In Ghana microinsurance has seen rapid growth over the past few years as more and more insurance providers have expanded their services to the low-income market.

This book, jointly published by the National Insurance Commission (NIC) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, provides a broad overview of inclusive insurance market development in Ghana. It seeks to identify best practices and offers concrete recommendations on the way forward for the development of (micro)insurance.

The authors employ a holistic approach that strives to address challenges to successful microinsurance implementation at all levels of the insurance sector: from government policy through to the end customer.

The book addresses six topics of key relevance to microinsurance providers: Regulation and Supervision, Managing Information, Appropriate Pricing, Research & Development, Distribution and Innovations & Technology.

This may be a useful text for insurance practitioners, distributors, policy makers, researchers and all those with an interest in expanding access to insurance for the low-income population in Ghana.
Promoting Microinsurance in Ghana

Microinsurance as a Means of Insurance Sector Development
Promoting Microinsurance in Ghana

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About the Publishers

National Insurance Commission (NIC)

The National Insurance Commission (NIC) was established under Insurance Law 1989 (PNDC Law 227), but now operates under Insurance Act, 2006 (Act 724). The objective of the Commission, as detailed in Act 724, is to ensure effective administration, supervision, regulation and control of the business of insurance in Ghana. The NIC is mandated to perform a wide spectrum of functions including licensing of entities, setting of standards and facilitating the setting of codes for practitioners. The Commission is also mandated to approve rates of insurance premiums and commissions, provide a bureau for the resolution of complaints and arbitrate insurance claims when disputes arise.

Other responsibilities include the provision of recommendations to the sector Minister for policy formulation, supervision of practitioners, enforcement of compliance and public education. The development of strong relationships with regulators from other countries and international bodies, such as the International Association of Insurance Supervisors, and ensuring practitioners conform to internationally accepted standards are also key mandates of the Commission.

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The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is a German federal enterprise which supports the German Government, particularly the German Federal Ministry for Economic Cooperation and Development (BMZ), in achieving its objectives in the field of international cooperation for sustainable development. GIZ operates in more than 130 countries worldwide and offers demand-driven, tailor-made and effective services for sustainable development in many fields. In Ghana, GIZ works in the following thematic areas: Sustainable Economic Development, Decentralisation, Agriculture, Good Financial Governance, Peacekeeping Training, and HIV/Health.

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Households and small businesses in the informal sector are particularly vulnerable to various kinds of livelihood risks. The financial consequences of natural disasters, illness or death of a family member often cannot be fully covered by savings or informal risk-sharing arrangements. Microinsurance can be a way to manage the risk of such unforeseen events. It is based on the premise that low-income customers need access to insurance products tailored to their needs.

The Financial Sector Strategic Plan (FINSSP II) of the Government of Ghana therefore puts great emphasis on insurance sector development as a key contributor to financial inclusion as well as overall economic progress.

German Development Cooperation supports the implementation of FINSSP II through financial and technical cooperation. The project 'Promoting Microinsurance in Ghana', in which the National Insurance Commission (NIC) partners with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), is a good example of such cooperation. Through ProMiGH the Ghanaian insurance sector benefits from capacity development services, as well as inclusion in global cooperation networks such as the Access to Insurance Initiative (A2ii) and Making Finance Work for Africa (MFW4A).

Microinsurance is developing rapidly in Ghana and can already be considered a key driver of growth and innovation in the insurance sector. More and more commercial insurers and intermediaries are seeking to expand their services to the informal sector. Nonetheless, access to insurance services is still very limited.

In order to increase outreach and ensure value for clients a number of challenges remain to be addressed. Many of these affect both the traditional classes of insurance and the emerging microinsurance segment. As indicated by its subtitle "Microinsurance as a Means of Insurance Sector Development", this book takes a holistic perspective that situates microinsurance in the broader context of insurance and financial sector development. It provides a good overview of the initiatives that have been undertaken so far and offers a range of concrete recommendations and ideas for the way forward.

There is a great amount of energy and determination among the various stakeholders to further the development of microinsurance in Ghana. We hope that this book may be of assistance in this important endeavour.
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There is a great amount of energy and determination among the various stakeholders to further the development of microinsurance in Ghana. We hope that this book may be of assistance in this important endeavour.

Yvonne Quansah
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Ministry of Finance & Economic Planning

Dr. Maria Tekülve
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Preface

The joint publication of "Promoting Microinsurance in Ghana – Microinsurance as a Means of Insurance Sector Development" is the result of longstanding cooperation between the National Insurance Commission (NIC) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). The NIC and GIZ share the conviction that a stable, efficient and inclusive insurance market is a key precondition for sustainable economic development.

The cooperation between GIZ and the NIC started in 2008, initially focusing on policy issues as well as consumer education. In June 2010, the cooperation project “Promoting Microinsurance in Ghana” (ProMiGH) was launched to provide holistic support to inclusive insurance market development.

Through ProMiGH the NIC and GIZ cooperate closely with major stakeholders in the Ghanaian insurance sector. The project seeks to create tangible impact for low-income households in terms of better access to insurance services, increased awareness of insurance and improved client value of insurance products. To this end, ProMiGH provides tailor-made and process-oriented capacity development services to stakeholders at the macro, meso and micro level of the Ghanaian insurance sector.

ProMiGH's holistic approach is symbolized by the figure below:

Micro, small and medium enterprises and low-income households have a better understanding of and access to demand-oriented microinsurance services.
At the macro level the project supports the NIC in its efforts to create an enabling legal and regulatory environment for (micro) insurance. At the meso level it facilitates the establishment of a supportive infrastructure for insurance market development, including the strengthening of associations and professional training institutes. At the micro level ProMiGH seeks to strengthen the efficiency and client-orientation of insurance companies and delivery channels and to educate the target group about the concept of insurance.

Although capacity development is inherently a long-term process we believe that the efforts undertaken in the past few years have begun to bear fruit.

A market survey commissioned by the NIC and GIZ in April 2012 confirmed that microinsurance is a key priority for the insurance industry. All the surveyed insurance companies said they were planning to introduce new microinsurance products under the proposed legal framework and 11 companies indicated they already offer products specifically targeting the low-income market.

The survey also showed that the number of people covered by microinsurance now numbers around 1.25 million. This impressive result is mainly due to innovations in product distribution: products are now being sold through telecom providers, churches and in combination with popular ‘susu’ savings.

A milestone was reached with the ‘International Microinsurance Conference – Learning Sessions Ghana’ held in Accra in May 2012. It brought together stakeholders from insurance companies, distribution channels, development organizations and academia to discuss the development and practical implementation of microinsurance in Ghana.

This book provides in-depth information and guidance on the issues examined at the Conference. The articles are written by renowned Ghanaian and international experts, most of whom were also speakers at the event.

Each of the six chapters addresses a key aspect of good (micro) insurance practice, providing both international perspectives and solutions tailored to the Ghanaian market. The first chapter, on Regulation and Supervision, addresses the development of a new legal and regulatory framework for the insurance sector. It also describes the position of the NIC with respect to the regulation and supervision of microinsurance. In the second chapter, Managing Information for Microinsurance Development, the importance of sound information systems is highlighted. Better financial reporting, the measurement of Key Performance Indicators and the use of available market data can help strengthen and professionalize the insurance sector as a whole. The third chapter, Appropriate Pricing of Microinsurance Services, shows how to approach product pricing in the low-income market segment where data is not always readily available. Given the crucial importance of actuaries in the pricing process the chapter begins with an assessment of actuarial capacity in Ghana. The fourth chapter, Research & Development, presents the
outcomes of recent research efforts focusing on the Ghanaian market. The articles provide an in-depth overview of both supply and demand for microinsurance. The fifth chapter addresses the distribution of microinsurance products. It emphasizes that alternative distribution models are crucial for increased outreach and profitability. The final chapter, on Innovations and Technology for Microinsurance, provides some examples of successful innovations in product design and distribution. Technology can be an important way to reduce transaction costs thereby increasing the value to the end consumer.

Taken together, these six chapters provide an in-depth overview of the market for microinsurance in Ghana. They clearly indicate the efforts and progress that have been made by various actors over the past few years, while also pointing out the tasks that lie ahead.

GIZ and the NIC would like to thank all those who contributed their time, effort and creativity to the publication of this book.

We are profoundly thankful to each of the authors who generously shared their insights into the diverse aspects of the (micro) insurance sector in Ghana. We are confident that their combined expertise provides a comprehensive overview of the issues facing the development of the (micro) insurance sector in Ghana.

Michael J. McCord, Isaac Baidoo and Eric Gerelle facilitated the six learning sessions at the Conference and gave valuable guidance on the structure and content of each of the chapters in this book.

We would also like to thank the members of the ProMiGH team for their efforts in initiating and managing the production process, and reviewing the individual chapters. The various contributions of ProMiGH intern Mareike Buss to the production and editing process deserve particular recognition.

Teresa Wyndham-Smith provided a highly valued service by proof reading, editing and polishing the final document. QualiType Ltd did an excellent job of the layout and printing.

We hope that this book may serve as a guide and reference for all those who have an interest in the development of the insurance sector in Ghana.

Nyamikeh Kyiamah
Commissioner of Insurance
National Insurance Commission

Torsten Schlink
Programme Manager
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
1.1. Introduction

*Michael J. McCord*

It is an opportune time to talk about the regulation and supervision of (micro)insurance in Ghana. Early in 2010 the National Insurance Commission of Ghana (NIC) began an ambitious process to bring the country’s legal and regulatory framework for insurance in line with international best practice. The new legal documents are expected to be approved soon by the respective authorities.

The proposed framework for insurance includes a number of provisions specifically designed for microinsurance. The innovative regulatory approach will strengthen the NIC’s reputation as a global frontrunner in microinsurance market development. Internationally, several jurisdictions are developing, or considering the development of, microinsurance legal structures. Ghana’s approach will provide a good model for consideration.

This chapter focuses on the implementation of a new insurance and microinsurance legal framework. It provides insight into some of the key issues the NIC pondered with regards to microinsurance structuring and sequencing. The authors discuss steps taken so far and the main aspects of the proposed legislation. The new framework is only as good as its implementation, thus the contributors provide insights from microinsurance framework implementation carried out elsewhere in Africa and internationally. These discussions are intended to help regulators, supervisors, insurers and other related parties to recognize the importance of planning for implementation and to provide examples that might be helpful in the discussions.

The authors have a wealth of experience in insurance regulation and supervision, both in Ghana and beyond.

The first article, by the NIC Commissioner, Nyamikeh Kyiamah, provides an overview of the principal challenges for regulators in emerging insurance markets in Africa. This sets-up the second article, by Richard Carpenter, which provides a narrative of insurance legislation implementation in Ghana. The first article discusses the challenges in
insurance legislation in Africa while the second outlines how these challenges could be addressed in Ghana.

The third article, by Kofi Andoh of the NIC, discusses proposed microinsurance legislation in Ghana. He demonstrates the balanced approach taken in drafting the new legal documents, as well as the importance of tailoring regulation to the needs and capacities of the market.

The final article, by Yoseph Assefa of the International Labour Organization’s Microinsurance Facility, looks at the role of the regulatory bodies in promoting microinsurance. He discusses several areas within the microinsurance realm of activities such as market education and consumer protection, which both require special consideration.

Effective development and implementation of relevant legislative frameworks can have a positive or negative impact on the development and expansion of microinsurance. This section should help regulators and insurers think through the primary components to framework drafting and the crucial considerations for effective implementation of the framework.
1.2. Regulation of the Insurance Industry in Africa: Historical Perspective and Future Direction

Nyamikeh Kyiamah

Introduction
Most insurance industries in Africa were established during colonial times and the insurance laws and regulations, which provided the framework for regulation and supervision, were usually based on the laws and regulations of the colonial power.

Insurance regulation in most African countries has by, and large, been compliance-based, deriving its powers and protection from the various legislative frameworks of the respective countries. The effectiveness of insurance supervision thus depends on the powers and independence of the regulatory bodies as defined in the respective laws relating to licensing, supervision and enforcement actions.

The absence of internationally accepted standards for the regulation and supervision of insurance, until the late 1990s, meant there was no impetus for change. The insurance laws of many African countries had, therefore, fallen behind market developments and were often unworkable. This sometimes resulted in regulated entities disregarding laws and regulators finding it difficult to enforce them.

Furthermore, the insurance laws included detail which should have been covered by regulations. For example, minimum capital requirements of insurers and specific monetary penalties for breaches of the insurance laws were stated in law. These figures quickly became outdated but it was difficult to review them as it required amendments to the main legislation through Parliamentary procedure. This rendered regulation and supervision ineffective.

Various regulatory bodies have been working hard to achieve effective regulation but there have been challenges, including:

- financial dependence of regulatory bodies
- weak financial strength of insurance companies
- inadequate expertise and capacity of regulators
- lack of cooperation among regulatory bodies
- inadequate disclosure of information by insurers to stakeholders
- lack of strict application of the provisions of the law

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1 This article was originally published by the African Insurance Organization (AIO).
2 The International Association of Insurance Supervisors (IAIS) was established in 1994 and the first Insurance Core Principles were issued in 1997.
Regulation of the Insurance Industry in Africa: Historical Perspective and Future Direction

with new regulations on risk management and corporate governance, among others. insurers to become more professional in their approach. This would assist them to relatively small and expertise is often limited. Regulation is needed which will compel very sophisticated so need well-designed, simple products. Insurance companies are investment markets but lack adequate expertise such as actuaries. Consumers are not to take into account the local environment. Most African countries have nascent industry in Africa, however, has some way to go to meet these requirements. Therefore, the framework for insurance regulation and supervision must be tailored to each country.

The introduction of detailed and comprehensive international standards for the regulation and supervision of insurance business, as well as a greater focus on implementation by the international community, has required all countries to upgrade their insurance laws.

It is, therefore, not surprising that over the past 10 to 15 years there has been substantial legislative and regulatory change in African countries. However, the Insurance Core Principles (ICPs) of the International Association of Insurance Supervisors (IAIS) are essentially a policy document. As a policy document, the ICPs apply to insurance supervision in all jurisdictions regardless of the level of development or sophistication of the insurance markets and the type of insurance products or services being supervised. This has led some African countries to look to more established jurisdictions, both within and outside the region, for more detailed models.

A careful study of European regulations has shown that the European approach does not work in Africa for a number of reasons, mainly:

- The European insurance industry consists mainly of very large insurers with billions of dollars’ worth of annual premiums.
- European insurance companies sell highly sophisticated products and have at their disposal adequate expertise, including actuaries.
- These insurers are able to invest in well-developed investment markets.

The European regulations assume that all these criteria are in place. The insurance industry in Africa, however, has some way to go to meet these requirements. Therefore, the framework for insurance regulation and supervision must be tailored to each country.

A possible regulatory approach for Africa

Any design for an appropriate insurance legal and regulatory framework for Africa needs to take into account the local environment. Most African countries have nascent investment markets but lack adequate expertise such as actuaries. Consumers are not very sophisticated so need well-designed, simple products. Insurance companies are relatively small and expertise is often limited. Regulation is needed which will compel insurers to become more professional in their approach. This would assist them to conduct business in a more consumer-centric manner by convincing them to comply with new regulations on risk management and corporate governance, among others.
The regulations will have to comply with the requirements of the ICPs\textsuperscript{3}, but it must be recognised that most African countries will not be able to comply with all the ICPs immediately. For example, ICP 16 on Enterprise Risk Management is too technically complex for most African countries to achieve compliance.

The regulatory framework should require insurers to develop and mature without placing impossible requirements on them. Importantly, regulators must also have sufficient expertise to be able to verify compliance. In other words, highly technical regulations which insurers cannot implement, or regulators do not have the resources to enforce, will not provide effective regulation and supervision.

As indicated previously, a culture of non-compliance and non-enforcement has developed in some African countries which needs to be addressed. It requires regulators to ensure insurance supervisory staff do not avoid confrontation with owners and managers of insurance companies over non-compliance.

Insurance regulators should take steps to comply with ICP 3 on Information Exchange between themselves. Relationships in this area should be formalized to help address cross-border and cross-sectoral issues and regulatory arbitrage; for example, South African insurers operate in many African countries, Kenyan insurers operate in Tanzania and Nigerian insurers operate in Ghana and Uganda.

**Future direction**

Various measures can be put in place to address the challenges faced by African insurance regulators including the following:

- Increased financial and human resource capacities
- Extensive use of Information Communications Technology (ICT) for information gathering purposes and better operational efficiency
- Adoption of risk-based supervision of insurers
- Adequate capitalization with risk-based solvency determination
- Adoption of International Financial Reporting Standards (IFRS)
- Increased consumer protection and education
- Increased financial inclusion (for example, deepening microinsurance and agricultural insurance)
- Reviving and strengthening the Association of African Insurance Supervisory Authorities (AAISA).

The enabling environment can be provided through a well-crafted legislative framework that meets international standards and best practice. The insurance regulatory framework in Africa should be drafted in such a way that supervisors can change it, when necessary, without the approval of Parliament. In Ghana, as explained in the following

\textsuperscript{3}The October 2011 ICPs are around 400 pages (compared with 50 pages for the 2007 ICPs).
The current law - Insurance Act, 2006 (Act 724) - has been redrafted. The new Bill covers the issues raised in the IAIS October 2011 ICPs in principle. The new Insurance Act will be accompanied by Insurance Regulations, an Insurance Code and an Insurance Intermediaries Code. The Codes cover many of the technical issues raised in the latest ICPs. The new Insurance Act will empower the supervisor to change the Codes as, and when, it becomes necessary.

A big challenge for insurance regulators in Africa is enforcement. The review of the legal and regulatory framework, in line with international standards and best practice, is the beginning of the process. The cycle will be complete when all insurers comply and regulators have the ability and willingness to enforce compliance.
1.3. Challenges in the Implementation of Ghana’s Proposed New Insurance Legislation

Richard Carpenter

Introduction
The National Insurance Commission (NIC) has invested considerable time and resources in the development of a new legal and regulatory framework for the insurance sector. The proposed new Insurance Act and Insurance Regulations have been submitted to Government for consideration. The framework has been designed to enable Ghana to comply, over time, with the new Insurance Core Principles (ICPs) published by the International Association of Insurance Supervisors (IAIS) in October 2012. The NIC considers that the proposed framework is up-to-date, comprehensive and appropriate for the insurance sector in Ghana.

Experience in other countries, however, has demonstrated that a well-designed legal and regulatory framework will only work to the extent that it is effectively implemented and enforced. The drafting and enactment of the necessary legislation is just the starting point; effective implementation is often the greater challenge.

This article considers the implementation and challenges that the NIC (referred to as the Ghana Insurance Regulatory Authority in the new legal and regulatory framework) and the industry will face once the new framework is brought into force, and the strategies for making implementation more effective.

Well-designed and well-drafted legislation is a necessary pre-requisite for effective implementation. The NIC has, therefore, worked not just on the policy issues but also on the design principles underpinning the proposed new framework. An understanding of these key design principles is essential for successful implementation. This article discusses the design of the legislation then considers some of the principal implementation issues that the Authority, as Ghana’s insurance supervisor, will face. The industry also has an essential role to play in effective implementation, and the article also considers some important implementation issues from an industry perspective. The focus of the second and third sections of the article is on practical ways in which implementation may be eased.

Legislative design
The insurance sector, and the commercial environment within which it operates, is far from static. The development of new microinsurance products and new delivery channels will extend access to insurance, and is likely to enable Ghana’s still relatively small insurance market to expand over the next few years. Developments in the
international insurance market will influence insurers in Ghana resulting in the development of new insurance and insurance-like products. As the financial crisis has demonstrated, unanticipated world events can have a worldwide impact, including on Ghana’s insurance sector. The insurance supervisor must be able to respond to these developments, changes and impacts and, often, the response will need to be immediate.

International standards for the regulation and supervision of the insurance sector are also developing. The new ICPs are the fourth set of international standards issued since 1997. The IAIS continues to issue standards and guidance, much of which is relevant to Ghana and the country must be able to respond to these changes, where appropriate.

Although some market and supervisory developments can be anticipated when legislation is being developed, it is impossible to anticipate all possible future developments and impacts. The insurance supervisor must operate within a defined legal and regulatory framework, so the challenge for the NIC was how to design a legal and regulatory framework able to adapt to these developments and impacts and that will enable the Authority to respond appropriately and promptly. The legislation is, therefore, designed to enable future developments to be easily accommodated. Before considering the design principles further it is helpful to outline the proposed legal and regulatory framework.

Legislation usually consists of primary legislation made by Parliament, and subordinate or delegated legislation. Although subordinate legislation takes effect as law it is made by another person or body under delegated authority contained in the primary legislation. The new legal and regulatory framework proposed for Ghana will consist of an Insurance Act (the primary legislation) and Insurance Regulations, an Insurance Code and an Insurance Intermediaries Code (all subordinate legislation). The Insurance Regulations will be made at Ministerial level, while the Authority will be responsible for issuing the two Codes. The legislation will be supplemented by Guidance, also issued by the Authority. The Guidance will contain important background and explanatory information and will provide direction about how the Authority expects licensees and others to comply with the Act, the Regulations and the Codes. In some countries, the supervisor has the power to issue other non-legislative documents, such as Codes of Practice, which may or may not be enforceable. Given that the Codes and Guidance will be extensive it was considered unnecessary to provide for the issue of any other documents, except for approved reporting forms.

Once primary legislation is enacted it is usually difficult to change. There are many demands on Parliamentary time so legislators are usually unhappy to see legislation repeatedly returning to Parliament for amendment. Therefore, to provide maximum flexibility, the Insurance Bill has been designed as principles-based framework legislation. The Bill sets out the key principles but contains very little detail. The detail is left for the Authority to specify in Codes. As the Codes are made by the Authority, they
can be more easily and quickly changed to enable the Authority to respond to industry developments, unexpected impacts and changes in international standards. The Authority will also be able to provide additional Guidance to the industry, as necessary.

The principles-based approach to drafting facilitates the adaptation of the legal and regulatory framework to developments and changes in circumstances. However, the lack of detail provided does impact on the way in which the Insurance Act will need to be read and understood. It is all the more important to look for and understand the underlying principles as this is necessary to enable a good understanding of the purposes of the Act. If the Insurance Act appears ambiguous, or does not deal with a particular issue, understanding the principles and purposes will assist in understanding the Act and its requirements.

The legislation also attempts to set a clear demarcation between the roles of government and the Authority and, equally importantly, between the Authority as supervisor and the insurance industry. The fundamental principle is that it is the role of the directors and senior managers of an insurer, or insurance intermediary, to manage the business of the insurer or insurance intermediary. The supervisor’s function is to do all possible to ensure the functioning of a sound insurance market and to protect consumers. It is not the role of the supervisor to manage insurance companies. The legislation has been designed to avoid regulatory capture where the supervisor “captures” the functions of directors and senior management. This will be discussed later.

This represents a significant shift from the current law and is critical to effective implementation, by placing much more responsibility on directors and senior management.

**Implementation - the supervisor’s perspective**

*Legal and regulatory framework must be complete and appropriate*

One of the reasons that the current Insurance Act (Act 724 of 2006) has not been effective is that the Regulations, and other documents provided for, have never been issued and brought into force. Given that, as discussed above, the detailed requirements are contained in the Codes it will not be possible for either the Authority, as supervisor, or the industry to implement the Act without the Codes. The intention is that the new Act will not be brought into force until the Regulations, Codes and Guidance are fully-developed, consulted on and ready to issue.

The legal and regulatory framework cannot be considered without also considering the stage of development of the insurance sector. It is important that the requirements in the Codes, and the Authority’s expectations, are realistic given industry and supervisory capacity and constraints. For example, there is no point in the supervisor setting requirements that rely on IT systems not yet in place.
The legislation needs to facilitate future development and growth. This can be achieved by permitting the Regulations or Codes to disapply certain provisions of the Act. For example, the Insurance Act provides for the use by insurers of internal models for the purpose of determining capital adequacy requirements, as envisaged by Solvency II. However, the Regulations prohibit the Authority from allowing the use of internal models. This is necessary given the current capacity of the NIC and insurers but, at some point, if internal models or partial internal models become feasible, it will be necessary to amend the Regulations but not the Act.

The Authority will also have to ensure that it sets requirements with the understanding that actuarial capacity in Ghana is still very much developing.

**Communication by the Authority**

Although the Codes will include many detailed provisions insurers will be required to establish their own policies, systems and controls on the basis of their own assessment of the risks that they face. Given the different circumstances of different insurers, and differing risk appetites, many of the requirements of the Code will need to be high-level, leaving the mode of compliance to the insurer. In the absence of detailed requirements it will be important for the Authority to effectively communicate its expectations to the industry as this will help insurers implement the Codes; something that supervisors often fail to do adequately.

There are a number of ways in which this can be done:

- Issuing formal and detailed Guidance. Guidance can cover matters that would be too difficult, or too restricting, to convert into legislative requirements.
- Holding workshops before the new framework comes into force. However, training is not an appropriate function of an insurance supervisor and these workshops should not be considered as training workshops, rather as one way for the Authority to communicate its expectations to assist industry participants prepare to implement the new legislation.
- As discussed, the insurance sector is not static. Insurance supervisors should meet with the insurance industry, or at least industry representatives, on an occasional but regular basis to communicate changes in expectations, highlight areas of misunderstandings or common problems and provide details of new proposals and plans. These meetings should not be considered solely as an opportunity for the insurance supervisor to impart information to industry. They also provide an excellent opportunity for the industry to raise concerns with the supervisor.

**Risk-based supervision**

The new legal and regulatory framework will require the Authority to supervise on a risk-sensitive basis. Under risk-based supervision (RBS), the insurance supervisor assesses various categories of risk posed by individual licensees and uses this assessment,
combined with an impact assessment, to drive its supervision of the licensee. Greater supervisory effort will be placed on licensees posing a high supervisory risk and which could be expected to have a greater supervisory impact.

This represents a completely different supervisory approach to that currently used by the NIC. Although the preparatory work has already been undertaken, the NIC still has much to do to enable it to implement RBS as required under the new framework.

Implementing RBS will also require changes in attitude and culture at the NIC. For example, the NIC will need to move away from concentrating on minor compliance issues to assessing supervisory risks posed by a licensee on a holistic basis. It will need to enforce the legislation in a risk-based and proportionate manner. In levying administrative penalties, for example, it may be advisable to focus more on the seriousness of the breach rather than look at punishing every technical contravention. The experience of some supervisors is that focusing over-heavily on punishing every minor breach results in the industry striving to obey the letter, rather than the spirit, of the law. If penalties are levied on a licensee for submitting a document just one day late, for example, that may result in future documents being submitted on time, but incomplete.

On the other hand a series of individual minor breaches may indicate a more serious underlying problem posing a significant supervisory risk.

_**On-going monitoring**_

It will be important for the Authority, on an on-going basis, to monitor the effectiveness of its, and the insurance industry’s, implementation of the new framework, as well as the effectiveness of the framework itself. There are a number of ways in which this can be done including:

- The use of technical committees with industry participation. The industry perspective is important and, in some areas, the industry will have more experience and expertise than the Authority. The use of joint technical committees will enable the industry to contribute to the agenda and to bring problems and concerns with the legal and regulatory framework to the Authority’s attention.
- The use of thematic inspections. These are onsite inspections carried out across the industry, or across certain sectors of the industry, focussed on the same theme for example, risk management procedures and controls. These provide an excellent way of assessing the strengths and weaknesses of the industry, rather than individual licensees, in relation to specific targeted areas and help the supervisor identify industry-wide problems and issues.
- Adequate consultation on proposed changes to the Codes and Guidance. The Insurance Act requires the Authority to consult in advance on any changes to the...
Challenges in the Implementation of Ghana’s Proposed New Insurance Legislation

The impact of excessive supervisory approval requirements includes:

- From the industry perspective, it will be important for insurers and insurance intermediaries to invest the time and resources necessary to provide good feedback to the Authority.
- Finally, the supervisory capacity of the Authority will also be a constraint on the implementation of the new legislation. The NIC, and subsequently the Authority, has responsibility for continuing to develop supervisory capacity.

### Transitions to new framework

As indicated, it is not realistic to expect that either the industry or the Authority will have the capacity to implement the legal framework from the date of its enactment. Both the industry and the Authority will need to expand their human resources and establish completely new procedures. Insurers will have to establish new functions. Even in respect of requirements intended to be brought into force on enactment, it is important to ensure that the Authority and the industry are given the necessary time to comply. There will, therefore, be transitional provisions in both the Act and the Codes that phase in full implementation over a period of time.

### Transition plan

Finally, given the complexity of transitioning to the new regime, the NIC would be well-advised to develop a transition plan and to give responsibility for implementing the plan to one or two key members of staff. The transition plan could contain a series of actions with an implementation timetable. This should enable the NIC to more effectively manage the additional workloads required to implement the new legislation.

### Industry perspective

#### Introduction

Regulatory legislation is often seen by the industry as a burden. Some elements of compliance are no doubt burdensome, but one of the keys to effective implementation is to understand that the regulatory framework, if well implemented, is enabling and necessary to allow market development and a level playing field.

The underlying attitude is critical. If the legal and regulatory framework is seen only as a burden the industry may seek ways to circumvent it and will almost certainly pay less attention to effective implementation.

#### Responsibilities of industry

In common with the insurance legislation of many countries the current Insurance Act requires supervisory approval for many matters that are properly the responsibility of the licensee. The desirability of avoiding regulatory capture has been discussed briefly. The impact of excessive supervisory approval requirements include:
Insurance supervisors take responsibility for decisions that should be taken by the directors and senior management.

Insurance supervisors take decisions on whether or not to approve a product, sometimes without the necessary knowledge, expertise or experience. For example, insurance supervisors are often required to approve insurance products, including the rating of those products. However, without detailed knowledge and understanding of matters within the knowledge of the insurer, such as the claims history for previous years, the insurance supervisor is not in a position to make a proper judgment. In order to undertake the function effectively the supervisor would need to employ significant additional resources or divert resources from its core supervisory functions.

If approval is required there is a tendency for directors and senior management to rely on the approval process as a substitute for undertaking the necessary work themselves. This is on the assumption that if anything is wrong the application will be rejected.

The new Insurance Act moves in a different direction. Based on international standards and best practice, the NIC has undertaken an analysis of those matters that should properly be approved by an insurance supervisor and those matters that should be decided by senior management. Of course the Authority will still need the information that it requires to effectively supervise insurers and insurance intermediaries. Therefore, where approval is not appropriate, the new Act will require documents to be provided to the supervisor on a “file and use” or “no objection” basis.

This has obvious attractions for insurers and insurance intermediaries but requires directors and senior management to understand their greater responsibilities regarding the documents and information that licensees will be required to provide to the Authority. It is important that insurers and intermediaries are straightforward and honest in the applications they make. Applications should not be made unless senior management consider they are worthy of approval.

Understanding principles-based legislation

It is important that the industry understands principles-based legislation. For example, one of the principles for business in both Codes is that insurers and intermediaries treat their customers fairly. This requires more than simply complying with the basic legal requirements. The United Kingdom has been hit by a series of mis-selling scandals in which consumers have been sold inappropriate insurance products. Payment protection insurance (PPI), for example, which provides for the continuing payment of loan instalments when the policyholder is ill or out of work, were often sold to policyholders who could never have claimed under the policy. While insurers are in business to make a profit, this betrays a misunderstanding of one of the core underlying principles; the need to treat customers fairly. The Code contains specific provisions and guidance on what this entails.
Investment in staff resources
In order to effectively implement the new legislation insurers and intermediaries will need to invest in understanding it. This requires acquiring sufficient and appropriate staff and providing appropriate staff training.

Corporate culture
An investment in staff resources, although necessary, will not be sufficient. It will also be critical for insurers and intermediaries to establish the right corporate culture throughout the firm and this has to come from the directors and senior management. Whatever guidance the Authority will provide, and whatever internal policies and procedures are set by senior management, ultimately it is the corporate culture of a company that will have one of the most significant influences on the effective implementation of the regime. Senior management will need to ensure that the corporate culture is one that understands the need to comply and the reasons for, and benefits of, compliance.

Implementation plan
It is as important for insurers and insurance intermediaries to establish an implementation plan as it is for the NIC. Again, specific responsibility for developing and implementing a transition plan should be given to specific senior members of staff. The transition plan should also contain a series of actions with an implementation timetable.
1.4. Ghana’s Microinsurance Policy Shift

*Kofi Andoh*

**Introduction**

In 2010 the National Insurance Commission (NIC) took the decision to develop a new legal and regulatory framework for the insurance sector. The main reasons for this were i) to enable Ghana to progress towards compliance with the latest international standards for insurance supervision (the Insurance Core Principles (ICPs) and ii) to enable the NIC to introduce risk-based supervision (RBS). This article focuses on a third very important motivation, the inclusion of appropriate provision for the development and regulation of microinsurance.

As has been indicated the outreach of insurance in Ghana is still very limited. At the same time the reality is that most of the population is employed in the informal sector. To increase the outreach of insurance in Ghana it will be necessary to work with those people in the informal sector. The development of microinsurance is, therefore, a necessity involving the whole insurance sector.

The first section of this article looks at the overall legal framework currently proposed, focusing on the main differences from the current situation. Then, some of the policy changes which have been incorporated into the new legislation are highlighted.

**Background on proposed legal and regulatory framework**

The new legal and regulatory framework consists of three levels. At the highest level there is the Insurance Bill, which will become the Insurance Act when it is passed by the Parliament. Secondly, there are Regulations, which will be issued by the Minister of Finance. There will be two Codes - an Insurance Intermediaries Code and an Insurance Code - which contain all the detailed rules and prudential requirements, and thirdly there is the Guidance. Both the Codes and Guidance will be issued by the Ghana Insurance Regulatory Authority (the Authority), and may be revised at any point in time to reflect changing market conditions. The Regulations and the Codes will take effect as subsidiary legislation and will, therefore, be enforceable as law. The Guidance will not have the status of subsidiary legislation and is not intended to be enforceable. The legislation will include appropriate transitional provisions, providing insurers and insurance intermediaries with time to implement many of the new requirements and obligations.

The NIC is expecting major changes to come from the new legislation. Firstly, there will be a much stronger emphasis on corporate governance and risk management. In the current Act insurers need prior approval from the NIC for a number of actions, such as,
issuing new products. In the new legislation insurers and insurance intermediaries will be given more responsibility for managing their own affairs, provided that they comply with the Act, Regulations and Codes, designed, among other things, to ensure the implementation of international best practice on risk management and corporate governance. This will require insurers to put certain structures and key functions in place. Secondly, it will entail the introduction of much more detailed prudential requirements, reflecting international standards on risk-based solvency. Lastly, of course, there will be comprehensive provisions on microinsurance.

**NIC’s objectives for microinsurance**

The legal and regulatory framework for microinsurance in the proposed legislation is designed to:

- Encourage private sector engagement in risk protection for the low-income segment and the development of the microinsurance market in a sustainable manner, including motivating consumers to buy insurance (Market Development).
- Protect the interests of customers by requiring transparency with respect to product offering and servicing and by requiring insurers and intermediaries to treat their customers fairly (Consumer Protection).
- Require microinsurance providers to act in a prudently sound manner (Stability).
- Ensure that providers are able to meet claims (Soundness).

The objective of market development may require additional explanation, as not all insurance regulators see this as part of their mandate. The NIC is of the opinion that if there is no market, there would be nothing to regulate so it engages in continuous interaction with the insurance industry and actively pursues a development agenda, of which microinsurance is a major component.

In anticipation of the new legal framework for microinsurance the NIC, in cooperation with GIZ, has sensitized the insurance industry to this new field of business. Seminars were organized to develop the capacity of the insurers in various aspects of microinsurance, highlighting the differences from conventional insurance practices. Furthermore, consumer education has been undertaken.

**Regulatory approach**

The NIC has studied both the local market situation and international best practice with respect to microinsurance policy and regulation.

In the literature on microinsurance policy a distinction is made between two regulatory approaches: the institutional approach and the functional approach. Under the institutional approach, a special regulatory tier is created for entities selling only microinsurance products. Normally, the capital requirements for this tier would be lower and the other prudential requirements would be less onerous. Under the
functional approach conventional insurance companies are allowed to sell microinsurance as a line of business. The NIC decided to use the functional approach as it reflects the current situation in the market and requires less adjustment of processes and procedures.

After deciding upon the regulatory approach the first step in designing a legal framework for microinsurance was to decide upon a legal definition that distinguishes microinsurance from conventional insurance products. Although there is general understanding of the microinsurance concept, i.e., that microinsurance is insurance intended for lower income people and households, countries worldwide have struggled with a definition that is appropriate and has legal certainty. If the legal definition is uncertain it can result in unintentional breaches of the Act, Regulations or Code which can have serious consequences for insurers and insurance intermediaries.

Although definitions of microinsurance vary from country to country, almost all definitions incorporate qualitative criteria, quantitative criteria or both qualitative and quantitative criteria. Qualitative criteria include, for example, a specified maximum premium or sum insured. The problem with quantitative criteria is that they are arbitrary. Furthermore, not all insurance products, for which a low premium is charged, are necessarily microinsurance and what is considered a low premium for one type of insurance may not be considered low for another type of insurance.

Qualitative criteria may require, for example, that the insurance is affordable or has the objective of protecting the social economic living conditions of the low-income population against specific risks. Although qualitative criteria are better able to capture the concept of microinsurance the NIC considers that they are somewhat vague and too subjective for a legal definition.

The new framework takes a new and ground breaking approach. Rather than using quantitative or qualitative criteria for definition, it proposes that insurers be given the power to designate an insurance product as microinsurance. Once designated as such by an insurer the product is considered for all purposes to be microinsurance. The definition of “microinsurance contract” is, therefore, quite simply an insurance contract designated by an insurer as microinsurance. Either the insurer or the Authority will have the power to determine that the product is not, or is no longer, microinsurance. Even then, the removal of the microinsurance designation will not affect any policies previously been sold as microinsurance.

The insurer must determine whether an insurance product is microinsurance on the basis of certain qualitative criteria specified in the Insurance Code. Instead of being part of the definition the criteria will be used by the insurer to make its own determination. This approach is intended to capture the qualitative criteria while achieving legal certainty.
It is proposed that the Code will provide that an insurer will not be able to designate a product as microinsurance unless it satisfies the following criteria:

- it is designed and developed with the intention of meeting the needs of, and being marketed and sold to, the low-income sector, or a segment of the low-income sector;
- the premiums are affordable; and
- the product is accessible to those low-income persons for whom it was designed and developed.

The NIC decided that the legal framework should contain certain incentives for insurers to provide insurance to the underserved population:

- A microinsurance product will not have to be approved by the Authority. Instead, the insurer will be required to file details of the product but may start using it after a period of four weeks, unless the Authority objects.
- As discussed in Chapter 5, delivery channels are very important in microinsurance distribution. At this point, it is proposed that banks and licensed non-bank institutions (including microfinance institutions) will be allowed to sell microinsurance (as an insurance agent) without a licence. However, this area is still open for discussion and the NIC is considering whether additional categories of unlicensed insurance agents should be permitted to sell microinsurance.
- Insurers will be able to rate microinsurance products on a community basis as opposed to an individual basis.
- Non–life insurers will be able to sell microinsurance life products, provided that the products satisfy strict criteria in the Insurance Code including a one year term limit.

There are also a number of provisions in the Code designed to protect the microinsurance consumer. For example, microinsurance contracts are to be written in simple and understandable language. Claims are to be settled and paid within a specified timeframe to retain the confidence of the policyholders.

**Outlook**

At the time of writing, the proposed Bill has been submitted to the Ministry of Finance and is awaiting approval by the Cabinet. The Regulations, Codes and the Guidance will come into force together with the new Act. It is envisioned that the Authority will start to implement the new legal and regulatory framework in 2013. As indicated, there will be appropriate transitional arrangements for insurers and insurance intermediaries to prepare for, and comply with, the more challenging aspects of the new framework.
1.5. The Role of the Regulator in Microinsurance Market Development

Yoseph Aseffa

Introduction
Ghana is introducing a new legal and regulatory framework to help it comply with international standards and encourage microinsurance development. It currently has one of the better organised regulatory authorities in Africa and, more importantly, a vision to change the insurance landscape focused on serving the low-income population. Its vision goes beyond regulatory structure and capacity, to applying regulation to serve market development to provide microinsurance for the underserved population; improving client value and services; and empowering insurance providers to initiate products and services that meet the needs of the population.

This article focuses on how regulators can facilitate microinsurance development and strengthen the role of microinsurance as a component of inclusive financial services for the low income population. It touches on issues such as microinsurance regulation, insurance education, and capacity development for the insurance industry. In its quest to promote microinsurance, Ghana can learn from the experience of others. Two case studies from other African countries are included below.

Box 1: The Access to Insurance Initiative

The Access to Insurance Initiative is a global partnership working with insurance supervisors in developing regions of the world. Its goal is to increase access to insurance markets, particularly for the low-income population. Through its link with the international standard-setting body for insurance, the International Association of Insurance Supervisors (IAIS), the Initiative unites insurance supervisors and development partners in promoting sound, effective and proportionate regulation and supervision of insurance markets consistent with international standards. Five of the ten members of the Initiative’s Governing Board, including the Chair, are designated by the IAIS.

The Initiative’s vision is to increase financial inclusion in insurance markets for the low-income population. To achieve this vision the Initiative supports global learning and strengthens the capacity of policymakers, regulators and supervisors seeking to create inclusive insurance markets.

The Initiative undertakes a wide range of activities that can be divided into four general categories.
Building knowledge and learning:南南交流在对话活动中的作用，旨在传播和发展包容性保险政策、监管和监督；培训，主题研究和跨国家的综合分析。

Undertaking country projects:开发工具包，用于国家诊断和实施改革；在政府的监督下，政策制定者和学者；支持保险监管和监督的发展，以及保险的障碍。该倡议还提供了实施支持改革。

Contribution to IAIS standard-setting:贡献给国际保险监管委员会（IAIS）的议题和标准的制定；制定IAIS自评工具，以包容性保险市场；与IAIS秘书处和金融包容委员会（MIC）合作。

Advocacy in international platforms:在国际平台上倡导：贡献给“G20金融包容进程”；连接IAIS和微型保险网络，保险和社交保障提供者，政策制定者和学者；支持IAIS-Microinsurance Network（MIN）联合工作小组的议程，通过提供技术和分享经验。

Box 2: The International Labour Organization (ILO) and microinsurance

The ILO has a long-standing commitment to improve financial access for the working poor. Under its Social Finance Programme, Microinsurance and Microfinance are two of its core activities. The ILO has set up the Microinsurance Innovation Facility at its head office in Geneva. The Facility has been the cornerstone for research, innovation and learning on how best to serve the insurance needs of the working poor. Its innovation grants, action research, technical capacity building and other support has made a significant contribution to microinsurance growth world-wide. The Facility is also a leading knowledge sharing platform for developing countries. In addition to the Facility, the ILO promotes microinsurance development on a regional basis in collaboration with other development partners and local institutions.

Since 2009, the ILO and United Nations Capital Development Fund (UNCDF) have set up a joint programme for microinsurance development in Africa. The focus is on assisting microinsurance access by the low-income population in Africa through support to key stakeholders. The ILO/UNCDF Joint Programme is one of the
important movers of microinsurance in Africa and works closely with a number of
development partners such as the Access to Insurance Initiative, the Microinsurance
Network, the International Fund for Agricultural Development (IFAD), Deutsche
Gesellschaft für Internationale Zusammenarbeit (GIZ) and Making Finance Work
for Africa (MFW4A).

