. engaged in microenterprises in the unorganised sector or as labourers:
 - small business owners (e.g. those with small grocery, confectionaries or snack stalls, etc.);
 - small vendors (e.g. those with hand carts selling vegetables, fruits, plastic utensils etc.);
 - home-based workers (e.g. those operating sewing machines, preparing ready-made clothes, *bandhani* or weaving products);
 - landless labourers (e.g. construction workers and small-scale plumbers, carpenters or barbers).

The poor families targeted are under-reached by mainstream insurance, especially labourers and microenterprise owners. *Afat Vimo* makes progress in bringing together insurance providers and livelihood recovery support in times of disaster. *Afat Vimo* is a product that transfers disaster risk from the

compiled several others under way in a Stocktaking Initiative that can be tracked at: <http://www.microinsurancenetwork.org/workinggroup/impact/stocktaking.php>.

poor and promotes effective recovery from economic shocks or disasters, as seen in the case studies below.

4.1 Operating System

Afat Vimo is a partner-agent microinsurance model, where poor communities and commercial and public insurance companies have cooperated to develop a policy to cover 19 types of disasters.

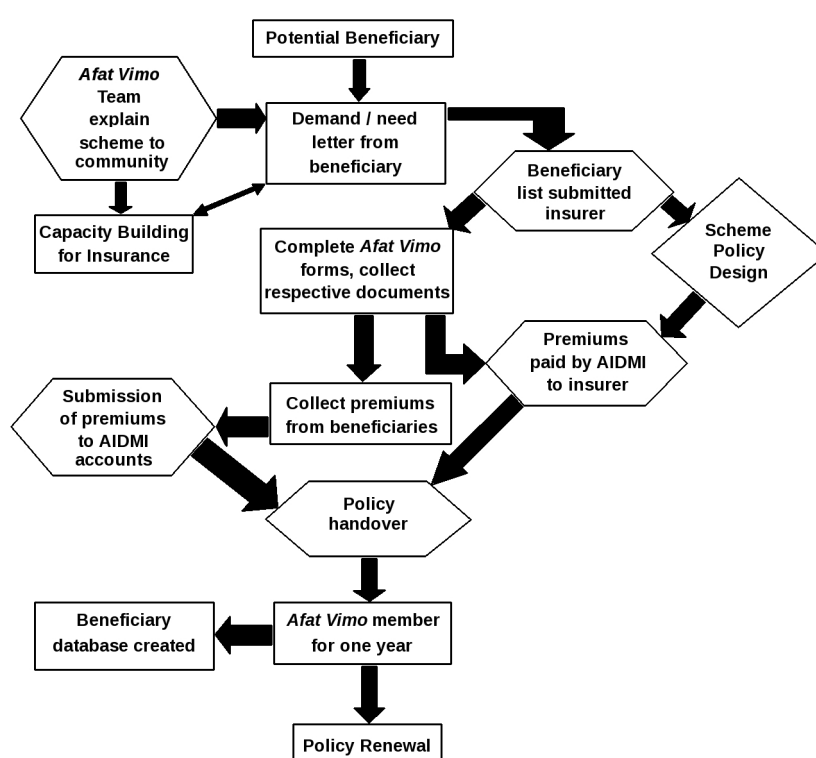


Figure 1: The Afat Vimo Process

The role of AIDMI in the *Afat Vimo* scheme is that of both facilitator and intermediary. At present, AIDMI does not serve as an agent or collect a commission. The scheme is promoted in areas where AIDMI has ongoing community development work and field teams discuss insurance concepts with local households. The *Afat Vimo* team compiles a list of potential candidates for the scheme based on their registered demands. Once the insurance companies have designed operational policies and premiums have been set, AIDMI reconfirms the beneficiaries on the list and ensures that all of the requisite information has been collated and passed to the insurance

companies. Policyholders are stored in a database kept by AIDMI. Once this is complete, AIDMI pays the premiums to the insurance companies on behalf of the beneficiaries, ensuring immediate coverage. Subsequently, the *Afat Vimo* team begins to collect the premiums from the beneficiaries. The process is effective but time consuming and costly, especially when renewal is optional.