Policy and regulatory objectives
Microinsurance is not a stand-alone product to provide protection to the excluded
population. It is a means for providing financial access to low-income households and
micro and small businesses, thus protecting livelihoods. At the policy level, therefore,
microinsurance is an integral part of a wider financial inclusion policy framework linked
to savings, credit and transactions.

To make microinsurance a tool for meeting government’s development policy
objectives, regulatory and supervisory authorities need to develop a set of guidelines that
encourage client value and acceptable levels of profitability for a vast network of
consumers, distribution channels and insurance providers. Key regulatory actions that
contribute to microinsurance development would include:

- Introduction of regulation and supervision processes proportionate to the business
  of microinsurance, thus facilitating entry for insurers and distribution channels
  relevant for the poor. There is inadequate insurance supply for the low-income
  population as mainstream insurance companies are not positioned to access and
  serve this sector. At the same time, the licensing requirements do not differentiate
  the business models of specialty microinsurance companies that could provide
  acceptable services to the target population.

- Allowing microinsurance distribution by non-traditional channels. Formal
  brokers and agents do not have the means to effectively serve the low-income
  population. For microinsurance to reach the low-income sector, those local and
  community institutions that have social and economic links to low-income
  communities, such as non-governmental organizations (NGOs), cooperatives,
  microfinance institutions, religious and other organised groups, could serve as
  effective distributors. In addition, informal community-based, traditional support
  groups, such as funeral societies, could be encouraged to formalise their services via
  microinsurance. This would enhance the scale of benefits and ensure consistency.

- Providing a logical framework for cross-selling combined products (life and
  general), drives down administration costs. It also helps low-income people avoid
  the confusion of product differentiation which primarily serves the objectives of
  the regulator to monitor the portfolio and solvency of the insurers and could be
  achieved by other means.

- Provision of insurance for the low-income population requires regulators to
understand that new entrants to microinsurance markets require incremental and proportionate regulation so they are not encumbered with standard insurance licensing and capitalization processes. Instead, they are encouraged through incremental and proportionate regulation based on their business models and opportunities. Their business model should be such that they innovate with services, products, distribution channels and other market issues on an incremental basis. Thus the regulator follows market evolution and supports good practices which lead to growth and value-added services for consumers.

**Licensing and inspection**

Regulation should encourage licensing conditions that introduce insurance products which meet the needs of low-income people. Often there is a mismatch between what the low-income insurance market needs and the insurance products available to them, including equitable pricing and efficient/timely claims payments. For example, traditional credit insurance schemes cover credit life, whereas low-income women borrowers are often faced with risks relating to maternity, pregnancy and illness.

To qualify for a licence an insurer must have no outstanding supervisory issues and have all microinsurance systems in place. The supervisor should be in a position to prevent insurers writing microinsurance business if their solvency is being endangered by microinsurance activity, or, if the supervisor believes the insurer’s microinsurance activities are not in the best interests of the public. Supervisors could make onsite inspection of selected (large) distribution channels with partner-agent relationships to assess whether premiums and claims have been duly taken into account. For example, clients provided with adequate information, risk managed adequately and so on. The introduction of a special licence for distribution channels, limited to microinsurance, could also be considered.

**System design**

Microinsurance becomes scalable and affordable for the low-income population when designed in a manner that makes the portfolio affordable. Some primary considerations include:

- Coverage would be under a master policy, potentially to cover all members or customers of the policy owner. A member desiring coverage would pay a premium and become a subscriber under the master policy.
- The microinsurer could issue the master policy to the client and individual certificates of insurance to members, usually a half-page document stating cover, premium basis and exclusions, if any.
- If considered desirable a number of microinsurers could enter into a formal pooling arrangement for microinsurance premiums and claims. A pooling operation should be able to achieve additional economies of scale and increase the efficiency of the overall operation.
The regulator may demand reinsurance and/or pooling for risks of a catastrophic nature (e.g. Crop Index Insurances).

Premium collection should follow the earning patterns of the insured; claims processing must ensure prompt service delivery with simplified processing. Policy services and fair claims payments also provide good education for clients. Amounts payable for life-related covers are usually fixed benefits, while payments under property risks (including crop and livestock insurances) are normally indemnity-based.

Promoting appropriate practices
Microinsurance market considerations begin with insurers deciding to enter the market with the objective of developing a viable and profitable portfolio based on products, distribution and management considerations deviating from traditional insurance contexts. In fact, the microinsurance business model is indeed dynamic and applicable to most activities of traditional life and general insurers. Insurers may not see microinsurance as a viable business proposition without the engagement of the regulator (shareholders’ interest for short-term profitability). Supportive policy and regulation mechanisms, such as consumer education, taxation and an ombudsman will enhance insurers’ entry.

Distribution
Distribution merits specific mention. Microinsurance requires a different distribution strategy with clients also becoming active partners in distribution and management of customer services for premium collection, account maintenance and payment of benefits. Traditional agents and brokers may not have a viable presence in communities where the poor live and work. Community-based organizations (such as cooperatives, NGOs, funeral societies, tontines) have good local knowledge and are better trusted. Empowering institutions with access to, and trust of, the people as distribution channels, is a valuable regulatory option. Partner-agent models in which the partnering institution serves as agent, services the policy and earns sales commission, as well as sharing in the residual profit under the policy, works well for financial services providers that are also large scale aggregators. In some countries major Microfinance Institutions (MFIs) and Savings and Credit Cooperative Unions (SACCO) may be licensed to operate as microinsurance providers if they have adequate reinsurance arrangements.

Products
Microinsurance product design should consider the economic risks faced by low-income households arising from death, illness, disability and asset losses including property, livestock and crops. Ideally the insurance product should cover the client and spouse, and have few exclusions, if any. It should also demonstrate value for money through timely settlement of claims and efficient services. In addition the product should be simple, understandable, distributed through reliable channels accessing low-income clients and be based on adequate client education, one of the key roles of the regulator.
Accident and disability insurances are very much needed, especially in combination with life and credit life insurances. Health insurance is required but requires great caution. The provider as much as the client requires education, and consideration of: access to health services, efficiency in claims control, fraud, high administrative costs, and an understanding of the gap in national health schemes. Insurance of loans for asset building and innovation cause the fewest problems as the coverage is strictly linked to the value of the outstanding amount of the loans. Crop and livestock insurances are micro at household level but can have catastrophic accumulations. There is a need for climate data, good statistics, loss assessment, and reinsurance.

**Consumer value and consumer protection**

Client value concepts in microinsurance aim at efficiency of services including ease of payment of premiums, easily understandable product design, prompt payment of claims and value for money in relation to the portfolio income and outgoings. This should also include new product delivery for low-income groups with premium payments matching the customers’ cash flows, reasonable management and acquisition costs and risk duration matching the risk exposures of the insured, plus fair, out-of-court settlement options.

**Financial literacy**

Insurance literacy is an essential element for empowering the poor. In promoting market development the regulator can engage in insurance education to ensure that content and delivery is balanced and in the best interest of the consumer. Investment in client education is more relevant than advertising. Product development and capacity building for distributors and insurers should ideally precede insurance literacy programmes. In many markets insurance literacy is provided as part of a wider financial literacy programme covering savings and credit.

**The microinsurance development process**

Successful microinsurance implementation at country level usually commences with a national diagnostic study led by the insurance regulator and comprising all stakeholders. The study leads to a stakeholder consultation and engagement process. This contributes to agreement on a national implementation strategy followed by the establishment of a task force, comprising key stakeholders and led by the insurance regulator. The task force could have a number of specialised technical committees that interact with government, market and development partners. Development partners have an advisory and a technical support role in the implementation process. This process leads to good results when the action plan is time-bound with a clear statement on deliverables.

**The business case for microinsurance**

Insurers should see microinsurance as an economic good that should be provided for profit. As in any other service the provider should plan adequately to design and provide
a product answering the needs of the consumer. The product should also show clear
process for design, development and delivery. Microinsurance is not a social service to
meet corporate social responsibility; however, this may be incorporated in the product
design to ensure equitable pricing and service. A passion to serve the low-income
population alone does not work; microinsurance should be provided on a for-profit
business model basis whereby insurance providers should see profit, growth and
business success as a goal arising from their microinsurance operation.

The business model should include good preparation by a company entering the
microinsurance market including feasibility study, identification of efficient distribution
and service channels, use of market and demand-side data and collaboration with
institutions serving the low-income market. The company also needs to collaborate
with stakeholders for common objectives such as product development, capacity
building, and client education. The insurance regulator is best placed to coordinate and
support market level activities, empower distribution channels and develop market
information but does not have responsibility for implementation.

Assessing demand for microinsurance
The starting point for effective service delivery is assessing real demand for
microinsurance. It should be based on sound understanding of the risks faced by clients
and their risk management strategies, thereby improving products, covers and costs.
Understanding gaps in products and services is essential. Demand assessment should be
linked to financial services for savings and credit the consumer needs and how
microinsurance can enhance the security and access to savings and credit. Micro and
small enterprise (MSE) lending is also an important element in assessing demand as
most MSEs would rely on microinsurance to provide their lenders adequate collateral for
lending and protection for their livelihoods and businesses. Demand for microinsurance
by rural households should also consider their livelihoods, risks and opportunities. Data
and information is important in demand assessment. How well do the poor understand
risk and insurance? Which economic risks do the working poor face and which are more
relevant for them? How do they cope with risks? What is fair value payout? Do they
want insurance? Can they afford it?

Country experiences: Ethiopia
Ethiopia has the lowest insurance penetration in Africa with fewer than 0.6 million
individuals, of an estimated population of 89 million, insured for life and health. This is
because the insurance industry is very young; the market was liberalized at a late stage;
the low income of most workers; and the lack of an active insurance distribution system
reaching out to the low-income population. To stimulate people’s access to financial
services, including insurance, the government passed the Microfinance Act 2007
permitting microfinance institutions to provide insurance to their clients. Encouraging
insurance provision by institutions that do not have technical experience and license to
carry out the business of insurance may seem a departure from past practice. However, it places the burden on regulation, as well as individual microfinance organizations, to ensure that their engagement in insurance does not lead to exploitation of consumers and distortions in the financial sector, including insolvency of microfinance institutions due to their involvement in insurance services.

Since the passing of the relatively recent Microfinance Act a number of strong MFIs have introduced microinsurance successfully, mainly through credit life insurance. Some have gone beyond and expanded their basic products to include both spouses and introduced some health insurance cover, while others have introduced disability cover arising from accident and natural causes and two MFIs have designed maternity covers.

An important contribution of MFIs to microinsurance development is that there were many agricultural insurance pilots in the country, mainly weather indexes for crops. One of the leading MFIs has now partnered with an insurer and development agencies to scale up crop index insurance, currently covering some 13,000 clients. The total number of MFI clients linked to microinsurance is estimated at over two million. The lesson from the Ethiopian experience is that government empowerment can go far in providing insurance access to low-income households where traditional insurers are either unable, or unwilling, to commit their limited resources to such insurance provision.

Ethiopia’s economy is mainly agriculture based, employing more than 75 percent of the population. The Ethiopian Government has signed a seven-year agreement for a Rural Financial Intermediation Programme (RUFIP II) with the International Fund for Agricultural Development (IFAD). RUFIP II includes microinsurance as a risk management tool for borrowers under the programme. In addition to savings and loans, RUFIP II includes financial education, microinsurance and capacity building for financial services providers. It provides for the empowerment of some 4,800 rural savings and credit cooperatives as financial intermediation vehicles along with microfinance institutions as financial services providers for savings, credit and microinsurance. The rural SACCO would be actively engaged in microinsurance education and distribution. However, they would not be allowed to write microinsurance for their own account but serve as agents through their unions for licensed insurers.

RUFIP II aims to provide support for some two million households. Financial education covering savings, credit and microinsurance will have been provided to the beneficiary households, and microinsurance provided on an incremental basis starting with life, accident and health credit insurance, as well as property insurances, and gradually including livestock and crop index insurances. The agricultural insurance products will be provided on a cautious basis dependent on technical capacity building for insurance providers, development of a national pooling strategy and reinsurance. There are very promising pilots of scalable models in livestock and crop insurance. The
lessons learned from these pilots provide a strong basis to scale up microinsurance for farmers engaged in both cereal and commercial crops.

**Country experiences: Kenya**

In Kenya the Insurance Regulatory Authority set up a Microinsurance Working Group consisting of the regulator, insurance association, Ministry of Finance/Treasury, representatives of financial institutions serving the low-income population (MFIs, SACCO, NGOs) as well as development partners. The guiding principle in setting up the working group was to make it open to all institutions serving the low-income population.

The Working Group identified quick wins and key activity areas, and assigned members to head various activities. These included:

- improving understanding of market opportunities and demand-side interventions
- leveraging on information and communications technology to push microinsurance products
- distribution channels and premium collection
- developing public private partnerships
- identifying topics of issues papers
- quick wins and further research to make microinsurance implementation successful
- understanding the microinsurance macro and meso level environment.

Currently, the Group’s research is on-going to strengthen the diagnostic study and inform policy makers and practitioners in two specific areas – health insurance and formalising funeral schemes. The main responsibilities of the Working Group include developing a set of activities to promote microinsurance, fundraising, advocating microinsurance in policy discussions and developing an exit strategy for the working group.

**Conclusion**

There are numerous ways in which regulators can contribute to the development of inclusive microinsurance markets. First and foremost, is the provision of an enabling legal and regulatory environment that takes into account the particularities of providing insurance to the low-income sector. Regulators can stimulate good market practices through approaches such as the use of appropriate delivery channels and the provision of products tailored to clients’ needs. Another important role is in the provision of public goods such as insurance literacy and market information.

African regulators face similar challenges in balancing regulation with market development objectives; the two country experiences included in this article are good examples. The approach chosen by the NIC in promoting the development of microinsurance can serve as a good example to many of its foreign counterparts.
The three articles in this section cover the modelling of microinsurance in Ghana; National Insurance Commission (NIC) reporting; and Key Performance Indicators (KPIs). Common to all is the requirement for base reporting, performance monitoring, and business modelling on consistent and reliable data.

The first article, by Simon Nerro Davor, presents national reporting requirements for insurance companies. By defining the framework for disclosing data concerning the business activities, performance and financial position of insurance companies, the NIC sets the policies needed for a coherent approach to managing information necessary for supporting microinsurance activities in Ghana.

Information is at the heart of the insurance business; accurate reporting is essential for management decision-making on selecting markets and products to satisfy customer needs. Equally important, however, are the benefits of demonstrating transparency to the emerging microinsurance market where low-income clients may have concerns about taking on insurance policies. The article explains the reporting standards and presents a new approach to calculating the solvency position of insurance companies.

In addition to the guidelines, the NIC provides an IT system to support the reporting process. Insurance companies can automatically upload financial supervision data into the NIC database which generates management reports, aggregates data and performs time series analysis to detect market trends. Using the system reduces the dependence on paper documents and manual overheads in the supervision process.

The NIC reporting procedures and information system are of great benefit to insurers as they provide management with relevant information about their financial situation, risk exposure and operational efficiency. Most importantly, the system ensures that insurance companies can meet their obligations towards policyholders through solvency monitoring and information disclosure to enable all stakeholders to make informed decisions.
2.1. Introduction

Eric Gerelle

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The NIC reporting procedures and information system are of great benefit to insurers as they provide management with relevant information about their financial situation, risk exposure and operational efficiency. Most importantly, the system ensures that insurance companies can meet their obligations towards policyholders through solvency monitoring and information disclosure to enable all stakeholders to make informed decisions.
The second article, by Jennifer Hennig, describes the results of workshops by the Performance Working Group of the Microinsurance Network together with microinsurance providers. Microinsurance experts have collaborated to produce 10 KPIs, specifically aimed at microinsurance, which are being applied internationally to guide insurance companies in their microinsurance activities. Although the main focus of the Indicators is financial viability, their social dimension is also apparent as the main objective of microinsurance is to provide efficient products to the poor.

The paper begins with a presentation of the Key Principles, which are preconditions for effective monitoring of the KPIs. This is followed by an explanation of each of the 10 indicators. Finally, the paper outlines the four steps an insurance company must follow to monitor KPIs on a regular basis. These are: to ensure compliance with the Key Principles; to calculate the KPIs based on the company’s financial statements and related data; to analyse the results and, finally, to act upon the findings and make operational changes to improve the performance.

The final article proposes a comprehensive modelling framework for microinsurance that integrates macroeconomic data on income and employment with demand-side indicators on household expenditure and supply-side key performance indicators. The framework can be used for scenario planning by microinsurance stakeholders to build strategic plans for the development of the insurance sector in Ghana.

The Ghana Microinsurance Model is a series of analytical models that: qualify and quantify the market potential for microinsurance; estimate microinsurance demand through willingness to pay; analyse key performance indicators; and use these results to make predictions on the evolution of the market.

The Model begins with an analysis of income and employment distribution in Ghana. The income distribution helps identify the microinsurance market by income range. The employment distribution in Ghana then indicates the target markets for microinsurance by employment sector.

The next stage is a demand-side analysis relating the willingness to pay (WTP) for insurance to other household expenses such as, the amount it spends on food. A supply-side analysis uses KPIs to rank and compare insurance companies. This part of the model can also be used to compare the performance of different microinsurance products and evaluate the geographic penetration of a particular type of product. Finally, the demand and supply-side analyses are integrated to perform a scenario planning exercise which can be used to forecast the evolution of microinsurance performance indicators in Ghana.
2.2. The NIC Reporting Standards

Simon Nerro Davor

Introduction
Information is the key to decision-making in insurance. The wisdom of a decision taken normally depends on the relevance and adequacy of available information. This equally applies to the decision to take up microinsurance. Microinsurance customers typically have low incomes and little or no experience with insurance companies. Insurance providers need to gain their confidence before expecting them to spend their hard-earned money on an insurance policy. Building confidence begins with providing the right information to potential clients to enable them to make an informed decision. For this reason the National Insurance Commission (NIC) is committed to ensuring that insurance companies provide relevant and correct information to the general public.

Insurance companies are also required to report regularly to the NIC itself, so that it can effectively carry out its supervisory mandate. For this purpose, the NIC has recently put in place a new reporting system which will enable it to obtain a more comprehensive picture of companies’ financial positions, as well as streamline the reporting and data consolidation process.

This article briefly introduces the international reporting requirements that define the new reporting standards, before explaining the standards themselves and the new approach to calculating the solvency position of insurance companies. Lastly, it outlines some of the benefits of the new system for companies, the NIC and the general public.

Reporting standards: international requirements
The international standard-setting body for the insurance sector, the International Association of Insurance Supervisors (IAIS), issued a fully-revised version of the Insurance Core Principles (ICPs) in October 2011. There are two Principles that directly address the reporting requirements of insurance companies.

ICP number nine deals with supervisory review and reporting. It requires that:

“The supervisor has an integrated, risk-based system of supervision that uses both off-site monitoring and on-site inspections to examine the business of each insurer, evaluate its condition, the quality and effectiveness of its Board and Senior Management and compliance with legislation and supervisory requirements. The supervisor obtains the necessary information to conduct effective supervision of insurers and evaluate the insurance market.”

As part of the requirements to comply with this ICP, the supervisor has to have a system in place for assessing the risks of insurers, and insurers must submit regular and comprehensive financial and statistical information.
Furthermore, in ICP number 20 (Public Disclosure), the IAIS stipulates the type of information which insurance companies need to provide to the general public. ICP 20 requests that:

“The supervisor requires insurers to disclose relevant, comprehensive and adequate information on a timely basis in order to give policyholders and market participants a clear view of their business activities, performance and financial position. This is expected to enhance market discipline and understanding of the risks to which an insurer is exposed and the manner in which those risks are managed”. (International Association of Insurance Supervisors, 2012)

Insurers are required to disclose appropriately detailed quantitative and qualitative information about:

- profile, governance, control, financial position, technical performance and risks
- technical provisions
- capital adequacy
- financial instruments and other investments by class
- enterprise risk management, including asset liability management
- financial performance
- relevant material insurance risk exposures.

This information can be made available either directly by the insurer or through the insurance supervisor, in this case the NIC.

The IAIS sets high standards both for regulatory reporting and public disclosure. There are clear implications for the NIC. Specifically, the NIC is required to:

- Oblige insurers to disclose relevant information on a timely basis in order to give stakeholders a clear view of their business activities and financial position and to facilitate the understanding of the risks to which they are exposed.
- Decide which information it requires, in what form, from whom, and with what frequency in accordance with the overall market structure and situation.
- Set requirements for the submission of regular, systematic and comprehensive financial and statistical information, actuarial reports, solvency position reports and other information from insurers.
- Establish documented procedures and guidelines for reporting.

In response to this the NIC has revised its reporting standards and procedures explained below.

**The NIC reporting standards**

Following the introduction of the new ICPs, the Commission decided on a new set of reporting standards for insurance companies which will be rolled out on a pilot basis in the third quarter of 2012. This timing is highly opportune as it directly follows the
compulsory introduction of the International Financial Reporting Standards (IFRS) and coincides with the development and implementation of the new legal framework (see Chapter 1). The reporting standards consist of 10 Supervision Department Returns (SDRs), which each insurer will have to submit to the Commission on a quarterly basis (see Table 1).

**Table 1: Supervision Department Returns**

<table>
<thead>
<tr>
<th>Code</th>
<th>Name</th>
<th>Details/Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDR 1</td>
<td>Solvency Margin</td>
<td>Solvency status of the insurer</td>
</tr>
<tr>
<td>SDR 2</td>
<td>Statement of Assets and Liabilities</td>
<td>Financial position of the insurer</td>
</tr>
<tr>
<td>SDR 3</td>
<td>Statement of Income</td>
<td>Operating results of the insurer</td>
</tr>
<tr>
<td>SDR 4</td>
<td>Statement of Premiums and Claims</td>
<td>Premiums and claims position of insurer</td>
</tr>
<tr>
<td>SDR 5</td>
<td>Statement of Reinsurance</td>
<td>Reinsurance operations of insurer</td>
</tr>
<tr>
<td>SDR 6</td>
<td>Statement of Receivables and Payables</td>
<td>Recoverability of receivables &amp; payables</td>
</tr>
<tr>
<td>SDR 7</td>
<td>Statement of Investments Summary</td>
<td>Investment status of insurer</td>
</tr>
<tr>
<td>SDR 8</td>
<td>Statement of Policy Data</td>
<td>Policies position of insurer</td>
</tr>
<tr>
<td>SDR 9</td>
<td>Statement of Outstanding Claims</td>
<td>Age analysis of outstanding claims</td>
</tr>
<tr>
<td>SDR 10</td>
<td>Statutory Returns</td>
<td>Corporate information and governance of insurer</td>
</tr>
</tbody>
</table>

The SDRs are designed to focus on three key high level indicators: solvency, operational efficiency, and governance.

SDR 1 assesses the solvency of an insurer. If an insurer is not solvent, or is not adequately capitalised, it is unable to pay policyholder claims when they are due.

Under the proposed new legal framework the NIC will move to a risk-based solvency approach for both life and non-life companies. This is reflected in SDR 1 which automatically applies a discount factor to investment assets and a weighting to policyholder benefits, according to their respective risk.

Furthermore, SDR 1 distinguishes between core capital and non-core capital for solvency purposes. From the total core and non-core capital will be deducted intangible assets, overdue premium debtors, amounts due from related parties, as well as other non-admissible assets.

The available capital resources thus calculated are compared with the solvency capital required, the calculation of which is stipulated in the Insurance Code.

SDRs 2 to 9 seek to assess an insurer’s operational efficiency. They require companies to report the structure and the composition of the balance sheet and the quality of assets and liabilities as well as other financial and operational data (see Table 1). Where appropriate, companies are required to report data per business line. For the first time, microinsurance will be explicitly considered as a separate line of business for reporting purposes.
Finally, SDR 10 requests information about the corporate governance structures of each insurance company, including details of directors, shareholder and personnel in key functions. The new ICPs strongly emphasise the importance of governance and this will be a key area of concern for the NIC.

The reporting system
To facilitate efficient processing and analysis of the SDRs the Commission has implemented a comprehensive supervisory Information Technology (IT) system. The system will include allowing the NIC to:

- limit distribution of paper documents
- manage a data repository of all incoming and outgoing correspondence
- reduce amount of time staff spend on performing key supervisory processes
- automatically import financial supervision data reported by supervised entities into the database
- automatically produce supervisory reports (aggregates, market summaries, time series etc.)
- enable ad-hoc analysis of supervisory data.

The SDRs are an integral part of the software which is expected to significantly improve and speed up the process of supervisory reporting and analysis.

Conclusion
The new regulatory standards will benefit all stakeholders:

- For the regulator, the new standards improve the speed and quality of supervisory reporting and analysis, and facilitate the implementation of risk-based supervision. This constitutes a major step towards compliance with the Insurance Core Principles.
- For insurers the supervisory reporting system streamlines the reporting process and provides management with relevant information on the company’s financial situation, risk exposure and operational efficiency.
- Most importantly, the system ensures that insurance companies can meet their obligations to policyholders though improved solvency monitoring and facilitates information disclosure to enable all stakeholders to make informed decisions.

Reference
2.3. Key Performance Indicators for Microinsurance

Jennifer Hennig

Introduction
Constant monitoring and transparent measurement of performance are necessary if microinsurance programmes are to become, and remain, viable and to offer value to their clients. Financial performance indicators can be used to produce a realistic picture of a microinsurance programme’s overall performance in key areas.

The Performance Working Group of the Microinsurance Network, together with microinsurance providers (with support especially from Appui au Développement Autonome (ADA) and the Belgian Raiffeisen Foundation (BRS)) has developed 10 Key Performance Indicators (KPIs) for microinsurance. While the main focus of the indicators is on financial viability, their social performance dimension becomes apparent when viability is not perceived as the main end, but as one of the requirements towards providing efficient microinsurance products to the poor.

This article begins by outlining the Key Principles, which are preconditions for effective monitoring of KPIs. It then explains each of the KPIs using a case study of a fictional insurance company to illustrate their application. Finally, it outlines steps for an insurance company to monitor KPIs on a regular basis.

The Key Principles
The basis for performance monitoring is the availability of consistent data. For this reason, the Performance Working Group and practitioners have developed nine Key Principles (see Table 2). These Key Principles can be regarded as practices that are preconditions for a meaningful calculation and interpretation of KPIs.

Table 2: The nine Key Principles

<table>
<thead>
<tr>
<th>Category</th>
<th>Principle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good accounting practices</td>
<td>Separation of data</td>
</tr>
<tr>
<td></td>
<td>Production of financial statements</td>
</tr>
<tr>
<td>Good insurance management practices</td>
<td>Relevant and accurate data</td>
</tr>
<tr>
<td></td>
<td>Calculation and set up of reserves</td>
</tr>
<tr>
<td></td>
<td>Clear investment policy</td>
</tr>
<tr>
<td></td>
<td>Efficient and continuous claims monitoring</td>
</tr>
<tr>
<td>Good organisational practices</td>
<td>Technical insurance capacity</td>
</tr>
<tr>
<td></td>
<td>Transparency</td>
</tr>
<tr>
<td></td>
<td>Client focus</td>
</tr>
</tbody>
</table>
Data accuracy, separation of data, calculation of reserves and the production of financial statements are essential requirements for managing an insurance business. If this is not observed, accurate and transparent performance measurement becomes impossible. Following these principles, however, still poses a challenge for many microinsurance providers. Often providers of microinsurance products ignore costs such as operating staff working part-time on microinsurance. Measuring all these expenses at a product level is important in order to evaluate true performance.

The KPIs

The 10 KPIs for microinsurance (see Table 3) evaluate product awareness and client satisfaction, service quality, product value as well as financial prudence (Wipf & Garand, 2010). All indicators should be calculated at the product level (with the exception of the two financial prudence indicators).

Table 3: The 10 KPIs for microinsurance

<table>
<thead>
<tr>
<th>Category</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product awareness &amp; client satisfaction</td>
<td>Coverage Ratio</td>
</tr>
<tr>
<td></td>
<td>Growth Ratio</td>
</tr>
<tr>
<td></td>
<td>Renewal Ratio</td>
</tr>
<tr>
<td>Service quality</td>
<td>Promptness of Claims Settlement</td>
</tr>
<tr>
<td></td>
<td>Claims Rejection Ratio</td>
</tr>
<tr>
<td>Product value</td>
<td>Incurred Expense Ratio</td>
</tr>
<tr>
<td></td>
<td>Incurred Claims Ratio</td>
</tr>
<tr>
<td></td>
<td>Net Income Ratio</td>
</tr>
<tr>
<td>Financial prudence</td>
<td>Solvency Ratio</td>
</tr>
<tr>
<td></td>
<td>Liquidity Ratio</td>
</tr>
</tbody>
</table>

Three indicators refer to product awareness and client satisfaction: the Coverage Ratio, the Growth Ratio and the Renewal Ratio.

The Coverage Ratio is defined as the proportion of the target population participating in the microinsurance programme (n=year):

\[
\text{Coverage Ratio}_n = \frac{\text{Number of active insured}_n}{\text{Size of target population}_n}
\]

The Growth Ratio is defined as the growth of the microinsurance programme in terms of number of insured:

\[
\text{Growth Ratio}_n = \frac{\text{(no. of insured}_n - \text{no. of insured}_{n-1})}{\text{no. of insured}_{n-1}}
\]

The Renewal Ratio is the ratio of participants that renewed to those that could have renewed:
Renewal Ratio \( n \) = Number of renewals \( n \) / Number of potential renewals \( n \)

Two indicators focus on client satisfaction, the Promptness of Claims Settlement Ratio and the Claims Rejection Ratio.

The Promptness of Claims Settlement indicator is an analytical breakdown of service times taken to report and process a set of claims:

\[
\text{Promptness of Claims Settlement} = \frac{\text{Time from the date covered event occurs until the date the payment to the beneficiary(s) is settled or refused}}{\text{Number of claims rejected}}
\]

The Claims Rejection Ratio is the proportion of claims disqualified for benefit payment (rejected), for whatever reason:

\[
\text{Claims Rejection Ratio} = \frac{\text{Number of claims rejected}}{\text{Number of claims in the sample}}
\]

Three further indicators focus on product value: the Incurred Expense Ratio, the Incurred Claims Ratio and the Net Income Ratio.

The Incurred Expense Ratio is defined as the proportion of the earned premium incurred as operating expenses:

\[
\text{Incurred Expense Ratio} \ n = \frac{\text{Incurred operating expenses} \ n}{\text{Earned premium} \ n}
\]

The Incurred Claims Ratio is defined as the proportion of the earned premium spent on claims:

\[
\text{Incurred Claims Ratio} \ n = \frac{\text{Incurred claims} \ n}{\text{Earned premium} \ n}
\]

The Net Income Ratio indicator is defined as the net income for a period divided by earned premium in the same period:

\[
\text{Net income ratio} \ n = \frac{\text{Net income} \ n}{\text{Earned premium} \ n}
\]

Finally, there are two indicators focusing on the financial prudence of the microinsurance providers, the Solvency and Liquidity Ratios.
The claims rejection ratio is the proportion of claims rejected for benefit payment for whatever reason. It reflects three main aspects: How well did the organization communicate information about the product? How reasonable is the microinsurance claims settlement policy? How good is the product design?

Figure 2: Service quality - promptness of claims settlement

Figure 2 shows the promptness of claims settlement for FlipFlop’s microinsurance product as well as the claims rejection ratio for the years 2006–2010. In 2007, the insurance company managed to settle 70 percent of its claims within 30 days. At the end of the 2008 financial year, however, the company was concerned about its performance indicators: 70 percent of the claims were only settled after 31 days with 30 percent taking 90 days or longer to settle.

After examining the underlying data the company discovered that the same people still managed to handle the same number of claims within the same amount of time. The cause of the delays in 2008 was that the company had many more claims to handle than in 2007 but no additional staff. FlipFlop then employed additional personnel for the 2009 financial year which immediately resulted in a more prompt claims settlement indicator as the company settled 70 percent of the claims within 30 days.

The claims rejection ratio was relatively high in 2009 so the company performed further data checks. It had adjusted the product in 2008 introducing stricter criteria for handling claims, however, this was communicated clearly to clients. FlipFlop took appropriate measures and decreased the indicator to 10 percent in 2010. The promptness of claims settlement also improved in 2010, with 80 percent of claims handled within 30 days, 40 percent of these within seven days.

The Solvency Ratio is defined as the ratio of admitted assets to liabilities:

\[
\text{Solvency Ratio} = \frac{\text{Admitted assets}}{\text{Liabilities}}
\]

The Liquidity Ratio is defined as the as the ratio of cash or cash equivalents to “short-term” liabilities of the programme:

\[
\text{Liquidity Ratio} = \frac{\text{Available cash or cash equivalents}}{\text{Short-term payables}}
\]

The Performance Working Group created a so-called KPI factsheet: an Excel-based tool that assists companies in calculating the KPIs and generates graphs from the financial statements provided by the microinsurance practitioners. It allows insurance companies to enter necessary data and then automatically calculates the KPIs and generates graphs\(^1\).

**Analysing the KPIs: a case study**

The (fictional) insurance company FlipFlop began using the KPIs, when they began operations in 2006, to monitor their financial performance and to assess whether they were offering value to their clients. Through this monitoring the company was able to discover weaknesses in their product and to take necessary action in order to improve it, as described below. This article provides a closer look at two of the indicators, namely the promptness of claims settlement, and the Incurred Expense Ratio.

*FlipFlop’s promptness of claims settlement and the claims rejection ratio*

The promptness of claims settlement is the time which elapses from the date the covered event occurred until the date the payment to the beneficiary(s) is settled or refused (as illustrated in Figure 1).

**Figure 1: The Claims Cycle**

<table>
<thead>
<tr>
<th>Event happens</th>
<th>Claim reported</th>
<th>Payment released / denied</th>
<th>Benefit received</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB</td>
<td>BC</td>
<td>CD</td>
<td></td>
</tr>
</tbody>
</table>

Definition spans the entire period, e.g. AD

---

\(^1\) The factsheet, as well as the KPI Handbook and various other materials, is freely available on www.microfact.org
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**Figure 2: Service quality - promptness of claims settlement**

![Claim Settlement Chart](chart.png)

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FlipFlop’s Incurred Expense Ratio and Incurred Claims Ratio
The Incurred Expense Ratio is the proportion of premium used to pay all the costs of acquiring, writing and servicing insurance. The Incurred Claims Ratio is the proportion of the premium spent on claims or the average proportion of the premium returned to the insured in the form of claims.

Paid claims in a given period are generally made up of two components: i) claims incidence or frequency, which is the number of claims divided by the number of risk exposures; and ii) the average amount paid for all claims. When monitoring the Incurred Claims Ratio both components should be studied carefully to understand what is happening.

Figure 3: FlipFlop Incurred Claims and Incurred Expense Ratios

Figure 3 shows the Incurred Expense and the Incurred Claims Ratio for FlipFlop’s microinsurance product from 2006–2010. In 2006, when FlipFlop started their operations, the premium income was very low but the company was already incurring operating expenses. The Incurred Expense Ratio was therefore high which is typical for the first year of operation. With increasing premium income in 2007 the company managed to decrease the Incurred Expense Ratio to 20 percent decreasing it even further in 2008 to only 10 percent.

This low Incurred Expense Ratio initially looks good: the less insurance companies are spending on operating expenses from their premium income, the more they can spend on claims (or retain as income). However, as we have seen earlier when discussing the promptness of claims settlement indicator, the expenses for personnel were actually too low in 2008 resulting in a very low promptness of claims settlement. The company
would have needed additional staff which would have resulted in higher operating costs and a higher Incurred Expense Ratio.

Distribution and communication expenses were also probably too low (FlipFlop introduced stricter criteria for handling claims and had not communicated this properly). Additional staff members were hired to handle claims in 2009 and communication expenditure increased resulting in a better promptness of claims settlement and a lower claims rejection ratio but also in a higher Incurred Expense Ratio. It is crucial to look at the linkages between the different indicators.

The company itself made adjustments to the product in 2008. These were made after the company realised its Incurred Claims Ratio for 2008 was 250 percent. A high claims ratio demonstrates clients are getting good value for their premiums but, if the ratio becomes too high, it will lead to the collapse of the programme. Due to the stricter criteria introduced for handling claims, the Incurred Claims Ratio decreased (75 percent in 2009).

Implementing the KPIs
KPIs can be a useful tool for insurance companies to monitor the performance of their products. The various steps a company will typically go through to implement and work with the KPIs are outlined below.

Step 1: Ensure compliance with the Key Principles. The company should check whether the management practices listed in Table 2 are observed. Data accuracy, sound data collection principles, separation of data, the calculation of reserves and the production of financial statements are some of the basic requirements for any analysis and interpretation to be representative and precise. Wherever these principles are not observed the company may need to put in place the required structures before starting to calculate the KPIs.

Step 2: Calculate Key Performance Indicators. The KPI factsheet automatically calculates KPIs based on the company’s financial statements and related data. Ideally the KPIs are derived from the company’s own Management Information System (MIS). KPIs should be calculated on a regular basis so potentially harmful trends are recognised at an early stage.

Step 3: Analyse the results. Calculating the KPIs is only a first step. In many cases it is necessary to look at underlying factors. When indicators deviate from acceptable levels management should carefully analyse why this is the case and what should be done to bring the indicator back to its desired level. In some cases deviations may be temporal: for example, an increase in the claims ratio as a result of a natural catastrophe. It is important to conduct trend analysis (observe how ratios develop over time), analyse the underlying data and observe the external environment.
Step 4: *Act upon the findings.* Microinsurance providers should use the outcomes of KPI analysis to maintain and/or improve product sustainability and client value. This may require adjustments to products, processes and practices. The case study presented in this article provides an example of a company reacting swiftly to unfavourable performance indicators.

More information, including the KPIs, the Social KPIs, trainings, and the handbook, is available at www.microfact.org

**Reference**

2.4. Ghana Insurance Model

Eric Gerelle

Introduction
The Ghana Microinsurance Model is a series of analytical models aimed at qualifying and quantifying the market potential for microinsurance; estimating microinsurance demand parameters such as willingness to pay; analysing key performance indicators; and using these results to predict the evolution of the market.

The approach starts with a top-down analysis of Ghana’s Gross Domestic Product (GDP), population and income distribution data. This gives rise to the Income Distribution Model which identifies the microinsurance market by the income range. The employment distribution in Ghana then indicates the target markets for microinsurance by employment sector. The resulting Employment Distribution Model is calibrated using the Ghana Living Standards Survey (GLSS) plus the International Labour Organization (ILO) Key Indicators of the Labour Market (KILM) and predicts the substitution of agricultural labour by informal and formal employment.

The next stage of the analysis is a demand-side Household Expenditure Model relating the willingness to pay (WTP) for insurance to other household expenses such as the amount spent on food. As household income increases, the model predicts a substitution of expenditure on food by expenditure on services such as insurance. Linking this result to the income and employment data provides a way to make quantitative predictions on the market potential for microinsurance.

The supply-side analysis uses Key Performance Indicators (KPIs) to rank and compare insurance companies. The example used to illustrate the approach is based on a published example evaluating the efficiency of 30 Ghanaian insurance companies. The Performance Ranking Model can equally be used to compare the performance of different microinsurance products and evaluate the geographic penetration of a particular type of product.

The demand and supply-side analyses form the basis for a scenario planning exercise which can forecast the evolution of microinsurance performance indicators in Ghana. The parameters of the Scenario Planning Model are obtained from aggregated insurance data found in the annual reports of the National Insurance Commission (NIC).

The article concludes with proposals for a Ghana-wide benchmarking exercise.
The Gini index measures the extent to which the distribution of income, among individuals or households within an economy, deviates from a perfectly equal distribution. A Gini index of zero represents perfect equality while an index of 100 implies perfect inequality. According to the same data source the Gini index for Ghana was 42.67 in 2004.

The lognormal income distribution model uses this value for the Gini index and a median per capita GDP of USD 305 (PPP). The model's accuracy can be gauged by comparing the model estimates for the income quintiles as a percentage of total income, as in Figure 5.

The income distribution model gives the mean income for 2004 at USD 1,050 PPP which corresponds well to the measured data. The mean value can be used to make a robust estimate of the target market for microinsurance. If the target market is defined by households with incomes below the mean then the lognormal income distribution model estimates the addressable market for microinsurance to be 80 percent of the population of Ghana. Only four percent of those surveyed in a study on financial inclusion in Ghana (FinMark Trust, 2010) had formal insurance, while just less than one and a half percent had some informal insurance.

Microinsurance market

**Income distribution model**

The Ghana Microinsurance Model starts with an estimate of the microinsurance market based on income distribution. The first observation concerns the overall trend in Ghana’s GDP per capita. This appears to have grown exponentially since the early 1980s. In 2004 the per capita GDP was just over USD 1,000, and the Purchasing Power Parity (PPP) had risen to USD 1,600 by 2010.²

The income distribution model is based on a lognormal distribution over the per capita GDP. This type of distribution is asymmetric and long-tailed with two key parameters: the median and a shape parameter (Limpert et al., 2001). For this type of distribution the shape parameter is directly related to the Gini index.

**Figure 5: Lognormal income distribution**

²The World Bank (2012) is the source of the data for this analysis
The Gini index measures the extent to which the distribution of income, among individuals or households within an economy, deviates from a perfectly equal distribution. A Gini index of zero represents perfect equality while an index of 100 implies perfect inequality. According to the same data source the Gini index for Ghana was 42.67 in 2004.

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Microinsurance products should address about 80 percent of the population of Ghana. Given that today the insurance industry is probably addressing the needs of around five percent of the population, there is still a long way to go.

**Employment Distribution Model**

The next stage of the analysis is to identify the employment sectors most relevant to microinsurance. The analysis is based on the ILO’s KILM for Ghana and the Organisation for Economic Co-operation and Development (OECD) (ILO, 2011) and the GLSS (Ghana Statistical Service, 2008).

The Employment Distribution Model follows the ILO labour reporting standard and segments employment into three categories: agriculture, informal non-agriculture and formal non-agriculture. The model assumes a hierarchical substitution process by which, as the GDP per capita of the country increases, employment in agriculture is gradually substituted by informal non-agriculture and then by formal non-agriculture. The result is a series of three overlapping curves representing the percentages as a function of per capita GDP.
These curves have been calibrated using 2011 data from the ILO on Ghana and OECD countries. The three curves in the graph show the how labour market distribution changes with per capita GDP: agriculture (yellow), informal non-agriculture (blue) and formal non-agriculture (deep blue). Assuming that the current trend in per capita GDP for Ghana continues then the Employment Distribution Model predicts the intersection curves, which correspond to an equal distribution between the three sectors, will occur in 2060.

For low values of per capita GDP, such as in Ghana, the mix of employment is dominated by agriculture; for high values the employment mix is dominated by the formal non-agriculture sector. The combination of agriculture and informal non-agriculture employment currently covers about 80 percent of the employment market. This confirms that these two segments are the most significant ones for microinsurance. As the per capita GDP increases the formal non-agriculture sector will also participate.

The doubling of per capita GDP in Ghana over the next 50 years will drive major changes in employment distribution in the Ghana labour market and hence the demand for microinsurance.

**Microinsurance metrics**

*Household expenditure model*

If the same type of hierarchical substitution process is used to investigate the demand-side of microinsurance, the resulting Household Expenditure Model can then be applied to the buying decisions of households. By dividing household expenditure into a hierarchy of human needs (food, housing and services), for example, the model results in
a set of three curves representing percentage of income spent on these needs. The curves are directly analogous to those obtained in the Employment Distribution Model.