When disaster strikes, the beneficiary first, immediately informs the *Afat Vimo* team of the occurrence who then respond quickly to process claim. AIDMI assists beneficiaries in filing claims properly. Since many of the *Afat Vimo* beneficiaries are illiterate or have poor literacy skills, they require such assistance. The need to build this general capability among policyholders is recognized. Therefore training is provided to help policyholders understand exactly how they can best use the policy. The *Afat Vimo* product is currently promoted by a local membership-based organisation called the Chamber of Commerce and Industry for Small Businesses (CCISB) that is a network of small-scale entrepreneurs. CCISB leverages interest in *Afat Vimo* through its close relations across many poor households.

Amadbhai Kartiyar, Kajlinagar Slum Area, Bhuj

Amadbhai was 22 years old. After the 2001 earthquake in Bhuj destroyed Amadbhai's confectionary cabin and its contents, he sought financial assistance. He received a new cabin and stock worth Rs. 8721 to restart his business. He was informed about Afat Vimo by the AIDMI team, but he was unaware of the benefits. He did not see how he could benefit from an insurance policy, which would cost him Rs. 135 per annum* when he only earned Rs. 50-60 per day. The team explained that it was a one time payment for coverage that lasted one year. He saw that if he paid a premium of Rs. 135, it would give him life and non-life coverage of Rs 95000 – he agreed that it was advantageous and took a contract.

Unfortunately, he fell seriously ill with jaundice. With this, he was unable to continue working and so could not afford the necessary medication. He later died from jaundice. He was the only earning family member, and his sudden death was a disaster for his elderly parents. However, his parents were aware that he was insured, and immediately informed AIDMI, the intermediary, of Amadbhai's death. AIDMI initiated the claim process with the insurance company and a payment was made to his parents for Rs. 20000. On receipt of the cheque, his parents explained that although nothing could replace their son or compensate for the personal loss that they had suffered, the cheque was vital for their economic survival. His younger brother said that they deposited Rs. 15000 in the bank for future medical needs, and used the rest for purchasing stock for the confectionary. He has now taken over the business and is supporting the family.

* The premium and liabilities noted in examples provided are based on rates from prior years and may not match rates provided in Table 1.

4.2 Claims Settlement

Feedback from beneficiaries who have made claims under the *Afat Vimo* policy has been very positive and encouraging. To date, more than 300 claims have been made to insurance companies. Since the scheme began in 2004, 260 of these claims have been successfully settled, giving a combined payout of US\$ 31,839. Of the claims that have been made, 48 have been made for life loss, 52 have been for personal accidents (some resulting in fatalities, others causing loss of earnings), six for house fires, and 154 for damage to property and contents as a result of monsoon flooding and other mishaps.

4.3 Opportunities

Like many forms of microinsurance, *Afat Vimo* offers several advantages: it can be a transparent means of providing compensation against damage; it decreases the need for humanitarian aid. Additionally, microinsurance offers the disaster affected a more dignified means to cope with disasters than relying on the generosity of donors after disaster strikes (Mechler et al., 2006). *Afat Vimo* may also make tracking trends in vulnerability and hazards easier when claims are charted with geographic information systems.

The expansion of *Afat Vimo* can be attributed to the affordable premium at which the product is offered. This puts insurance within the reach of those who otherwise would not be able to access conventional insurance services. Similarly, the policy has had a great deal of success in the prompt settlement of claims, which has translated into client satisfaction and a good relationship with the insurance companies. It has also contributed to the good policy renewal rate which currently stands at 76%. *Afat Vimo* policyholders are now spread across several districts in Gujarat, as well as in Tamil Nadu and Pondicherry in South India.