As household income increases the income spent on food diminishes as a percentage of income. This result is known as Engel's Law and is a special case of the Household Expenditure Model. A recent study by the Political Economy Research Institute has reviewed the international data supporting Engel's Law (Anker, 2011).

**Figure 7: Household expenditure and Willingness to Pay (WTP) for microinsurance**

The substitution of income spent on services such as microinsurance, and on income spent on food, follows a characteristic form as shown in Figure 7. Data from the 2008 study by the German Institute of Global and Area Studies (GIGA), on the demand for microinsurance in rural Ghana (Giesbert, 2008) and the premium contribution to participate in the National Health Insurance Scheme (Joint Learning Network for Universal Health Coverage, 2012), indicates that the WTP for microinsurance ranges between one percent and four percent of household income. The corresponding percentage expenditure spent on food ranges from 50 percent down to 30 percent.

The Household Expenditure Model can be also used to represent the various sources of funds used by households to respond to risk and catastrophic events including out-of-pocket expenditure, savings, and borrowing.

Ghana is positioned well within the microinsurance sector corresponding to the range of 30 to 50 percent of average income spent on food and between one percent and four percent WTP on insurance.
The empirical results in the study suggest higher average efficiency scores for life insurance business than non-life insurance companies. The drive for market share, firm size and the ratio of equity to total invested assets are important determinants of an insurance firm’s efficiency. This conclusion leads us directly to the Scenario Planning Model.

The Performance Ranking Model should be applied to all companies involved in microinsurance in a Ghana-wide benchmarking exercise. The standard microinsurance KPIs are the basis for this exercise.

Strategic planning
Scenario Planning Model

Scenario planning, also called scenario thinking or scenario analysis is a strategic planning method which some organizations use to make flexible long-term plans. Scenario planning has been found to help insurers make business decisions by considering a number of potential future developments and allowing them to manage a broad range of often inter-related risks (SwissRe, 2009). The method is used in areas such as strategic planning, risk management and underwriting.

The Scenario Planning Model for Microinsurance is based on three variables that can be applied to any insurance entity (office, division, company, or aggregated insurance entity): the number of policyholders $P$, the number of staff and agents $S$, and the fixed assets $A$ (in GHS).

Figure 9: P/S and A/P Model

Managing Information for Microinsurance Development

Performance Ranking Model

The Performance Ranking Model takes any performance indicator (Wipf & Garand, 2010) applicable to a set of insurance entities—such as companies, products, channels, geographic regions, agents—and analyses the rank ordering of the entities as a distribution over the value of the performance indicator. The rank ordering obtained can be shown as a linear combination of one or more lognormal distributions. This behaviour is typical of a wide range of competitive and or collaborative situations encountered in quite different circumstances, including interacting species in ecology, investments in a portfolio and teams in sporting competitions.

The data to illustrate the Performance Ranking Model is taken from a study that evaluated the efficiency of insurance companies in Ghana (Ansah-Adu et al., 2011). The sample analysed in this paper was a cross-sectional data set of 30 companies from 2006 to 2008. The study evaluated the efficiency scores by applying data envelopment analysis (Biener & Eling, 2009). Applying the Insurance Ranking Model to the companies in the study gives rise to Figure 8, a ranking graph over the cost efficiency ratio used in the study. The 30 companies separate naturally into four groups or leagues, each corresponding to a lognormal distribution. This ranking behaviour is typical of competitive and or collaborative situations.

Figure 8: Performance Ranking Model of insurance companies in Ghana
The empirical results in the study suggest higher average efficiency scores for life insurance business than non-life insurance companies. The drive for market share, firm size and the ratio of equity to total invested assets are important determinants of an insurance firm’s efficiency. This conclusion leads us directly to the Scenario Planning Model.

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**Figure 9: P/S and A/P Model**

<table>
<thead>
<tr>
<th>Fixed Assets A (GHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,000</td>
</tr>
<tr>
<td>10,000</td>
</tr>
<tr>
<td>100,000</td>
</tr>
</tbody>
</table>

- **Policyholders per Staff-Agent P/S**
- **Fixed Assets (GHS) per Policyholder A/P**
- **P/S Model**
- **A/P Model**
The ratio of Policyholders per Staff-Agent (P/S) and the fixed assets per Policyholder (A/P) are the KPIs for the Scenario Planning Model. These are represented as log-logistic functions of the fixed assets A and are indicators of how well the staff, agents and assets, of the insurance entity under consideration, are being used. The introduction of microinsurance products will force the ratio P/S to rise significantly, as the industry develops, and the ratio A/P to diminish significantly.

The idea behind the planning scenario approach is to base the initial conditions on the current data, in this case based on the data found in the annual reports of insurance companies and the NIC.

The scenario represented in Figure 9 is based on assumptions concerning the growth rate for the population of Ghana and future limiting microinsurance market penetration (in this case 65 percent based on the current stable penetration of the National Health Insurance Scheme (NHIS)). This scenario anticipates the level being reached by 2040.

For microinsurance to rise from the level reported in the FinScope Study (FinMark Trust, 2010), to 65 percent of the population by the year 2040, the ratio of policyholders to staff-agents needs to increase by a factor of three from 20 to 60.

**Conclusion**

The Ghana Insurance Model is an analytical framework that can be used to study the microinsurance market at several levels: income, employment distribution, household expenditure, performance ranking, and scenario planning.

The recommendation is to set up a Ghana-wide microinsurance benchmarking exercise and use the Ghana Insurance Model as a coherent framework to position the results of the benchmarking by:

- Defining microinsurance benchmarking leagues comprising microinsurance entities with comparable performance using general insurance, microinsurance KPIs and technology indicators.
- Creating a benchmarking league comprising comparable microinsurance entities: companies, products, regions, distributors, agents.
- Representing the overall performance of each benchmarking league by the statistical properties of the ranking distribution of the indicators.
- Representing the individual performance of the league members through a positioning table.
- Applying time series analysis and further parametric analysis to overall league performance and league position.
- Using the analysis to propose development scenarios for the industry and make forecasts on the evolution of the key indicators.

- Expand on the GIZ market studies.
- Collect market, technology and microinsurance performance data from the field.
- Perform time series and further parametric analysis on the data.
- Apply the various components of the Ghana Insurance Model and use the results in a Ghana-wide microinsurance benchmarking exercise.

References


Isaac Baidoo

Introduction

Appropriate product pricing requires good and credible data, robust actuarial tools and an understanding of the cultural and economic environment within which the insurance product or service is to be offered. Microinsurance products are particularly vulnerable to mis-pricing. This is often due to the dearth of available experiential data on the targeted populations, underdeveloped local actuarial expertise in modelling risk in sparse data environments, and a tendency towards managing the pricing challenge by applying excessive factor loadings. The often catastrophic consequences of mis-pricing are well understood, with numerous examples of microinsurance initiatives failing due to underfunded reserves, on the one hand, and problems of adverse selection and uncompetitive market positioning, on the other.

The availability of competent actuaries is crucial to appropriate pricing of (micro)insurance products. An actuary deals with the financial impact of risk and uncertainty. Actuaries provide expert assessment of financial security systems focusing on their complexity, their mathematics, and their mechanisms. Furthermore, actuaries advise businesses on how to design and implement risk management strategies and play an essential role in calculating the solvency position of insurance companies.

This Chapter begins by assessing the state of the actuarial profession in Ghana. The article 'The Landscape of Actuarial Capacity in Ghana' is based on an in-depth study of the supply of actuarial services in Ghana and the demand for those services in the insurance industry, as well as the overall way in which the profession is structured including the educational opportunities available to aspiring actuaries.

The microinsurance market in Ghana is subject to the same technical and socio-economic pricing challenges that exist in most markets. In the article, 'Microinsurance Pricing in the Ghanaian Context', an overview of pricing practice in Ghana is presented with emphasis on the local context within which pricing is done.


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*Isaac Baidoo*

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Due to the dynamic nature of insurance markets, and the varying amounts of data available to an insurer during a product’s life cycle, any static fixed-point pricing strategy is bound to fail. ‘Actuarial Pricing Principles and How to Apply Them in a Microinsurance Context’, examines the technical foundations upon which sound pricing practice should be based. The case for a process-oriented approach to pricing is made and the paradigm captured formally in a presentation of the Actuarial Control Cycle.

Actuarial pricing is part art and part science. In addition to well-understood data and an acceptable process-oriented approach, competent actuarial practitioners making the judgement calls need to turn the data, tools, and approaches into viable pricing solutions. The paper ‘Illinois State University: Creating Actuarial Capacity in Rare Harmony’ examines a successful actuarial science programme in the United States and some of the initiatives that have produced graduates with a well-balanced set of market-relevant skills. The article provides an example of actuarial capacity-building in the context of the need to increase the number of actuaries with the requisite skills, training, and local knowledge to adequately price products in the Ghanaian market.

In summary, optimal pricing can be achieved through a focus on four factors: actuarial capacity, improved data quality and quantity, improved pricing processes, and improved tools and practice. Each article in this chapter addresses a particular facet of the pricing challenge faced by microinsurers in Ghana. By focusing on improving each factor individually, great strides can be made towards pricing optimality and service sustainability in the growing microinsurance sector in Ghana.
3.2. The Landscape of Actuarial Capacity in Ghana

Mark Akanko Achaw and Isaac Baidoo

Introduction
As indicated in the introduction to this Chapter, the role of actuarial professionals in the development of the insurance industry cannot be underestimated, especially in ensuring that the products sold are valuable to clients as well as viable to the insurance company. It has been observed that Ghanaian actuarial standards are below international best practice and there are very few, fully-qualified actuaries within Ghana. As a result, insurance companies seek the services of more expensive foreign actuaries mainly from the UK, USA and South African actuarial bodies.

The National Insurance Commission (NIC) has recognised these deficiencies and included some provisions in the proposed insurance legislation requiring all insurers to have appointed actuaries and to establish in-house actuarial functions. This is likely to greatly enhance the demand for actuarial expertise.

The information presented in this article is based on the Actuarial Capacity Assessment study, which was commissioned by the NIC and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) to assess the actuarial landscape of Ghana. The assessment covered both the supply of actuaries (current actuarial practitioners, actuarial teaching institutions and their students) and the demand for actuarial services by insurance companies and other institutions. In response to the assessments, the NIC and the Actuarial Society of Ghana (ASG) are establishing a Technical Working Group to initiate responses to the recommendations made.

Methodology
The assessment adopted different methodologies taking into consideration the peculiarities of the different players.

Supply-side assessment
The supply-side study took a stakeholder industry-wide participatory approach where focus group and roundtable discussions were held with key players from the industry. These included regulators, practitioners (ASG members), teaching institutions (university lecturers\(^1\)) and potentials (actuarial science/statistics students and graduates). These actors were assessed based on their Strengths, Weaknesses, Opportunities and Threats (SWOT).

To identify interdependencies among players as well as review and optimise the effects of

\(^1\) From departments of actuarial science, statistics, and mathematics.
selected strategy options or processes for change, the SWOT analysis was aligned to four capacity development pillars namely: human resource development, organizational development, cooperation and network development and systems/policy development (see Table 4).

**Table 4: Sample of the Capacity Assessment Matrix**

<table>
<thead>
<tr>
<th>Indicators/Factors</th>
<th>Human Resource Development</th>
<th>Organizational Development</th>
<th>Cooperation &amp; Network Development</th>
<th>Systems/Policy Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengths</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weaknesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threats</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To broaden the scope of the study, as well as fairly capture the views of the major stakeholders, the assessment team visited members of the following: the ASG, the NIC, the Actuarial Science Departments of Kwame Nkrumah University of Science and Technology (KNUST), University of Cape Coast (UCC), Pentecost University College (PUC), and University For Development Studies (UDS), the Statistics Departments of the University of Ghana (UG) and the Mathematics and Statistics Department of the Methodist University College (MUC).

After the individual institutional assessments and validations, the findings were presented at a larger workshop where participants identified and prioritised measures for enhancing internal actuarial capacities.

**Demand-side assessment**

The main approach adopted for the demand-side was a survey-style assessment in which semi-structured questionnaires were circulated to all the (re)insurance companies in Ghana and to the Social Security & National Insurance Trust (SSNIT) and the National Health Insurance Authority (NHIA).

The questionnaire covered the following topics: actuarial functions performed in the organization; details of personnel performing actuarial functions; and how adequately actuarial functions are performed. These questions were addressed by departmental heads—mainly the corporate, operation, actuarial and finance divisional heads.

Twenty-four of forty-six insurance organizations responded. The final sample included large/medium/small companies; foreign/locally based mother companies as well as in-house/outsourced actuarial function companies (see Table 5).
In addition to the written responses, in-depth interviews were conducted with selected respondents.

**Current and emerging issues from the demand-side assessment**

The recent global financial crisis emphasised the need for stringent regulatory measures from financial standards setters, including insurance regulators, all over the world. The insurance regulator in Ghana recognises the risk of having weak regulatory standards. Thus, in the current bill the regulator proposes that all insurance companies have an in-house actuarial function for activities outlined in Table 6.
Table 6: Actuarial Functional Categories

<table>
<thead>
<tr>
<th>Categories</th>
<th>General Actuarial Functions</th>
<th>Proposed Regulatory Requirements by NIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Division</td>
<td>▪ Advise management and board of directors</td>
<td>▪ Reviewing the sufficiency and quality of the data used in the calculation of technical provisions. Where the sufficiency and quality of data is sub-standard, the actuary has the authority to direct management to take appropriate steps to rectify the matter and ▪ Approval of any dividend to be paid to shareholders</td>
</tr>
<tr>
<td>Operations Division</td>
<td>▪ Administration system management</td>
<td>▪ The design of the insurer’s reinsurance programme in line with the company’s risk strategy as approved by the board, and subsequent negotiation of reinsurance arrangements ▪ Approval of underwriting policies ▪ An evaluation of the insurer’s investment policies and the valuation of assets</td>
</tr>
<tr>
<td>Product Development, Pricing &amp; Support</td>
<td>▪ Development of new products.  ▪ Financial reporting which includes actuarial valuation of technical liabilities</td>
<td>▪ Approving product development and design, including the premium calculation, pricing, terms and conditions of insurance contracts</td>
</tr>
<tr>
<td>Finance and Treasury</td>
<td>▪ Enterprise risk management  ▪ Embedded value calculation  ▪ Asset liability management  ▪ IFRS valuation of staff benefits  ▪ Expense analysis  ▪ Surplus analysis  ▪ Experience studies  ▪ Actuarial Valuation/Scheme Sustainability  ▪ Reserve Analysis  ▪ Cost and Trend Analysis  ▪ Reimbursement Analysis</td>
<td>▪ The calculation of the insurer’s solvency position, including a calculation of minimum capital required for regulatory purposes and liability and loss provisions, and signoff on same ▪ The calculation of the insurer’s prospective solvency position ▪ Experience reviews and profit testing ▪ The performance of the liability adequacy test as required by IFRS 4.15, including formal written advice that this test has been performed ▪ Risk assessment and management policies and controls relevant to actuarial matters and/or the financial condition of the insurer ▪ An evaluation of the insurer’s actuarial and financial risks ▪ The completion of risk modelling and use of internal models, where applicable ▪ The calculation of distribution of policy bonuses, policy dividends and other benefits</td>
</tr>
<tr>
<td>Human Resources</td>
<td>▪ Recruitment and training of actuarial personnel</td>
<td></td>
</tr>
</tbody>
</table>

2 The columns on categories and functions were drawn from the Actuarial Capacity Assessment Study in Ghana: Demand-side Survey, and the column on proposed regulatory requirements is from Oliver Reichert’s discussion paper for the NIC on Actuarial Involvement in An Environment of Risk Based Management.
While the demands by the regulator pose a cost challenge to insurers they also present an opportunity to actuarial professionals as more jobs are created. The supply-side documented the perceived actuarial challenges and needs of the insurance industry.

**Status update of the insurance industry: actuarial functions**

Insurance companies are expected to have personnel performing some risk management functions. However, the survey shows that few insurance institutions have dedicated actuarial departments (Table 7).

**Table 7: Update on actuarial departments by respondents**

<table>
<thead>
<tr>
<th>Status update</th>
<th>Life Insurance</th>
<th>Non-Life Insurance</th>
<th>Reinsurance</th>
<th>NHIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of responding Institutions</td>
<td>14</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Responding Institutions with Internal actuarial departments</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Plans to set up an actuarial Depts.</td>
<td>7</td>
<td>2</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>External Actuarial Consultant</td>
<td>14</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
</tr>
<tr>
<td>Assistance from Parent Company</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Life insurance companies are most likely to have an actuarial department. This may be due to the regulatory requirement that they must have an appointed actuary to support the development of the internal capacities. Most life companies which do not have an actuarial department indicated they intend to set one up in the near future. On the non-life side none of the surveyed companies had an actuarial department and only one engaged the services of an external consultant. Most multinational insurance institutions had an established actuarial department run by qualified personnel.

Reasons cited for not establishing in-house actuarial functions:

- Limited number of “qualified” actuaries in the market to help set up and run a department. The industry believes the ASG could be instrumental in addressing this deficiency.
- Very high expense in training and remunerating actuarial personnel. It is cheaper to acquire the services of an external “qualified” actuary than to set-up an in-house function.
- Not a regulatory requirement.
- Low on the priority list of management and board.

**How are actuarial functions performed?**

Although there are personnel performing different actuarial tasks the quality of service delivery lacks the level of actuarial rigour and precision required by the industry. This is because most actuarial units are run by personnel with limited, or no background in,
Actuarial practice. For example, it was observed that only half the staff members working in the actuarial departments of the sampled life companies held any educational degree in actuarial science.

When it comes to further professional qualifications the actuarial profession is even more underrepresented (see Figure 10).

**Figure 10: Professional background of personnel performing actuarial functions**

![Bar chart showing professional background of personnel performing actuarial functions](chart)

Of the 51 actuarial personnel only two had passed actuarial professional exams. Most either had a background in insurance (51 percent), accounting (21 percent) or other disciplines (54 percent). Though some personnel from the non-life insurance companies performed actuarial tasks none had a professional background in actuarial science. Respondents expressed concern about how some functions are currently performed (Table 8).

Basic functions such as financial reporting, expenses analysis, surplus analysis, premium rate calculation and asset liability management were either not given prominence or were performed by personnel with limited actuarial skills (see Table 8).

<table>
<thead>
<tr>
<th>Function</th>
<th>Life Insurance</th>
<th>Non-Life Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Reporting</td>
<td>100</td>
<td>64</td>
</tr>
<tr>
<td>Expense Analysis</td>
<td>63</td>
<td>45</td>
</tr>
<tr>
<td>Surplus Analysis</td>
<td>56</td>
<td>27</td>
</tr>
<tr>
<td>Experience Studies</td>
<td>50</td>
<td>27</td>
</tr>
<tr>
<td>Recruitment/Training of Actuarial Personnel</td>
<td>44</td>
<td>27</td>
</tr>
<tr>
<td>IFRS Valuation of Staff Benefit</td>
<td>19</td>
<td>36</td>
</tr>
<tr>
<td>Asset Liability Management</td>
<td>44</td>
<td>45</td>
</tr>
<tr>
<td>Embedded Value Calculation</td>
<td>25</td>
<td>9</td>
</tr>
<tr>
<td>Appropriate Pricing of Microinsurance Services</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Respondents’ evaluation of how actuarial tasks are currently performed

Generally, respondents were dissatisfied with the way actuarial functions were performed (Figure 11).
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**Table 8: Respondents’ evaluation of how actuarial tasks are currently performed**

<table>
<thead>
<tr>
<th>Functions</th>
<th>Life</th>
<th>Non-Life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Performed (%)</td>
<td>Performed (%)</td>
</tr>
<tr>
<td>Advise Management / Board of Directors</td>
<td>100</td>
<td>36</td>
</tr>
<tr>
<td>Administration System Management</td>
<td>88</td>
<td>55</td>
</tr>
<tr>
<td>Review of Reinsurance Arrangements</td>
<td>75</td>
<td>82</td>
</tr>
<tr>
<td>Review of Underwriting Polices</td>
<td>75</td>
<td>82</td>
</tr>
<tr>
<td>Actuarial Calculation of Premium Rates</td>
<td>100</td>
<td>36</td>
</tr>
<tr>
<td>Development of New Products</td>
<td>100</td>
<td>82</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>100</td>
<td>64</td>
</tr>
<tr>
<td>Enterprise Risk Management</td>
<td>38</td>
<td>64</td>
</tr>
<tr>
<td>Embedded Value Calculation</td>
<td>25</td>
<td>9</td>
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<tr>
<td>Experience Studies</td>
<td>50</td>
<td>27</td>
</tr>
<tr>
<td>Recruitment/Training of Actuarial Personnel</td>
<td>44</td>
<td>27</td>
</tr>
</tbody>
</table>

**Figure 11: Satisfaction with actuarial functions performed**
Current and emerging issues from the supply-side assessment

The study took stock of available actuarial resources to assess how supply could meet demand. Additionally, the supply-side assessment identified and documented the capacity development challenges facing the various players, mainly the universities and the actuarial practitioners.

Actuarial practitioners and the ASG

Throughout the assessment the ASG was prominently mentioned as the frontrunner when it comes to issues bordering on actuarial science, including standards setting. The ASG handbook, states that the Society is responsible for spearheading actuarial excellence in the country and that its objectives are to:

- Promote knowledge and research in matters relevant to actuarial science and its application.
- Regulate the practise of its members.
- Promote, uphold, and develop the highest standards of professional training, knowledge, and conduct among its members.
- Promote the status of the actuarial profession.
- Provide the impetus for the rapid and positive transformation of the financial services industry in Ghana.
- Provide a source of reference on actuarial matters for government, regulatory authorities and other interested bodies.

The ASG, however, is yet to meet the basic requirements for full fellowship of the International Actuarial Association (IAA) as it does not have enough fully-qualified and internationally recognised actuaries among its membership. Until it obtains full membership of the IAA, the membership classification of ASG will not be globally recognised (see Table 9).
Table 9: ASG membership distribution

<table>
<thead>
<tr>
<th>Classification</th>
<th>No. of members</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Membership</td>
<td>98</td>
<td>• Membership classification is based on education and professional qualification as well as number of years of practical experience</td>
</tr>
<tr>
<td>Fellow</td>
<td>22</td>
<td>• Attained associate-ship in any of the recognized professional actuarial bodies and has at least five years of actuarial responsibility and is familiar with Ghanaian conditions and or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Has a postgraduate university qualification in Actuarial Science or any other actuarial qualification and has at least ten years of actuarial responsibility and is familiar with Ghanaian conditions</td>
</tr>
<tr>
<td>Associates</td>
<td>8</td>
<td>• Has a postgraduate university qualification in Actuarial Science; or has passed at least three of the Core technical subjects including Financial Mathematics, Probability &amp; Mathematical Statistics of any of the recognized professional actuarial bodies and has at least two years of actuarial responsibility which the Council may approve of and is familiar with Ghanaian conditions; and or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Has any other actuarial qualification(s) which is equivalent to the above conditions; and has at least two years of actuarial responsibility which the Council may approve of and is familiar with Ghanaian conditions</td>
</tr>
<tr>
<td>Student</td>
<td>66</td>
<td>• Has a declared interest in actuarial matters or is performing actuarial or other related work in a financial institution, an insurance company, academic institution, government office or an actuarial consulting office;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Has completed an actuarial course or other related course in a University, or any degree in other academic institute recognized by the Society and has achieved a qualification thereof.</td>
</tr>
<tr>
<td>Honorary members</td>
<td>1</td>
<td>• It is awarded to individual sponsors/resource persons</td>
</tr>
<tr>
<td>Institutional Members</td>
<td></td>
<td>• It is awarded to institutional sponsors/funders</td>
</tr>
</tbody>
</table>

*Source: ASG Handbook, 2011*

As of the third quarter of 2011, of the total 98 ASG members 22 were Fellows while eight were Associates. The Fellows were either Associates of the five internationally recognised actuarial societies\(^4\) or have considerable experience in actuarial professional practise so are the most qualified to satisfactorily perform the actuarial functions required by the regulator. No member is a fully-qualified and internationally-acclaimed actuary.

Most members (68 percent) are students, which presents a significant potential supply of actuarial talent for the future as the regulator plans to have actuarial functions required in all insurance companies. Additionally, with the current active and dynamic membership, collaboration with the regulators can help it focus its strategy towards building the needed capacity for the future.

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\(^3\) It must be noted that the membership classification ASG is not recognised by the IAA.

\(^4\) The actuarial societies in the USA, UK, Australia, Scotland and Canada.
There are also Ghanaian nationals living abroad who are fully-qualified actuaries, some of whom are presently supporting the industry on a consultancy basis with different forms of actuarial services. This group is a potential resource for the local society to support it in gaining full membership of the IAA.

**Actuarial science programmes and students**

The number of students admitted to actuarial science programmes has increased steadily over the years (Table 10).

<table>
<thead>
<tr>
<th>Universities with Actuarial Programmes</th>
<th>Year programme commenced</th>
<th>Size of current student population</th>
<th>No. of students who took at least one prof. exam</th>
<th>No. of students who passed at least one prof. exam</th>
<th>No. of Bsc. Actuarial science graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Cape Coast (UCC)</td>
<td>2003</td>
<td>85</td>
<td>18</td>
<td>11</td>
<td>157</td>
</tr>
<tr>
<td>Kwame Nkrumah University of Science and Technology (KNUST)</td>
<td>2005</td>
<td>407</td>
<td>15</td>
<td>0</td>
<td>335</td>
</tr>
<tr>
<td>Pentecost University College</td>
<td>2007</td>
<td>117</td>
<td>0</td>
<td>0</td>
<td>32</td>
</tr>
<tr>
<td>University For Development studies (UDS)</td>
<td>2005</td>
<td>118</td>
<td>1</td>
<td>0</td>
<td>193</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>727</strong></td>
<td><strong>34</strong></td>
<td><strong>11</strong></td>
<td><strong>717</strong></td>
</tr>
</tbody>
</table>

Within six years KNUST admissions have more than doubled, from 57 in 2005 to 140 in 2010. The UCC maintained a comparatively small class over the years, averaging 24 students. The UDS, although a relatively new entrant, has experienced high growth in actuarial science student admissions - 110 in 2010 compared with 19 in 2008.

In terms of professional qualifications from the five internationally recognised actuarial societies, students from UCC and KNUST were found to be more active in attempting the professional exams. Of the 34 students across the universities who have attempted at least one of the professional exams only 11 students from UCC recorded passes. Possible reasons for low enrolment in the professional exams include, but are not limited to, high cost of examination and the lack of learning materials. Some also indicated a lack of mentorship from practitioners or lecturers as reason for their apathy in pursuing the profession. For most students their lecturers lack the professional background to provide informed career guidance as most are either trained mathematicians, or statisticians, rather than having an actuarial background (see Figure 12).
Of the 43 actuarial science faculty members identified by departmental heads of the four universities, only seven have some background in actuarial science. The heads are trying to attract practitioners from the industry to provide students with basic practical skills and exposure. The challenge they face is how to persuade university boards to recognise actuarial professional qualifications as a satisfactory prerequisite for lectureship.

Because there are so few actuarial professionals in the faculties to give the student the practical actuarial inputs, students lack confidence in their training and fear they will be unable to put theory into practice. As of 2010, 717 graduates (Table 10) had been prepared for the actuarial job market. They have concerns about employment attributable to their lack of practical actuarial competencies and believe if internships were available they would help them acquire the practical skills required.

The records show that actuarial students are of the same entry standard, if not better than medical school students. They therefore have the required aptitude to become competent professionals in their chosen field if they receive the right foundational training and exposure. Be that as it may, the educational goal should not be to make all the actuarial graduates professional actuaries but rather to adequately prepare them for the career path they might eventually pursue. Currently most graduates are pursuing other related professional training such as Chartered Institute of Insurance (CII), Chartered Financial Analyst (CFA) and Association of Chartered Certified Accountants (ACCA).

Conclusion and recommendations
The survey showed that actuarial graduates lack the basic competencies required by the industry. The local society is yet to attain full membership of the IAA as only a few members can perform the proposed regulatory functions. As a result, mandating
companies to have in-house actuarial functions will require long-term planning to provide ample time for training and resourcing the functions.

To achieve this, concerted effort is required from all stakeholders with the ASG and the NIC taking the lead role. The ASG has already taken some action including offering part-time tuition in universities, mentoring students and holding dialogue with stakeholders. However, a national strategy is required to address the capacity deficiencies especially the following:

*Standardise actuarial practices* – The industry requires local standards to govern the training and practice of the actuarial profession. This task will require the participation of all stakeholders led by the ASG.

*Strengthen professional body* – The ASG must strengthen its membership so it can develop standards for the industry and take leadership in actuarial development in Ghana. A starting point would be the establishment of a permanent secretariat.

*Strengthen linkages among stakeholders (linking theory and practice)* – The development of the sector, as indicated earlier, requires collective effort thus cooperation, especially between industry and universities, cannot be overemphasised.

*Advocacy* – The actuarial profession to date remains a mystery to many. Even among insurance professionals, the role of actuaries in financial management remains secondary. The ASG and stakeholders should increase awareness of the critical role of the actuarial profession.

*Attraction and retention of core actuarial lecturers* – Measures must be employed to attract and retain lecturers with core actuarial educational and professional backgrounds in training institutions. The ASG and the NIC will need to take the lead.

*Teaching and learning resources* – Stakeholders must explore, cooperate, and devise measures towards stocking universities with actuarial teaching and learning resources. These measures could be structured in both near and long-term horizons:

**Short-term**
- Solicit financial and material support from domestic and international bodies and groups, for example, the Society of Actuaries, embassy educational attaches, the IAA.
- Encourage students to take advantage of existing e-learning opportunities.

**Long-term**
- Develop local actuarial training manuals.
- Explore sustainable funding opportunities for text book supplies.
- Create a local e-learning platform for disseminating existing materials to a wider audience.
• Support universities in aligning their curricula to international standards (e.g. IAA minimum requirements for actuarial science programmes).
• Explore scholarships for students given the high cost of actuarial training. The NIC could take a lead in providing some grants.

Future outlook
As the NIC and the ASG are in the process of establishing an Actuarial Capacity Development Technical Working Group it is hoped that some of the recommendations made in this article will be taken up.

References
3.3. Microinsurance Pricing in the Ghanaian Context

Ernest Amartey-Vondee

Introduction
Microinsurance is the protection of low-income households against specific perils in exchange for premium payments proportionate to the likelihood and cost of the risk involved.

It is essentially a financial service which uses risk pooling to provide compensation to low-income individuals or groups adversely affected by a specified risk or event.

Microinsurance is aimed at the working poor; it enables people to become more involved in their financial destinies and to avoid the debt traps that often imperil their livelihoods and even their lives.

By managing risks and avoiding debt it is hoped that, over time, those who have microinsurance will have a means of protecting the wealth they accumulate, and can generate more income and prevent themselves and their families from falling (back) into poverty.

Pricing of insurance products
Insurance offers a mechanism to exchange contingent, future benefit payments against fixed premiums.

The technical (or actuarially fair) premium is equal to the expected loss. The rationale behind this is that insurance companies need to charge a price that at least covers their claims expenses.

The equivalence principle is derived from this rationale as the origin for pricing insurance risk. It defines the pure insurance premium as such that the present value of expected premiums is equal to the present value of expected benefits and the expected cost for providing the insurance coverage.

Pricing in microinsurance
There are significant problems in the practice of pricing risk in microinsurance markets. The most fundamental of these is data availability.

The main reasons for restricted data availability are:

- Microinsurance is relatively young, so historical data on risk is limited.
- Many microinsurers are relatively small so internal experience data, generated from insurance pools, may be insufficient for statistical analysis and premium calculation.
Internal and external reporting standards, as well as the documentation of the loss history of the insured, is often poor in microinsurance markets thus limiting the capacity to analyse risk. Poor infrastructure in many developing countries precludes the use of important macro-level data such as inflation, demographics, meteorological data, health cost and so on; such data restrictions severely limit the ability to estimate distribution of losses and other costs.

Standard actuarial approaches to pricing insurance risk require large sets of data and statistical information; these range from assumptions on interest rates to mortality rates, or, frequency and severity distribution of losses. In the absence of extensive and reliable data, standard actuarial approaches need to be applied with caution in microinsurance.

Insurers in regular insurance markets rely on exhaustive data and precise actuarial estimates for the distribution of losses. Increased precision is a requisite for financial sustainability and enables insurers to decrease the risk loading in premium calculations thus increasing an insurer’s ability to offer competitive prices. This is particularly important when tailoring insurance coverage to the low-income population of microinsurance markets.

Due to data constraints, microinsurers are required to add high risk-loadings for uncertainty in the estimations of expected losses. Consequently the loading on pure premiums may be higher in the microinsurance market making insurance more expensive and perhaps less attractive to the low-income population.

It follows that, when selling insurance at the estimated pure premium, microinsurance runs the risk of overpricing and possibly making the insurance unattractive.

Simplicity, availability, affordability, accessibility and flexibility are integral to microinsurance product design.

**Microinsurance in the Ghanaian market**

When designing insurance products, it is important to take into account the wider macro-economic environment. The following country characteristics define the Ghanaian environment:

**Demography**
- Total population: 25 million, with a growth rate of 2.33 percent (2011)
- Population below the poverty line: 28.5 percent (2007, est.)
- Religion: Christian 68.8 percent, Muslim 15.9 percent, with the remainder being traditional or no religion (2000)
- Workforce: 10.4 million (2011), with about 57 percent in agriculture and fishing (2006)

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5 Data regarding the population below the poverty line and religion is from the CIA Factbook (2012); other statistics are from World Development Indicators (2012).
Insurers should maintain good lines of communication with policyholders. Insight into the preference and concerns of existing policyholders will help the insurer design appropriate products to manage policyholders' expectations.

The microinsurance target group often has irregular and unpredictable cash flow. To minimise lapses and maximise renewals, payment timing is crucial. There should be a short interval for premium collection so the policyholder can pay affordable premiums on a regular basis.

Building up a historical database on risk profiles, claims records and other financial data will facilitate better pricing of products, based on actual, rather than, presumed risks. Warehousing of such data will make the market more transparent for all operators.

Appropriate government agencies, such as the Ghana Statistical Service, could assist in the provision of data on mortality and morbidity, ideally for a large sample and on a regular basis. This would lead to finer pricing on an actuarial basis and eventually cut the cost of insurance for the client.

Appropriate systems should be instituted for policy administration. In the long run, technology is more cost-effective and reliable in tracking client information than manual entry.

Microinsurance service providers can use the existing rural banking infrastructure, including microfinance institutions, for providing services, thereby leveraging on an existing network and reducing costs. These entities find greater acceptability among the financially-excluded as they better understand their needs and are well-equipped to advise them on their choice of products.

It may be useful to consider composite products, whereby a number of benefits are combined into one policy. For instance, a life cover could be combined with a property cover.

Services in relation to claims must ensure that clients know how to make claims, assist them in meeting the documentation requirements and ensure that claims are paid quickly with a bare minimum of rejections or repudiations. Excellent service is an effective marketing strategy.

Conclusion

Microinsurance can provide greater economic and psychological security to the poor as it reduces exposure to multiple risks and cushions the financial impact of livelihood risks. There is an overwhelming demand for social protection among the poor.

Microinsurance, in conjunction with micro-savings and microcredit, can contribute strongly to financial inclusion.

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Appropriate Pricing of Microinsurance Services

- **Health**: life expectancy for women is 65 years, for men it is 63 years (2010), infant mortality is 51.8/1000 (2011)
- **Education**: nine years basic and compulsory, literacy is 66.6 percent (2009)

**Economy**
- Economic growth: 14.4 percent (2011)
- Per capita GDP in current USD: 1.570 (2011)
- Inflation rate: 8.7 percent (average 2011)

**Insurance market**
The 2010 Annual Report of the National Insurance Commission (NIC) provides the following overview of the insurance market in Ghana:
- 17 life insurance companies; 25 non-life (general) insurance companies; 48 broking companies
- Gross premium income for the industry stood at GHS 458,694,764 a 33 percent increase on the 2009 figure
- Gross premium for non-life insurance grew by 23 percent, while that for life grew by 52 percent
- Insurance penetration is about 1.8 percent.

Current microinsurance developments, as noted in the Report, include:
- The inclusion of appropriate microinsurance provisions in the Draft Insurance Bill to give the necessary legal backing to the unique features of microinsurance products and distribution channels (see Chapter 1).
- Collaboration between the NIC and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in the design of programmes to develop capacity and provide technical assistance to companies providing microinsurance services.
- Collaboration between the NIC and GIZ in the design of programmes to develop the demand-side of microinsurance, including a baseline survey to ascertain the current state of the microinsurance market in Ghana (see Chapter 4), and the development of an insurance awareness index toolkit, as well as a general consumer education programme.

**The future of microinsurance**
In general, awareness about insurance and microinsurance is very low. Awareness among the poor about insurance as a proactive risk management tool needs to be heightened. Accessibility can be provided through voluntary self-help groups or non-governmental organizations and through risk-pooling among informal groups.

Low-income households are vulnerable to shocks because they lack reserves to cover immediate expenses; consequently, timeliness of claim payments is crucial to providing timely relief to the beneficiary, which creates further demand for microinsurance.
Insurers should maintain good lines of communication with policyholders. Insight into the preference and concerns of existing policyholders will help the insurer design appropriate products to manage policyholders’ expectations.

The microinsurance target group often has irregular and unpredictable cash flow. To minimise lapses and maximise renewals payment timing is crucial. There should be a short interval for premium collection so the policyholder can pay affordable premiums on a regular basis.

Building up a historical database on risk profiles, claims records and other financial data will facilitate better pricing of products, based on actual, rather than, presumed risks. Warehousing of such data will make the market more transparent for all operators. Appropriate government agencies, such as the Ghana Statistical Service, could assist in the provision of data on mortality and morbidity, ideally for a large sample and on a regular basis. This would lead to finer pricing on an actuarial basis and eventually cut the cost of insurance for the client.

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There is an overwhelming demand for social protection among the poor. Microinsurance, in conjunction with micro-savings and microcredit, can contribute strongly to financial inclusion.
Actuarial Pricing Principles and How to Apply Them in a Microinsurance Context

Daniel J. Clarke

Introduction

If microinsurance is to be a sustainable line of business it must be managed on a sound actuarial basis. Sustainability will require providers to acquire sufficient risk capital (reserves, reinsurance, etc.) to be able to pay claims, even in very bad years, and to charge actuarially sound premiums so that they expect to cover their costs over the medium-term. The process by which an insurer arrives at a suitable premium for an insurance risk is called rating.

Just as for mainstream lines of insurance business, inappropriate rating for microinsurance can cause critical problems for insurers:

- If premium rates are too high the insurer may find it challenging to develop a client base or maintain market share, particularly as the market grows and additional insurers enter the market. A microinsurance provider may also be exposed to the risk of bad publicity or action by an insurance regulator with a mandate to support the economic development of low-income households.
- If premium rates are too low, the insurer would be exposed to an increased risk of significant losses and an inability to meet its claims.
- If the premium structure is wrong, i.e. if some premium rates are too high and some are too low relative to the technical cost to the insurer, the insurer is exposed to adverse selection whereby the insurer sells a disproportionate number of under-priced insurance products, leading to losses.

Getting rating right can be challenging, particularly when data is limited. In Ghana, the microinsurance sector is young and sufficient data may not be available to reliably rate products, for some classes of microinsurance business. In early years, rates may need to be set by applying judgment to imperfect data sources but, over time, rates should update to reflect past experience. This may lead to rates that are too high or too low in early years, but this early investment in data should allow a gradual progression to an experience-based approach to ratemaking. To achieve this progression, microinsurance providers will need to collect data specifically to assist with actuarial rating and incorporate this into a sound actuarial ratemaking process responsive to experience.

In this article I introduce the Actuarial Control Cycle, a general purpose control cycle useful for all actuarial work, and apply it to the problem of microinsurance rating.

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In this article I introduce the Actuarial Control Cycle, a general purpose control cycle useful for all actuarial work, and apply it to the problem of microinsurance rating.
The Actuarial Control Cycle

Actuarial practice is not just a technical exercise and this is reflected in the way actuaries are trained. In countries such as the US and the UK, approximately the first half of the actuarial exams covers core technical material from financial mathematics, statistics, probability and economics. However, although a good understanding of this material is necessary for actuarial work it is far from sufficient. The second half of the actuarial exams addresses higher level topics such as how to (and how not to) apply these technical tools; how to make decisions under uncertainty with imperfect information; and how to communicate about assumptions and actuarial methods with decision makers so their expert judgement may be incorporated into an actuarial calculation.

Actuaries are trained how to approach problems, not given ‘the correct answer’. For example, actuarially sound rating does not involve application of any one specific statistical technique to data, as insurers differ in ways such as the products they offer, how they implement delivery, how the products are financed, and how they collect data. Different statistical techniques may be appropriate for different lines of business and in different circumstances.

The principles for sound actuarial rating, however, are universal and may be explained through the Actuarial Control Cycle (see Figure 13), a control cycle similar to that used in many other professional disciplines, such as medicine or engineering.

Figure 13: The Actuarial Control Cycle

The Actuarial Control Cycle allows all actuarial problems to be approached systematically and comprehensively. Box 3 provides an overview of how this can be applied to the issue of actuarial rating. For a new programme one must understand the environment and the data available and apply a combination of statistical techniques and judgement. Moreover, databases must be set up so that experience can be monitored in a standard timely way and rating can be adjusted accordingly.
Box 3: The Actuarial Control Cycle applied to microinsurance pricing

**General commercial and economic environment.** Find out as much as possible about the context for the business to be rated including:
- rating terminology
- target consumers
- products offered by competitors or offered in other countries
- the legislative and regulatory framework
- how the insurer rates other lines of business
- how the risk will be financed
- returns available on major capital classes
- taxation of insurance products and insurance providers

**Specify the problem.** Decide upon the ultimate goal of the rating, for example:
- set technically minimum sustainable pricing
- set rates so that reserves can be built over time
- set rates to expand market or market share

**Develop a solution** that has a good chance of being successful
- search as much data as possible, including internal and external data, and adjust to specific circumstances
- try to incorporate both quantitative and qualitative information
- make initial assumptions about expected claim cost, capital costs, expenses and business size
- perform sensitivity analysis of individual assumptions to understand which are the most critical assumptions, and spend more time on getting those assumptions right

**Monitor experience:**
- collect the right data on claims and expense experience
- monitor claims and expense experience intensively
- respond quickly if experience suggests rates or procedures need to be amended

**Professionalism:** Those responsible for rating should be able to demonstrate competence in actuarial rating, and its practical application, and should act with integrity.

**Premium rating**
There is no such thing as an ‘actuarially correct’ premium rate. All rating requires assumptions to be made about future experience and, while more information or better analysis of available data may lead to better decision-making, no rating methodology is perfect. Nonetheless, a technically sound rating methodology uses a combination of
data, judgement and statistical analysis to determine and monitor rates. In low-income environments, where actuarial expertise is often lacking, any rating methodology should be transparent enough for senior management to scrutinise and flexible enough to allow the inclusion of expert judgment.

Throughout this article the concepts are illustrated using the example of life, health and agricultural insurance. For additional examples see the actuarial toolkit project (UK actuarial microinsurance working party, forthcoming) and Garand et al. (2012).

Data, cleaning, and detrending
An actuarial approach to rating requires relevant data, and stability in the process for collecting this data. Data is the lifeblood of pricing so using sophisticated pricing techniques on poor data is next to useless. It is important that the quality and suitability of any data sources be considered. Some data may have been collected for purposes other than insurance, so its suitability for use in the rating should be assessed.

Data should be checked for any obvious errors and trends or step-changes identified and removed, or partially removed, as appropriate. The detrending step, in particular, requires both statistical analysis and informed judgement. For example, consider the two yield data series in Figure 14. Although both series have average yield of 95 kg/ha, over the 10 year period, and the same variance in yields, it is clear from looking at Figure 14 that they should not be treated in the same way. Yield series (a) exhibits a significant trend, whereas yield series (b) exhibits no such trend. After accounting for the trend the yield in year 11 for series (a) might reasonably be estimated to be around 150 kg/ha with low risk around that estimate, whereas the yield in year 11 for series (b) might reasonably be estimated at 95 kg/ha with high risk.

However, note that judgement here is important. The analysis in the preceding paragraph may be fine if, for example, yield increases in (a) can be explained by gradual application of improved farming practices or application of improved fertilisers that can be expected to continue in future. However, if, for example, yields (a) have increased substantially due to an overuse of ground water in the dry season, and the historical trend is not expected to continue, an alternative approach to detrending should be considered. Moreover, humans are prone to attributing patterns to random data so statistical tests should be used to complement judgement (Clark et al., 2012).
Detrending can have a substantial impact on rating. Applying a detrending methodology to cotton area yield index insurance in India led to premium reductions of up to 78 percent (Clark et al., 2012). Substantial trends can occur in health, life and property insurance, as well as in agricultural insurance.

A fundamental rating formula

The commercial premium rate is typically taken to be an actuarially sound estimate of the expected total cost associated with the insurance product, as given by the following fundamental rating formula:

\[
\text{Commercial premium} = (\text{Expected claim payment} + \text{Cost of capital} + \text{Expense Load}) \times \text{Discount Factor}
\]

For example, for a life insurance product that pays USD 200 on death of the policyholder and a mortality rate of five per 1000, the expected claim payment would be calculated as 0.5% x $200 = $1.

As already noted, estimates of claim frequency or size should be based on detrended data, where appropriate. Moreover, rating cannot be isolated from the context, product design or delivery. For health microinsurance, in particular, operational processes and distribution channels can significantly affect the expected claim frequency and incorporating this information into rating assumptions is critical (Garand et al., 2012).

Cost of capital

Insurers need to acquire enough capital to ensure that they can pay claims, even in extremely bad years. For example, many regulators require insurers to acquire enough risk capital to remain solvent over the coming year with probability greater or equal to 99.5 percent. While capital requirements are not discussed here acquiring this capital, for example, by holding reserves or purchasing reinsurance, is costly and this cost is accounted for in the above rating formula through the cost of capital element. This element may also include an explicit profit loading or a margin for uncertainty to reflect fluctuations in experience or unexpected expenses.
In practice, rates will need to be set before the microinsurance provider knows the size or composition of their portfolio, and perhaps before they have finalised their risk financing strategy so the actuary will need to develop appropriate assumptions for these. The portfolio composition is a particularly critical assumption, as a diversified portfolio will typically require much less capital than a portfolio with substantial aggregate risk and will, therefore, be subject to a lower capital cost. For example, a large life microinsurance portfolio will typically have much lower capital requirements than a similarly sized agricultural microinsurance portfolio due to the covariate nature of agricultural risk; droughts can affect large areas, triggering claim payment across a portfolio of policies, whereas large clusters of deaths occur much less frequently.

The cost of capital is typically calculated across the entire assumed portfolio and then allocated between policies so that the total addition premium income from the cost of capital element equals the total cost of risk capital across the portfolio. The cost of reinsurance capital is given by:

\[
\text{reinsurance premium} - \text{expected insurance claim}
\]

and the cost of reserves is given by:

\[
(\text{reserves} - \text{expected uninsured claim payment}) \times \text{required return on reserves}.
\]

The total cost of capital across the portfolio is the sum of these two items.

The required return on reserves is the extra return that the owners of the insurer require to compensate them for their capital being held in low yield, low risk assets and the liabilities containing significant risk. This can include margins for profits, uncertainty, or contributions to reserve accumulation, as appropriate. If the microinsurance provider wishes to offer discounted rates to build market share it can reduce the required return on reserves (even to the point where this is negative) to reflect this.

**Expense load**

The expense load is an allowance for all administrative costs of the product, including design, pricing, marketing, commission, premiums collection and claim settlement. Variable costs, such as commission or legal costs, are typically directly attributed to the respective policy, whereas fixed overhead costs, such as computing, personnel or general management costs are typically spread between multiple policies. As fixed costs are typically large, the expense load for an individual policy can be quite sensitive to assumptions about future portfolio size. Many expenses might be expected to increase with price or salary inflation, and this should be accounted for in estimating the expense load.
Discount factor
The discount factor adjusts the rate to allow for the period between premiums being paid and claims being settled, during which time the premium income may be invested in interest-bearing assets. For example, expenses and claim payments from a one year term insurance policy might be paid, on average, half way through the year so the discount factor would be set at , where denotes the annual rate of interest. The discount factor can take different forms depending on the timing of claim payments and expenses and whether the cost of capital already essentially includes a discount factor.

Conclusions
This article has provided an applied overview of actuarial rating for microinsurance. The key messages are:

- Inappropriate pricing can cause critical problems for insurers.
- Pricing requires a combination of high quality data, expert judgment and statistical analysis.
- Pricing is a process, not an event, and should adapt quickly following unexpected experience. A sound pricing process can be designed around the Actuarial Control Cycle.
- Unless the microinsurance provider is intentionally offering low premiums to invest in market share or data, rates should reflect the full economic cost to the insurer, including the expected claims cost, the cost of capital, the expense cost and any discount to reflect interest expected to be earned on reserves.
- Rating is complex, particularly for non-life insurance, and should be conducted or reviewed by a suitably qualified actuary.
- Rating is not sufficient to ensure sustainability; risk financing is also necessary to ensure that claims can be paid even in very bad years.

If Ghana is to be home to a thriving microinsurance market there will need to continue to be substantial investments in data and actuarial capacity. One relevant project is the actuarial toolkit for pricing that is being developed for life, agriculture and health insurance by the UK actuarial profession and the International Actuarial Association (UK actuarial microinsurance working party, forthcoming). The toolkit will be a publicly available educational resource for technical microinsurance practitioners, developed on a volunteer basis by qualified actuaries, and will be launched in November 2012.

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James R. Jones and Krzysztof Ostaszewski

Illinois State University (ISU) houses a successful risk and insurance education and research programme, as well as an actuarial science programme. Creating a harmonious relationship between the risk and insurance programme on one side, and an actuarial programme on the other, is a long-standing challenge for all university educators preparing students for careers in insurance. Risk and insurance education requires development of business acumen which comes from significant business coursework and interactions with business professionals, while actuarial science calls for substantial mathematical rigour in order to prepare students for actuarial exams and skills.

ISU, through the Katie School of Insurance, helps create synergies between these two areas even though the two programmes are housed in two different colleges. The Katie School acts as both the liaison between the College of Arts and Sciences (the actuarial programme is located in its Department of Mathematics) and the College of Business (the risk and insurance programme is housed in its Department of Finance, Insurance and Law) and the liaison to the insurance industry. This article describes how this is accomplished and the outcomes achieved in creating risk management and actuarial capacity for the industry.

Creating the harmony

At ISU actuarial students are welcome in College of Business classes and activities and encouraged to participate in all Katie School insurance and leadership development programmes. Insurance students are always welcome at actuarial functions and events, and any interest in anything actuarial on their part is always appreciated. The Katie School works closely with the actuarial programme and supports it in many ways. This support can be categorised as follows:

- Financial support to students
- Support for student development of business acumen and leadership
- Support of curriculum development.

These are elaborated on later in this article. However, first it is helpful to have an overview of the Katie School and the actuarial programme at ISU.

Katie School of Insurance and Financial Services

The administrative name of the Katie School is the Center for Insurance and Risk Management but it is commonly known as the Katie School of Insurance and Financial Services.

UK actuarial microinsurance working party. (forthcoming). The actuarial toolkit project. To be released online in November 2012 at http://www.stats.ox.ac.uk/actuarialtoolkit.
3.5. Illinois State University: Creating Actuarial Capacity in Rare Harmony

James R. Jones and Krzysztof Ostaszewski

Illinois State University (ISU) houses a successful risk and insurance education and research programme, as well as an actuarial science programme. Creating a harmonious relationship between the risk and insurance programme on one side, and an actuarial programme on the other, is a long-standing challenge for all university educators preparing students for careers in insurance. Risk and insurance education requires development of business acumen which comes from significant business coursework and interactions with business professionals, while actuarial science calls for substantial mathematical rigour in order to prepare students for actuarial exams and skills.

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Services or just the Katie School at ISU. It was established in 1991. Today 26 insurers, reinsurers and brokers form the Katie Advisory Board with another 80 plus insurance and risk management organizations providing support for the Center.

The Katie School’s mission is to support ISU’s insurance and risk management programme and actuarial science programme. Its central focus is to prepare future industry leaders by supporting strong industry involvement with students, innovative teaching, cutting-edge applied research and a student-centred learning environment. To support this vision and mission the Katie School employs four full-time staff members; one half-time staff member who coordinates leadership programmes, two student workers, four graduate assistants and the Edmondson-Miller Endowed Chair.

The actuarial program at ISU

In 1997, a formal actuarial sequence in the mathematics major was created, followed by a master degree in mathematics, actuarial sequence in 2001 with the first master degrees awarded in 2002. Though the programme is still relatively young it has achieved national prominence and, in 2009, it was among the initial 10 programmes in the US to be recognised by the Society of Actuaries as a Center of Actuarial Excellence. It has now produced over 300 graduates, of whom 135 are credentialed actuaries. About 30 students graduate every year.

The actuarial programme is devoted to preparing students for professional actuarial examinations and to help them succeed as true actuarial professionals. Examples of support that ISU provides include:

- Free online study resources for all preliminary actuarial examinations.
- Online seminars for the first three actuarial examinations with the help of an external grant, the seminars for the first two examinations are free, while the next two are substantially discounted.
- Paying examinations fees for students who pass, and even 50 percent of the fees for those who fail, provided they meet certain conditions showing seriousness in their preparation for the examinations.
- Encouraging student participation in additional professional development activities offered by the Actuarial Programme, the Actuarial Club and the Katie School.

Katie School support for actuarial programme

The Katie School promotes the development of actuarial capacity through financial support, providing actuarial student development workshops outside the classroom and through curriculum development.

Student financial support and development programmes

The Katie School provides financial support for scholarships to students meeting specific performance requirements and reimbursement of actuarial exam fees.
It supports various curricular and co-curricular student development activities including an insurance student organization involving both insurance students and actuarial students in industry-related events. The School provides funding for outside speakers as well as expenses to attend industry conferences and symposia and undertake international internships.

Several talented actuarial students have participated in the Katie School 100-hour leadership programme. This includes workshops in leadership and culminates with a risk consulting project with a local non-profit organization. Students must present risk consulting recommendations in writing and present their findings in person to their respective board of directors. Students are encouraged to teach one class of the mathematics of insurance to middle-school students for which they receive recognition and a small stipend.

**Curriculum development**
The School provides support for developing curricula in actuarial science, business analytics, sustainability, ethics and risk management, and insurance.

**Actuarial curriculum development**
Actuarial curriculum development is a high priority. Both the bachelor degree and master degree curricula are highly aligned with the requirements of the US professional actuarial education system.

Additionally, students in actuarial science are expected to take classes in general education, as well as courses in accounting, finance, insurance, and basic programming. An elective course teaching actuarial programming has also been developed with industry support. This teaches specific computing skills that employers look for in internship and entry-level actuarial candidates.

Undergraduate students are strongly encouraged to obtain actuarial internships with insurance or consulting companies.

There are two core courses for master degree students in actuarial science:

- Applications of Actuarial Principles: covering practical calculations of reserves and prices in all lines of business, i.e., life insurance, life annuities, pensions, property/casualty/liability insurance, health insurance and group insurance; as well as regulatory requirements for reserving.
- Mathematical Models in Finance and Investments: covering models used in actuarial practice, such as asset-liability management, arbitrage-free pricing, equilibrium pricing, uses for derivative securities and financial risk management tools, management of capital and regulatory requirements for capital.

In addition, advanced graduate level courses in mathematics, statistics, accounting, finance and insurance, including predictive modelling and advanced analytics, are also offered.
The curriculum is continuously adjusted and updated based on changing professional actuarial education, current academic research, evolving regulatory requirements for the industry and in consultation with the insurance industry and actuarial professionals.

The actuarial programme has an advisory board of actuarial professionals who advise on its development.

Graduate actuarial students have the option to complete a research project which qualifies as a culminating experience for the programme. Many of these involve work with insurance corporations in helping them find solutions to their problems. In support of this, the Katie School involves graduate actuarial students in a number of industry projects using real world data for business projects. These also include international projects. Recently, several actuarial students (along with four staff members) were involved in a grant project analysing data for crop loss in Ghana with the purpose of promoting the potential development of an insurance product benefiting farmers.

**Business, risk management and insurance education**

All programmes are rigorously assessed by third parties who provide feedback on quality. This ensures the School meets its goals and helps with attaining national recognition.

In the course ‘Insurance Company Operations’ students are exposed to a number of presenters from different functions in the industry; this course was co-designed with industry input.

Actuarial students are encouraged to take risk management and insurance courses with most of them completing at least three of these courses.

**The value of insurance industry connections**

The tag line used by the Katie School is “Adding Value to Industry”. Industry leaders, representing national and regional insurance and financial services organizations, serve on the School’s Insurance Advisory Board of Executives and provide guidance and financial support for programmes. Ways in which the Katie School adds value to the insurance industry include:

- Attracting and developing talented young people and helping prepare them for careers in insurance
- Supporting civic engagement and social responsibility
- Providing professional development opportunities to young insurance professionals
- Providing networking opportunities for industry professionals to meet, discuss current topics, and do business together
- Providing support for faculty in research on key industry issues.
Attracting talent to the industry
The Katie School attracts talent into the RMI and actuarial programme at ISU in several ways. One is to provide high school students with the opportunity to experience risk management and insurance through summer programmes offered on the ISU campus. The two programmes are called the Redbird Risk Management Challenge and Minority High School Scholars Actuarial Academy (MHSSAA).

The Redbird Risk Management Challenge is a one week on-campus programme where students work in teams to run businesses which face different risks each day. They must respond to the risks and grow their businesses to succeed. They learn both business and actuarial principles in determining the best risk management strategy.

The MHSSAA is similar to Redbird Risk Management Challenge but is targeted at talented underrepresented minority (African-American, Hispanic-American and Native-American) high school students. It introduces them to professionals working as actuaries giving them exposure to a career as an actuary.

Faculty support and industry solutions
The Katie School provides faculty development and research grants (both competitive and non-competitive) for new staff members, thereby helping to attract high quality teaching staff for the college. In 2011, for example, more than 20 grants were provided in five different disciplines to conduct research in the insurance industry. Support includes making available one of the most comprehensive sources of insurance industry data for any university, as well as providing graduate assistants to support faculty research.

Continuing the connection
The hallmark of the Katie School is industry engagement and support. Industry partners support the School and the actuarial programme. Furthermore, the integration of industry practitioners into curriculum content decisions and classroom facilitation benefits students and staff. This integration enables students to have a better understanding of the real world challenges that they will encounter and helps them better understand the different parts of the industry and different jobs and how they interact. Support from industry leaders, human resource departments, and alumni is critical to making the industry connection.

Maintaining a tremendous database of industry practitioners and alumni information is vital to many of the actuarial talent development activities. Currently, there are more than 3,000 industry professionals with whom the programmes regularly communicate.

The Katie School and the actuarial programme have grown dramatically in both numbers and quality. The success is largely due to insurance industry support for formal fundraising efforts and individual and corporate donations. The potential for the
industry is tremendous when considering the talent that enters the industry each year from just one university which is focused on making sure students understand their career objectives.
4.1. Introduction

Isaac Baidoo

The microinsurance market has significant social and economic value, with some estimates exceeding USD 40 billion in premium income and a potential reach of four billion low-income people globally (Swiss Re, 2010). It is a relatively new field, however, with many aspects of the optimal business model not yet fully understood. It is this staggering income potential, combined with the opportunity to conduct valuable (social and economic) investigation, which drives the strong research imperative in microinsurance.

A wide range of microinsurance topics are under study reflecting the interests of practitioners, donors, regulators, government, NGOs, and other entities in this fledgling field. While many classification schemes for microinsurance research are possible, a significant number of projects can be grouped under the headings: demand-side studies, supply-side studies, and impact studies.

On the demand-side, research has been conducted into the insurance needs of low-income people, their uptake of various products and the way in which insurance impacts on clients’ lives. This has greatly contributed to understanding the challenges facing insurers as they seek to increase coverage penetration to reach the poorest sector of the population.

On the supply-side, market research has been conducted as to the availability and outreach of microinsurance in various jurisdictions and on the type of delivery models that have successfully increased coverage and decreased portfolio attrition over the long-term.

Impact studies try to establish whether clients are better off after buying insurance, for example, in terms of economic well-being, health or vulnerability to shocks.

This chapter provides an overview of the most relevant research on microinsurance in Ghana. It begins with a review of microinsurance literature in Ghana and abroad,
focusing on the barriers to product take-up. The review shows that although the take-up of health insurance is relatively well understood, research into the market for commercial microinsurance is very limited.

This gap is addressed in two recent studies which explore both sides of the supply-demand dynamic at play in the Ghanaian microinsurance market. In the article, ‘Market Survey: An Overview of the Supply of Microinsurance in Ghana’, results of an industry-wide survey of all life and non-life insurance companies are presented with a focus on the supply of microinsurance products. A number of recommendations are made that, if followed, should increase the supply and value of product offerings in Ghana. ‘Market Survey - The Demand-side’ presents the results of a survey of 870 microinsurance clients. The study contains a rich set of quantitative and qualitative data on the studied population with analyses of product awareness, risk perception, and insurance preference, coupled with socio-economic and occupational profiling, reviewed in the results. Recommendations are made on how to improve the insurance product value proposition to potential clients.

Another area of research that has received significant attention is client value. Providing sustainable high value policies at low premium levels is an on-going challenge to microinsurers. Research suggests that policy simplicity and operational efficiency are keys to striking the balance between product value and affordability. In the paper, ‘Assessing the Client Value of Property Insurance in Ghana’, client value is explored by examining a microinsurance product designed to mitigate business losses from potentially catastrophic events such fire, flood, earthquakes, and disability for workers in the informal sector. A comparison of insured versus uninsured victims in a post-event analysis showed significant benefits to insured parties over their uninsured counterparts.
4.2. Literature Review: Barriers to Microinsurance Uptake

Isaac Baidoo and Mareike Buss

Introduction
As a preface to the research and development chapter we look at the existing literature on microinsurance and identify insights relevant to microinsurance practitioners in Ghana.

Given that the main focus of practitioners is on selling their products, we focus on literature that explains the level of uptake of microinsurance products.

We provide a brief overview of the international landscape of microinsurance research, focusing on the major research trends and emerging evidence on microinsurance uptake.

We then look at studies that specifically focus on the uptake of microinsurance in Ghana. However, as commercial microinsurance in Ghana is a relatively new line of business, this type of country-specific literature is limited.

In contrast, there is a relatively large body of literature on the uptake of health insurance. In Ghana, health insurance has been offered to low-income households since the early 1990s (Brugiavini & Pace, 2011), particularly in the form of community-based health insurance schemes, many of which were integrated into the National Health Insurance Scheme (NHIS), which began operating in 2004. We provide an overview of studies explaining the uptake of health insurance and draw lessons for microinsurance enrolment.

Finally, we look at gaps in the literature and offer some ideas for future research.

International literature reviews
We first examine a sample of international literature reviews on microinsurance research for common themes, and significant findings, to set context for evaluating the Ghanaian microinsurance experience. This is particularly important because there has been little research into local microinsurance uptake.

Research into insurance in general, and microinsurance in particular, is best viewed from within a framework that promotes a clear understanding of the range and focus of the questions and issues under study. The framework often employed, which we adopt, groups research into the following classes: demand-side issues, understanding the uptake of microinsurance from the client perspective; and supply-side issues, how product features, services, and delivery models affect uptake.
**Trends in current research activity in microinsurance**

Several trends are evident after examining recent reviews of microinsurance research literature.

- Global geographical concentration: In a recent review of current literature (Magnoni & Zimmerman, 2011) most studies are concentrated in Africa (38 percent) and Asia (55 percent).

- Methodological approach: Studies are mostly observational or quasi-experimental, making conclusive inferences about the actual impact of microinsurance difficult (Dercon et al., 2008). This bias was quantified in another review (Magnoni & Zimmerman, 2011) which found only 18 percent of quantitative studies into health microinsurance employed the randomised control trials “needed for more definitive causal explanations”.

- Bias towards health and agriculture studies: Research has leaned to crop and health insurance research where outcomes are more common and thus easier to study. Micro life insurance has received much less attention, even though it is distributed more widely (Magnoni & Zimmerman, 2011). This is largely due to the methodological difficulty in studying insurance coverage for rare events such as death.

- Bias towards rural area studies: In a recent review of microinsurance literature, 50 percent of studies covered rural areas, 30 percent urban, and 20 percent mixed (Magnoni & Zimmerman, 2011).

- Few studies covering impact and client value: Client value studies form a very small proportion of the total research output into microinsurance (Dercon et al., 2008).

**Demand-side challenges to microinsurance uptake**

The international literature on microinsurance is consistent in recognising several factors that influence the uptake of microinsurance.

- Competitive ex-ante risk strategies. Risk takes a significant toll on the poor, both prior to a loss occurring and after a loss event. Poor people engage in a variety of ex-ante strategies to manage this risk. These strategies are often costly and provide only partial risk mitigation. For some potential clients these strategies are direct competition to microinsurance coverage and, when available, tend to reduce the uptake of microinsurance products. Savings accounts, micro-credit opportunities, social security and safety nets, informal risk pooling, formal and informal credit are cited as competitive risk management strategies for the poor (Dercon et al., 2008). However, the interactions between these mechanisms need to be further analysed in future research.

- Insurance knowledge. Lack of understanding of the basic ways in which insurance works can obscure the value proposition presented by even the best policies. This factor is further exacerbated by the inability of some agents to explain policy terms and conditions to prospective clients.
Lack of trust and provider credibility. Uptake is severely reduced when potential clients do not trust an insurance provider to pay claims in the event of a loss. Dercon et al. (2008) point out that in this way microinsurance is distinctly different from microfinance: in microfinance a loan is extended to a borrower and the lender leads with the trust that the borrower will repay the loan at the appropriate time. In microinsurance the covered party leads with a premium payment and trusts that the insurance company will pay in the event of a loss. It is this requirement of initial client trust that makes microinsurance such a credibility-driven proposition for the insurance provider. Reputation risk is extremely high when claim payments are due.

Household wealth. In simple terms, the more money a family has, the greater their ability to afford premiums.

Willingness to pay premiums. Several authors distinguish the ability to pay (a function of household wealth) and the willingness to pay (WTP) premiums (Dror, 2006). WTP thresholds can be overcome by making payment easy and breaking up premium payments to frequencies and locations that match those of the insured.

Mismatched risk coverage. Although preferences for insurance coverage are highly context-specific, indicating that the poor are not completely homogeneous (with variation in illness incidence and cost by location) (Dror, 2006), studies have identified health, agricultural, and loss of income as the principal needs with respect to coverage (e.g. Mosley, 2008). Unfortunately, cover for these risks is not yet available in many developing markets where providers focus on ‘easier’ products such as (credit) life.

Education of head of household. The level of education of the head of household has been found to be positively correlated with microinsurance uptake. This result is purely associative, although one may infer that head of household education may be causative through links to literacy gap reduction and trust of provider.

For most factors only a correlation, rather than causality, with microinsurance uptake could be proven. Further studies would be necessary to assess causality.

Supply-side challenges to microinsurance uptake
Numerous challenges exist on the supply side of the microinsurance industry. Product design and pricing; size of pools of insured (needed to adequately spread risk); covariant risks; moral hazards; and adverse selection are all cited as barriers to bringing products to market. However, the list is much shorter if we consider the supply-side barriers to microinsurance uptake of the products currently developed and marketed.

High premiums. Several authors, (e.g. Biener & Eling, 2012), cite high premiums as a major impediment to uptake. This is a derivative issue as it often stems from the data and pricing challenges existing at the product design stage. As indicated in the previous chapter, inability to adequately assess risk leads to overly conservative
(high) premium pricing. High premiums do not only lead to small pools of insured clients but can also exacerbate adverse selection problems.

- Mismatched risk coverage. In many cases insurers only provide products that are easy to roll out and quickly become profitable: credit life is a good example. If these products do not address the most pressing risks of the client, uptake often remains limited (in the case of voluntary products).
- Inefficient delivery channels. In order to provide maximum risk coverage at minimum cost, delivery cost of the product to the insured should be minimised. Effective delivery channels can also have a positive effect on demand-side trust, as the channel’s reputation and relationship with the client can bolster the insurance provider’s profile.

Uptake of microinsurance in Ghana

Although sparse, the research on microinsurance in Ghana reaffirms the difficulties of providing insurance coverage to the disadvantaged. The principal demand and supply-side challenges identified in the international literature were also found in the Ghanaian market.

The financial and social imperative to build a strong microinsurance sector in Ghana draws from several sources. The Millennium Development Goals of poverty reduction, conference resolutions from organizations such as the International Labour Organization (ILO), and concepts from working microinsurance models in countries like India have been cited as fuelling the interest in microinsurance initiatives (Akotey et al., 2011). In addition, social security systems are unlikely to cover the entire population in the short to medium term (Arun & Steiner, 2008).

The current market for microinsurance products has its roots in the failed susu schemes of the 1980s (Akotey et al., 2011). The first private-sector microinsurance product came on the market in October 2001 when CARE International, in collaboration with Gemini Life Insurance Company (GLICO), introduced the Anidaso product, based on a product development model which McCord et al. (2004) describe as “a model for others who are developing similar products”. As will be described in the next article of this Chapter, many more insurance companies are now active in microinsurance together offering at least 16 microinsurance products.

Microinsurance research in Ghana

In 2009, a seminal household survey was conducted that provided a rich data set about microinsurance-related research in Ghana. In the study 1,030 households were equally split between households with an insured individual (clients), households without an insured individual (non-clients), and households from geographic areas with no insured individuals (non-clients). The insurance product was the Anidaso microlife policy offered by GLICO. The 2009 survey led to a flurry of research findings and publications, for example, works by Bendig (Bendig et al., 2009), Giesbert (Giesbert et al., 2011) and
Steiner (Steiner & Giesbert, 2010). These studies collectively represent most of the current country-specific research on microinsurance in Ghana.

The limitation of the Anidaso studies is that they were based on a geographically limited sample covering clients of only one product. Moreover, Anidaso is a bundled product which contains not only insurance elements but also a savings component. This hampered the evaluation of the studies’ results from an insurance-demand perspective, as well as the generalization of the results for a country as diverse as Ghana.

A recent study by Ackah and Owusu (2011), assessing the knowledge of and attitude towards insurance in Ghana, provides further analyses of quantitative and qualitative data from interviews with 303 clients and non-clients and six focus group discussions covering four different regions. The authors developed an insurance awareness index to shed light on insurance literacy/awareness in Ghana.

A well-designed experimental study investigating the relationship between demand for agricultural index insurance and the investment decisions of small-scale farmers in Northern Ghana was conducted in 2009. The yet-to-be-published work concluded there is an interactive effect between capital constraints and risk with respect to the investment choices of farmers. Mitigation of risk alone, therefore, did not lead to higher levels of investment (Karlan et al., 2012).

Demand-side issues
In the Anidaso product survey non-customers were asked why they did not have coverage. ‘Expense’ was the primary impediment and accounted for 46.1 percent of non-client respondents. ‘Insurance not important’ (15.1 percent), ‘lack of trust in provider’ (9.9 percent) and ‘lack of information about insurance options’ (8.6 percent) were also mentioned frequently (Steiner & Giesbert, 2010). The rank-ordering of these factors was confirmed by the FinScope survey on access to finance (FinMark Trust, 2010) in which ‘Affordability’ (64 percent), ‘Lack of information’ (27.6 percent), ‘Don’t need’ (13.2 percent) and ‘Trust’ (4.2 percent) were four of the top five factors. These results, consistent with those from international jurisdictions, indicate that the market in Ghana may not be unique in the demand-side challenges to microinsurance uptake.

The survey showed that when looking at actual uptake, poorer households were less likely to participate in the financial sector (including insurance). Uptake was also dependent on the socio-economic status of the household and prior risk exposure (Bendig et al., 2009). The level of education of the household head was a significant factor in the uptake of microinsurance, at least for the Anidaso product. In line with this, Ackah and Owusu (2011) outlined the importance of insurance education adjusted to the needs of different segments; for example, rural and urban, literate and illiterate.

Some results from the Anidaso survey were counter-intuitive and not in line with existing theoretical models and international experiences. For example, it was observed
that the more risk averse the respondents were, the less likely they were to buy insurance. Insurance uptake also seemed unrelated to the actual level of risk exposure. This result suggests that surveyed individuals viewed microinsurance uptake itself as a ‘risky option’, or, at least, that they did not see it as a tool to manage their risks (Giesbert et al., 2011). A possible explanation is given in the study on insurance awareness by Ackah and Owusu (2011) whose research showed that Ghanaian culture perceives planning ahead for a misfortune as a trigger factor for misfortune. In addition, misperceptions and mistrust towards insurers, as well as negative experiences with the NHIS, make people wary of insurance as a means to manage their risks.

Perceptions, attitudes and other behavioural factors are typically explored through focus group studies. Perceptions about insurance among the low-income target group (both clients and non-clients) were found to be often based on incomplete information indicating a lack of understanding about the way in which insurance works (Ackah & Owusu, 2011; Giesbert & Steiner, 2011). In addition, perceptions of policies and providers (both positive and negative) were strongly influenced by the opinions and experiences of peers. As a result people often held either overly negative perceptions (mistrust), or overly positive ones (unrealistic expectations).

Supply-side issues
As noted, there is a dearth of literature on the supply of microinsurance in Ghana. The supply-side issues identified in the country-specific literature mainly centred on agency.

The nature of the supplying agency was found to be statistically determinant of product demand (Akotey et al., 2011) and insurance agents were the principle contributors to product awareness (Ayeh, 2009).

The Anidaso survey found product understanding was sometimes lacking and some clients were not informed about how and when they could make a claim. The authors emphasised the importance of client education to increase uptake and client satisfaction (Giesbert, 2010).

Researchers made the following recommendations to increase microinsurance uptake:

- Adoption of a nodal agency model for microinsurance distribution (Akotey et al., 2011)
- Flexible premium payment schemes (Akotey et al., 2011)
- Microinsurance education campaigns (Akotey et al., 2011)
- Improved communications between insurer and client (Steiner & Giesbert, 2010).

What can we learn from health insurance?
Besides looking at the factors influencing the uptake of microinsurance in Ghana, several authors have studied the determinants of participation in health insurance schemes, either in community-based insurance schemes or in the NHIS.
Micro health insurance schemes in Ghana, developed since the mid-1980s, mostly provide financial protection against costs related to in-patient services (Owusu et al., 2012). Even though the number of mutual health insurance schemes steadily increased and expanded from 47 schemes in 2001 to 168 in 2003, their combined membership covered just one percent of the Ghanaian population (Sulzbach et al., 2005).

The NHIS was established in 2004 through the National Health Insurance Act, 2003. It aimed to reduce out-of-pocket expenses and make health care affordable. This "provided the basis for the establishment of micro health insurance schemes at the district level in Ghana" (Owusu et al., 2012). The NHIS is currently operational in 145 of the 170 districts in Ghana (Owusu et al., 2012). According to Innovations for Poverty Action (IPA, 2011) there are diverging estimates of the percentage of the population currently covered by the NHIS. The National Health Insurance Authority estimates that 62 percent of the Ghanaian population is registered, of which 48 percent were enrolled in 2011. In contrast, other sources have found the enrolment rate to be much lower (below 18 percent) (IPA, 2011). Nevertheless, there was a rapid increase in NHIS registrations in the first years following implementation (Witter & Garshong, 2009).

The uptake of health insurance could provide an interesting reference for the emerging microinsurance segment. Factors determining the successful uptake of health insurance under the NHIS, along with identified barriers to participation, could provide information about how best to foster microinsurance expansion.

This section provides a brief overview of factors affecting health insurance in Ghana. As with the section on microinsurance, the variables identified as having an impact on health insurance demand have been demand-side factors on the one hand (e.g. demographic and socio-economic variables, as well as knowledge and attitude) and supply-side factors (e.g. characteristics of the provider) on the other.

Demographic and socio-economic factors
According to the National Development Planning Commission (NDPC, 2009) “insurance under the [NHIS] scheme is perfectly linked to the socio-economic status of households […]”. In this context, affordability seems to be one of the main barriers to health insurance uptake (NDPC, 2009). Thus, different studies found, for example, that the NHIS predominantly serves people without socio-economic constraints1 and that richer households are more likely to join an insurance scheme (e.g. Jehu-Appiah et al., 2011a; Nketiah-Amponsah, 2009; Sarpong et al., 2010). In addition, households headed by an unemployed person are less likely to participate in health insurance schemes (Chankova et al., 2008).

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1The socio-economic status is generated from different asset variables, including, for example, water supply and building material of the house.
Several studies have also found a correlation between education, literacy and health insurance. Chankova et al. (2009) showed that education of the household head was positively correlated with joining a health insurance scheme. Brugiavini and Pace (2011) found literacy to be a key characteristic for NHIS enrolment. Given the proven correlation of education and insurance demand Chankova et al. (2008) suggest that insurance schemes “need to tailor their marketing strategies to cater to those with less or no education, to ensure that these segments of the population are not excluded”.

In addition to wealth and education a range of household characteristics influence health insurance enrolment. Most studies show that female individuals, or households headed by women, are more likely to become a member of an insurance scheme. Women, rather than men, are expected to deal with the consequences of health shocks and might have a greater need for health care during their reproductive age (Jehu-Appiah, 2011b; Owusu et al., 2012). Furthermore, being married and having a large household were associated with insurance demand, as married couples tend to be more risk averse and may demand insurance in order to protect their children (Nketiah-Amponsah, 2009, Chankova et al., 2008).\(^2\)

An individual’s age appears to affect the decision to join an insurance scheme as well. In general, one can say that the greater the age the more likely the insurance enrolment. It can be argued that the health status of individuals deteriorates with age, resulting in increasing investments in health (Jehu-Appiah, 2011b).

Furthermore, the majority of studies agree that living in an urban area is positively correlated with insurance uptake. According to Owusu et al. (2012) this might be caused by the “comparative ease of access to registration and health care service”. Jehu-Appiah et al. (2011b) found the opposite arguing that this was due to the pro-poor and decentralised design of the NHIS as door-to-door and solidarity campaigns might be more effective and easier to organise in rural areas.

Knowledge and attitude
Nketiah-Amponsah (2009) shows that access to, and the dissemination of, information is significantly correlated with insurance uptake. Educational campaigns are needed to raise knowledge and increase insurance demand (Atim & Sock, 2000).\(^3\)

Jehu-Appiah et al. (2011a) conducted a study to investigate households’ perceptions of the NHIS and the implications for the Scheme. They found enrolment is strongly associated with households’ observations of the Scheme itself, in particular the

\(^2\) Children under the age of 18 do not have to pay insurance premiums for the NHIS when their parents pay their own contributions (Nketiah-Amponsah, 2009).

\(^3\) To more precisely assess the effect of those campaigns, the IPA is currently studying the impact of consumer education programmes on health microinsurance knowledge, take-up rates and the ability of consumers to access and utilize the benefits covered by their policies. For more information see: http://www.microinsurancefacility.org/learning-journey/health-microinsurance-consumer-education.
perception of the price, benefits and convenience of the NHIS. Owusu et al. (2012) found trust in the insurance scheme to be a significant determinant of insurance registration. It has been suggested that policymakers should be more responsive to consumer preferences and ensure that the insurance meets the expectations of the clients (Jehu-Appiah et al., 2011a).

Atim and Sock (2000) identified community perceptions as the cause of the low uptake of the community health insurance scheme they observed (before the implementation of the NHIS). Often, a community’s negative perception of a scheme and its management results from inadequate transparency, little community participation in the scheme’s decision-making and/or lack of support by community leaders (Jehu-Appiah et al., 2011a).

Supply-side factors
Looking at the supply side, inconvenient administrative arrangements are considered to hamper uptake. Delayed distribution of NHIS identity cards is often mentioned as an example in this context. Furthermore, the payment method and frequency and the duration and complexity of the registration process are considered to impact on the uptake of insurance among the population (Gobah & Liang, 2011; Jehu-Appiah et al., 2011a). Atim and Sock (2000) discovered that registration for the community health insurance scheme they analysed took place during the months in which the average income of the population was lowest. Chankova et al. (2008) noted that a yearly payment schedule is not suitable for low-income clients.

Further studies show that the quality and accessibility of health care also influences health insurance uptake. The population per nurse, and the distance to the nearest health facilities or insurance hospital, are negatively correlated with insurance demand (Nketia-Amponsah, 2009; Osei-Akoto, 2003).

Conclusion: what have we learned, and what should we do?
The literature on microinsurance and health insurance demand in Ghana shows that a prospective client’s wealth status, education, and knowledge of insurance, together with the perception of an insurance scheme or provider, are the most important demand-side factors for uptake. On the supply-side, significant determinants of insurance demand include convenience, practicability and accessibility.

The policy implications of these findings are clear. More research is needed to understand and monitor the dynamic and often complex relationship between poverty, risk, and economic behaviour in poorer communities. The findings of such research will

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4 Also targeting the clients’ perceptions the Netherlands Organization for Scientific Research is currently running the research project ‘Towards a client-oriented health insurance system in Ghana’. For more information see: http://www.nwo.nl/nwohome.nsf/pages/NWOP_86UBVT_Eng.
provide industry actors with the requisite insight to agilely adjust policies, products, and pricing to meet the real needs of both clients and providers.

Improved and publicly visible support for the microinsurance sector is needed to reassure potential clients that products and services available have passed regulatory scrutiny and that the government, through its regulator, stands behind the promise to pay in the event of a claim.

In addition to efforts to increase the general education level of those at the bottom of the economic pyramid, targeted efforts to increase financial literacy should be supported. This education would stress the importance of microinsurance in personal risk management strategies in easily accessible language.

Finally, government should provide funds to support the smooth entry of new players into the domestic microinsurance market. New providers would stimulate product improvement and innovation and price reduction. They would move the industry closer to the elusive goal of providing the maximum amount of insurance cover, at the minimum cost, but with high levels of profit, in a sustainable business model.

**Knowledge gaps and recommendations for further studies**

Many important questions are only partially or not addressed in the literature on microinsurance in Ghana. For instance, while the case for microinsurance being beneficial to the poor appears to have been clear, evidence of the superiority of microinsurance over competing ex-ante risk management tools, has not been established.

More research is needed into the determinants of uptake of microinsurance in Ghana, particularly from the supply-side. When research findings are dominated by a single survey focused on a single product, the risk of anomalous findings driving product and policy developments is high.

Existing studies have tended to focus on rural populations. Given the existence of the urban poor research investigations should be extended into cities and towns.

Ultimately, research should lead to sound policy interventions to achieve desired goals. Studying “what is” through observational studies seldom leads to conclusive evidence of causal factors. Improved research methodology, with a focus on Randomized Control Trial (RCT) approaches, would provide rich findings about causality to establish a high impact policy agenda.

Finally, if efforts to increase microinsurance in Ghana are successful, what would the resulting landscape of financial services look like? To what extent would microinsurance cannibalise other mainstream products and services?

The following proposals for further studies address the concerns raised:
The following proposals for further studies address the concerns raised: cannibalise other mainstream products and services? resulting landscape of financial services look like? To what extent would microinsurance be beneficial to the poor appears to have been clear, evidence of the superiority of microinsurance over competing ex-ante risk management tools, has not been established.

Knowledge gaps and recommendations for further studies

- Generalised models for financial services uptake. Few studies have viewed microinsurance in unison with other similar products and services that might be used for ex-ante risk management strategies. One exception is Steiner’s study using the 2007 Ghana household survey data in which a multinomial logit model is fit to investigate the determinants of demand for credit, savings and insurance conjointly (Arun & Steiner, 2008). This is an approach that we feel better reflects the interaction between insurance use and other risk management options.

- Role of gender in uptake decisions. In the Ghanaian context operating with formal financial services is typically viewed as men’s domain, while women resort to other (informal) strategies to deal with risk. Further investigation of the role of gender in access to and use of (micro)insurance provides an interesting subject for future research (Giesbert, 2010).

- Does microinsurance actually enhance welfare? Dercon et al. (2008) posed this question focusing on the question of whether people covered by microinsurance were better able to “manage risks and break the poverty cycle” than those without coverage. There are numerous examples of impact-focused research in the literature but none were conducted in Ghana. The client value study presented later in this Chapter might be a step in the right direction.

- What are the most effective mechanisms to build trust of microinsurance providers? This research (Dercon et al., 2008), would respond to the dearth of “systematic knowledge about instruments and mechanisms to build trust”.

References


4.3. Market Survey: The Supply of Microinsurance Products in Ghana

Isaac Yaw Buabeng and Rob Gruijters

Introduction
Until recently, there was no formal definition of microinsurance in Ghana. Although various insurance companies provide products that are marketed as microinsurance little was known about their outreach, coverage, or the way in which they were distributed. The National Insurance Commission (NIC) recently proposed a regulatory framework that defines microinsurance by the criteria of affordability; accessibility and meeting the needs of low income earners (see Chapter 1 for more information).

This article seeks to provide an overview of the supply of microinsurance in Ghana (based on the definition proposed by the NIC) and identify some of the key trends that have been observed in the market.

The data presented is derived from two recent surveys. The first is a market survey of all insurance companies in Ghana, commissioned by the NIC and GIZ in May 2012. The main objectives were to:

- gain a better understanding of the microinsurance sector and how it can be further developed; and
- guide the NIC in the development of an appropriate framework for the regulation and supervision of microinsurance.

The main method used in the survey was a questionnaire, which was sent to the managing directors of 41 life and non-life insurance companies. Follow-up visits were made to the companies to provide guidance and encourage response. Of the 41 questionnaires, 20 companies responded with completed questionnaires. Eleven of these indicated that they were currently providing microinsurance.

In July 2012, these 11 companies were approached with a second, more detailed survey on their microinsurance products as part of the research study on the Landscape of Microinsurance in Africa, conducted by the MicroInsurance Centre. Ten responses were received. The purpose of the Landscape study was to document the volume and types of microinsurance activities in Africa, how and by whom these products are delivered as

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5 The survey was implemented by CDC Consult.
well as how the landscape has changed compared to previous studies. The full survey covered 511 providers offering microinsurance in 39 African countries.

This article presents the main findings from both surveys, focusing on the supply of microinsurance products. Taken together, we believe the surveys provide a fair picture of the microinsurance landscape in Ghana.

Key findings of survey on microinsurance products and providers
When combining the responses from both market surveys, 11 insurance companies currently providing microinsurance products in Ghana can be identified. They include eight life companies and three non-life companies. In total, the respondents provided data on 16 products they identified as microinsurance.

Figure 15 provides some indicators of outreach and financial volume for the various types of microinsurance products on the market. Given that most of the microinsurance providers were life companies, it is not surprising that the majority of microinsurance products provide some type of life cover.