A particular strength of the *Afat Vimo* scheme is the unified policy design. Under *Afat Vimo*, life and non-life coverage is brought together under one client product³. According to a recent study by the International Labour Office (2005: 7), 45% of the microinsurance schemes researched cover only a single risk. Only 16% of schemes cover three risks, making *Afat Vimo* one of the most simple and comprehensive products in India. This not only makes the policy more attractive to clients, but also makes investment in the policy more efficient in economic terms. Another aspect of *Afat Vimo* that sets it apart from other microinsurance policies is the extensive range of eventualities covered under the policy. To combine micro-mitigation with microinsurance, community capacity building and involvement in *Afat Vimo* – including training on insurance concepts and claim administration (below) – has provided more stability and viability.

³The produce consists of a life and a non-life component, which are underwritten by separate insurers.

Reducing an entity's disaster risk is possible through increasing that entities physical/material, social/organisational, and behavioural/motivational capacities (Anderson and Woodrow, 1989). Using this framework, *Afat Vimo* is successful in reducing community risks to disasters. Physical/material goods are insured and can be replaced after loss and damage; social/organisational capacity is supported as informal businesses are brought together (for example, through CCISB) and receive a product that is typically not affordable if the same households were to individually approach the insurer; motivational/behavioural capacity is built as understanding the issues of risk and disasters are increased.

Dhanjibhai Bababhai Dantani, Ramol Slum, Gaffurbasti, Ahmedabad

Dhanjibhai is a vegetable vendor who lost his handcart, weighing scales, and stock during communal riots that broke out in Ahmedabad in 2002. As part of a livelihood recovery programme, AIDMI supported him in replacing the handcart, weighing scales, and vegetables worth Rs. 3200. One day while he was at home, he slipped on the tiles at night and fractured his right wrist. He did not remember that he had insurance, so attended a local unregistered, traditional doctor for treatment. After ten days, he was reminded of his policy by a neighbour, and he informed AIDMI of the accident. He was visited by the AIDMI team, and was advised that he should take treatment from a registered orthopaedic doctor and obtain an official report and medical certificate. He was seen by a doctor approved by the insurance company, and he was awarded one week's compensation of Rs. 250 for loss of work. He challenged the decision, since he had not been able to work for seven weeks. He presented his case along with all of the supporting documents (reports, x-rays etc.) to the insurance company. The case was reviewed, and subsequently Dhanjibhai was awarded compensation of Rs. 1500 for seven weeks of lost work.

For policyholders, the services of intermediaries are helpful, since they may not always know how to make claims and challenge decisions. In this case, the intermediary explained the processes to Dhanjibhai, accompanied him to the doctor, helped him to prepare his claim and assisted him with challenging the original settlement.

Increasingly, partnerships with private commercial sector actors are being forged for the application of microinsurance and risk reduction. There is much that can be learnt in terms of risk management from private sector and public enterprise insurance providers; they have a wealth of experience that can be shared, and, in this, can facilitate the provision of microinsurance policies for the poor. AIDMI has engaged in a partnership with the Life Insurance Company of India to provide life insurance, and the United Insurance Company Ltd. to provide non-life insurance cover under the *Afat Vimo* scheme. They also continue to raise awareness of the opportunities and benefits

of insurance provision to the low-income strata of communities. There is additional scope within microinsurance to motivate private sector insurance companies to develop and provide products for low-income individuals as initiatives for their own corporate social responsibility.

4.4 Challenges

Though defrauding is one of the most common challenges for the microinsurance sector, *Afat Vimo* has experienced very few incidents of false claims. Similarly, premium defaulting is another such challenge. The retrospective collection of premium payments from clients can be seen as a threat to the long-term sustainability of the *Afat Vimo* scheme. In terms of long-term sustainability, this means that unless the clients meet the full operating costs, perhaps covered by a commission, estimated to add 50% more burden on client, the scheme is not financially self-sustaining. In addition, there are a number of reasons why beneficiaries do not renew their policies. Migration, the inability to pay, and low desire to renew are believed to be factors.