Figure 15: Number of microinsurance products and providers over time

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6 The results presented here are based on the preliminary data. For this reason, figures presented in this article may deviate from the Landscape survey results. Results of the full survey are summarized in an interactive map, which can be accessed at http://www.mfw4a.org/insurance/microinsurance-landscaping.html. The full survey results are expected to be published by December 2012. For more information see www.microinsurancecentre.org or www.mfw4a.org.

7 As both surveys were conducted on a confidential basis this article provides aggregate figures only and does not refer to individual companies.

8 Two more microinsurance products were identified, but no details were provided.
For all product types, claims figures are far below premium volumes. Although this may be partially explained by the rapid growth of the market, it is a worrying observation from a customer perspective.

The data further indicates that the market is growing at a fast rate. For example, from 2010 to 2011 the number of people covered increased from 66,241 to 1,259,055 a growth rate of more than 1,800 percent! Much of this growth can be attributed to two new products that came on the market in 2010.

Institutional models and distribution channels

As described in Chapter 5, the distribution model is an essential factor in reaching low-income clients. We therefore studied the types of distribution models and sales channels observed in the Ghanaian market. Because microinsurance requires different processes and distribution channels, as well as separate accounts (see Chapter 2), insurance companies are confronted with the challenge of how to separate their microinsurance activities from their regular insurance business.

In Ghana most companies treat microinsurance as a special business line. In some cases companies have set up specialised microinsurance departments with dedicated personnel. Star Assurance Company Ltd and StarLife Assurance Company Ltd have gone further and outsourced the administration of their microinsurance business to Star Microinsurance Services, a specialised microinsurance agency set up in 2008. Other insurers partner with MicroEnsure, a specialised microinsurance intermediary.

With respect to sales many companies still adhere to the ‘traditional’ models of selling microinsurance through company agents or Microfinance Institutions (MFIs). Of the 16 products used for this analysis seven rely mainly on direct sales by company agents and sales representatives and five on MFIs and other financial institutions. Table 12 lists the various types of sales models that have been employed to bring products to the low-income market, with their respective outreach in terms of policies sold:

<table>
<thead>
<tr>
<th>Type of product</th>
<th>Number of products</th>
<th>Number of policies</th>
<th>Number of people insured</th>
<th>Volume of premiums/contributions (GHS)</th>
<th>Volume of claims/benefit payments (GHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funeral/ term life</td>
<td>4</td>
<td>319,244</td>
<td>626,582</td>
<td>903,169</td>
<td>269,121</td>
</tr>
<tr>
<td>Savings-linked/ endowment</td>
<td>7</td>
<td>106,461</td>
<td>130,346</td>
<td>9,255,396</td>
<td>3,935,629</td>
</tr>
<tr>
<td>Credit-linked</td>
<td>3</td>
<td>257,506</td>
<td>497,197</td>
<td>1,206,135</td>
<td>158,341</td>
</tr>
<tr>
<td>Agricultural</td>
<td>1</td>
<td>10</td>
<td>3,073</td>
<td>36,209</td>
<td>0</td>
</tr>
<tr>
<td>Property</td>
<td>1</td>
<td>1,857</td>
<td>1,857</td>
<td>302,579</td>
<td>58,403</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>685,078</td>
<td>1,259,055</td>
<td>11,703,488</td>
<td>4,421,494</td>
</tr>
<tr>
<td>USD equivalent</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6,087,473</td>
<td>2,299,803</td>
</tr>
</tbody>
</table>

Further analysis of Table 11 shows that term life and credit linked products have the largest outreach, both in number of policies and number of people insured, while agricultural and (micro)property insurance are not yet widespread. Endowment products make up the largest share of premiums paid: more than GHS nine million in 2011 (around USD 4.7 million). This figure includes both the insurance premiums and the savings contributions.

Term life policies (often referred to as funeral cover) are commonly sold as microinsurance. In many cases, the policy provides the option of insuring one or more additional family members. This explains the difference between the number of policies and the number of people insured (see Table 11).

In other cases the life cover is combined with, or added onto, a savings product such as in the case of endowment products. In this case the insurance premium can be deducted from the savings balance or from the interest. Savings-linked products often use the susu collection method whereby agents collect small contributions on a daily basis. Some of these products are marketed as education or pension plans.

Three of the identified microinsurance products were embedded in a credit product (see Table 11). These products provide the borrower with life, and sometimes property, cover for the duration of the loan. Normally the insurance covers the outstanding loan amount, sometimes with an additional payment for the beneficiary. In the case of credit-linked insurance the insurance cover is normally mandatory and priced into the cost of the credit.

No micro health insurance products were identified, which is probably due to the prevalence of the National Health Insurance Scheme (NHIS).

Table 11: Overview of microinsurance products in Ghana (year-end 2011)

Research and Development on Microinsurance
For all product types, claims figures are far below premium volumes. Although this may be partially explained by the rapid growth of the market, it is a worrying observation from a customer perspective.

The data further indicates that the market is growing at a fast rate. For example, from 2010 to 2011 the number of people covered increased from 66,241 to 1,259,055 a growth rate of more than 1,800 percent! Much of this growth can be attributed to two new products that came on the market in 2010.

**Institutional models and distribution channels**

As described in Chapter 5, the distribution model is an essential factor in reaching low-income clients. We therefore studied the types of distribution models and sales channels observed in the Ghanaian market. Because microinsurance requires different processes and distribution channels, as well as separate accounts (see Chapter 2), insurance companies are confronted with the challenge of how to separate their microinsurance activities from their regular insurance business.

In Ghana most companies treat microinsurance as a special business line. In some cases companies have set up specialised microinsurance departments with dedicated personnel. Star Assurance Company Ltd and StarLife Assurance Company Ltd have gone further and outsourced the administration of their microinsurance business to Star Microinsurance Services, a specialised microinsurance agency set up in 2008. Other insurers partner with MicroEnsure, a specialised microinsurance intermediary.

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**Table 12: Outreach by sales model (2011)**

<table>
<thead>
<tr>
<th>Primary Distribution Channel</th>
<th>Total Number of Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct sales / Company agents</td>
<td>24,668</td>
</tr>
<tr>
<td>MFIs and other financial institutions</td>
<td>343,243</td>
</tr>
<tr>
<td>Telecom providers</td>
<td>302,194</td>
</tr>
<tr>
<td>Churches</td>
<td>13,116</td>
</tr>
<tr>
<td>Other</td>
<td>1,857</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>685,078</strong></td>
</tr>
</tbody>
</table>

9 It should be noted that the premiums and claims volumes include the savings contributions and payments related to the endowment-type products.
Whereas some products target specific groups, such as taxi drivers or market vendors, most providers indicated that products are targeted at the low-income population in general. Products that are primarily sold through company agents tend to have a comparatively low number of clients. Companies that use MFIs and, or, telecom providers to distribute their products have been much more successful in increasing their outreach. Churches are another possible distribution partner for microinsurance although the potential for large-scale uptake through this channel remains to be proven.

Geographical spread of microinsurance
Most microinsurance products are not available throughout the country. Insurance branch offices providing microinsurance are normally located in the major urban centres in the southern part of the country. As a result the spread of microinsurance products is heavily skewed towards Greater Accra and, to a lesser extent, Kumasi and Takoradi. The outreach of microinsurance is particularly low in the Northern, Upper East and Upper West regions in Ghana, where hardly any branch office offers microinsurance products. As an illustration, the data provided by the insurance companies indicate that there are 22 branch offices in the Greater Accra Region that offer one or more microinsurance products. In the Northern Region however, there is only one branch office that provides microinsurance. Of course, distribution channels can be a solution to the lack of branch offices, and have been used by various companies already, as the previous section shows. MFIs and rural banks, for example, have a finer network of branch offices than insurance companies, and are often active in more remote areas.

Feedback on the proposed microinsurance regulatory regime
As previously explained the NIC plans to introduce specific regulatory provisions for microinsurance. The framework is aimed at ensuring client protection while supporting further market development. Its main features are described below (for a more extensive description, see Chapter 1):

Rather than using quantitative criteria, such as a maximum premium level, to define microinsurance, the NIC proposes that insurers should be given the power to designate an insurance product as microinsurance based on three qualitative criteria specified in the Insurance Code:

- extent to which products meet the needs of low-income earners
- affordability of products by low-income earners
- accessibility by low-income earners.

The proposed framework also includes a number of incentives to promote the development of microinsurance products, for example, with respect to distribution channels. Furthermore, in order to protect microinsurance policyholders, two additional requirements will apply to microinsurance products: simple policy wording with few exclusions and fast payment of claims.
The first section of the market survey asked for companies’ feedback on various components of the regulatory framework for microinsurance. Some of the responses are summarised below:

**Figure 16: Selected feedback on the proposed regulatory framework for microinsurance**

![Graph showing feedback](image)

Figure 16 shows all respondents would consider offering new or additional microinsurance products if the new framework is implemented. It is likely, therefore, that the framework would contribute to further growth and development of the microinsurance sector.

Most respondents agreed with the approach taken by the NIC which allows insurance companies to designate microinsurance products based on certain (non-quantitative) product criteria.

The only contentious issue arising was the proposed incentive that non-life companies will be allowed to sell term-life microinsurance products. While non-life companies saw this as an opportunity to bundle life with non-life risks and diversify their microinsurance product portfolio, life companies generally thought that the division between life and non-life business should be respected. This mixed feedback may need some further consideration by the NIC.

Furthermore, companies providing microinsurance were asked whether they believed their products would be able to meet the criteria and requirements of the proposed framework (Figure 17).
Insurance companies were generally in agreement with the provisions of the proposed microinsurance framework of the NIC and expressed the desire to introduce products in line with the framework. However, although they were largely in agreement with the principles-based approach, several respondents expressed the desire to receive more guidance on the product parameters.

Based on the survey results, a number of recommendations can be made to increase the accessibility, affordability, and client value of microinsurance products, in line with the proposed criteria:

- **Accessibility**: We observed weak geographical penetration; the respondent companies offering microinsurance are generally absent from the Northern, Upper East, and Upper West regions of Ghana. It is, therefore, suggested to continue the development of alternative delivery channels and innovative technologies to reach the intended target group, including those in underserved areas.

- **Affordability**: Affordability is affected by distribution and administrative costs. Most companies still use traditional distribution models which are often not cost effective (see Chapter 5). It is advisable to separate microinsurance from the traditional insurance business and to introduce more cost-effective administrative processes and distribution channels. To ensure the availability of data for accurate pricing, industry operatives should cooperate and share relevant market intelligence.

- **Meeting the needs of low-income clients**: This will be addressed in more detail in the next article. It can already be seen that the variety in products and risk covers available to the low-income market is still quite low, especially on the non-life side. There is a need to develop products specifically targeting the risk exposure of low-income clients.

The requirements of simple contracts with few exclusions appear to be a challenge for some of the current microinsurance providers. When it comes to the duration of claims procedures - often a subject of complaint in traditional insurance classes - most respondents did not foresee problems in meeting the new requirement (10 days). Most respondents further stated that their products already met the microinsurance criteria of affordability, relevance to the needs of low-income clients, and accessibility. It should be noted that this is a self-assessment by the companies; the clients’ perspective is addressed in the next article.

**Future outlook**

In the final part of the market survey, companies were asked about their future plans in the microinsurance segment. Going by their responses, we can expect an expansion of product range, premium volume, and outreach to the informal sector. Currently, the market is being driven by life companies, but many non-life companies indicated their intention to enter the market. New products being developed include life and non-life cover, as well as composite products combining, for example, a life policy with an accident or property cover. Insurers also indicated that they would continue to look for innovative ways to distribute their products including telecom providers, farmer-based organizations, rural banks, and various other channels.

**Conclusion and recommendations**

The market survey aimed to provide a more accurate picture of the supply of microinsurance in Ghana. The results indicate that microinsurance is a rapidly growing and developing market. Currently, 11 companies have confirmed that they have products which they consider to be microinsurance.
Insurance companies were generally in agreement with the provisions of the proposed microinsurance framework of the NIC and expressed the desire to introduce products in line with the framework. However, although they were largely in agreement with the principles-based approach, several respondents expressed the desire to receive more guidance on the product parameters.

Based on the survey results a number of recommendations can be made to increase the accessibility, affordability and client value of microinsurance products, in line with the proposed criteria:

- With respect to accessibility, we observed weak geographical penetration; the respondent companies offering microinsurance are generally absent from the Northern, Upper East and Upper West regions of Ghana. It is, therefore, suggested to continue the development of alternative delivery channels and innovative technologies to reach the intended target group, including those in underserved areas.

- Affordability is affected by distribution and administrative costs. Most companies still use traditional distribution models which are often not cost effective (see Chapter 5). It is advisable to separate microinsurance from the traditional insurance business and to introduce more cost-effective administrative processes and distribution channels. To ensure the availability of data for accurate pricing, industry operatives should cooperate and share relevant market intelligence.

- The last criterion, meeting the needs of low-income clients, will be addressed in more detail in the next article. This consists of a survey of clients who have purchased the products discussed in this article. It can already be seen, though, that the variety in products and risk covers available to the low-income market is still quite low, especially on the non-life side. There is a need to develop products specifically targeting the risk exposure of low-income clients.
4.4. Market Survey: the Demand-Side - Results from a Survey of Microinsurance Clients

Adobea Y. Owusu, Charles Ackah and Rob Gruijters

Introduction: background to the study
The research project presented in this chapter can be seen as a follow-up to the supply-side assessment conducted by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the National Insurance Commission (NIC). While the supply-side assessment provides an overview and analysis of the different microinsurance products available in Ghana, this survey seeks to describe the knowledge, attitudes and risk exposure of clients who have purchased these products. As discussed in Chapter 1, the NIC is currently working on a revised legal and regulatory framework for insurance in Ghana, which will include specific provisions for microinsurance. The proposed Insurance Code states that a microinsurance contract:

“must be designed and developed with the intention of meeting the needs of, and being marketed and sold to low-income persons generally; specific types or descriptions of low-income persons; or low-income persons in a particular geographic area.”

In addition, the code stipulates that a microinsurance product should be both affordable and accessible to low-income persons. In order to comply with these provisions, insurers need reliable data on the microinsurance target group. Unfortunately, quantitative data on (potential) microinsurance clients in Ghana is very limited. For example, little is known about their socio-economic background, their risk perceptions and views on insurance, or whether they feel that current products serve their needs. Against this background GIZ and the NIC decided to undertake a client survey to help close the information gap.

Research objectives, study design and methodologies
The main objective of the survey is:

“To provide the insurance industry with data on the socio-economic profile, insurance awareness and risk exposure/unmet demand of microinsurance clients.”

As the survey sought to collect comparable indicators, as well as subjective perceptions, a mix of quantitative and qualitative methods were employed:
Market Survey: the Demand-Side - Results from a Survey of Microinsurance Clients

- A questionnaire-based survey assessed insurance knowledge, attitude and products, as well as personal and household characteristics.
- Guided focus group discussions elicited information on attitudes towards insurance, perceptions of insurance companies, risk exposure and risk management.

To ensure geographic variety and adequate representation of rural and semi-rural areas study locations were selected carefully. After the research locations were broadly defined, all insurance companies that had previously undertaken to offer one or more microinsurance products were approached to cooperate in the survey by providing contact details of clients, distributors and/or branch offices in the selected research locations. These details were obtained for 14 different insurance products. Fifty clients per product were then selected and identified with the assistance of the local branch officers and/or insurance agents. Focus Group Discussion (FGD) participants were drawn from the sample of surveyed clients primarily based on gender and occupational background. In the end, seven of 10 regions in Ghana were covered. As microinsurance is mostly offered in the major urban centres of Accra, Kumasi and Takoradi, respondents from these areas make up a large part of the sample.

The survey questionnaire was pre-tested with 23 microinsurance clients in Accra (Madina) and Tema and subsequently revised. The FGD guide was pre-tested with one group of non-clients at Agona (Western Region). The questionnaires were then distributed to a sample of 870 microinsurance clients and FGDs were held with nine groups of clients, averaging seven people in a group (60 participants in total).

Limitations of the study design include that only (micro)insurance clients were sampled. This makes it impossible to generalise the findings to the wider population or draw comparisons between clients and non-clients. A future study covering both clients and non-clients in selected districts is expected to resolve this issue. Selection bias may have occurred where insurance agents introduced the survey team to the ‘best’ or most conveniently located clients. In addition, a certain degree of interviewer bias is unavoidable, especially as interviewers were often introduced to clients by the agent. Furthermore, the purposive selection of the study regions limits its generalizability to the country.

The survey addressed the following theoretical constructs and phenomena:

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11 All companies that were approached agreed to participate in the study. In some cases, however, the selected research areas were changed due to the preferences of the insurance companies or distributors, or due to insufficient client numbers.
12 For more information about the types of products covered see the section on insurance products below.
13 The regions covered were the Greater Accra (37.8%), Central (5.1%), Western (11.6%), Volta (8.7%), Ashanti (12.1%), Brong Ahafo (22.2%) and Northern Regions (2.5%).
Socio-economic profile of clients’ households: This refers to variables such as income level, expenditures, occupational status, household demographic characteristics and use of financial products. In addition to the income level an asset index was constructed to provide an alternative indicator of household wealth.

Insurance Awareness: Insurance awareness was measured using an adaptation of the Insurance Awareness Index Toolkit developed by the Institute of Statistical, Social and Economic Research (ISSER) at the University of Ghana, as part of a previous research project (Ackah & Owusu, 2011). The Toolkit was designed to provide a quantitative measure of a person’s insurance knowledge and attitude. Insurance knowledge is defined here as the objective knowledge of insurance concepts and processes, as well as familiarity with available products and providers. Attitude refers to the subjective perception and valuation of the concept of insurance (for example, the importance of being insured) and of insurance providers (for example, the level of trust in insurance companies).

Product details: Questions were asked related to the degree of understanding of and satisfaction with products.

Risk exposure/unmet demand: It was investigated whether the insurance products purchased by the clients provided adequate cover for the underlying risk. We also looked at exposure to risk and preferences for insurance as compared to alternative risk management mechanisms.

Outcomes and analysis: quantitative

Socio-economic profile
The structure of the sample (see Table 13) reflects the client base of microinsurance providers who tend to target self-employed women (especially traders) in the urban areas. The mean age of respondents was 44 years and the majority were women (65.5 percent). Most clients were using other financial services such as a bank account (73.2 percent). Susu\textsuperscript{14} savings were also popular.

\textsuperscript{14} Susu collectors are largely informal savings providers who are very common in Ghana.
Table 13: Structure of the sample (N = 870)

<table>
<thead>
<tr>
<th>Gender (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>34.5</td>
</tr>
<tr>
<td>Female</td>
<td>65.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>72.7</td>
</tr>
<tr>
<td>Semi-urban</td>
<td>34.5</td>
</tr>
<tr>
<td>Rural</td>
<td>16.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current usage of financial services (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank account</td>
<td>73.2</td>
</tr>
<tr>
<td>Susu savings</td>
<td>69.4</td>
</tr>
<tr>
<td>Loan</td>
<td>37.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment Status (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal wage employment</td>
<td>4.9</td>
</tr>
<tr>
<td>Informal wage employment</td>
<td>4.4</td>
</tr>
<tr>
<td>Retired</td>
<td>2.1</td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.5</td>
</tr>
<tr>
<td>Self-employment without employees</td>
<td>71.3</td>
</tr>
<tr>
<td>Self-employment with employees</td>
<td>15.5</td>
</tr>
<tr>
<td>Home (housewife / house husband)</td>
<td>0.2</td>
</tr>
<tr>
<td>Student</td>
<td>1.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education Level (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No formal schooling</td>
<td>12.1</td>
</tr>
<tr>
<td>Up to primary level</td>
<td>12.9</td>
</tr>
<tr>
<td>Up to secondary level</td>
<td>69.5</td>
</tr>
<tr>
<td>Up to tertiary level</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Just over 96 percent of respondents were economically active at the time of the interview. The main occupation was self-employment without employees (71.3 percent), normally within the informal sector. The distribution by occupation sector by sex (see Table 14) shows the majority of women interviewed worked as traders, whereas the occupation of men was more diverse with most working as traders (32.9 percent), in the transport and communication (17.8 percent) and manufacturing (13.6 percent) sectors. Farmers and other agricultural workers were clearly underrepresented. Again, this is likely due to the concentration of microinsurance providers in urban areas.
and wealth were derived in the form of monthly expenditure figures and an asset index. About half of respondents' households owned a major asset in the form of the house or premises in which they lived. Most households also owned a number of ‘luxury’ items such as a TV (83.2 percent), fridge (70.1 percent) and sofa set (63.6 percent). More expensive items, such as a car (18.9 percent) and polytank/water pump (12.0 percent), were not as common.

The combined information on occupation, income, expenditures and assets indicates that the products largely reach the intended target group: low-income persons in the informal sector. There were, however, a significant proportion of people with medium or higher incomes who also patronised these products. The proposed microinsurance regulations explicitly provide for this.

Insurance knowledge
Outcomes of the insurance knowledge section indicate that knowledge of basic insurance principles was often lacking. On average, respondents were able to mention 2.4 types of insurance products and 1.3 insurance companies. The types of insurance products mentioned most frequently were life, health and property. Basic questions such as whether insurance premiums will be returned if no claim is made could not be answered correctly by a large section of respondents (43.1 percent). In addition, over 35 percent were not aware that his or her insurance premiums might be used to pay other people’s claims, indicating that they did not fully understand the basic insurance principle of risk pooling. However, most clients knew that insurance is not for free and has to be paid regularly.

Knowledge of insurance products and companies, and knowledge of the concept of insurance (as indicated by the number of multiple choice questions that were answered correctly), was combined to create a personal ‘Insurance Knowledge Index’ for each participant. The index ranges from zero to one with one being the highest possible score.

Unfortunately it was not possible to benchmark this data, since there have been no recent nationwide surveys on living standards.

### Table 14: Occupational sector of working respondents (by sex)¹⁶

<table>
<thead>
<tr>
<th>Region</th>
<th>Male (%)</th>
<th>Female (%)</th>
<th>All respondents (%)</th>
<th>Ref: Ghana overall (%)¹⁷</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>14.7</td>
<td>5.6</td>
<td>8.7</td>
<td>55.5</td>
</tr>
<tr>
<td>Fishing</td>
<td>1.4</td>
<td>0.0</td>
<td>0.5</td>
<td>1.4</td>
</tr>
<tr>
<td>Mining</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>13.6</td>
<td>5.8</td>
<td>8.5</td>
<td>10.9</td>
</tr>
<tr>
<td>Electricity</td>
<td>1.8</td>
<td>0.0</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>Construction</td>
<td>5.2</td>
<td>0.0</td>
<td>1.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Trade</td>
<td>32.9</td>
<td>79.9</td>
<td>63.9</td>
<td>15.2</td>
</tr>
<tr>
<td>Hotel and restaurants</td>
<td>1.1</td>
<td>2.2</td>
<td>1.8</td>
<td>1.9</td>
</tr>
<tr>
<td>Transport and communication</td>
<td>17.8</td>
<td>0.0</td>
<td>6.1</td>
<td>2.8</td>
</tr>
<tr>
<td>Financial services</td>
<td>2.1</td>
<td>0.5</td>
<td>1.1</td>
<td>0.3</td>
</tr>
<tr>
<td>Real estates</td>
<td>1.8</td>
<td>0.2</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td>Public administration</td>
<td>0.0</td>
<td>0.2</td>
<td>0.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Education</td>
<td>3.2</td>
<td>1.6</td>
<td>2.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Health and social work</td>
<td>1.1</td>
<td>0.0</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Other community services</td>
<td>3.5</td>
<td>3.8</td>
<td>3.7</td>
<td>2.7</td>
</tr>
<tr>
<td>Activities of private households</td>
<td>0.0</td>
<td>0.2</td>
<td>0.1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

### Figure 18: Clients' monthly income (in percentage)

Figure 18 shows that over half of the clients earned less than GHS 400 a month. About 30 percent of respondents were not able, or willing, to provide information on their combined household income. As this was anticipated¹⁸, proxy indicators for income

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¹⁶Categories were adapted from the 2008 Ghana Living Standards Survey 5 (GLSS 5), which applies the International Standard Industrial Classification.

¹⁷Derived from the GLSS 5 (2008)

¹⁸In the Finscope Ghana survey (FinMark Trust 2010), an equal percentage did not provide information on household income. It turns out that, in many cases, spouses keep their finances separate and do not know about each other's income.
and wealth were derived in the form of monthly expenditure figures and an asset index. About half of respondents’ households owned a major asset in the form of the house or premises in which they lived. Most households also owned a number of ‘luxury’ items such as a TV (83.2 percent), fridge (70.1 percent) and sofa set (63.6 percent). More expensive items, such as a car (18.9 percent) and polytank/water pump (12.0 percent), were not as common.

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**Insurance knowledge**
Outcomes of the insurance knowledge section indicate that knowledge of basic insurance principles was often lacking. On average, respondents were able to mention 2.4 types of insurance products and 1.3 insurance companies. The types of insurance products mentioned most frequently were life, health and property.

Basic questions such as whether insurance premiums will be returned if no claim is made could not be answered correctly by a large section of respondents (43.1 percent). In addition, over 35 percent were not aware that his or her insurance premiums might be used to pay other people’s claims, indicating that they did not fully understand the basic insurance principle of risk pooling. However, most clients knew that insurance is not for free and has to be paid regularly.

Knowledge of insurance products and companies, and knowledge of the concept of insurance (as indicated by the number of multiple choice questions that were answered correctly), was combined to create a personal ‘Insurance Knowledge Index’ for each participant. The index ranges from zero to one with one being the highest possible score.

---

19 Unfortunately it was not possible to benchmark this data, since there have been no recent nationwide surveys on living standards.
Table 15: Insurance knowledge

<table>
<thead>
<tr>
<th>Item</th>
<th>Right answer (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance is for free</td>
<td>85.98</td>
</tr>
<tr>
<td>If someone has an insurance policy, he does not have to pay regularly; he can just pay when he wants.</td>
<td>87.59</td>
</tr>
<tr>
<td>If an insurance policy has a waiting period, it means you cannot make any claim during this period</td>
<td>58.97</td>
</tr>
<tr>
<td>If someone pays for an insurance, his premiums might be used to pay claims for other people who are part of the same insurance scheme</td>
<td>64.48</td>
</tr>
<tr>
<td>If someone dies from an accident, what insurance will help his / her family?</td>
<td>44.94</td>
</tr>
<tr>
<td>If someone pays regularly for insurance and you never need to use it, he will get the money back.</td>
<td>56.9</td>
</tr>
<tr>
<td>If someone has an insurance, he can go to the insurance company to get the money whenever he wants it</td>
<td>77.82</td>
</tr>
<tr>
<td>If someone has an insurance and a catastrophe befalls him, the insurance will always help him regardless of what caused the catastrophe</td>
<td>69.2</td>
</tr>
<tr>
<td>If someone has an insurance policy and misses some of his payments, the insurance company will refuse to pay him in case something happens</td>
<td>61.03</td>
</tr>
</tbody>
</table>

Average Insurance Knowledge Index 0.57 (Standard Deviation: 0.18)

By comparing their average knowledge indices we can assess how particular categories of respondents differ with regard to their knowledge of insurance.

Table 16: Insurance index scores by gender, location and education level\

<table>
<thead>
<tr>
<th>Gender</th>
<th>Index Score</th>
<th>Education Level</th>
<th>Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0.63</td>
<td>No formal schooling</td>
<td>0.44</td>
</tr>
<tr>
<td>Female</td>
<td>0.54</td>
<td>Up to primary level</td>
<td>0.46</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Up to secondary level</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Up to tertiary level</td>
<td>0.72</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Index Score</th>
<th>Location</th>
<th>Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>0.59</td>
<td>Semi-urban</td>
<td>0.54</td>
</tr>
<tr>
<td>Rural</td>
<td>0.52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As indicated, knowledge of insurance tends to be lower among women, rural dwellers and those with lower education levels with the effect of education being particularly pronounced (Table 16). However, the effects described above are interrelated; for example, rural dwellers also tend to have a lower educational level. These effects need to be further explored.

**Insurance attitude**

Attitude towards insurance was measured by the degree of agreement with a series of subjective statements about insurance and insurance companies using a Likert Scale. The responses were subsequently recoded on a scale from zero to one, where one stands for a perfectly positive attitude. A summary of the outcomes is provided in Table 17.

---

20 Each of these variables was found to be significantly correlated (0.01 level) to insurance knowledge.
### Table 17: Insurance attitude index

<table>
<thead>
<tr>
<th>Insurance Concept</th>
<th>Strongly agree (%)</th>
<th>Agree (%)</th>
<th>Undecided (%)</th>
<th>Disagree (%)</th>
<th>Strongly disagree (%)</th>
<th>Refused to answer (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance is expensive</td>
<td>10.3</td>
<td>19.3</td>
<td>5.4</td>
<td>39.5</td>
<td>22.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Insurance is not needed since God will protect me</td>
<td>2.2</td>
<td>3.6</td>
<td>0.7</td>
<td>33.9</td>
<td>59.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Insurance is not needed when no one is sick right now</td>
<td>2.1</td>
<td>4.8</td>
<td>1.4</td>
<td>44.8</td>
<td>46.2</td>
<td>0.7</td>
</tr>
<tr>
<td>I think it is ok that if I pay for insurance for 1 year and nothing bad happens, I don't get any payout in that year.</td>
<td>15.2</td>
<td>40.2</td>
<td>8.3</td>
<td>18.7</td>
<td>14.7</td>
<td>2.9</td>
</tr>
<tr>
<td>If you buy insurance against accidents, it is like inviting the accident to happen</td>
<td>1.8</td>
<td>1.8</td>
<td>1</td>
<td>29.9</td>
<td>64.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Insurance is about helping each other</td>
<td>44.8</td>
<td>44.5</td>
<td>1.8</td>
<td>5.5</td>
<td>1.2</td>
<td>2.2</td>
</tr>
<tr>
<td>It is better not to think about risks and emergencies in advance.</td>
<td>14.8</td>
<td>24.3</td>
<td>1.5</td>
<td>37.2</td>
<td>21.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Insurance is something for rich people</td>
<td>2</td>
<td>3.3</td>
<td>0.5</td>
<td>32.1</td>
<td>62</td>
<td>0.2</td>
</tr>
<tr>
<td>Insurance is necessary to protect your family</td>
<td>47.8</td>
<td>47.1</td>
<td>1.2</td>
<td>3</td>
<td>0.6</td>
<td>0.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insurance Companies</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>When it comes to paying claims, insurance companies will always try to delay and / or make it difficult</td>
<td>24.9</td>
<td>21.8</td>
<td>8.4</td>
<td>19.8</td>
<td>13.6</td>
<td>11.5</td>
</tr>
<tr>
<td>When it comes to making claims, insurance companies will normally try to cheat you</td>
<td>16.4</td>
<td>15.1</td>
<td>11.5</td>
<td>26.2</td>
<td>17.8</td>
<td>13</td>
</tr>
<tr>
<td>Insurance companies try to help their clients</td>
<td>18.4</td>
<td>59.1</td>
<td>7.7</td>
<td>7.9</td>
<td>3</td>
<td>3.9</td>
</tr>
<tr>
<td>I can trust insurance companies to be fair to me.</td>
<td>27.4</td>
<td>45.2</td>
<td>11.4</td>
<td>7.6</td>
<td>5.2</td>
<td>3.3</td>
</tr>
<tr>
<td>Insurance companies care more about saving money than about helping you.</td>
<td>15.5</td>
<td>21</td>
<td>9.5</td>
<td>36.3</td>
<td>11.7</td>
<td>5.9</td>
</tr>
</tbody>
</table>

**Average Index for Insurance Concept** 0.76 (Standard Deviation: 0.11)

**Average Index for Insurance Companies** 0.59 (Standard Deviation: 0.22)

**Average Combined Index** 0.70 (Standard Deviation: 0.12)
Interesting patterns can be identified in the results on attitude (Table 17). Questions referring to the concept of insurance generally drew very positive responses, as indicated by the combined ‘insurance concept’ index of 0.76. Respondents seemed convinced of the importance of insurance and generally did not exhibit attitudes or beliefs that would deter them from buying insurance products; this was to be expected given that they are insurance clients.

It is important to note that 33.5 percent did not agree with the statement “I think it is ok that if I pay for insurance for one year and nothing bad happens, I don’t get any payout in that year”, and that 39.1 percent agreed that “it is better not to think about risks and emergencies in advance”. These observations will be discussed further in relation to the qualitative outcomes. When questions referred to insurance companies, the responses were markedly more negative than in the more theoretical questions, which is reflected in the lower insurance company index of 0.59. For example, a large share of respondents believed that insurance companies delay and complicate (46.8 percent) or even cheat (31.5 percent) when it comes to paying claims. It was observed that women tend to have a more positive attitude towards insurance companies than men. It is also worth noting that urban dwellers have a more negative attitude towards insurance companies, whose reputation was worst in the Greater Accra Region. Furthermore, dissatisfaction with the current product is associated with a more negative view of insurance companies in general.

**Insurance products**

The questionnaire included a number of questions directly related to the respondent’s insurance product. Most of the 14 products covered by the survey offered life insurance cover.

About a third of all clients owned insurance products linked to (micro)credits they had obtained (see Table 18). These products included life as well as composite (life + property) cover for the duration of the loan. Since the insurance is sometimes a mandatory part of the loan, a significant number of these clients (17.5 percent) were unaware of their insurance.

Table 18: Awareness of insurance component in linked products

<table>
<thead>
<tr>
<th>Type of Product</th>
<th>% of sample</th>
<th>% does not know about insurance component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance linked to credit</td>
<td>34.7</td>
<td>17.5</td>
</tr>
<tr>
<td>Insurance linked to savings</td>
<td>40.2</td>
<td>37.0</td>
</tr>
<tr>
<td>Insurance linked to telecom subscription</td>
<td>5.9</td>
<td>2.0</td>
</tr>
<tr>
<td>Pure insurance</td>
<td>19.2</td>
<td>NR</td>
</tr>
</tbody>
</table>
In many other cases (40.2 percent) the insurance was offered as part of a savings product. The saving products included educational saving plans, susu schemes\(^{21}\) or lump-sum pension products which typically offer a life cover for the client and sometimes his or her dependants. The number of clients who were not aware of the insurance component is even higher for this type of product (37.0 percent), which is worrying from a consumer protection perspective. It was also observed that clients who were not aware of their insurance product had a significantly lower insurance knowledge index.

Outcomes and analysis: qualitative
The qualitative outcomes, based on FGDs with groups of six to eight clients, focused on the perception of insurance, perceptions of risk and ways to manage (life) risks. The aim was to get a broader understanding of the risks clients face, the potential role for insurance and the barriers to take-up.

As all FGD participants were insurance clients they were first asked about their experience with the insurance company and whether they were satisfied with their product(s). Again it became clear that many clients of credit or savings-linked products were unaware of their insurance. In some cases it appeared that clients were dissatisfied because of negative experiences either by themselves or their peers. In one case a participant recalled how her funeral claim was denied as she could only produce seven of the eight documents the insurance company asked her to bring. In cases in which participants were satisfied they normally referred to their experience with the insurance agent as well as witnessing claims payments to peers.

Perception of insurance
Secondly, the clients were asked a number of questions related to their attitude, as well as their community’s attitude, towards insurance and insurance companies. Generally, clients referred to insurance as a safety-net for the future or something that will help you in case of need. It became clear that a number of clients had inaccurate comprehension of insurance.

When asked how insurance companies were generally seen in their community, the response was overwhelmingly negative. The general mistrust and suspicion towards insurance companies is reflected in statements such as the following:

“Most people think that the insurance companies cannot readily help them because of the experiences and stories that they have heard from members [of insurance schemes]. They think that the companies take a long time to pay them their claims.” (Female, 34, hairdresser in Agona Nyakrom, Central Region.)

\(^{21}\) Susu normally involves daily collection and monthly payouts. Insurance companies have taken over the concept of daily collection but extended the maturity to one year and above.
Some participants referred to problems with the National Health Insurance Scheme (NHIS) to explain why people dislike insurance:

“Insurance, we thought initially that it was a good thing but we now feel that it is a cunning thing. Let me take health insurance, for example, I went to register one of my daughters. We were having problems with getting the card. I followed it up for a long time and could not get it. I decided to register her for the health insurance again, but I was not allowed. (...) Because of this, people do not say any good thing about the insurance. At first, we thought that it was going to be of good help to us. But it turned out to be the opposite.” (Female, 37, chop bar operator in Techiman, Brong Ahafo Region.)

In other cases, however, participants stated that the positive experience they had made with their insurance product was now convincing fellow community members to change their views on insurance.

“...people who go into buying insurance or getting one for themselves are those of us who have witnessed someone benefitting as promised” (Male, 39, wedding photographer in Atebubu, Brong Ahafo Region.)

When asked specifically why people in their community do not take up insurance participants again referred to the bad reputation of insurance companies, as well as to a lack of understanding (of how insurance works) as a secondary explanation. Cultural factors or religious beliefs, which are sometimes invoked as reasons why people do not take up insurance (e.g. Ackah & Owusu, 2011), did not appear to play a major role. Furthermore, participants were asked whether they believe it is fair that insurance does not provide any payout if the insured event does not happen. A few participants said solidarity was the reason why they thought this was fair:

“(…) I think that it is ok if I pay my insurance contribution within some agreed time and I don’t get a payout after the time because I did not suffer from the insured event. This, I think can or will be used for another brother who may suffer from that event.” (Female, 52, street side vendor in Techiman, Brong Ahafo Region.)

However, it appeared the majority of participants did not believe the proposition to be fair:

“What I also think is this: if I take an insurance policy, like fire, and such an insured event does not happen within the agreed period, I think that there should be some amount of money which will be given back to the one who took the insurance policy at the end of the period. I think that they should practise something like this else, you paying and not getting anything back from them because nothing happened will be discouraging or worrisome for the one taking the policy.” (Female, 35, market vendor in Kumasi, Ashanti Region.)
“I don’t know much about insurance but from what I have heard today I will say that it is very unfair because if for instance you contribute for 10 years and the event you insured against is not occurring the company will not give you anything then that is not good enough because nobody will insure against car accident and pray to engage in an accident so it is obvious that the insurance companies are in to enjoy the fruit of peoples’ hard work.” (Female, age unknown, market vendor in Ho, Volta Region.)

It appears many respondents have a fundamental objection to contingent claims insurance even if they understand the concept. The same observation was made by the economist Jean-Philippe Platteau:

“The abstract frame of mind implied in the very notion of insurance and the redistribution from lucky to unlucky people through risk-sharing networks are largely alien to people in traditional agrarian societies (…) When they make contributions, villagers strongly expect that, in some form or another, there will be a tangible quid pro quo for their present generosity. The idea that such a return is uncertain (it might come but it might just as well not come) is unacceptable to them: balanced rather than conditional reciprocity is the principle that motivates their actions.” (Platteau, 1997, p. 767).

The desire to see a tangible benefit from insurance contributions was mentioned in the FGDs on several occasions, for example:

“I have friends at church who wish to be part of the insurance but the question that they always ask is: what kind of tangible help have I received from the insurance since I joined? I am unable to point out anything.” (Male, 43, mason in Agona Nyakrom, Central Region.)

In several cases help was expected in areas that were not covered by the policy, such as the provision of loans, payment of school fees and investment in business.

Risk perception and risk management

As a visual support in the discussion about risk perception, all focus group participants were given six illustrated cards indicating a particular insurable risk. They were asked to rank the cards according to the potential impact on their household’s finances, and indicate why they ranked them that way. Afterwards, they were asked to make a new ranking reflecting their insurance preferences.

The outcomes of this exercise are summarised in Figure 19.
Figure 19: Risk perception and insurance preferences

Figure 19 shows that insurance preference closely follows risk perception. Health was identified as the most serious risk, followed by disability, fire or flood, and (traffic) accidents. Death or funeral is considered to be the least significant risk, which is striking as most of the participants were clients of life insurance products. Informal risk coping mechanisms may play a role in this, as will be discussed below.

In many cases participants used their profession to explain why they believed certain risks to be particularly relevant to them:

“I chose health or hospitalization because I cannot do my work if I fall sick. I will waste a lot of my time and money. I am a carpenter by profession. If I am disabled – that is, [in my] leg or arm - I cannot work. The next is traffic accident. If I should be involved in an accident when I go to bring wood for work; then the wood will get to the house without me being able to work with it.”

(Male, 38, carpenter in Atebubu, Brong Ahafo Region.)

As most clients held some type of life or funeral policies, further questions were asked about costs involved in funerals and ways to pay them. It was uniformly asserted that funerals can have a serious financial impact on the household, especially if the deceased is...
a parent, as costs are normally shared among the children. Not only do they have to bear the direct funeral costs such as the coffin, there is also the cost of feeding and housing the visitors attending the funeral. Participants from the Northern and Ashanti Regions mentioned that when a parent dies children are expected to observe a mourning period, of varying length, during which they are not supposed to work.

Among the methods of paying for these expenses, the most commonly mentioned were (informal) loans, savings or working capital, informal mutual assistance schemes (referred to as tsorfor in some parts of the country, or ‘welfare’) as well as contributions collected during the funeral.

Loans are generally seen as the worst option as they often carry high interest (up to 100 percent) and require pledging collateral that is lost if the loan is not repaid. Although only one of the sixty FGD participants had ever received a life insurance claim the participants were positive about using insurance as a way of financing funeral costs.

When asked how they would spend a funeral claim most participants indicated they would like to spend only part of the claim on the funeral and keep the rest to invest in their business or in their children’s education. As one discussant put it:

“I concentrate on things ahead and not things behind. The dead is gone so we must protect the ones that we have.” (Female, 33, salted fish seller in Kumasi, Ashanti Region.)

They also stated that they would still use traditional ways of financing funerals such as family contributions. There was no indication that insurance would ‘crowd out’ solidarity-based risk management strategies or further inflate expenditure on funerals.

Discussion and recommendations

It is important to note that all interviews and discussions were held with insurance clients only, who can logically be expected to have a better insurance understanding and attitude than the general population, especially in the case of voluntary products. It is, therefore, all the more worrying that large knowledge deficits were apparent in the questionnaire survey, as well as a high degree of mistrust towards insurance companies. The outcomes of the qualitative study largely reinforced these findings, while adding valuable information about clients’ risk perception and insurance demand. A number of observations made in the study may be of particular relevance to (micro)insurance practitioners in Ghana who want to increase their value proposition to clients:

- Clients often do not know the terms and conditions of their policy and, in some cases, are completely unaware that the savings or credit product they bought contains an insurance component.
- The microinsurance target group is typically distrustful of insurance companies often because of negative experience with insurance companies in their
communities. These companies can only redeem their public reputation by paying claims in a timely and consistent manner.

- Clients and potential clients want to see the benefits of insurance. They tend to grow dissatisfied when the insured event does not occur so no claims are paid. This denotes either a poor understanding, or a lack of acceptance, of the concept of risk pooling in insurance schemes. A solution that has already been widely implemented in Ghana is to bundle insurance with other services that provide quicker and more tangible benefits, such as savings or loans. However, educating clients on the nature of risk pooling might also prove a successful option.

- Currently, most microinsurance products in Ghana are life products yet life is the least demanded risk cover in this study. Property cover, especially for fire, and products that protect against the income losses resulting from accidents or disability are likely to be in high demand. Companies could also think of composite products (e.g., life-property-personal accident).

References


4.5. Assessing the Client Value of Property Insurance in Ghana

Barbara Magnoni, Taara Chandani and Emily Zimmerman

Studying MicroEnsure’s “Obra Pa” insurance in Ghana

Formal employment is a luxury few have access to in the developing world. It affords a level of stability and social protection that the majority of labour forces do not have. In Ghana only 18 percent of the country’s 9.7 million working population has formal employment. The remainder are either self-employed or work in family farms or businesses for no monetary wage (Ghana Statistical Service, 2008).

In urban areas, 60 percent of women are self-employed, informal workers with many concentrated in the trade sector. These workers are vulnerable to sundry risks including illness, accidents, theft or fire as well as a growing risk of climate-related damage to their businesses. In a 2008 household survey (Ghana Statistical Services, 2008), eight percent of respondents in Accra mentioned having to stop their usual activities due to an accident or illness in the past two weeks.

Efforts to extend social protection, universally through a National Health Insurance Scheme (NHIS), aim to address some of these risks, primarily by offering comprehensive health coverage to low-income households. Private insurance companies also sell microinsurance in Ghana, offering funeral and property coverage to informal workers in urban areas and crop insurance in rural parts of the country. Property coverage in microinsurance is relatively new. It promises to cover a risk that is especially pertinent to small businesses in the trade sector relying on a market stall or shop and sufficient inventory to make a daily living. Although property microinsurance products represent a significant proportion of microinsurance throughout the world (Roth et al., 2007), virtually no rigorous studies of their value have been conducted.

MicroEnsure, a global insurance intermediary offering microinsurance to low-income populations in various countries, has been a leader in Ghana’s microinsurance market. In 2011, MicroEnsure-Ghana, in partnership with the insurer Star Assurance, developed the Obra Pa product aimed at addressing some of the business risks informal sector workers face including fire, flood, earthquakes, and disability. The product, which translates to “good life in the future,” is a mandatory coverage that is bundled with all loans from microfinance institutions (MFIs). The property coverage offers clients two benefits:\2:\ i) payment of their outstanding loan balance and one month of interest to the

Roth et al. estimate that property products cover 7.8 million lives, while the potential market is up to 30 times larger.

Benefits are paid upon submission of a police report and photographs of physical damage to the insurer.
MFI, and ii) a cash payout to the primary insured of USD 114. This second benefit was recently included to offer tangible monetary support to business owners and also provide clear evidence of an insurance policy. However, given that most of these micro-businesses are highly leveraged with debt financing, the product is primarily a debt cover.

Since the product was launched a number of events have triggered this insurance. Most recently, in October 2011, the bustling Circle Market in Accra was devastated by a torrential flood, destroying many small businesses and bankrupting many of their owners. Ninety of MicroEnsure’s clients were badly affected. Though devastating, the event provided MicroEnsure with an opportunity to analyse the product’s effectiveness in protecting market vendors from external shocks, offering insights into the value of this product to clients.

In January 2012 the MILK Project designed a Client Math study in partnership with MicroEnsure-Ghana and GIZ. The study centred on how insurance coverage helped entrepreneurs cope with this shock, and explores the value of this type of coverage. Many products covering property damage, including agricultural microinsurance, have a large component covering outstanding loans. The premise is that loan coverage can be useful in maintaining clients’ credit access in the formal financial sector. By paying off the loan the product can help clients to remain credit-worthy which, in turn, helps them to continue to borrow in the future. The extent to which the loan coverage has value depends, of course, on what options would have been available to these clients if they did not have insurance coverage. Where a loan can be restructured, or even partially forgiven, after a shock the potential value of an insurance product is limited as the risk has already been managed. Giné and Yang (2009) suggest that one reason for low demand for a weather index product covering farmers’ loans is that they are already implicitly insured due to the inherent limited liability in the loan contract. This renders the explicit insurance product redundant. (See also Akter & Fatema, (2011) with similar findings for an agricultural microinsurance product covering flood risk). Our study shows a different story in the case of Obra Pa, in which the debt relief component of the insurance appears to offer value, while few loans of uninsured clients (only four of 28) were restructured.

We also found that the Obra Pa product’s loan forgiveness improved the insured’s ability to borrow more, albeit from informal sources. Kanz (2011) offers some partially contradictory evidence in the context of a government debt relief programme in India.

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24 We specifically studied the property component of the product, which is restricted to businesses that are damaged by natural disasters including floods, fires and earthquakes. The product also covers credit life, disability and funerals. The cost of the total insurance package is 1% of the borrowers’ loan principal.

25 Microinsurance Learning and Knowledge (MILK) is a project of the MicroInsurance Centre that is working collaboratively to understand client value and business case in microinsurance. Barbara Magnoni leads the client value effort and Rick Koven leads the effort on the business case. Contact Michael J. McCord (mjmccord@microinsurancecentre.org), who directs the project, or visit MILK’s website (http://www.microinsurancecentre.org/milk-project.html) for more information.
The study found that households receiving debt relief were no more likely to be approved for a future loan and no less likely to take a loan with disadvantageous terms than those not receiving debt relief. The study did, however, find evidence of a shift in demand by beneficiaries away from formal sector loans and toward informal sector loans, in particular friends and family. The reason for this shift is unclear. Lessons about the loan forgiveness component of this product are relevant not only for insurers, who aim to offer value to small businesses, but to financial institutions whose increasingly commercial lending criteria often keep them from taking risks when their clients are struck by disaster and who may also be affected by post-shock shifts in demand for formal loans.

**Methodology**

The study focused on two questions around client value: how did clients with insurance financially cope with the shock and did the insurance offer any non-financial benefits, such as “peace of mind”? These questions were complemented by a second thread of questions exploring the insured’s awareness about the product, their experience with the claims process and overall perception of insurance. The study sample included 27 insured clients who are borrowers with Opportunity International Savings and Loans (OISL) and received an insurance benefit after the flood. We also interviewed 30 uninsured entrepreneurs from the same markets, whose businesses were badly damaged by the flood, to offer perspective on how the uninsured cope with the same risks. These were also loan clients of an MFI but did not have any business property coverage. Both groups were randomly selected, interviewed at their place of business and given a small gift in appreciation for their time. Our data analysis revealed that several respondents reported monthly household income levels that were between seven and eight times the average of the remainder of the sample. These respondents’ coping mechanisms were substantially different from the others, most likely because they were much better off. We eliminated five outliers from our data set, with a sample of 24 insured and 28 uninsured clients remaining from which we calculated the averages below.

**Clients vs. non-clients: how alike were they?**

The groups were very similar in nearly all regards, from gender and household composition to employment and income. Most respondents were women representing 67 percent of the insured sample and 68 percent of the uninsured. Only a fraction of the insured and uninsured owned homes (25 percent and 11 percent respectively) with most respondents from both groups renting or living in their family homes. The household sizes were similar in both groups with approximately four people.

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26 Insured clients include all clients that were paid claims and were found in the market. The uninsured were selected by walking door-to-door in the same markets as the insured.
The cumulative costs of the flood averaged USD 871 for the insured and USD 872 for the uninsured. Respondents were asked to distinguish between flood damages that affected the external structure of their businesses and those that destroyed their inventory or equipment. Many respondents (33 percent of the insured and 39 percent of the uninsured) did not have an external structure at all. These are entrepreneurs who sell their goods in an open market or simply use a table or umbrella to display and protect their goods. Of those businesses with an external structure, 42 and 32 percent, of the insured and uninsured respectively, reported some damage caused by the flood. The most common types of damage were removal and disposal of water as well as fixing of electric outlets and wires. The average cost of structural damages was relatively low at USD 14 for the insured and USD 54 for the uninsured.

Given the nature of most businesses nearly all respondents faced damages to inventory and equipment or “contents of the stall” leading to significantly greater financial losses than the structural damage. However, while over 90 percent reported their business inventory was destroyed only around half the respondents—50 percent of insured and 57 percent of uninsured—actually replaced this inventory. It is possible that some inventory was salvaged, reducing the need for full replacement. Other costs related to business contents included furniture and equipment such as refrigerators and electronics (including televisions and cell phones). In the end, the insured spent roughly a quarter of their average monthly income on research and development.

In terms of employment, all respondents identified as being a business owner. Over 75 percent of all respondents work in trade (such as running a provision store or selling second-hand clothes) while the remainder work in the services or manufacturing sector. The average monthly income was reported at USD 306 for the insured respondents and USD 249 for the uninsured. After including income from other members in the household the insured earn nearly USD 385 and the uninsured USD 325. This suggests most respondents are the primary breadwinners in their families.

**How badly were businesses affected by the flood, and how did they cope?**

_Flood damage was extremely costly to both groups of respondents, accounting for over twice their average household monthly income; the prolonged indirect cost of not working represented the largest source of loss for both groups, followed by damaged business inventory._

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<table>
<thead>
<tr>
<th>Sample</th>
<th>Insured (n=24)</th>
<th>Uninsured (n=28)</th>
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<td>Women (%)</td>
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<td>68</td>
</tr>
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<td>Average age</td>
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<td>Average HH size</td>
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<tr>
<td>Average HH monthly income (USD)</td>
<td>385</td>
<td>325</td>
</tr>
<tr>
<td>Average net income (after HH expenditures) (USD)</td>
<td>68</td>
<td>60</td>
</tr>
</tbody>
</table>

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**Table 19: Socioeconomic statistics of the insured and uninsured groups**
The cumulative costs of the flood averaged USD 871 for the insured and USD 872 for the uninsured. Respondents were asked to distinguish between flood damages that affected the external structure of their businesses and those that destroyed their inventory or equipment. Many respondents (33 percent of the insured and 39 percent of the uninsured) did not have an external structure at all. These are entrepreneurs who sell their goods in an open market or simply use a table or umbrella to display and protect their goods. Of those businesses with an external structure, 42 and 32 percent, of the insured and uninsured respectively, reported some damage caused by the flood. The most common types of damage were removal and disposal of water as well as fixing of electric outlets and wires. The average cost of structural damages was relatively low at USD 14 for the insured and USD 54 for the uninsured.

Given the nature of most businesses nearly all respondents faced damages to inventory and equipment or “contents of the stall” leading to significantly greater financial losses than the structural damage. However, while over 90 percent reported their business inventory was destroyed only around half the respondents—50 percent of insured and 57 percent of uninsured—actually replaced this inventory. It is possible that some inventory was salvaged, reducing the need for full replacement. Other costs related to business contents included furniture and equipment such as refrigerators and electronics (including televisions and cell phones). In the end, the insured spent roughly a quarter
more than the uninsured in replacing their business contents, at USD 335 compared to USD 271.

A third set of costs discussed during the interviews was the indirect costs of the flood damage. These included lost income from having closed their businesses and lost wages by other household members who gave up their work to help with repairs. Respondents from both groups were simply unable to re-open their businesses for weeks and those who did were still cash-strapped, working with a smaller inventory and managing on a reduced income. On average, the insured kept their stalls closed for 22 days after the floods and the uninsured did so for 28 days. This was a significant amount of time for both, leading to considerable forgone income amounting to the largest share of costs for both groups. The value of this forgone income was USD 522 and USD 545, representing 135 percent and 168 percent of the monthly household income of the insured and uninsured respectively.

Our next discussion will explore why the differences between groups were so minimal, how respondents re-capitalized their businesses, and the role that insurance played for those who had coverage.

**Financing their damages and re-establishing businesses**

*The insured and uninsured drew on a diversity of funding streams and cut back on household consumption following the flood; however, the insured did not have to resort to as many difficult coping mechanisms.*

**Figure 21: Breakdown of claims processing time**

![Bar chart](image_url)

As suggested above, insured respondents saw little benefit in the short run. In part this is a result of the slow claims processing time. On average, the insurance benefit from Star Assurance took 45 days to be paid, mostly as a result of delays in processing claims by the MFI (Figure 21 breaks down the days each actor in the process took to process the claim).  

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27 During the interviews, clients reported taking an average of six days to submit their applications to OISL; however, MicroEnsure-Ghana was notified about clients’ applications an average of 17 days after the event.
This left most insured respondents cash-strapped in the short-term and presumably less able to access a new loan from OISL. In many cases the insured still had to make payments on their outstanding loans despite the destruction of their business, and despite the expectations that claims would be approved. The average claim amount covering the insured’s outstanding loans was USD 532. Additionally, the insured received USD 114 as a cash payout. In total, households received an average total benefit of USD 646 in debt forgiveness and cash. Many borrowed from friends or family while a few were left with no alternative but to turn to stressful coping mechanisms such as using up savings or reducing consumption (see Figure 22).

The insured and uninsured financed equivalent amounts of money to cover their business damages (USD 878 and USD 877 respectively), albeit using different sources in different proportions. The insured used two primary sources of financing: income and loans. Uninsured respondents used more savings, gifts, asset sales and reduced consumption to make up for their much lower use of loan financing.

For both groups, the largest source of financing was through the limited household income available to them over several months following the flood. This strategy was used by most of the insured (83 percent) and uninsured (57 percent). The insured used an average of USD 445 in income compared with USD 271 by the uninsured. These

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28 In Figure 22 we have represented the benefit as an overlay of USD646 as it did not represent a net cash payment to the insured, but did reduce their leverage.
amounts were spread over the four-month period leading to our interviews, and represent nearly one-month’s income for the insured (USD 385) and uninsured (USD 325) respectively.\textsuperscript{29} Interestingly, the insured were more likely to draw on their own current income (67 percent) compared with the uninsured (25 percent) who were more likely to have “worked more” to earn additional income. This suggests that the insured’s businesses may have bounced back more quickly than the uninsured’s; their disposable income after loan obligations was likely higher, since eventually all insured respondents received the benefit that paid off their loans. This may be why they did not resort to working more to cover their needs instead relying on regular income.

For the insured loans represented the next most significant source of financing. However, the insured did not borrow from a formal institution, including OISL. Instead, they borrowed an average of USD 306, all from informal sources, primarily friends and family. Respondents in both groups said that, when possible, loans from friends and family are favourable as they have fewer restrictions, greater flexibility in repayment and lower cost. After a crisis these advantages were likely to be more important than ever and microfinance institutions do not typically offer loans with these characteristics. Additionally, the underwriting criteria of MFIs may preclude them from lending to those whose businesses have been negatively affected by a large shock. The uninsured borrowed less than the insured (USD 111), using both informal and commercial sources.\textsuperscript{30} Presumably, the uninsured remained more heavily indebted after the flood and could not manage as much new debt as the insured. Only four of the 28 uninsured had loans restructured by their financial institutions after the flood. At the time of our survey, four months after the floods, the insured were also more likely to be leveraged at all than the uninsured, suggesting that they had bounced back more quickly. Of the insured, 75 percent indicated that they had a loan, compared with just over half the uninsured. They also had slightly higher levels of outstanding loans, USD 333, compared to USD 277 for the uninsured. By then both groups had sharply reduced their borrowing from friends and family (seven percent and ten percent of each group, respectively, held such loans). The quick exit from family and friends’ loans suggests that these may be difficult for the lenders and need to be repaid fairly quickly.

Only 25 percent of respondents in each group had had savings prior to the flood so this was not a large coping mechanism. Even among those with savings the use of savings varied quite extensively. Drawing from savings, for the most part, was not sufficient for most people. Earlier MILK studies have suggested that low-income clients may prefer to use debt and income rather than draw down on hard earned-savings to finance shocks,\textsuperscript{31} suggesting the uninsured would have preferred to use other means of financing if given the choice. Of the 12 people who started with a savings balance, only five

\textsuperscript{29} Our interviews took place in late January 2012, nearly four months after the floods.
\textsuperscript{30} These did not receive loans from OISL
\textsuperscript{31} See MILK Brief #8: Cashless Funeral Microinsurance in Colombia
withdrew all of their savings to cover the shock. This may have been due in part to the low levels with which they began, and the need to rely on other financing sources. One respondent in the uninsured group had much higher levels of savings than the remainder of our respondents and instead relied heavily on these to re-start his businesses. By tapping into his savings of almost USD 3,000 he was able to replenish his inventory more quickly after the floods. Interestingly, however, he also reported reducing his business investment, reducing household food consumption and using his own income to help finance the costs. Given that he had money left over it is interesting to consider the trade-offs he foresaw when considering how to fund the damages to his business. Most likely, even with higher levels of savings, not all savings are accessible, as they may be “earmarked” for planned expenditures or other emergencies.

Figure 23: Household expenditure reductions (USD)

Most (58 percent of insured and 60 percent of uninsured) respondents in both groups reduced their household consumption of food, education or medicines—a clear indication of belt-tightening needed to deal with the catastrophic event. This did not represent a large amount of the financial response but was perhaps the most indicative of the severity of the shock. Reduction in food intake was the most commonly reported cutback, followed by education and reduction in purchase of medical services (See Figure 23). On aggregate, the uninsured made greater cutbacks in consumption, averaging USD 96 compared with USD 40 by the insured. It is important to consider that a faster cash payout by the insurance might have reduced the need to cut consumption even more for the insured. Once the claim was paid insured respondents received a cash payout of USD 114, which was most commonly used for household consumption (46 percent) and for recovering household’s savings and assets (42 percent). Only eight percent of respondents used it for business investment purposes. This suggests that households faced a more critical need for cash after the floods than the insurance was able to provide.
Overall, the use of gifts and transfers was minimal. The uninsured were more effective in getting gifts after the flood, and eight of 28 respondents did so in the form of in-kind or cash gifts from friends and family as well as remittances. A nominal few (two insured and two uninsured) respondents also sold personal assets during the flood to generate needed cash, suggesting that this is an extremely difficult mechanism. The two uninsured cases were most extreme, selling large assets worth USD 2,961 and USD 2,164 at a large discount for about USD 1,700 respectively. Of the insured, one respondent sold a laptop for USD 512 and another sold USD 28 worth of clothes for about USD 22.
A closer look at selected businesses
This section focuses in-depth on selected businesses to present a nuanced picture about how the insurance benefit played out for MicroEnsure-Ghana clients. In particular, it shows how indirect costs of having to close the business were difficult to make up, especially when insurance benefits were not paid immediately.

Example 1 highlights the case of a trader from the market in Accra; an insured 40 year old married male heading a home of four people. The family lives in a rented home and has two sources of income. Prior to the flood his business was bringing in USD 2,500 per month. He had to finance USD 3,986 of this lost inventory as well as indirect costs of USD 797 using income of USD 4,556 and, to a lesser extent, the USD 114 cash claim from MicroEnsure-Ghana to cover these costs. The respondent made this investment over several months and was interviewed four months after the flood. At the time of the interview his business still had not fully bounced back. He had no outstanding loans and was living off the reduced income of his remaining businesses of USD 683 per month, supplemented by his wife’s income of USD 228. The respondent was satisfied with the insurance. He found the claims process with OISL easy. He submitted his paperwork to the loan officer within two days of the flood and received the cash benefit of USD 114, plus payout of his outstanding loan of USD 2,830, in just three days. He believes that the insurance gave him peace of mind.

Figure 24: Cash flow of insurance client in Example 1
Example 2 is a male trader heading a household of five people. The October flood damaged his business inventory, valued at just over USD 1,000 but the respondent replaced only USD 342 worth of goods. He paid USD 14 to clean out rubbish from his stall and replace the flooring. His indirect costs were relatively high at USD 854 as he had to close his stall for over a month and forego income. His wife, who works with him, also missed work during this time but this did not result in a loss of additional income. The trader reported paying for the damaged inventory using income of USD 285 spread over a few months. He did not report financing his entire loss, the bulk of which was opportunity costs from lost wages.

The trader received his cash payout of USD 114 and loan forgiveness of USD 626 within three weeks of submitting his documents and immediately invested the cash payout into his business. His income prior to the flood had been approximately USD 650 per month. At the time of the interview, the business had still not bounced back completely and his household's monthly income was reported at USD 387.

His strategy for picking up the pieces was, primarily, to begin borrowing again to get his business up and running. He held an outstanding loan of USD 626 with OISL. Besides borrowing from MFIs he also accessed loans from friends and family. When asked about MicroEnsure-Ghana’s insurance he remarked that the claims process was very easy and perceived the premium amount to be cheap, but felt that waiting for three weeks posed a financial burden on his family. He believed that insurance was important as it helped to protect one’s income and also allowed one to worry less about the future.

Figure 25: Cash flow of insurance client in Example 2
Example 3 represents an uninsured female trader with a household of four people. She reported earning USD 512 a month, supplemented by income of USD 342 from others in her home. The respondent typically borrows from an MFI or friends and family. She has an external structure over her stall that suffered water damage when the flooding struck the market. It cost her USD 40 to re-paint the walls and fix pipes.

The loss of business inventory – representing the major source of physical damage – amounted to roughly USD 430. She was forced to close her stall for 21 days and incurred a deficit of nearly USD 1,200 from lost income; this estimate was based on pre-crisis net business earnings of USD 57 per day. The respondent had to piece together a number of sources of financing to make ends meet after the flooding though, like the respondents in the previous examples, she did not make up her entire loss resulting from closing her business. The trader borrowed interest-free loans of USD 228 from friends and a comparable loan of USD 205 from her family. She had to draw on savings of USD 171 that were deposited in a bank. Finally, she was forced to cut back on basic consumption of food worth USD 120 for three weeks and reduce investment in her business by USD 114. The respondent believed insurance might have offered her some peace of mind and noted that she would consider buying life and property coverage in the future.

Figure 26: Cash flow of an uninsured trader in Example 3
Was it worth it?
The devastation left by the flood was severe. Our respondents’ businesses typically provided the main livelihood for their families. In many cases, these businesses were paralysed for weeks, slashing incomes and driving respondents to reduce their overall living standards. Given the devastation it is disappointing that OISL did not do more to speed up the claims process, which could have done much to help clients recover more quickly and completely. Most insured respondents (79 percent) noted that having to wait for their benefits posed a financial burden and thus reduced its value. The General Manager of MicroEnsure-Ghana at the time of the study, Peter Gross, points to some challenges in working with microfinance institutions on this type of product: “One thing I take away from this is that we asked OISL to do too much in the wake of the flooding. They had a lot going on, so asking them to get documents to us was not a quick process.” Another interesting finding is that OISL did not rush to re-lend to insured clients. This is probably due to a number of factors, including their concerns with possible delinquencies resulting from the floods, as well as clients’ concerns about managing more formal debt with lower sales levels. These difficulties highlight some of the challenges of working with microfinance institutions which may be able to offer microinsurance products cheaply to their customers, but might not have the capacity to support claims processing, or whose credit policies may not be aligned with the ultimate goals of the insurance; to protect businesses from being de-capitalised in times of crisis.

Our study highlights the prolonged damage from the destruction of property of low-income self-employed workers in Accra’s markets and suggests an insurance product can help alleviate some of this cost. It also underscores, however, that insured respondents’ needs were much greater than the insurance offered. This is partly a reflection of the need to price the product accessibly. Overall, 54 percent of the insured felt the product was reasonably priced or cheap and none said it was expensive (the remainder were unaware of the price). With a very low average cost of USD 1.3 per loan cycle for an average USD 646 of benefits for property coverage the benefit from this insurance seems clear. However, the balance between loan coverage and cash benefit clearly leans in the favour of the financial institution, which ended up protecting much more of its risk with the product than the client.

On the positive side insured respondents perceived that the product offered them value, possibly as a result of its low price/coverage ratio. Although most insured respondents (93 percent) bought the insurance because it was mandatory, a large majority (92 percent) felt it was a good idea to purchase the coverage and nearly everyone said they would recommend the package. When asked about the advantages of insurance, most insured and uninsured (over 70 percent of each group) felt that its greatest value was in offering peace of mind or “reducing worries about the future.” While delays in claims

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32 The average cost of the entire product per loan cycle was USD 5.32 per client in this sample.
Both the insured and uninsured went through significant stress following the devastating floods in October 2011. Their financing needs to cover damages, including the high indirect costs of numerous days without working, far exceeded their ability to raise funds. In general, the costs of the damages represented over twice their monthly household income. Both the insured and the uninsured had to piece together comparable amounts of financing to bridge this gap. However, at the time of this survey, they had still not reached pre-crisis income levels and only about half of respondents had re-stocked their inventories. Despite this hardship for both groups, the insured seemed to have bounced back more quickly on average, using fewer coping strategies. They borrowed first from low-cost friends and family, later from formal institutions, to gradually make up the income losses. This was, in part, due to the insurance benefit which paid off their debt, reducing their overall leverage and allowing them to take on additional debt to rebuild their businesses. Delays in the payment of their benefit seemed to erode this value somewhat, so that the differences between the insured and uninsured groups were not as marked in the first two months after the flood. However, the higher levels of debt of the insured at the time of our survey, four months after the flood, suggests that these businesses had started to pick up and were able to access commercial sources of funding to finance their working capital needs.

Early lessons from other MILK studies
The MILK project has conducted Client Math studies in over five countries exploring the financial value of a range of microinsurance products including health, property and funeral coverage for low-income communities. In our preliminary analysis we see several trends emerging that may be instructive for implementing partners in Ghana. These trends are by no means exhaustive and may not apply across product lines or to the Ghanaian context in every case; yet, we hope they are helpful to insurers, distribution partners, NGOs and others seeking to introduce or expand a microinsurance product in Ghana. The first set of findings reveal how families cope with different shocks while the second offers insights that may be useful in developing valuable products for low-income clients.

We have found that while insurance offers important financial protection to low-income communities, the cost of financial shocks is rarely fully covered by insurance. Poor households typically use a range of coping strategies that complement their insurance, including taking out loans, drawing on savings or using income. In more difficult cases households resort to “belt-tightening” or reduce their basic consumption of food, education or medicine to help finance a shock. When looking at the choice of coping strategies used by poor households we see they typically prefer to access loans rather than draw down on their savings, which may be hard-earned over years.
families that were insured for a funeral insurance product in Colombia preferred to protect their savings rather than use savings as a form of protection.\textsuperscript{33}

We also observed across programmes that households affected by a shock prefer to turn first to their friends and family to access loans, when these are available, rather than borrow from a formal banking institution or more expensive informal source.

We also observe several trends that may offer guidance in product design and delivery. The pace at which claims are paid to clients is an important factor in the overall effectiveness and value that the product offers. For example, the property insurance coverage discussed in this brief highlights how the delay in claims eroded some of the value for clients and meant that they had to finance a large outlay upfront. In the Philippines we performed a Client Math study of life and funeral insurance (forthcoming) and found that, when claims are paid slowly the insured and uninsured look more alike in the way that they finance their shocks. In products that include some cash benefit for clients typically tied to loan forgiveness, such as the property cover in Ghana, we observe that often the benefit is too small to ensure that families recover fully or quickly.

Finally, we see early indications of great value in cashless products. In MAPFRE’s funeral insurance product in Colombia\textsuperscript{34}, we find that offering cashless funeral services helped families avoid having to piece together complicated financing mechanisms to cover the funeral costs. We also found they were able to access discounted pricing and assistance services that would have been impossible to purchase at an individual level. Similarly, in a Client Math study of health insurance in India\textsuperscript{35}, we found that a product offered by Grameen Koota, a microfinance institution that offered cashless hospital services, also allowed clients to leverage discounts and reduce their upfront financing needs. Cashless health insurance products can offer immediate benefit to clients and ensure that they build loyalty and trust with pre-approved healthcare-providers that are in-network.

\textsuperscript{33} See MILK Brief #8: Doing the Math – Cashless Funeral Microinsurance in Colombia.
\textsuperscript{34} See MILK Brief #8: Doing the Math – Cashless Funeral Microinsurance in Colombia.
\textsuperscript{35} See MILK Brief #12: “Doing the Math” in Karnataka, India.
Assessing the Client Value of Property Insurance in Ghana

References


5.1. Introduction

Michael J. McCord

Possibly the biggest issue in the dramatic expansion of microinsurance is distribution. Finding effective and efficient means of providing good microinsurance products to low-income people is a fundamental challenge all microinsurance has to address. The traditional approach of an agent selling policies one by one is simply not going to lead to microinsurance coverage of hundreds of millions of people. Finding the right distribution partner is, perhaps, the most crucial factor in microinsurance provision.

During the initial stages of microinsurance market development providers tend to rely on company agents and partnerships with Microfinance Institutions (MFIs). This generally results in limited outreach and, in many cases, limited client value.

The Ghanaian insurance industry has offered microinsurance for nearly 10 years. The initial distribution channels were rural banks through savings and loans. These channels were overcompensated with donor funds and had no production requirements to receive compensation, creating high expectations among rural banks. Coupled with limited interest from rural bank boards, this distribution system became too challenging and expensive for microinsurers. Insurers tried placing their own staff in rural banks resulting in higher expense and reduced effectiveness.

Microinsurers then tried direct sales in the markets. Developing systems that mirrored the concept of susu collectors, microinsurers sent their agents into the markets daily to collect tiny premiums from market vendors. Such processes are inefficient, and limited in terms of potential outreach and profitability.

More recently, there has been a movement away from direct market selling back to group sales. Rural banks are being approached again with new products and processes and even the telecommunications companies are selling (or giving) microinsurance to their subscribers.

These methods are not sufficient for massive expansion of various good value products.
Ghana’s microinsurers, current and potential, must reconsider distribution and begin to test and implement new distribution models if they want to significantly expand the market in a way that provides profits and value for policyholders.

This chapter primarily focuses on providing ideas and models from outside Ghana to help local microinsurers understand different approaches to distribution and how these could be implemented in Ghana.

In considering different options, microinsurers should constantly question new models in terms of their objectives and the reality of microinsurance in Ghana:

- What would need to be done to make this work in Ghana?
- What would the impact be on outreach?
- Would this model help improve our financial position?
- Does this model fit with the products we offer or plan to offer?

This chapter should also help microinsurers and distribution channels look at distribution in a new way. It addresses questions such as:

- How do we create a partnership benefitting insurers, distributors, and clients?
- What can we learn from successful mass market retailers, such as Coca Cola?
- How can distribution partners reduce cost and increase uptake?
- What are the legal and regulatory implications of various distribution models?

The authors provide guidance and practical ideas for each side of the partnership and discuss advantages and disadvantages of different models and options. They also provide practical examples of successful microinsurance distribution models.

In the first article Roland Steinmann, from the MicroInsurance Centre, presents the main aspects of microinsurance distribution. He looks at the current insurance landscape in Ghana and provides some recommendations for successful partnerships. For insurers, he offers a number of criteria against which potential distribution partners can be assessed. The impact on business performance of adding microinsurance to the product portfolio is discussed from the perspective of the distribution channel.

The second author, Jeremy Leach of Bankable Frontiers Associates, delves deeper into the issue of mass-market distribution, making the case for alternative (non-financial institution) distribution channels. He points out the opportunities of leveraging their massive consumer base and sales infrastructure but also illustrates common pitfalls to avoid. Of particular interest are the examples from South Africa, where microinsurance sales are made in supermarkets and even clothing shops. The article cautions about the need to balance the risk of selling insurance through non-specialist sales staff while enabling non-advice models.
Finally, Peter Gross of MicroEnsure provides insurers with some concrete guidance on how to operate successfully in the mass market. After dispelling some of the persistent ‘myths’ about microinsurance, he outlines six lessons based on his experience working with both insurance companies and distribution channels.

Taken together, these articles provide a singular message to the Ghanaian insurance industry; to change its current way of doing business and tackle the challenge of new distribution models.

Such a paradigm shift requires major changes in products and processes, and in the mind-set of management and staff, but it will prove worthwhile as the microinsurance business expands dramatically throughout Ghana.
5.2. General Aspects of Microinsurance Distribution in Ghana

Roland Steinmann

Introduction
Globally the microinsurance sector has evolved impressively over the past couple of years. At the same time, penetration remains very low in most countries. A growing number of advocates for further expansion argue that client value of many products should improve significantly. Despite the increased interest from various stakeholders and multiplied efforts, a definite break-through has yet to happen as large proportions of potential customers remain unserved. As one industry exponent put it recently: “A substantial amount of the ‘microinsurance’ activity discussed openly is best classed as R&D…” (Mathews, 2012).

Three issues have been identified to push the microfinance frontier further (Helms, 2006):
1. Scale: scaling up quality financial services to serve large numbers of people
2. Depth: reaching increasingly poorer and more remote people
3. Cost: lowering costs to both clients and financial service providers.

A fourth issue could be added to the microinsurance context: speed of claims settlement, which has a direct influence on client value. Most aspects of these issues are directly related to the way in which microinsurance is distributed hence distribution must be addressed to make microinsurance a sustainable business. Distribution is far more than sales and pertains to important questions such as: How can microinsurance products be distributed to a large number of customers across the country in a cost-effective way? How can claims be quickly checked, approved and paid out if valid?

Globally, definite answers to these questions are still outstanding and the Ghanaian microinsurance industry is no exception: in the past, many local microinsurance providers have opted for direct, individual sales through specialised agents. However, the limitations of this approach have become more and more evident. This article explores some general aspects of microinsurance distribution from both the insurer and the distributor’s perspective and concludes with an outlook on possible evolution.

The challenge of turning potential into business
Many stakeholders repeatedly state that low and lower middle-income market segments offer huge business opportunities for microinsurance providers (e.g. Swiss Re, 2010). At the same time significant challenges to turn this potential into real business success are obvious. Figure 27 illustrates some of the issues and expectations any microinsurance project has to address to become a long-term success. Apart from the item ‘value for
money’, i.e., an adequate average payout compared to average premium contributed, all other aspects are directly related to the way in which microinsurance products are promoted, sold and serviced. A microinsurance provider has to identify such a way to deliver its products that addresses most or all of these challenges. Good products, marketing and financial literacy of clients are prerequisites but delivery is the key to turning microinsurance potential into a real business.

Figure 27: Key challenges and expectations to meet

Given that most insurance companies with an interest in the microinsurance market do not operate a very dense branch network, and, typically, have cost structures that make direct sales to individuals not viable, most microinsurance is sold through partnerships with non-insurance organizations. This is referred to as the Partner-Agent model (McCord, 2006). Such partnerships allow an insurance company to access specific customer groups otherwise difficult to reach. Angove et al. (2012) list the advantages for an insurer of entering into a partnership as:

- access to infrastructure, be it physical or technological
- increased physical footprint
- multiplication of access points for the low-income customers.
These factors allow transferring some or all of the following core tasks to the delivery partner:

- marketing and sales
- premium collection
- communication with clients
- claims servicing and payment.

For microinsurance sold under partner agent arrangements most insurance companies have sought to partner with a Microfinance Institution (MFI). This choice is attractive because: the MFI has a standing business relationship with the low-income market; is conducting financial transactions with them on a daily basis; is trusted in the community; and has an interest in securing at least the outstanding loan portfolio, if not the whole community. The obvious product to sell first is credit life as it comes with the additional advantage of relatively low claims frequency and thus is easy to administer.

Over time, the limitations of this approach have also become more obvious. Once the larger MFIs are in partnership with an insurance company, it becomes difficult to grow, except by selling additional products to the same customers. However, the potential market for microinsurance is believed to be far larger than the one for microcredit: not everybody needs credit, but all need insurance. This insight has spurred the research of alternative delivery channels and Jeremy Leach discusses aspects in more detail in his article.

Ghana is one of the few countries where many insurance companies have not entered the microinsurance market through partnerships with MFIs. Instead, most players have first opted for a specialised workforce of what could be called micro-agents, an approach inspired by the local tradition of susu-collectors. For susu this works quite well but most insurance companies have found it challenging to both reach large numbers and keep costs down to an attractive level while still managing fraud.

Ghanaian microinsurers are not alone in facing this challenge; globally most microinsurance products are sold through some sort of partnership agreement rather than micro-agents who have turned out to be too costly for the business volume they produce. The Ghanaian MFI market is also quite fragmented with very few large, stable organizations.

Furthermore, the Ghanaian microinsurance sector has so far been driven by insurance companies and specialised intermediaries, with potential delivery channels either waiting until they are contacted or, in some cases, offering microinsurance on their own,

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1 While Angove et al. (2012) argue that MFIs are, from a commercial insurance perspective, already an alternative distribution channel, Smith et al. (2011) use the term ‘alternative delivery channel’ to designate those beyond MFIs and banks.
putting them in conflict with current regulation. This may well change. Larger
distribution channels are likely to do their own market research because they recognise
the advantages of offering microinsurance. They will outline products that optimally
respond to their specific client base and then shop for an insurer willing to collaborate
and take on the insurance risk. The National Insurance Commission (NIC) may enforce
strict adherence to insurance regulation, especially once the new regulatory framework
with specific provisions for microinsurance becomes law. Such developments would
also bring new dynamics into Ghanaian microinsurance partnerships.

As with every partnership, expectations are not necessarily the same for both parties. As
long as both find enough common understanding to realise their goals, this is acceptable.
Kelly Rendeck (Rendeck, 2012) notes that difficulties in microinsurance partnerships
may stem from different organizational cultures, as well as from different priorities.
Recognition of this from the beginning should help overcome inevitable challenges
along the road of serving the low-income market with microinsurance.

**Insurer’s first choice**
To an extent insurers are accustomed to working with other institutions: brokers may
facilitate new deals or administer whole portfolios and third party administrators may
process claims, which is relatively common in health insurance. However, partnerships
in microinsurance bring a whole new dimension into play. The insurer usually knows far
less about the target customer than the delivery channel does and so has ‘to give the pen
away’. For the sake of efficiency the partner organization will, to a large extent, make
decisions on who to insure etc. Consequently, the power relationship and tasks to be
performed are significantly different than in other businesses the insurer may know.
Such business relationships will only last if based on deep trust and governed by a clear
common understanding of the ultimate goal.

From an insurer’s perspective, there are many good reasons for seeking partnerships with
large delivery channels. An attractive delivery channel for microinsurance products may
score highly on some of the following criteria:

1. **Scale and access**: the partner should reach a large number of potential customers and
serve population segments the insurer otherwise cannot access easily. Microinsurance is a typical example of mass production with low margins, where
only schemes able to realise economies of scale will satisfy all stakeholders in the
long run.

2. **Trust**: the more trust potential customers have in the partnering organization the
easier it will be to introduce new products. Potential customers frequently cite lack
of trust in providers as a reason not to take up new microinsurance products. A
continued presence in the community is essential to build and maintain trust.

3. **Low-cost operations**: delivery costs are typically the largest cost item after insurance
claims. The lower these can be kept the more benefits can be offered to clients
while expectations of economic returns on the sides of the delivery partner, and the insurance company, are still satisfied.

4. **Convenience**: the delivery partner should allow a convenient way to serve microinsurance clients. Opportunity costs are often significant and, in many countries, the low-income population has a busy daily schedule which makes trips to distant outlets and long queues an unattractive option.

5. **Speed**: quick responses, especially when it comes to claims, are essential to make microinsurance a good customer experience. In some countries, such as the Philippines, speed in claims settlement has become the key driver in a competitive microinsurance market. As discussed in Chapter 1, the proposed microinsurance regulations for Ghana stipulate a maximum of 10 days for settling all claims.

6. **Outreach**: bringing financial services, including microinsurance, to the rural population often remains a challenge. This aspect goes beyond scale, which to some degree can be achieved through covering the low-income population in cities. The challenges of serving rural clients are manifold and include underdeveloped infrastructure, lower population density and onerous monitoring schemes. The spread of mobile technology and working through partner networks can help.

Obviously, only few if any potential delivery organizations will excel in all six dimensions. However, insurance companies should assess them carefully and make informed choices before entering into any partnership. Such endeavours represent huge opportunities but entail significant investments, risks and disadvantages too, as the insurer loses some control to the partner.

Typically, distribution partners have limited or no prior knowledge of microinsurance, but they should promote and service the products. The insurer faces considerable upfront investments including insurance education, process design and marketing campaigns. It also has to rely on the partner’s service standards, anticipating the benefits from good brand recognition and reputation, but also the consequences if the partner falls short of the customers’ or insurer’s expectations. The history of microinsurance is dotted with successful partnerships, but also with failed ones and destroyed reputations, leading sometimes to complete market exits.

In any case the insurer entering into such partnerships has to recognise the accumulation risk and adapt its supervision and monitoring systems accordingly. While written agreements for business partnerships may not be the norm in some countries, there is the clear advantage of spelling out each party’s role and responsibilities, clarifying expectations to form the basis for successful collaboration in the case of unforeseen events.
Microinsurance as a side-show: what is in it for the distributor?
For a prospective microinsurance delivery partner organization two main aspects dominate the discussion about whether or not to engage in this activity: the impact on its business and the impact on its clients.

Peter Gross, in his article, argues that delivery partners have to find direct benefit in adding microinsurance, increasing the volume and benefit of their core business. Such direct benefits can take a variety of forms: for example, while a purely commercial mass distribution channel may want to increase customer loyalty and ultimately profits, a farming co-operative, church or trade union may want to stabilize the livelihoods of their members. In either case, the insurer must understand the motivation of its partners to offer microinsurance and tailor its products to suit the specific needs.

On the business side, the delivery partner may aim at:

- a diversified suite of services and products
- a competitive advantage
- an additional, fee-based revenue stream
- better risk management (directly, if part or all of the insurance payout goes to the partner as is the case with pure credit life insurance, or indirectly, if the partner has an interest in a financially stabilised client base)
- social impact
- regulatory compliance by working through a regulated insurance company and not doing self-insurance.

For the delivery partner’s clients, a partnership agreement could yield several advantages, including a larger product choice from the same provider, tailored products, affordable pricing and professional service. Ideally, these positive elements from a client’s perspective will feed back into the partner’s and ultimately the insurer’s results. For example, banks and MFIs may experience better loan repayment rates if clients benefit from health insurance, as health incidents in the family are a major cause of delays or defaults.

The more services and products a customer has with one service provider the more loyal they tend to be to that provider. Some telecom operators have now begun to offer relatively simple life insurance programmes with the explicit goal of increasing customer loyalty. First results from these programmes suggest the approach works and customers become more loyal to the provider.

Remuneration of agents and commissions for delivery partners often results in heated discussions. With microinsurance being a low-margin business and often difficult to sell, finding the right mix of compensation, incentives to generate new business, preventing mis-selling and rewarding renewals is a tricky task. If benefits arise at the institutional level only the distributor’s staff may not be willing to go the extra mile.
Where possible a delivery partner organization new to microinsurance will want to carefully select an honest and professional insurance company already experienced in microinsurance. Selection criteria to consider include (International Fund for Agricultural Development (IFAD), forthcoming):

- interest in the low-income market segment
- capacity to develop new products and support through IT systems
- compliance with regulations
- reputation, especially when it comes to claims payment
- flexibility in product design, pricing approaches and business processes
- sound financials.

IFAD is about to publish a guide for MFIs that want to develop microinsurance products and seek to select insurance partners. Though this is written for MFIs, many of the issues discussed are valid for other delivery channels too.

**Conclusion**

Distribution is at the core of making microinsurance an attractive business proposition and allows the low-income population to benefit from financial risk management instruments. Ghanaian microinsurers still have to identify new ways to reach out to a large, unserved population segment. Over the past couple of years many players have come to realise that selling microinsurance through micro-agents comes with substantial risks and severe limitations. Profitably reaching large numbers of clients through this approach is unrealistic. The recent entry of mobile phone operators into the microinsurance scene in Ghana has shown how such numbers can be realised in relatively short timeframes. Whether this success is sustainable and how this programme will evolve remains to be seen.