While exploring the impact of the *Afat Vimo* scheme in disaster affected areas, Ms. Claudia Wipf (2008: 22), a student from the University of Basel, Switzerland, concluded:

“*Afat Vimo* has a lot of potential. [I]t helped to empower poor people who are left out of other social security systems. The success of *Afat Vimo* can also be seen by the high renewal rate of 88%.⁴ Additionally, *Afat Vimo* serves as a model for other microinsurance schemes. It has inspired other NGOs in Sri Lanka and Iran which intend to initiate similar schemes. Besides the potentials, *Afat Vimo* also has a lot of challenges. As AIDMI is a relatively small NGO, with 30 to 40 employees, and *Afat Vimo* is only one of several programs, its capacities are limited. An expansion by the membership of *Afat Vimo* would also mean a sustainable increase in operating costs, at least in the beginning. Because *Afat Vimo* is a pilot project, a lot of resources are demanded and it is more difficult to gain the support of the government or of international institutions.”

5 LESSONS LEARNED

The process of developing and administering *Afat Vimo* offers many lessons for up-scaling the product and for sharing with other risk transfer stakeholders:

1. demand exists for disaster microinsurance but it is not yet clear if potential clients are willing to pay a premium that covers all administrative costs without direct or indirect subsidies;

⁴Currently 76%.

2. pro-poor financial risk transfer initiatives combined with risk reduction measures such as *Afat Vimo* remain rare in the South Asian region. There appears to be a significant potential for disaster risk management at community level through insurance. The 2007/08 floods in Bihar provided an opportunity for local institutions to extend access to community risk transfer services by discussing insurance concepts with disaster-affected households. It is possible that other disaster recoveries will result in new attention paid to insurance;
3. convergence of interest and attention of academicians, researchers, policy makers, donors and risk management practitioners along with victim communities is necessary. Generating the awareness – and building the commitment – to initiate microinsurance costs money, time and effort. These must be found to make *Afat Vimo* suitably resourced;
4. to be viable, risk transfer products need to be appropriately designed and piloting and upscaling is a long process that requires dedicated local institutions. This needs planning, awareness building and long-term commitment. Pilot initiatives in microinsurance should be based on medium and long-term financial plans that emphasise financial viability. A minimum of a three or five year horizon for such a plan may help ensure that actions are taken to cover administrative costs in the product model. Options for collecting a commission to offset administration costs should be investigated;
5. the *Afat Vimo* scheme has tremendous potential for expansion. Currently, microinsurance coverage under the *Afat Vimo* scheme is only available to communities where AIDMI has presence. Offering a similar policy in other disaster hit areas is under review by the AIDMI team;
6. microfinance organisations and civil society partners may consider bundling existing credit or other financial services with microinsurance to hedge default risk and extend risk transfer to wider groups of the poor;
7. in order to expand awareness of the positive and negative aspects of insurance, agencies working with large groups of children in developing countries should explore options for commercial microinsurance coverage for partner children and their schools.

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19-06-08

E così ho conosciuto Rossella, 29 anni di Dalmine. Ha gli occhi
azzurri e non porta il reggiseno. Si è iscritta all'AIDMO a 18
anni perché rimasta colpita dalla morte di un suo compagno
di scuola alle elementari. E dopo 11 anni è stata chiamata.
Ha avuto una sofferta, il suo midollo servirà ad un
bambino. E così si chiude il cerchio.
Da 10 minuti è scesa in sala operatoria ed io ho sentito
il bisogno immediato di scrivere un bigliettino.

OGGI HAI FATTO UNA COSA

MERAVIGLIOSA !!

Ti ringrazio a nome di tutti coloro che
aspettano una persona come te per
ricominciare a vivere.

TI MERITI UN
FIORE !



Manu

And so I met Rossella, 29 years old from Dalmine. She's got blue eyes and doesn't wear a bra. She joined AIDMO (Italian Association of Bone Marrow Donors) when she was 18 because she had been deeply affected by the death of one of her schoolmates when she was at primary school. And after 11 years, she received the call.

She got a tip: her bone marrow will go to a child. And so the circle is complete. Ten minutes ago she went down to the surgery room and I immediately feel the need to write a little note to her:

TODAY YOU DID A WONDERFUL THING!!

I thank you for all those who are waiting for a person like you to come their way and start living again.

You deserve a flower!

[From Manu's Diary]