The Ghanaian microinsurance sector clearly offers many new opportunities to extend outreach to unserved regions or population segments. With a completely revised legal framework aiming at promoting the industry; a number of dedicated insurance companies; a spectacular programme with a mobile phone operator and a direct investment from a specialized microinsurance investment fund, the sector is poised to make further headlines. Domestic players have the clear advantage over foreign entrants of stronger knowledge of local culture and business attitudes. However, they still have to learn to think big and follow through if they want to drive the Ghanaian microinsurance market. It is now time to analyse past experiences and approach this market segment strategically.
Distribution Channels for Microinsurance

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§ reputation, especially when it comes to claims payment
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References


5.3. Enabling Effective Distribution to the Emerging Consumer

Jeremy Leach²

Introduction

In emerging markets such as Ghana most of the population are low and middle-income earners largely working in the informal sector. They represent the single biggest potential market for insurers, both in number and volume.

In Africa, however, insurance companies have typically focused on the corporate and upper end of the market; a model representing the structure of the colonial insurance market (Muchena, 2012) and ignoring the broader population. This is further demonstrated when one considers the state of access to insurance (see Box 4) which is extremely low across the continent. As a result, the broader population has been forced to self-insure or use informal means of insurance (such as burial societies).

Box 4: Access to insurance in Africa

In South Africa, one of the more advanced economies in Africa, 45 percent of the population has some form of insurance, however:
“despite proactive effort by industry short-term [general] insurance has not managed to penetrate the low-income market beyond 1.5 percent of LSM 1-5 [the poorest 60 percent] adults” (Smith et al., 2010); and
less than one in ten of small business owners are insured against the specific risks they face (FinMark Trust, 2010).

Outside South Africa, only five percent of Ghanaians have insurance, six percent of Kenyans and Zambians and only two percent of the Nigerian population (FinMark Trust, 2010).

With the exception of South Africa, where insurers have provided “microinsurance” for decades through a range of distribution models, African insurers have typically only used traditional intermediation models such as brokers and agents. This has expanded only relatively recently to include microfinance institutions reaching lower segments. As indicated in the previous article, traditional distribution models have limited potential in reaching the low-income market segment. Sales representatives and brokers accustomed to serving high-end clients are not cost-efficient and do not have the connections required to serve the mass market effectively. Although microfinance institutions and

² Support from Rob Gruijters is greatly appreciated.
cooperatives have these connections, their outreach often remains extremely limited, hence there is a vacuum in the middle and bottom of the market.

In most cases, insurance companies need to look beyond these methods and look to alternative distribution models if they want to serve significant numbers of mass-market customers in a sustainable manner. In this article alternative distribution channels are defined as: “insurance models which utilise partnerships with institutions traditionally not involved in insurance to reach underserved, low-income households”. Therefore, contrary to sales representatives and brokers, selling insurance is a secondary activity for alternative distribution partners. This poses a number of challenges to the partnership but provides enormous opportunities should the partnership be established properly.

This article begins with an overview of the alternative distribution models with a proven track record, using case studies mainly from South Africa. It goes on to describe the typical challenges faced by distribution partners and provide guidance on how to deal with them. The regulatory aspect of alternative distribution is addressed, particularly the challenge of enabling these models while protecting the customer from abuse. Lastly, some recommendations for Ghanaian insurers are provided.

**Alternative distribution models for microinsurance: an overview**

When considering entry options into the mass market insurers are faced with a wide array of potential distribution partners. They can narrow their options by assessing potential partners against a number of ‘ideal’ criteria:

- **Scale**: The distributor provides access to large numbers of potential clients.
- **Infrastructure**: The distributor has a physical or virtual (e.g. telecom) distribution network capable of providing insurance even in remote communities.
- **Transaction platform**: The distributor is able to collect small cash payments, where applicable, on a frequent basis.
- **Trusted brand**: The distributor’s brand is well-known among the target group and inspires trust. This is often critical as insurers are not well-known because such a small percentage of the population is insured.

After a thorough assessment, based on the above criteria, insurers are normally left with a manageable number of potential channels. Smit et al. (2012) divided the most common channels into four categories based on a case study of 14 alternative distribution partnerships:

- cash-based retailers, such as supermarkets and retailers
- credit-based retailers, such as furniture and appliance stores offering goods on credit
- third-party bill payment providers

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utility and telecommunications companies (e.g. mobile network operators).

This could be expanded to include viral marketing models, financial education models as a form of marketing, and “alternative agency” modes which adapt the traditional agency channel to leverage off a key channel such as a retailer.

The first two channels are particularly popular in countries such as South Africa, Brazil and Colombia, which have large retailers focusing on the low-income market segment. In Ghana, mass-market retailers are not as widespread; however, as Peter Gross shows in his article, there are numerous opportunities for innovative partnerships.

Box 5 provides an example of a successful distribution partnership between an insurer and a cash-based retailer in South Africa which has sold policies to over 600,000 of their clients.

**Box 5: Hollard & PEP retail stores**

**Distribution case study: Hollard and PEP**

Hollard is the largest privately owned insurer in South Africa, with six million policyholders in 2008. PEP is a budget clothing retailer with a network of 1,159 stores targeting the low-income market. PEP partners with Hollard to sell low-cost funeral insurance to its customers for which it receives a 10 percent commission as well as a share of underwriting profits. Clients purchase their product off-the-shelf and are required to pay their monthly premiums in cash at a PEP store.

The PEP-Hollard model is one of the most successful examples of microinsurance distribution innovation in South Africa. A number of factors have contributed to the success:

- Low distribution costs due to available infrastructure: PEP’s existing infrastructure allows it to collect premiums in cash at any PEP store.
- Costs kept low by provision of limited information and no advice: the model is structured in such a manner that verbal product disclosure is only provided upon request.
- Commitment to success by PEP: interestingly, PEP rather than Hollard initiated the distribution partnership.

*Based on Smith & Smit (2010)*

Distribution partnerships with Mobile Network Operators (MNOs) - also referred to as m-insurance (Leach, 2011) - have been implemented in various African countries in recent years. The three dominant models for client acquisition include:

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4 Leach (2011) expands on the way that mobile operators can also be used to improve the value chain, such as through SMS for improved communication.
Embedded loyalty models, where insurance is provided “for free” to the customer, and paid for, by the MNO.

Airtime deduction models, where premiums are paid through airtime.

Mobile money models, where insurance products are bought and paid for through mobile money.

Each of these models has its respective advantages and disadvantages as outlined in Table 20:

Table 20: Classification of m-insurance models

<table>
<thead>
<tr>
<th>Type:</th>
<th>Embedded loyalty products</th>
<th>Deduction from airtime</th>
<th>Mobile money</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIGO –MicroEnsure-Bima (Ghana)</td>
<td>MTN African Life (Zambia)</td>
<td>MTN MiLife (Ghana, SA)</td>
<td></td>
</tr>
<tr>
<td>Advantages</td>
<td>High scale</td>
<td>High scale</td>
<td>Potentially higher cover policies</td>
</tr>
<tr>
<td>Customer loyalty</td>
<td>Ability to convert loyalty customers to paid-for products at low cost</td>
<td>Cost efficiency</td>
<td></td>
</tr>
<tr>
<td>High market making</td>
<td>Accessible premium</td>
<td>Automatic deductions</td>
<td></td>
</tr>
<tr>
<td>characteristics through</td>
<td>collection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>allowing client to</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>experience the product</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Disadvantages            | High cost for MNO         | High cost for consumer (converting cash into airtime) | Limited uptake of mobile wallet in most African markets |
|                         | Limited risk coverage     |                                             | Challenge of a potentially three step sale: SIM card, Mobile Wallet, Insurance |
|                         | Indirect cost to clients  |                                             |                                                  |
|                         | Potential mis-selling     |                                             |                                                  |

Essentially, the table points to a trade-off between scale, cost and coverage. Whereas mobile money products have the highest potential in terms of sums insured, cost efficiency and essentially democratizing insurance, they can struggle to achieve the same scale as the airtime and embedded loyalty products which reach the whole base of the MNO. This is because, outside Kenya and the Philippines, mobile money remains in its nascent stages. A phased approach of building towards a mobile money approach may be required.

Challenges and opportunities of alternative distribution

From the perspective of an insurer there are a number of challenges inherent in partnering with a mass-market distributor whose core business is not insurance. The distributor, on the other hand, may fear damage to brand reputation if clients are dissatisfied with the product. This section outlines some key characteristics of effective alternative distribution partnerships, illustrated by case studies from South Africa.

Trusted brand

Insurance is a particularly difficult product to sell, especially to customers new to the market. Chapter 4 has shown that lack of trust is one of the main reasons for the low uptake of insurance in Ghana. As the service provided by insurers (risk management,
‘peace of mind’) is intangible, consumers can only check the veracity of the insurer’s promises once the insured event happens and a claim is paid (Figure 28). In South Africa and Latin America many insurers, therefore, provide auxiliary in-life benefits (such as discount vouchers) and services (such as assistance organizing the funeral, or legal advice) as well as cash-back bonuses to allow for tangibility and more frequent interaction with the insurer.

Figure 28: Challenge of experiencing the product

- More opportunities to check if something went wrong
- Less money at risk
- Fewer opportunities to check if something went wrong
- More money at risk

Source: Bankable Frontier Associates

One of the great advantages of alternative distribution channels is they have established relationships with their clients. Clients who would be unwilling to buy insurance from an insurance company may well buy the same product if it is offered by their trusted mobile provider or grocery store. Hollard’s experience with Take it Eezi (see Box 6) demonstrates the difficulty of selling insurance in the absence of a trusted brand name, especially passive sales.

Box 6: Hollard & Take It Eezi

**Distribution Case Study: Hollard and Take it Eezi**

Take it Eezi is a rural and township-based vendor network selling prepaid cellular airtime, electricity and insurance. It has an extensive network of informal vendors throughout South Africa and approximately 18,000 registered agents.

The product offered was designed specifically for the low-income market, with individual and family funeral cover from as low as ZAR 18.00 (USD 2.13) per month. The monthly premium collection is paid in cash and processed by the vendor using the Take it Eezi mobile payment device. The product is positioned as a non-
Distribution Channels for Microinsurance

‘peace of mind’) is intangible, consumers can only check the veracity of the insurer’s promises once the insured event happens and a claim is paid (Figure 28). In South Africa and Latin America many insurers, therefore, provide auxiliary in-life benefits (such as discount vouchers) and services (such as assistance organizing the funeral, or legal advice) as well as cash-back bonuses to allow for tangibility and more frequent interaction with the insurer.

Figure 28: Challenge of experiencing the product

More opportunities to check if something went wrong
Less money at risk
Fewer opportunities to check if something went wrong
More money at risk

Based on Smith & Smit, 2010

Products tailored to the delivery channel
To make optimal use of the client-distributor relationship, products must be tailored to each distribution channel. Before deciding on a particular distribution channel Hollard conducts a thorough assessment of its client base, staff incentives, existing products and so on.

Small adjustments in product design and marketing can significantly affect take-up. For example, one of the success factors of the PEP product has been using SMS’ as a reminder to pay the premium. This has had a dramatic impact on persistency levels as most customers must come in person to settle their premium.

Appropriate pricing is one of the main challenges in designing products for alternative delivery channels. Mass market retailers are all about price: they have low profit margins and affordability is their main selling point. When partnering with an insurance company they want to obtain the best possible price for their clients. In the Hollard-PEP partnership Hollard was forced to revise its prices because the initial products were loss-making. PEP’s low-income client base exhibited much higher mortality rates than the populations used in actuarial models; particularly because of the effects of HIV/AIDS. After taking a certain amount of loss Hollard decided to introduce a new range of products that better reflected the characteristics of the target group. These products turned out to be highly successful and they have sold over 600,000 policies with one of the cheapest funeral covers in South Africa.

Division of tasks based on comparative advantages
Many of the companies that serve as distribution partners can handle part of the policy administration. For example, many retailers keep databases with client details which can be used to manage the records of who has a policy, as well as for marketing purposes. A
key advantage of retailers as distribution channels is that they have cash payment systems which can be leveraged for premium collection and potentially even claims payment. Building the product into the existing administrative systems of the distributor normally leads to a more cost-effective product.

The roles of the various distribution partners should thus be split according to their comparative advantages, using cost efficiency and customer service as the main criteria. In some cases, it may be advisable to outsource some of the policy administration to a specialised third party, such as an administrator. Hollard created a subsidiary (The Best Funeral Society) that takes care of much of the policy administration for its funeral products.

To make the product a long-term success, all parties in the value chain (including various key staff within the distributor) need clearly defined tasks and corresponding financial incentives.

**Rapid service delivery**

When selling insurance to mass-market customers insurers face a trade-off between cost and personal service to the client. Distributors and insurers face a reputation risk when their products do not meet clients’ expectations. Companies such as Unilever and MTN see delays in claims payment and substandard services as a direct risk to their brand reputation. As it is easier for a distributor to switch insurer than vice versa, distributors hold a lot of bargaining power. It is not uncommon for the distribution partner to pressure the insurer for improvements in service delivery, claims payment and addressing queries. In South Africa, alternative distribution channels play a key role in improving product quality and client value.

**Behavioural economics also offers valuable lessons**

While not limited to alternative distribution, lessons from behavioural economics (Dalal & Murdoch, 2012) are also important. The phrasing of messages can reinforce the benefits of alternative distribution and the partner is often more trusted than the insurer in raising these messages as shown in Table 21.
Table 21: Behavioural economics is key to messaging

<table>
<thead>
<tr>
<th>Issue</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame the loss: The risk of losing something is a stronger motivation for action than the possibility to gain something.</td>
<td>Take-up could be increased by appealing to individuals’ fear of losing (their property, their health, etc.) rather than advertising the benefits of insurance. Linking this to the distribution partners key brand is key.</td>
</tr>
<tr>
<td>Keep it simple: Offering more choices to consumers is not always best. This is because “choice overload” can lead to inaction.</td>
<td>Insurance may be difficult to understand for its target clients and so take-up could be increased by reducing the number of available options. This could include offering composite insurance products where it leverages the brand and trust of the distribution partner.</td>
</tr>
<tr>
<td>Eliminate obstacles to action: Translating intention into action is not easy. “Channel factors,” or small nudges, have a surprising power to create action. Channel factors refers to additional aids i.e. maps to direct people where to go, providing appointment slots for people to book etc.</td>
<td>Channel factors can be used to bridge the gap between recognizing the need for insurance and actually purchasing a policy. Pointing to the partner’s footprint is again key.</td>
</tr>
</tbody>
</table>

Considerations for regulators
The distribution of insurance products through alternative channels poses a number of concerns with respect to consumer protection.

The NIC may want to take these into account especially when deciding to allow certain categories of non-licensed microinsurance agents.

The potential to massively expand the reach of the insurance market through these models is significant and should be embraced. However, when insurance products are sold by retailers or mobile providers, without the involvement of qualified insurance personnel, there is a risk of mis-selling, particularly when the target group comprises low-income individuals with little or no experience of insurance. At all times it is the insurer’s task to ensure that the distribution partner undertakes appropriate sales practices and discloses full information where required, enabling the client to make an informed decision. This should include non-advice models, as happens with MTN Ghana’s mi-life, where there is disclosure but no advice. The regulator may therefore want to assess that the disclosure is sufficient and is in plain language, as Peter Gross demonstrates in his article.

The challenge for regulators is to ensure insurers fulfil their regulatory responsibilities and provide value to their clients, without stifling innovative distribution models. In South Africa the regulator has allowed alternative distribution partnerships but requires insurers to take responsibility for the entire value chain. Salespeople who are not

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5 It is noted that intermediaries need to be licensed separately in Ghana and are responsible for meeting the market conduct rules and regulations. However, we argue that this should not excuse the insurer from responsibility of ensuring their products are sold responsibly.
Distribution Channels for Microinsurance

licensed insurance agents can only perform limited tasks which are clearly circumscribed by the regulator. Individual advice and needs assessment can be provided by a licensed insurance brokers or agents only (whether in a distribution partner or not). However, this has been eased by allowing “non-advice” models focusing strongly on disclosure but not requiring advice, such as with the PEP-Hollard example.

Furthermore, regulators need to allow for the possibility that a distribution partnership breaks down for example, because the distribution partner pulls out. In this case the regulator needs to ensure the insurance company continues to fulfil its contractual obligation towards the clients. The regulator could, for example, draw on lessons from the banking sector to require a “living will” laying out what is required should the insurance need to be ended (see Box 7).

Box 7: Living will

*A living will for m-insurance*

From the regulator’s perspective, while m-insurance models can potentially reach massive scale and address growing calls for an inclusive financial market, they need to be designed so they do not damage or destroy the market they are trying to create, should they be cancelled. For example, Econet Zimbabwe cancelled their embedded insurance due to a dispute with a service provider and, overnight, 1.6 million people lost their insurance. At this scale, the impact in terms of loss of trust is potentially systemic.

A failure of this magnitude can undermine trust in insurance and prevent the market developing or even undermine it. The regulator needs to consider how to create rules that enables these incredibly important models but also limits the downside risk. One example from the banking sector may be to have a form of ‘living will’ built into m-insurance models, where they agree to ensure alternative cover is available, paid or not, should they “switch off” the cover. This would aim to limit the potential damage to the market should the ‘fad’ of insurance be less appealing to the mobile operator who either pays the full premium or subsidises the distribution thereof. This could include the insurer and MNO jointly agreeing to the following:

- If the embedded insurance cover is cancelled an alternative voluntary (paid) insurance be made available.
- A client must be given three months’ notice of the intention to cease cover and arrangements made to allow for appropriate payment mechanisms (e.g. airtime, mobile money, cash, debit orders).
- Reporting separately on the m-insurance business to ensure adequate oversight – due to the likely scale of these models.
**Alternative distribution: implications for Ghana**

Alternative distribution channels provide great potential for expanding the outreach of (micro) insurance. In South Africa alternative distribution has helped millions of households gain access to insurance products while simultaneously improving customer experience. There are three main reasons:

- Distributors pressure insurance companies for lower prices and better service quality.
- Mass distribution helps to reduce delivery cost, and thereby the price of the product.
- Distributors have trusted brands, which helps to overcome clients’ mistrust of insurance companies.

Although the South African insurance market is much larger and more developed than its Ghanaian counterpart, Ghanaian insurers can learn from the case studies presented in this article.

Firstly, insurers must realise they need to improve their value proposition if they are to persuade successful retailers or service providers to distribute their products. Although commissions are important mass-market retailers are unlikely to be convinced by financial incentives alone. They want to sell products that provide value to their customers in terms of price and service quality. Insurers should not make the mistake of driving scale without benefit: paying claims is still the best marketing tool.

Secondly, it is important to choose the right partner and design products tailored to its particular distribution model. The guiding principle should be the minimization of costs and maximization of benefits for clients, distributor and insurer. As the PEP case study shows it is difficult to get the product parameters right from the beginning. It is advisable to pilot products, carefully monitor their performance over time, and make adjustments where necessary.

Finally, the broader enabling environment still needs work. Appropriate regulation requires a concerted effort from regulators and insurers. It is expected that the proposed micro-insurance legislation will go a long way in achieving the right balance between protecting consumers and enabling innovative distribution models: alternative distribution models need to be encouraged as part of this. Ghana certainly is one of the most exciting test beds for m-insurance innovation with all three models present and we will watch this space with great interest, both in terms of how one enables the market, but also mitigates the downside.
References
5.4. Succeeding with Mass-Market Microinsurance – the Experience of MicroEnsure

Peter Gross

Introduction
MicroEnsure, a microinsurance intermediary working in Africa and Asia, grew from 600,000 active customers in 2010 to 4,000,000 in 2012, with more than 80 percent of its customers new to insurance. Significant growth came from Ghana where the company grew from 30,000 customers in July 2010 to 1,000,000 customers in April 2012.

This article outlines the strategic approach used by MicroEnsure in marketing and distributing microinsurance in Ghana, with emphasis on practical application of concepts. The information is intended for Ghanaian insurance company executives and marketers. However, many of the insights will be applicable to other contexts and microinsurance marketing efforts as well.

The first half of the article addresses insurance marketing myths that insurers should abandon in order for mass marketing to thrive. The second half outlines a framework for success at the mass-market level focusing on elements that may be unfamiliar to insurers who are new to mass marketing. The reader should expect to take away a theoretical approach to microinsurance marketing and distribution, as well as practical steps to serve the mass market.

Part I: Microinsurance marketing myths
On 8 May 1886, Atlanta pharmacist John Pemberton developed a unique new formula for a beverage. The beverage was sweet with a refreshing taste and when he shared it with his friends and family they gave his new drink rave reviews.

Pemberton took the beverage down to a local drugstore, Jacobs’ Pharmacy, but unfortunately his new concoction was a slow seller. His problem was that his beverage was dirt-coloured, so unfamiliar customers were reluctant to spend their hard-earned money on something that appeared unappealing. In the first year of operation, Pemberton averaged only nine sales of his drink per day.

“Insurance must be sold, not bought.”

If Pemberton had given up after that first year he would have been acting like the traditional insurance company does today. A common complaint among insurance marketers is that “no one wakes up in the morning and wants to go and buy insurance.”
Pemberton, however, was certain that he could find a market for his product. He was inspired to try a novel idea: giving away his product for free. Positive that people would love the beverage once they tried it, Pemberton and his bookkeeper, Frank Robinson, began distributing the first coupons in the history of marketing. For the next 20 years, these coupons were critical to creating a new market for their beverage, which they branded “Coca-Cola.”

Coca-Cola is now the best-known brand on earth, and free coupons still play an important role in each new Coca-Cola product campaign (The Coca-Cola Company, 2012). Yet when Coca-Cola began, “no one woke up in the morning and wanted to go and buy a Coke.”

In 2010, MicroEnsure teamed up with Tigo, Vanguard Life, and Bima to offer free life insurance to Tigo customers in Ghana on an opt-in basis. The value proposition was simple: a user simply had to visit a Tigo office, sign up for the product, and provide her name and age as well as the name and age of a next of kin. Both people were automatically covered with life insurance from the first day of the following month, with insurance cover ranging from GHS 200-1,000 per person, based on the monthly airtime usage of the Tigo subscriber. No waiting period applied, no medical examination was required, and no insurance premium was collected.

Following the Coca-Cola model, MicroEnsure and Tigo reasoned that free insurance would find a market. The initial response to the product was enthusiastic but the partners wondered whether a free product could be sustainable. After all, Coca-Cola had eventually charged its customers, had it not?

The Tigo Family Care Insurance product could only remain free if Tigo earned enough additional revenue through customer loyalty to cover associated product costs, including payment of the insurance premium to Vanguard Life. As the life insurance cover only lasted for one month a customer had to stay with Tigo in order to continue enjoying the insurance benefit; however, as long as she did stay with Tigo, she could enjoy free insurance. Furthermore, the more airtime the customer used, the more life insurance she earned both for herself and for her designated family member. These product features ensured a “win-win-win” for the subscriber, Tigo, and the insurer; the subscriber was able to access free insurance, Tigo was able to earn more revenue from loyal customers, and the insurer gained access to a sizeable risk pool.

By February 2012 Tigo Family Care Insurance exceeded one million customers in Ghana and Tanzania (Bima, 2012). In that month, Tigo launched a new variant, “Xtra-Life,” which allowed subscribers to double the free insurance they earned each month by paying one Ghana cedi through airtime. In this way Tigo was able to access consumer demand for greater insurance cover through a simple, easily-paid premium. More than
500 claims were paid within the first year of the product launch, demonstrating value to clients through a simple and transparent claims operation.

While some below-the-line marketing of Tigo Family Care Insurance took place to create awareness, the case demonstrates that intensive sales are not always necessary for microinsurance. Tigo stores reported anecdotally that clients began signing up for the product, having heard about it via word of mouth, and MicroEnsure noted a surprising level of awareness of the product in markets, schools, and other venues in Ghana.

Insurers can learn a great deal from mass marketers, and not only by offering products for free. Shampoo, once a rarity in India, now enjoys 90 percent penetration and a market equivalent in size to that of the United States. Manufacturers have accomplished this growth largely by packaging their products in single-serve sachets affordable to the low-income sector and easy to distribute at low cost (Prahalad, 2010). In the case of shampoo, packaging made all the difference. Messaging, merchandising, and other mass-market tactics, detailed in the second part of this article, can also allow insurers to become market makers.

Unfortunately, insurance companies are still largely controlled by the back office rather than by the front office. If insurers relinquish the marketing myth of “insurance must be sold, not bought” and focus their energy on innovative marketing approaches, they will find millions of customers on their doorstep.

“Insurance is a rational purchase, but the poor are not rational.”

Although development and behavioural economists are beginning to overcome this perception (see esp. Collins et al., 2009, Banerjee & Duflo, 2011) many insurers, unfortunately, believe the poor are not rational consumers. They pay for televisions when they should pay for school fees, they eat non-nutritious meals, and they buy lottery tickets. A poor consumer, it is thought, will be a waste of time for a well-crafted, rational, insurance sales pitch.

Recent research is demonstrating that low-income people are indeed not rational; they are hyper-rational. Because of the thin margins within which they live they recognise the value of a dollar more than middle-income consumers do, and they work harder to ensure that the dollar is spent wisely, according to their preferences, perceptions and values. The catch is that those preferences – and the rational framework underlying them – are not equivalent to those of the middle and upper-income consumers that insurers serve today.

Some basic maths may help to illustrate this concept. In the abstract, middle-income consumers tend to think about the time value of money along the following lines:

\[ Fv_t = CF_v (1+r-i)^t \]
where \( FV \) = future value of capital, \( CF_0 \) = capital in hand today, \( r \) = interest rate, \( i \) = inflation, \( t \) = time. In other words, the dollar in my hand today is worth more than the same dollar will be worth at a certain point in the future, assuming that I can invest my dollar at an interest rate that exceeds inflation.

The low-income consumer, however, views the equation differently. Inflation is not usually a factor because of the short-term time horizon for investment. In its place, however, s/he incorporates the very real risk of losing the capital completely, represented below as “risk of total loss” or rtl:

\[
Fv_t = CF_0 (1+r-rtl)^t
\]

If the risk of total loss exceeds the rate at which she could reasonably invest her/his cash then the value of her/his dollar today is lower than the value of the same dollar tomorrow, the effect of which is magnified exponentially over time. As a result, s/he has an incentive to consume her/his dollar today, or transfer it into tangible goods, or put it away somewhere – even at a negative interest rate, as in susu savings – so s/he can have something tomorrow and will not have lost everything in the end.

As the authors of *Portfolios of the Poor* (Collins et al., 2009) elaborated:

“Minus 40 percent a year on savings? Can that be rational? But to a mother in a poor household saving 10 cents a day to ensure she can buy three dollars’ worth of schoolbooks for her daughter before the school term starts next month, 10 cents is an eminently affordable fee.

The risk that the mother will lose the three dollars completely before the school fees are due next month – through theft, consumption, flood, fire, illness, accident, or any of the other unexpected income shocks – is clearly high enough to justify paying the susu collector for safe-keeping. As the susu collector visits her at her business or home, she does not incur any additional costs of savings, which she would incur if she had to visit a bank. Expenses (taking time out of her business, the cost of transport, etc.) would easily wipe out any short-term interest she would earn. So, her real return – even a negative one – is greater with a susu collector than if she were to keep the money herself or deposit it at a bank.
Box 8: Why short-term susu saving is rational

**Scenario 1 - Keeping the $3 at Home**

*Interest earned is 0% Risk of Total Loss is 25%*

\[ FV_1 = $3 \times (1 + 0 - 25\%) = $2.25 \]

**Scenario 2 – Saving $3 at a Bank**

*Interest is 1%, Less 20% for Expenses Risk of Total Loss is 2%*

\[ FV_1 = $3 \times (1 + (1\%-20\%) - 2\%) = $2.37 \]

**Scenario 3 – Saving $3 with a Susu Collector**

*Interest Earned is -3% Risk of Total Loss is 5%*

\[ FV_1 = $3 \times (1 + (-3\%) - 5\%) = $2.76 \]

In Box 8, note that the low-income consumer perceives risk in every scenario, since risk is a permanent fact in her life: but the risk of keeping the money at home is the greatest of all. There is certainly a risk that the susu collector will disappear with her money – but what of the two percent risk of total loss in saving with a bank? After all, very few middle-income consumers would consider saving with a bank for one month to represent a serious risk. Unfortunately, poor consumers perceive greater risk because of experience. She, or someone she knows, has lost money from a bank in the past, or been denied a request to withdraw money when it was needed, which is virtually the same thing. Middle-income consumers, who are both more likely to be treated well by a formal institution, and are more accustomed to fine print, terms and conditions, have no such reason for doubt. They trust that if they follow the rules the system will usually benefit them. The low-income consumer, however, has no such confidence. As a result, she makes a rational choice to place her hard-earned cash where the expected future value is the highest, and she considers risk a fundamental variable in her financial analysis. Rather than considering her to be irrational the insurer must simply learn to do business with her on her terms.

“Insurance is not in demand among the poor.”

The myth that the poor do not demand insurance contributes greatly to the supply-side shortfall in mass-market microinsurance. Unfortunately, academic studies have reinforced this message, whether in survey format (as in Karlan and Murdoch, 2010) or in numerous studies of specific microinsurance projects where uptake fell below expectations. More progressive is the 2011 annual report of the ILO’s Microinsurance Innovation Facility, which noted that microinsurance has grown rapidly in the past five years and now serves more than 500 million people globally.

While it is possible that the implicit question following the statement “microinsurance faces low demand” is, “But why?” many indigenous insurance companies respond to
empirical evidence by avoiding the micro market altogether. The assumption of a
commercial insurer in Ghana may be that microinsurance is an academic development or
corporate social responsibility initiative. However, the 2011 International Labour
Organization (ILO) report indicates, “33 of the 50 largest commercial insurance
companies in the world now offer microinsurance, up from just seven in 2005”
(Microinsurance Innovation Facility, 2012). Commercial viability is still a lively
discussion but it is unlikely that companies of this size would have moved en masse
toward microinsurance without a conviction of real commercial value, including
demand from the target market.

One alternative explanation for empirical evidence of low demand could be that the poor
do not demand the insurance products that are on offer, but they do want insurance in
general, in planning for a future risk event. The poor face disproportionate risk, so they
must - and do - account for it. *Portfolios of the Poor*, especially chapter three (Collins et al.,
2009) makes a compelling argument that because low-income people face such a
persistency and variety of risk, their demand for tools to mitigate risk is among the
highest in the world. Over the course of a year, the authors studied risks faced by 242
low-income families, detailed below:

### Table 22: Income shocks experienced by studied low-income families over one year

<table>
<thead>
<tr>
<th>Event</th>
<th>Bangladesh (42 households)</th>
<th>%</th>
<th>India (48 households)</th>
<th>%</th>
<th>South Africa (152 households)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious injury or illness</td>
<td>50</td>
<td></td>
<td>Serious injury or illness</td>
<td>42</td>
<td>Funeral of family outside the household</td>
<td>81</td>
</tr>
<tr>
<td>Did not receive expected income</td>
<td>24</td>
<td></td>
<td>Loss of crop or livestock</td>
<td>38</td>
<td>Serious injury or illness</td>
<td>10</td>
</tr>
<tr>
<td>Fire/loss of home or property</td>
<td>19</td>
<td></td>
<td>Loss of regular job</td>
<td>10</td>
<td>Funeral of member of the household</td>
<td>7</td>
</tr>
<tr>
<td>Loss of crop or livestock</td>
<td>7</td>
<td></td>
<td>Theft</td>
<td>4</td>
<td>Theft</td>
<td>7</td>
</tr>
<tr>
<td>Business failure</td>
<td>7</td>
<td></td>
<td>Abandonment or divorce</td>
<td>4</td>
<td>Violent crime</td>
<td>4</td>
</tr>
<tr>
<td>Cheated/cash loss</td>
<td>7</td>
<td></td>
<td>Serious harrassment by officials</td>
<td>4</td>
<td>Fire/loss of home or property</td>
<td>3</td>
</tr>
</tbody>
</table>

*Source: Collins et al., 2009*

While not all these risks are insurable, many of them are, and low-income people use a
variety of informal and formal tools to prepare for them. To a poor person in-kind
reciprocity, assets, savings, credit vehicles, and burial societies all represent planning for
risk. The sale of an asset after a tragedy may appear to an outsider to be a failure of
planning, whereas to a low-income person it represents the culmination of planning for
the risks that are ever-present in his/her life.
Unfortunately, these informal tools are much less efficient than formal microinsurance, but a significant gap remains between supply and demand. The growing global consensus is that the gap stems from supply-side shortcomings, not a lack of demand. In other words, the poor do not have insurance because they do not want what insurers are currently offering, and/or they do not have access to products they do want. Enterprising insurers will capitalise on the market disequilibrium, but as microinsurance penetration grows, this window is closing.

“Insurance must be sold individually by agents.”

Agents are a longstanding element of the insurance sales chain. Top agents can earn as much as executives and are rewarded with lavish perks. In 2011, one prominent Ghanaian insurance chief executive noted that, leading by example, he continued to sell life insurance policies in the course of his professional and personal interactions. Agents are required first and foremost to sell a product that ‘must be sold,’ but they also assist in performing customer service and claims administration.

Convention and innovation, however, are often in conflict, and the demands of mass-market microinsurance may require insurance companies to reconsider the role of agents. Microinsurance requires scale for viability, and agents represent a critical bottleneck to the adoption of insurance at scale by the mass market. The maths are simple: if the market size in Ghana is 10 million people, it would take 1,000 agents selling 10 policies per day five years to meet the demand, at a cost of GHS 40 million. While agent-sold microinsurance is not uncommon today, nascent technological, product and marketing innovations are beginning to chart a new course for marketing that is less dependent on agents.

For the individual insurer aiming for microinsurance scale the critical element of a mass-market product is how to partner with a mass-market distributor. Typically, insurers tend to think too small for mass-marketers: insurers think in terms of hundreds or thousands of customers while mass-market distributors think in hundreds of thousands of customers. Mass-market distributors look for products that reach millions of customers quickly. In fact, they consider that level of scalability as the price of entry for a partner. Because an agent-led insurance sales model is unlikely to fulfill the scalability criteria, insurers must consider alternative forms of distribution to engage with mass-market distributors.

“Insurance sold to the poor must have strict conditions.”

The table of risk presented in Table 22 should chill any self-respecting insurer to the core. The poor face persistent risk; in that case, are they even insurable? Add HIV/AIDS, risky behaviours, poor health decision-making, dangerous work environments and poor housing quality to the list above and it seems the poor are the least-profitable customers for an insurer, who is accustomed to operating expenses of 30-40 percent and low claims volume. If the overall volume of claims increases by 300-400 percent with a mass-
market product, the logical question is: would operating expenses not expand similarly and impact on profitability?

To avoid these higher operating costs and claims payments, insurers may be tempted to add significant exclusions, terms and conditions to a microinsurance policy. Microinsurance specialists, however, encourage a single-page insurance policy. This is preferred for three reasons:

1. **Terms and conditions decrease consumer trust.** Low-income consumers lack health, financial and legal education and do not have access to the extensive documentation sometimes required by insurers leading them to distrust contract minutiae.

2. **Conditions decrease the potential for high-volume sales, simply by adding something else to be explained in a brochure or on a phone menu.**

3. **Policy conditions increase operational expenses and decrease the speed of customer service at the critical time of claim.** When claims volumes are high but the insurer does not engage in intensive claims adjudication work, operating expenses for microinsurance are actually reduced, and scale overcomes any individual cases of fraud that may occur.

While unconventional, the experience of micro insurers indicates that the cost of addressing each individual case of fraud or moral hazard is higher in the end for the insurance company than creating a simple product with high uptake and low operating expenses. Widespread fraud is easier to catch and address through *ex post facto* management analysis. Additionally, as the market grows by serving people who have never before been insured, new customers do not know enough about insurance in order to commit fraud. Over time this advantage will decrease, but for now uptake must be the primary focus; fraud becomes a concern only in a developed insurance market.

It is for these reasons, among others, that the National Insurance Commission (NIC) has stipulated that microinsurance policies in Ghana should have “no or few exclusions” (NIC, 2012). However, this principle is in the interest of the insurers as well. When the number of microinsurance policies sold is high, sum assured per policy is low, and period on risk is short, conditions and exclusions represent a far greater threat to the insurer than fraud and adverse selection. Customers will voice frustration at fine print, as a result of which mass-market distribution partners will pull their branding support. It is far better to *price in* the various risks faced by the target market, to ensure that consumer trust and operational consistency are protected. In microinsurance scale requires, and also justifies, simplicity.

**Part II: A framework for mass market microinsurance**

Having addressed the myths of microinsurance marketing, a commercial insurer should have the confidence that low-income consumers are rational consumers who want
insurance and will respond to a value proposition that meets their needs. How, then, should an insurer build such a value proposition? While much has been written elsewhere (cf. esp. Churchill & Matul, 2012), the focus of this section is to provide concrete lessons from the Ghanaian context.

**Learn the true barriers to mass-market microinsurance**

As stated, marketing to middle and upper-income customers tends to be much easier for insurance marketers because they share the target market demographic. The first step in serving low-income people is to get to know them and value their perspectives. Unfortunately, it is not uncommon in Ghana to hear bias from professionals against the poor. They are perceived to be more difficult to serve or to negotiate with, to engage in low-class behaviour, to read or speak English poorly, and so forth. Rather than viewing these as obstacles to providing the poor with insurance, micro insurers must appreciate the circumstances and values of all their clients – and accept these as the conditions for doing business. Once an insurer treats low-income customers with the same dignity given to higher-income customers, the low-income market will reward the insurer in kind and in numbers.

Some insurers, however, perceive serving the poor as a risk for their brand as if shareholders or customers will view them negatively by such an association. As for this perception, one can only offer the potential market size of microinsurance in Ghana - estimated at USD 1.9 billion (Matul et al., 2010) - compared with the current insurance market size of USD 300 million (Oxford Business Group, 2012). Shareholders are likely to be assuaged when revenues begin to roll in. International investors, who are increasingly focusing on microinsurance (Institutional Investor, 2010) are likely to take a keen look as well.

**FinScope Ghana 2010** (Finmark Trust, 2010) conducted a detailed study of the true barriers to insurance uptake among low-income Ghanaians seen in Figure 29. While 19 percent of interviewees responded that they either “don’t need insurance” or that they “don’t believe in it, as such things are destined by providence,” the remaining 82 percent indicated that they wanted insurance, but were prohibited by certain barriers, summarised here into four main categories:

- **Cost** – 64.4 percent indicated they could not afford insurance
- **Understanding** – 26.5 percent indicated some lack of understanding of insurance
- **Access** – 6.7 percent indicated they did not know how to buy insurance
- **Trust** – 4.2 percent indicated that insurance companies con people out of money
Each of these barriers can be overcome by mass-market distribution. Cost can be reduced significantly when a mass-market distributor is engaged, so policies are priced within reach of the mass market - even one Ghana cedi per month or less.

**Understanding** can be overcome by building a simple policy that is easily scalable. A one-page policy with no fine print can be completely explained in 30 seconds or less, providing for a fast purchase decision by the consumer. **Access** is made easier because of the distributor’s large footprint.

**Trust** is overcome through several linked characteristics of mass-market distribution. Firstly, the brand of the distributor must be front-and-centre. In the first case above, note that the product was called, “Tigo Family Care Insurance” – not “Vanguard Life Insurance through Tigo.” The primary reason is that Tigo will always be a better known and more trusted brand than any insurance company. Customers trust Tigo every day to transmit their communications; they will only ever rarely interact with an insurer. Secondly, trust is built through simple policies without insurance jargon or fine print. Thirdly, and most importantly from the insurer’s perspective, problems of trust are overcome through robust, reliable, transparent operations including, and especially, at the time of claim. Insurers in Ghana who look to better profits through scepticism of claimants are likely to find themselves the targets of a talk-radio attack by a vengeful claimant. In such an event, because the distributor has imprinted its brand on the product, the distributor will not hesitate either to drop the product or drop the insurer. Paying claims consistently and on time (72 hours or less) must be a top priority for an insurer seeking to serve the mass market.

**Identify aggregators that serve the mass market and study their interests**

Although Ghana has fewer national distributors than markets such as Nigeria and Kenya, many local companies maintain a customer database in the hundreds of

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**Figure 29: Barriers to insurance uptake in Ghana, per 3,643 face-to-face interviews**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some insurance companies con people out of their money</td>
<td>4.2%</td>
</tr>
<tr>
<td>Have no assets valuable enough</td>
<td>5.6%</td>
</tr>
<tr>
<td>Do not believe in it - as such things are destined by providence</td>
<td>5.9%</td>
</tr>
<tr>
<td>Don't know how to go about buying insurance</td>
<td>6.7%</td>
</tr>
<tr>
<td>Don't know what insurance is</td>
<td>7.6%</td>
</tr>
<tr>
<td>Don't need it</td>
<td>13.2%</td>
</tr>
<tr>
<td>Don't know how insurance works</td>
<td>13.3%</td>
</tr>
<tr>
<td>Can't afford it</td>
<td>64.4%</td>
</tr>
</tbody>
</table>

*Source: FinMark Trust, 2010*
thousands. Telecoms, retailers, banks, wholesale distributors, NGOs, lottery agents and similar organisations have access to large swathes of the country. The key for insurers is to know what makes those organisations tick. Typically insurers will extend an agency commission to a distribution partner but for mass-market sales, commission is rarely enough. Insurance must drive the distributor’s core activity or business to engage the full marketing power of the distributor. This means insurance must increase service value, transactions or other forms of engagement and member loyalty. It must make a positive difference for the distributor, not just add some commissions on the side.

The good news is that, because of the unmet demand for insurance in Ghana, products that include insurance can sell well, even (and especially) when insurance is a main selling point. In 2011, MicroEnsure launched a product with a bank that serves the low-income market in Ghana. This bank, like many in the country, was suffering from low customer activity. Although the bank had more than 100,000 depositors, more than 85 percent of depositors held a balance under GHS 100. These customers actually cost the bank around GHS 0.40 per month in administrative costs so were very unprofitable. Some banks offer short-term “Win-an-iPhone” promotions in order to mobilise their deposit base, but such promotions are short-lived and of dubious effectiveness. Interest, meanwhile, had proven to be an ineffective incentive for the bank’s low-income clients, for whom a benefit of a few cedis in one year was not enough to mobilise deposits.

Insurance, on the other hand, offers both an immediate benefit (peace of mind today) and simultaneously is a “sticky” product. A customer who wants insurance today will also be more likely to want it for the medium-to-long term, generating customer value that lasts far beyond the term of a typical promotional give-away.

MicroEnsure and its partner, StarLife Assurance, built a product that encouraged depositors to save GHS 100 and, in return, enjoy free life insurance of GHS 300. As long as a depositor maintained a minimum balance of GHS 100, she could enjoy the insurance month after month. Once she reached a balance of GHS 200, she could enjoy life insurance coverage for her spouse and children as well. The bank paid the premium to StarLife Assurance instead of a portion of the interest that clients would normally have received, although higher-deposit customers (for whom interest would be the strongest motivator) did not suffer from a reduction in interest. The partners marketed the product via SMS, in-store marketing, posters, and telemarketing at a minimal cost of less than USD 0.05 per depositor.

As with the Tigo Family Care Insurance product, results were surprising. After having been stagnant the bank’s overall deposits increased by 19 percent in the five months after the product launched. Even more telling, however, was the increase in deposits under GHS 100, as detailed in Table 23.
Table 23: Savings-linked insurance results

<table>
<thead>
<tr>
<th>Branch</th>
<th>Balance As At June 2011 Ending (GHS)</th>
<th>Balance As At Nov 2011 Ending (GHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch 1</td>
<td>91,425.15</td>
<td>275,049.02</td>
</tr>
<tr>
<td>Branch 2</td>
<td>70,828.30</td>
<td>220,464.94</td>
</tr>
<tr>
<td>Branch 3</td>
<td>97,777.79</td>
<td>316,362.36</td>
</tr>
<tr>
<td>Branch 4</td>
<td>137,147.82</td>
<td>373,018.51</td>
</tr>
<tr>
<td>Branch 5</td>
<td>123,744.50</td>
<td>346,276.53</td>
</tr>
<tr>
<td>Branch 6</td>
<td>146,014.68</td>
<td>495,100.86</td>
</tr>
<tr>
<td>Branch 7</td>
<td>84,782.97</td>
<td>279,022.36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>751,721.21</td>
<td>2,305,294.58</td>
</tr>
</tbody>
</table>

A robust behavioural study was not part of this product launch, but the figures, together with anecdotal evidence from depositor interviews by the bank and MicroEnsure, indicate that tens of thousands of customers changed their behaviour and increased their savings with the bank due to the stimulus of insurance. Because the product enhanced a core concern of the bank – active deposit accounts – the bank was willing to extend its brand and marketing energy to the product, thereby lowering costs and increasing product uptake. It may be that savings accounts with a meaningful and visible insurance benefit offer a new business model for bank assurance in developing markets.

The important lesson learned is the need for insurers to build products justifying the distributor’s decision to lend its brand and footprint. Potential products abound for the enterprising insurer and its distribution partners, such as:

- Buy an insurance airtime package, talk just two minutes a day, and enjoy life and disability insurance.
- Buy 10 bars of soap each month and receive daily hospital cash insurance.
- Make at least five purchases per week and receive income replacement insurance if you lose your job.

In an underinsured market, the potential is great, even lotteries and public sector companies can offer opportunities for distribution. The key is to use insurance to encourage customers to do more of what the channel wants them to do anyway.

*Ensure that the product reflects the priorities and behaviours of the mass market*

Although the benefits of mass-market distribution are clear, linkage to a distributor’s goals can be a two-edged sword, especially if the distributor is not aligned with mass-market behaviour. MicroEnsure launched a separate micro insurance product through an African mobile operator where premiums were to be deducted through a client’s mobile money account. Millions of accounts had been opened so the partners assumed uptake would be high. However, only a few thousand of these accounts were active with
customers conducting transactions. The market was simply unaccustomed to using mobile money. MicroEnsure and its partners mistakenly believed that, based on the popularity of mobile money services like M-Pesa in Kenya, the value of a mobile money product would be self-evident.

A year after the launch fewer than 10,000 policies had been sold and the sales bottleneck was clear: the linkage to the telecom’s unfamiliar mobile money service. A recent study by Experian Microanalytics indicated that, although there were over 50 mobile money services currently active in Africa, they had fewer active users than Safaricom with its Kenyan M-Pesa service (Schmidt, 2011). MicroEnsure was essentially asking clients to do two new things: buy insurance and operate an active mobile money account. The barrier was too high.

Similarly, MicroEnsure experienced quite different results with a separate product similar to the savings-linked insurance offering identified above. Rather than including insurance as an embedded benefit for all depositors, however, the bank required customers to open a new account (ostensibly for technical reasons). That simple requirement – 30 minutes to fill account-opening forms – proved too great for large-scale behavioural change. The product also offered insurance benefits starting at GHS 5.00, which led to a meaningless initial amount of life insurance cover. As a result, MicroEnsure learned the hard way that indeed “small changes can make a surprising difference” (Churchill & Matul, 2012). Cautionary tales abound of microinsurance product design gone wrong. Insurers must be careful to link their products to channels that can change customer behaviour a little. Insurance is a change in itself; it is difficult to ask much more.

As for premium collection, it is important to remember that timing, sums required, and collection method matter as much as the actual cost of the premium (Collins et al., 2009). Too often insurers repeat the dogma that insurance requires consistent, regular premiums paid by the insured. The irregular cash flow of the poor dictates that insurers must become more flexible in premium collection. Embedding, auto-deduction, subscription, and collection at point of product purchase are useful alternatives to regular cash premiums.

Test insurance operations for scale, considering the role of technology
Operations quality is paramount when offering mass-market insurance, primarily due to the brand risk incurred by the distributor. It is worth noting here that insurers often want to have an equal partnership with a distributor. The distributor usually offers far more benefit to the insurer than the insurer offers to the distributor; it is not an equal relationship. As a result, an insurer who does not operate to the distributor’s standards will lose the partnership.

Insurers do not generally enjoy a customer-centred reputation, whereas mass-market
distributors thrive or fail on customer service. Insurers often must do a significant amount of work to learn how the distribution partner currently serves its clients and then match its performance. These typically include 24-hour customer service; service in store, or via web, voice, or Short Message Service (SMS); one-hour responses to questions; and management reports on disgruntled customers, to name a few. Mass-market insurers may also have to become accustomed to paying more *ex gratia* claims to facilitate smooth relations with the distributor.

Agents also represent a bottleneck in microinsurance operations and technology should be considered as a replacement for all or part of the role of the agent. However, when technology has been used exclusively to sell microinsurance, the quality of client education has typically been low, which has led to low perception of value and long-term product impact. The key is to replicate the agent without sacrificing the quality of the client-agent interaction. Six key stages must be considered where technology may replace insurance agents:

| Marketing | Education | Enrolment | Premium Collection | Customer Service | Claims Payment |

Emerging lessons indicate that a suite of technologies is required to achieve high quality and a seamless user experience. Interactive Voice Response (IVR), Point of Sale devices (POS) and SMS are some of the technologies that have been used or considered in the delivery of microinsurance through mass-market channels. Insurers must employ technical experts to consider which technologies are most appropriate for each stage and how they should be implemented for maximum impact.

*Engage the aggregator’s marketing footprint with clear messaging emphasizing immediate benefits.*

A 2010 study of a smallholder contract farming initiative in India supported by PepsiCo, showed the main drivers influencing a farmer to purchase index insurance included (Hazell et al., 2010, p. 82):

- incentives offered (e.g. higher buy-back price from PepsiCo)
- the ability to finance the premium and other production costs through a loan
- trust in the actors involved (e.g. corporation, processor, insurer, local representatives)
- demonstration of timely payouts in previous seasons
- a perceived need to mitigate the risk of losing the significant upfront costs of production, (in part to cover the production costs for the following season
- dissatisfaction with the government area-yield insurance programme.

Four of the six reasons provided offered immediate benefits to the farmer. Low-income consumers value visual proof over contracts, so no matter how many times the legal team
has revised a policy wording, a consumer still may not be interested if marketing fails to emphasise how she will benefit today.

In addition to emphasising immediate benefits, insurers must avoid jargon. Consider restating common policy wording language so the policy wording will be well-understood by the target customer (Table 24).

Table 24: Replacing jargon with simple wording

<table>
<thead>
<tr>
<th>Insurance Jargon</th>
<th>Restatement for Mass Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum Assured</td>
<td>Amount of money you will receive</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>Someone you trust to use the insurance money well</td>
</tr>
<tr>
<td>Indemnify</td>
<td>If X event happens, we will pay you Y</td>
</tr>
<tr>
<td>Contestability Period</td>
<td>You will be protected by insurance from this date</td>
</tr>
</tbody>
</table>

The distributor can help smooth out the language and shape the product into something that complements its product suite. Insurers should allow this to happen rather than insisting on jargon for legal or other reasons.

*Invest in monitoring & evaluation and share the results (and returns) across the value chain.*

Mass-market distributors are masters of learning and change. Insurers, meanwhile, are not accustomed to a high rate of change in products and packaging. As a result, monitoring and evaluation efforts often look very different for the two types of organizations. Distributors may have teams of 50-60 employees contacting customers to find out what they liked or did not like or, how they might respond to various types of alternative messages or product features. Insurers, on the other hand, are generally satisfied as long as products sell steadily, renewal rates are high, and loss ratios are low.

A note on loss ratios: insurers should accept loss ratios of 50-60 percent as necessary for the viability of mass-market products, rather than the 20-25 percent loss ratios that tend to prevail in Ghana. The distributor will want to ensure value for clients’ money, and for its brand, and these loss ratios are perfectly reasonable given the large customer base. Because sums assured and terms of risk should be short-term, the loss ratio is unlikely to be volatile; in any event it will not be as volatile as the distributor will be if the loss ratio remains low.

Finally, as results come in, the insurer and distributor should meet regularly to ensure the greatest value for the client. What value is created, meanwhile, must be shared appropriately. Insurers should maintain the distributor’s interest by sharing underwriting profits, and doing so early and often. In mass-market microinsurance distributors are the critical missing link.
Conclusions and next steps

Mass-market microinsurance offers insurers the potential to create new markets and ensure protection for the low-income population. Once obstructionist myths have been discarded and new strategies have been crafted, numerous opportunities exist. An insurer which executes well and builds real value propositions for its clients will find the mass market a rewarding business environment.

There are several steps an insurer in Ghana should consider in order to penetrate the mass market:

1. Hire a marketing expert who has worked in mass marketing industries such as fast-moving consumer goods or telecommunications. Firms such as Ghana Breweries, FanMilk, Kinapharma, Coca-Cola, Nestle, Unilever, and Procter & Gamble do an excellent job of hiring and training for mass marketing. If insurers use the same people and the same approach as in the past, very little is likely to change.


   See especially Section VII, “Delivery channels and intermediaries.” This book, and its predecessor (Volume I) represents the gold standard in the microinsurance industry offering concrete ideas on delivery channels, products, in-life benefits, marketing, client education, and much more that is beyond the scope of this paper.

3. Engage a microinsurance intermediary or consultant with demonstrated success at the mass-market level. Besides MicroEnsure there are other organizations such as the Microinsurance Centre, Bima, and MFS Africa, with experience in distributing microinsurance through mass markets in Ghana. StarLife and Star Assurance have also experienced success launching their own dedicated microinsurance agency, Star Microinsurance Services Ltd, which in April 2012 launched the third mobile life insurance product in Ghana with Airtel Ghana and UniBank.

4. Meet with the NIC. Regulators do not often demonstrate an interest in pursuing untried innovations but Ghana is fortunate to have a Commission which does. Insurers should not miss the opportunity to engage with the NIC on potential microinsurance distribution opportunities.
Distribution Channels for Microinsurance

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6.1. Introduction

Eric Gerelle

The articles in this section illustrate three different ways in which technology is bringing innovation to microinsurance. Common to all is the realization that significant increases in operational efficiency are essential if insurance companies are to reach the uninsured majority of the population and deliver insurance products that meet customer needs. This can be done by: automating the collection of data, using data to manage business more efficiently and improving the frequency and quality of contact with clients.

The first article discusses how automated data collection systems can be used to completely change the delivery of agricultural insurance products. The second focuses on how management information systems can improve operational efficiency and provides guidelines on the selection and procurement of these systems. The third addresses how mobile technology can be used to increase market penetration and improve the interaction between insurers and policyholders.

Ken Appenteng-Mensah and Susan Gille, in the first article, describe their experience using technology in the Ghanaian agricultural sector. The adaptation of agricultural insurance to climate change is the focus of a recent joint effort by the National Insurance Commission (NIC) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). It sets a sustainable agricultural insurance system using a weather index product with plans to introduce an area-based index crop insurance product in 2013. The scaling-up of such products depends on collecting and analysing relevant data and cost-effective ways of reaching farmers in remote locations.

The first challenge encountered by the Ghana Agricultural Insurance Programme (GAIP) was the state of data collection infrastructure in Ghana, in particular, the low density of weather stations and their poor condition. Other challenges included finding ways to stimulate demand within meso level risk aggregators and smallholder farmers, as well as seeking ways to obtain the support of the government for the Programme.
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Agricultural insurance is a critical input to the crop production value chain but it can only be cost-effective if supply, credit and post-harvest storage and output markets are also in place. Thus a holistic approach, involving multiple stakeholders, is needed. The Programme is based on a risk transfer tool allowing financiers, aggregators and farmers to jointly address agricultural production risks influenced by weather events.

From a technology perspective the use of remote sensing was the first step to making the Programme work. The density of ground-based weather stations is being increased and systematic data collection and analysis initiated. The Programme has been successful in applying technological innovation in agricultural insurance. The introduction of index-based products provides a great opportunity for Ghanaian farmers, financial institutions, input dealers and other actors in the agricultural value chain to benefit from risk-mitigating instruments in agriculture.

The second article, by Godwin Ahatsi and Victor Aggrey-Fynn, focuses on the operational and IT/Management Information System (MIS) challenges faced by most start-up microinsurance companies and departments. The IT/MIS platform is at the heart of insurance operations and the choice of technology is critical to the long-term success of microinsurance. The platform is a considerable expense and involves the participation of many staff within the enterprise, thus board level approval is required and inputs must be solicited from users and managers alike.

Technology selection and procurement requires careful analysis and documentation of all the internal business processes, followed by development of functional specifications for the technical solution. Because of the size of the microinsurance customer base it is essential that processes are simplified so procedures are streamlined before the information system is implemented.

The paper recommends ways to optimise operations by identifying the parts of the business process which have the greatest impact on client satisfaction and give competitive advantage to the institution.

Additionally, it explains the use of process mapping which documents the business in a visual way. This makes internal communications about objectives and process improvements more transparent. The use of process mapping also makes discussions with potential IT/MIS suppliers more straightforward as the mapping techniques are used by developers in the software specification. Cost benefit analysis is essential once the business process mapping has been completed. This helps prioritise the required functionality in the IT/MIS and puts the focus on the changes that will have the greatest impact on improving business efficiency.

As the software selection process is not fundamentally different from designing and selecting a product or service, the learning that the company goes through in IT/MIS definition and procurement can be helpful in other ways within the organization.
The final article, by David Ronoh, describes CIC’s experience with mobile technology in Kenya. CIC M-Bima is a set of mobile insurance applications, premium payments and communications tools that exploit well-established mobile money transfer services, such as M-Pesa. The efficiency of mobile money transfer platforms makes the technology well suited to making premium payments for microinsurance policies on a monthly, weekly or even daily basis. Microinsurance agents can use mobile money platforms to reach low-income markets and are essential for developing cost-efficient insurance distribution mechanisms in remote locations.

Microinsurance clients are mostly working in the informal sector and have irregular income, thus they require flexible mechanisms for premium payments. As most clients have mobile phones, the ability to make small payments at any time with their phones is a very attractive option. For example, the automatic deduction of premiums from customers’ phones can replace traditional standing orders.

Mobile technology opens up a large potential mass market for microinsurance. However, the life and non-life products delivered through this channel need to be easy to understand and the premium payment and claims processing made as simple as possible.

Ken Appenteng-Mensah and Susan Gille

Introduction
Agriculture continues to be the backbone of Ghana’s economy despite its transition from a developing country to its current status as a middle-income economy. Not only is it an important contributor to the country’s GDP (about 39 percent), it also provides employment to over 51 percent of the total labour force and is the largest contributor to Ghana’s foreign exchange earnings (Stutley, 2010). Despite this, it has seen very little transformation over the years and remains largely rain-fed; hence vulnerable to a range of climatic hazards notably drought, excess rainfall/flooding, pests, diseases and bushfires. Extreme weather conditions cause severe damage to cereals, food crops and cash crops such as cocoa, mango, banana, and cashew plantations to mention but a few. An estimated 5.5 percent of the national principal food crops are lost each year due to a combination of climatic, biological and natural perils (Stutley, 2010).

Until recently, there was no tradition of agricultural insurance to mitigate agricultural production losses arising from the severe weather conditions. As a result, farmers were adversely affected and vulnerable to a range of risks and constraints impeding socio-economic development. Weather shocks can trap farmers and households in poverty. Moreover, the risk of shocks further limits the willingness of farmers to invest in measures that might increase their productivity and economic situation. Hence the need for an agricultural insurance system to mitigate the financial risks associated with such extreme weather events. The situation calls for very innovative technology-based approaches which can meet the needs of various supply-actors in the agricultural value chain in Ghana, namely farmers, farmer-based organizations, exporters, processors, input dealers, and financial institutions.

The Ghana Agricultural Insurance Programme (GAIP)
In December 2009, the project “Innovative Insurance Products for the Adaptation to Climate Change” (IIPACC) was initiated to support Ghana in tackling the socio-economic costs and risks associated with the negative effects of climate change. The project is jointly implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the National Insurance Commission (NIC) with funding from the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.

IIPACC’s primary objective is to assist the insurance sector develop and implement
Innovations and Technology for Microinsurance

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Until recently, there was no tradition of agricultural insurance to mitigate agricultural production losses arising from the severe weather conditions. As a result, farmers were adversely affected and vulnerable to a range of risks and constraints impeding socio-economic development. Weather shocks can trap farmers and households in poverty. Moreover, the risk of shocks further limits the willingness of farmers to invest in measures that might increase their productivity and economic situation. Hence the need for an agricultural insurance system to mitigate the financial risks associated with such extreme weather events. The situation calls for very innovative technology-based approaches which can meet the needs of various supply-actors in the agricultural value chain in Ghana, namely farmers, farmer-based organizations, exporters, processors, input dealers, and financial institutions.

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IIPACC's primary objective is to assist the insurance sector develop and implement demand-oriented economically sustainable insurance products to protect farmers against crop failure and financial losses caused by extreme weather events. IIPACC intends to build an institution thereby creating lasting agricultural insurance capability in Ghana. This model is based on a five year programme to build local expertise, and to develop a crop insurance market in Ghana. The project has identified the need for a public private partnership (PPP) with active support by government, though it is not yet clear the type of support government will provide.¹

IIPACC supported the establishment of the Ghana Agricultural Insurance Programme (GAIP) in 2010 and the programme was officially launched on 30 June 2011. GAIP has a steering committee chaired by the NIC. IIPACC continues to provide technical support in capacity building and research for the key stakeholders. The Committee has four private sector stakeholders, four public sector stakeholders, one state-owned reinsurance company and two development partners².

GAIP has adopted a ‘pool’ approach to encourage the widest participation by Ghanaian insurance companies. This is supported by 19 of the 22 non-life insurance companies in Ghana. As part of creating local expertise in Ghana, a Technical Management Unit (TMU) was set up to carry out the day-to-day business of the Pool. The objective is to create a nucleus of local crop underwriting expertise which the insurers can build on over time and which will be self-sustaining when the IIPACC project phases out. The TMU is a small business unit managed by a project manager, an underwriter and an agro meteorologist. It receives technical support from a team called the Technical Committee on Agricultural Insurance (TCAI).

¹ At the inception of the programme, government (through the Ministry of Finance and Economic Planning), indicated it would not provide premium subsidies for farmers.
² The composition is as follows: the NIC, Ministry of Finance and Economic Planning (MoFEP), Ministry of Food and Agriculture (MoFA), Ghana Meteorological Agency (GMet), Ghana Reinsurance Company (Ghana Re), Ghana Insurers Association (GIA), Stanbic Bank, Agricultural Development Bank, a representative of the National Farmers and Fishermen Award Winners Association of Ghana (NFFAWAG), the World Bank and GIZ.
Innovative agricultural insurance products for the Ghanaian market

A feasibility study conducted at the beginning of the IIPACC project included a preliminary assessment of the potential to develop certain kinds of agricultural insurance products for the major food and plantation crops grown by Ghanaian farmers (Stutley, 2010). Two major classes of crop insurance products: a) traditional indemnity-based crop insurance products and b) innovative index-based or parametric crop insurance products were examined in terms of their suitability.

The traditional indemnity-based, multi-peril crop insurance (MPCI) is the most widely practised form of crop insurance in the world offering comprehensive protection against yield losses due to a range of risks. For Ghana the MPCI product was identified as being unsuitable in the start-up phase for a number of reasons, including: the lack of individual farmer time-series yield data on which basis to design and rate the product, the very high costs associated with in-field inspections and loss assessment, and concerns about the potential for moral hazard and adverse selection. However, a range of named-peril products, as well as different kinds of index insurance products, have been assessed as potentially feasible for the Ghanaian market. Crop Weather Index Insurance (WII) and Area-Yield Index Insurance (AYII) were identified as promising product options (Stutley, 2010).
Box 9: Index insurance for maize

In 2011 GAIP introduced crop Weather Index Insurance for maize to the three northern regions in Ghana. This is the first commercial agricultural insurance product which has been designed and sold in Ghana. In 2011, four institutions decided to take this up: at the meso-level one commercial and two rural banks bought the product to cover their agricultural lending portfolio; and a research organization (Innovations for Poverty Action) marketed the product directly to approximately 1000 farmers (micro-level). In total, over 3,000 farmers around four weather stations (Tamale, Pong Tamale, Walewale and Yendi) were covered with an insured area of 5,045 acres. The total sum insured was GHS 0.58 million and premium income was slightly more than GHS 36,000 (average premium rate 6.3 percent). No payouts were triggered in 2011.

Crop weather index insurance

At the end of 2010 the Steering Committee, together with IIPACC, decided that a WII product seemed the most feasible first agricultural insurance product to become the first index insurance product in Ghana.

In contrast to traditional indemnity-based insurance, which indemnifies crop yield losses at the individual field level, WII uses an index (proxy), i.e. an independent and objective measure which should be highly correlated with field losses. Indices used could be rainfall, temperature or humidity, etc. As indemnifications are independent from individual losses this circumvents the moral hazard and adverse selection problems that come with traditional insurance (Skees, 2008). In addition, WII reduces administration costs for the insurer which could make premiums more affordable.

The IIPACC 2010 feasibility study identified the potential to develop WII products at different levels of aggregation in Ghana: a) selling directly to individual farmers at the micro-level, b) selling to risk aggregators, such as financial institutions or input suppliers involved in agricultural finance (meso-level) or c) using WII at the national/governmental level as a food security tool for food security for example (macro-level).

The feasibility study recommended starting the programme with meso-level insurance selling to banks, and input suppliers, to build up experience before extending to individual farmer sales. Furthermore, the major cash and food crops, and their main perils, were assessed in terms of the potential design of a WII product for them. WII works best where there is a single major weather peril which can cause severe but relatively infrequent (every seven to ten years) crop damage and economic losses to farmers in the selected geographic area (USAID, 2006). Drought is the main peril for maize, rice, sorghum, millet, groundnuts and pineapple so the potential for rainfall (drought) index cover was identified.
Rainfall (drought) index insurance is based on rainfall measurements made at a reference weather station. When the measured rainfall during the contract period falls below a predefined threshold (USAID, 2006) payouts are triggered for all insured farmers located within a certain radius around the weather station.

At the end of 2010 the Steering Committee chose maize, as the main food crop grown in all regions of Ghana, to be the first crop to have drought index insurance cover designed. As the season in the middle and southern belt of Ghana begins at the end of March the northern belt, where the season starts at the end of May, was selected as the pilot region.

Agronomic data collection, product development and marketing took place between January and June 2011. Historical daily rainfall data for the past 30 years, as well as the condition of 40 existing weather stations in the three northern regions were assessed; 16 of these were selected as suitable as the basis for a WII product. Data, such as production dates and water requirements in different crop growth phases, was collected in order to set product features and triggers for payouts. This was done by interviewing a sample of farmers and analysing soil conditions around the 16 weather stations.

Subsequently, a rainfall deficit (drought) index insurance product for maize was designed for 16 selected weather stations in the Northern Region, Upper East and Upper West. The product is a three-phase-product comprising a germination phase, crop growth phase and a flowering phase all characterised by different parameters which trigger a payout. This reflects the specific water requirements during the different growth stages. A payout can be triggered by an amount of rainfall received in a certain period of time below a defined threshold or by a number of consecutive dry days (dry spell) above a certain threshold, as defined in the contract. Not only the amount, but more importantly, the distribution of rainfall is taken into account. Parameters and payout structure offered could be chosen by the clients according to their preferred comprehensiveness of insurance coverage. Sensitization and marketing workshops were conducted with all rural banks in the three northern regions, commercial banks and selected input suppliers. In 2011, the product was sold to four institutions which together covered more than 3,000 farmers.

For 2012 and beyond, GAIP aims to expand its weather index insurance programme by adding additional crops such as rice, soya and groundnuts as well as new regions in the middle and southern belt of Ghana. The possibility to insure excess rainfall is also under consideration.
Area Yield Index Insurance

As part of the feasibility study, AYII was also identified as another potential innovative insurance product which might be suitable for the Ghanaian small-farmer market. In theory this product could be designed as a retail crop insurance product for all the major food crops grown in the 10 regions of Ghana including: rice, maize, millet, sorghum, groundnuts, soya, cassava and plantain.

AYII represents another alternative approach to traditional indemnity-based MPCI insurance. The key feature is that it does not indemnify crop yield losses at the individual field or grower level instead it makes indemnity payments to growers according to a shortfall in yield against an average area yield (the index) in a defined geographical area (e.g. the district or municipality). The actual average yield for the insured crop is established by sample field measurement (usually involving crop cutting) in the insured unit, and an indemnity is paid by the amount that the actual average yield falls short of the insured yield coverage level purchased by each grower (Stutley, 2010).

GAIP is aiming at introducing an AYII product in the near future to expand its product portfolio so it can offer more comprehensive insurance cover than the current WII product. AYII, in contrast to WII, covers a wide range of perils such as drought, excess rainfall, windstorm and disease, perils which affect the average yield of a particular crop at the district level. In GAIP’s discussions with potential clients it became clear they were interested in comprehensive cover rather than buying protection against extreme drought cases as in the case of WII.

Since mid-2011 IIPACC and the Technical Management Unit of GAIP have actively researched and developed an AYII product for selected crops and selected districts in Ghana. GAIP’s initial plan was to launch an AYII pilot programme for maize grown in three selected districts in the Upper West, Upper East or Northern Region in the 2012 season beginning at the end of May. As in the case of WII there are fundamental data requirements for a) pricing and b) operating in order to implement AYII.

For pricing an AYII contract an historical minimum of 10 to 15 years (preferably 20-30 years) of crop area, production and yield data for each selected district is needed. Under this initiative, GIZ-IIPACC has contracted a US-based consulting company, to provide technical advice and training to the TMU and insurance companies on AYII contract design and pricing. The training took place in February 2012 for the TMU, the Technical Committee on Agricultural Insurance and IIPACC team members.

Wa, Jirapa and Sissala West in Upper West Region were selected as the three pilot districts to start with in the 2013 crop season (Stutley, 2012; Barnett et al., 2011). For the operational side of AYII it is essential to be able to obtain accurate and reliable estimates of actual average crop yields on a district basis. Payouts are made to insured clients if the actual average district yield falls short of the insured district yield coverage
level set in the insurance contract. Since 1992 the Statistical Research and Information Department (SRID) of the Ministry of Food and Agriculture (MoFA) has provided district, regional and national estimates of planted areas; average area yield and total production for major food crops (including maize, rice, sorghum and millet, groundnuts, cassava, yams and plantains) under the Multi-Round Annual Crop and Livestock Survey (Stutley, 2012). SRID, which is also a member of the GAIP’s Steering Committee, has made available 19 years (1992 to 2010) of district and regional crop area, production and yield data for the pricing purposes of AYII. The historical district data provided by SRID comes with a number of challenges, e.g. district boundary changes over time, as well as the statistical procedures and equipment used by SRID to estimate district yields (these are set out in the next article in more detail) (Stutley, 2012; Barnett et al., 2011).

Box 10: Basis risk

**Basis risk during crop season implementation in 2011**

Last year there were incidences of basis risk when the first drought index insurance was sold to meso-level clients in the Northern Region. Rainfall data collected and transmitted from the Walewale weather station by the Ghana Meteorological Agency (GMet) did not show that payouts were triggered during the season. However, when GAIP did its post-season notification study and interacted with three clients, Bonzali Rural Bank, Bangmarigu Community Bank and Innovations for Poverty Action, it learnt that farmers within a 20 km radius of the Walewale weather station complained about long dry spells at certain stages of the maize crop growth during the season, thus giving an indication of basis risk. GAIP is currently analyzing this issue.

Since 2011 discussions have been held with SRID-MoFA to seek ways for GAIP and SRID to collaborate in strengthening the crop cutting procedures of area-yield estimation. In 2012, a Memorandum of Understanding (MOU) was concluded between the Steering Committee of GAIP and SRID. Under this, GIZ and/or GAIP provide a combination of training and funding for area measurement and crop-cutting equipment purchases for SRID field-level staff in selected districts. This is in return for SRID’s commitment to strengthen its crop-cutting procedures and to provide the crop-cut results to GAIP in a timely fashion. The Agricultural Insurance Company (AIC) of India, which implements the world’s largest AYII programme for over 28 million insured farmers under AYII and WII, will provide crop-cutting yield estimation training to SRID staff in the three selected districts. Equipment such as GPS, ranging poles and weighing scales for implementing good crop-cutting practices was funded by GIZ in 2012.
Due to the very tight time-frame it has been agreed by the TMU of GAIP and IIPACC to postpone implementation until 2013 which will give adequate time to address all outstanding AYII product design and rating issues. It also allows enough time to put in place all the operating systems and procedures for the AYII programme and to plan a comprehensive marketing and sales programme for 2013.

**Innovative insurance products and their challenges**

Innovation is not without challenges. Over the past 18 months (i.e. since 2011) of introduction and implementation of crop index insurance into Ghana, the GAIP has gone through some major challenges which, if not addressed, could threaten its sustainability. These include issues connected with the lack of high quality data on crop production and yields, weather station infrastructure and density, education of farmers about agricultural insurance, basis risk, lack of premium subsidy from the government, farmers’ limited capacity and willingness to pay premium, low demand from banks and others.

This article examines the details of some of the most fundamental challenges:

1. **Lack of high quality data from a public sector stakeholder such as SRID.** With the development of AYII, the major challenge GAIP faces is poor data quality and low sampling density of district yields. The poor quality production and yield data has been attributed to lack of funding. For example, due to budgetary constraints, SRID is only able to conduct one single crop area production and yield-cutting exercise per year which coincides with the single cropping season in northern Ghana and the main cropping season (April-August) in the rest of the country. In the central and southern regions where two annual crops (e.g. maize) may be grown, SRID does not conduct yield estimation for the minor crop season (September-November) so it is not possible to analyse crop yields for the minor season. SRID has advised that the 18-year harvested area production and average yield data at district, regional and national levels only represented the single crop season in northern Ghana and the main cropping season in central and southern Ghana. Although there are drawbacks in the available SRID crop area, production and yield data, this time-series data has enabled a series of useful data analyses to be conducted (Barnet et al., 2011).

2. **Lack of sufficient weather station density to measure rainfall data in areas where weather index insurance product could be sold for farmers.** Though GMet provides rainfall data on the numerous weather stations across Ghana from the past 30-50 years, barely half of these stations have full data usable for farming areas where the programme could be rolled out. There are approximately 300 weather stations throughout Ghana but, due to lack of GMet funding, many of these are inoperative or have interrupted time series daily data. Fewer than half the stations
are well-equipped and maintained. Most have broken equipment and lack volunteers/staff to take regular recordings of the weather variables needed for the GMet database. The density of the weather station network, especially in the northern belt, is low which is likely to increase basis risk when operating a WII programme.

3. Improving farmer awareness and the need for general education will help create a broader understanding of index insurance in the country and increase demand. The level of insurance literacy among farming communities in Ghana is generally very low, principally because farmers regard insurance with general mistrust due to previous negative experiences with insurance companies. GAIP also found that farmers have an inaccurate perception of the frequency of payouts from an insurance contract or even expect to have the premium paid back if no payout was triggered during the contract period. However, with education farmers are able to establish trust in insurance products and respond positively to demand for insurance services (IPA, 2012). GAIP’s challenge is to find the best financial literacy approach, or the right kind of information on agricultural insurance, to educate farmers. A possible strategy is to link with existing insurance companies in the various regions, or NGOs such as IPA that have the trust and confidence of farmers. Another option is to create synergies with existing GIZ programmes such as ‘Promoting Microinsurance in Ghana’ and ‘Responsible Finance’ which are heavily involved with consumer education and financial literacy. Farmer education is a complex task and must be handled with the right expertise.

4. After two seasons of implementing the weather index insurance programme, GAIP strongly believes that it is important to establish a cost-effective channel for distributing its index insurance products to its clients, especially those who work with rural small holder farmers. So far, the costs of sensitization and marketing are not commensurate with the low business volumes generated from such activities. Scaling up operations in the future will incur much higher costs if no solution is found to the issues of cost-effective distribution channels. This raises issues of sustainability. For example, potential farmer clients are located in remote villages or rural areas with limited access to agricultural and rural finance, information and communication as well as limited access to markets. The distribution networks of insurance companies are in principal towns in the various regions, hence access to the farmer is severely constrained. For this reason GAIP currently focuses on meso-level clients such as rural banks, input suppliers, commercial banks, NGOs and insurance company networks in the regions.

**Opportunities for technological solutions**

In this section we present technological solutions which might help GAIP overcome some of the challenges described. Automated weather stations and remote sensing
technology could help deal with the lack of data and insufficient weather station density and condition; the use of mobile technology could be a solution in awareness creation and, more importantly, as a way to distribute products cost-effectively.

**Automated weather station technology**

The drought index insurance product introduced by GAIP in 2011 relies on historical and current daily rainfall data measured and transmitted by weather stations run by GMet. As already described, GAIP faces several challenges in this regard: weather station density is not high enough to cover all important agricultural production areas in Ghana, and the condition of many of the manual stations is poor with many not operational. Also, 20-30 years of historical daily precipitation data without major gaps (less than three to five percent missing data) is required for pricing a commercial WII product and a reinsurance transaction. This cannot be fulfilled by many stations.

In many developing countries national meteorological services are underfunded and it is the same for GMet. A very important role for governments and donors is to invest in strengthening weather services by investing in the weather station network to improve availability, validity and reliability of data. A recent study by Wageningen University (Alterra, 2012) provided a weather risk analysis and mapping of homogeneous weather zones for agriculture for the northern part of the country. It found rainfall patterns have strong spatial variability in this region. It became clear that more weather stations are needed. Under IIPACC, GIZ has invested in the installation of 18 automated weather stations with dataloggers - solar powered with back-up batteries, and daily reporting to GMet headquarters via telecommunications networks. Data is transmitted directly thereby avoiding human intervention and data tampering. Additional automated stations will be procured and installed in 2012. GMet staff members were trained in the installation and maintenance of the new automated weather stations. Regular maintenance is very important to ensure accuracy, for example, cleaning debris (such as leaves, sticks) from the rain gauge and wiping away mud and dirt. Sensors also need to be checked and recalibrated on a regular schedule (Skees, 2010).

However, if it installs new automated stations GAIP will still face data limitation issues when scaling-up its WII programme. It would need a major amount of funds to adequately cover all important crop growing areas with weather stations and to be able to reduce the currently used radius of 20 km, as the insured unit around each weather station, to a radius of 10 km to take into account localised variability in rainfall and to reduce the basis risk for farmers. Twenty years plus of uninterrupted data for each station in a new area is required for rating purposes.

Methodologies to generate artificial datasets for new station locations, as spatial interpolation of data from surrounding weather stations, do exist but may only be suitable for single stations and not the whole country (Skees, 2010). GAIP needs to seek alternative solutions such as remote-sensing or satellite-based data sources.
Remote sensing technology

Rainfall estimates using satellites

Given the constraints associated with the existing weather station network in Ghana, and the need to use smaller grids for GAIP’s WII programme, an alternative data source is required to improve the scalability of weather index insurance. Rainfall estimates processed from satellite-based technology sources provide an alternative to data from ground stations. Some satellite data sources reach back to the early 1980s so can provide time-series of available historical data up to a 30 year period. GAIP is assessing different classes of satellite data sources in terms of suitability, accuracy and cost implications as a basis for the current WII programme. These are: research-oriented satellite data sources (National Aeronautics and Space Administration, e.g. Moderate Resolution Imaging Spectroradiometer (MODIS); TAMSAT-TARCAT) which provide a low-cost solution but continuation of data series in the future might be not guaranteed; government-operated, non-commercial satellite data sources (e.g. the National Oceanic and Atmospheric Administration’s NOAA-N) characterised by low-cost data with continuity plans; and commercially operated systems.

Figure 31: NOAA-RFE 2.0 rainfall estimates for Ghana

Satellite-based technologies estimate rainfall using infrared or microwave radiation data. Infrared solutions observe the temperature of the tops of clouds to provide an estimate of the intensity of rainfall. Microwave radiation can measure through clouds and tends to be more accurate than infrared data estimations.
For the 2012 season, GAIP started using daily precipitation data freely accessed from the NOAA for all the weather station locations in Ghana. The NOAA RFE 2.0 (African Rainfall Estimation Algorithm) data is available on a 10km x 10km basis from the early 1980s. It uses algorithm processing Meteosat infrared data (cloud top temperatures) in combination with two microwave satellite observations and stationary rainfall data (NOAA, 2012). Figure 31 shows the total precipitation for a dekad (period of 10 days) in November 2011 compared with a dekad in March 2012.

GAIP is reviewing alternative options to the RFE 2.0 data to get rainfall estimates on a smaller scale grid basis of approximately 4km x 4km. Such small grid data would be a huge improvement in addressing basis risk compared with using ground station data covers a radius of 20km. Ignitia Ltd., a Swedish meteorological high-tech company located in Accra, is the only commercial provider of rainfall estimates in Ghana. Ignitia produces rainfall estimates using data from EUMETSAT based on an algorithm that takes into account microwave data from a polar orbiting satellite and cloud top temperatures from a geostationary satellite. This data is further improved by using lightning data, based on a proven relation between lightning density and rainfall amounts. GAIP and Ignitia Ltd. have started a small pilot project reviewing the suitability of their rainfall estimates for index insurance purposes.

Other applications of remote sensing to index insurance
In addition to rainfall estimates, other information can be derived from satellite-based data sources. The application of remotely sensed indices to crop insurance is currently receiving considerable attention, as the precision of commercially available satellite imagery increases and the costs of remote sensing historical and real time data decreases.

Remotely sensed spectral vegetation indices (VI) are widely used in different disciplines interested in the assessment of biomass, water use, plant stress and crop production. VIs are calculated from satellite imagery spectral bandwidths of reflectance from the electromagnetic spectrum. One of the most commonly used VIs for crop insurance is the NDVI (Normalized Difference Vegetation Index) which uses near infrared (high reflection by vegetation) and red (high absorption by vegetation) bands to estimate the level of photosynthetic activity in observed vegetation. It can be used as a proxy for the vigour and density of vegetation at the surface and thus as proxy for plant health. It is sometimes called a “vegetation greenness index”. In general, higher values of NDVI indicate greater vigour and amounts of vegetation. Index insurance contracts based on vegetation would insure against a decline in NDVI over a designated area (Ceccato et al., 2008).

Several countries including Canada, the USA, Mexico and Spain are using NDVI for commercial livestock-pasture indexes which mirror drought impact in pasture/grazing quality. In India and Kenya research is being conducted in the application of NDVI
indexes to field row crops (cereals). However, while NDVI might provide a good estimation of what the final pasture production will be, the relationship between vegetation greenness, and crop forage production, is not as easy (Ceccato et al., 2008). For crops such as maize, soybean, millet and rice, for which GAIP is currently providing or developing an index insurance cover, the relationship between vegetation vigour and or biomass during the growing season and final crop production, has to be further explored. Other VIs, such as the Vegetation Condition Index (VCI), have been developed as an attempt to better indicate water stress conditions rather than NDVI and require careful investigation. If livestock index insurance is to be developed by GAIP in the future NDVI is an option worth researching.

Mobile phone technology
Mobile technology is an approach GAIP could consider to help overcome the challenge of identifying a cost-effective distribution channel for the wider sale of WII products. Mobile phones are a low cost technology which could be used to market and distribute agricultural crop insurance through rural institutions such as rural banks, input suppliers, NGOs and rural agro-dealers. Recently, the mobile insurance initiatives of MicroEnsure and others have been successful. For case studies on the use of mobile technology in insurance see the articles by Peter Gross (Chapter 5) and David Ronoh (Chapter 6).

In future GAIP will investigate collaborating with mobile phone companies in Ghana to use mobile phones for WII programmes; for example, premium payments and claims settlement, as well as the transmission of weather data and farming information to farmers and other clients. Such information should provide a lead on when to plant, when to apply fertiliser and good farming practices. The use of mobile phones to disseminate agricultural information will greatly facilitate outreach to remote smallholder farmers and agro dealers with a nationwide network. Furthermore, GAIP could derive some benefit from the Syngenta experience in Kenya where mobile phones have proved an innovative, very low cost way of marketing and administering the WII programme for small maize farmers.

Conclusions
GAIP has already achieved a measure of success in the application of innovation in agricultural insurance. The introduction of WII, and the current development of AYII, is a great opportunity for Ghanaian farmers and other value chain actors to benefit from much needed risk-mitigating instruments in agriculture. However, this is not the solution to mitigating all the risks in agricultural production. Agricultural insurance can help manage climatic risks impacting on crop production but it cannot solve problems of input supply, post-harvest losses or market and price risks. Agricultural insurance is just one input into the crop production value chain and is only cost-effective if other input supply, credit and post-harvest storage and output markets are in place.
By way of recent technological applications, remote sensing has the potential to enhance future scale-up efforts by GAIP and help reduce basis risk. The key advantage of remote sensing products is in overcoming problems such as the density of ground-based weather stations, very low and inadequate historical time-series data and also concerns over the accuracy of current recording systems.

In considering the distribution of WII and AYII products across Ghana mobile phone technology has the potential to greatly enhance cost-effectiveness and create exponential coverage for GAIP. Most smallholder farmers, outgrower schemes, contract farmers, agro dealers and other agricultural value chain activities are rooted in rural areas.

The experiences of companies using mobile phones for financial transactions among low-income households show that mobile money platforms can be used for claims settlements, premium payments and so on, as well as money transfer/remittances. Based on the achievements of the past two years of implementation, GAIP needs to apply technology and new innovations for scaling up toward future sustainability.

References
The goal of this article is to highlight and recommend ways to address some of the operational and technological challenges that most start-up microinsurance providers experience. Particular reference is made to how understanding an organization's internal processes may help in identifying the right process, optimization solutions for client satisfaction and the overall competitive advantage of the institution.

The FinScope Ghana 2010 report indicated 44 percent of Ghanaians have no access to financial products, and a vast 95 percent no access to insurance products (FinMark Trust, 2010).

Traditional insurance companies in Ghana are increasingly showing interest in selling microinsurance. To maintain this involvement and sustain interest the microinsurance option must contribute to the overall profitability of an enterprise, even though it is argued that, in microinsurance, the social connection with clients is far more important than the commercial connection.

For traditional companies to venture into microinsurance entails a major shift in the way they approach the market. Premiums are generally relatively low compared with traditional lines so larger numbers are required to make economic sense. Larger numbers require an efficient Management Information System (MIS). At the customer level whatever is communicated must be simple and easy to understand as this can make or break a microinsurance business. It is vital that insurance companies employ all available tools to make their processes efficient and cost-effective.

As members of the management team at Donewell Life Company Ltd (DLCL) we recognised changing microinsurance market conditions and asked what we could do as a business to keep pace with change. Changing market conditions obviously favour businesses that are able to move with the times and invest in innovative new business
6.3. Enterprise Information System (EIS): How to Identify the Appropriate Solution

Godwin Ahatsi and Victor Aggrey-Fynn

Introduction
High operating costs and client accessibility are two major barriers to microinsurance development. In addition, there is the issue of poor service delivery to clients if the right administrative tools are not employed or do not function properly. Technology can help microinsurance providers overcome some of these challenges by increasing the efficiency of delivery and administration and by helping bridge the physical distance to the client (World Resources Institute, 2007).

The goal of this article is to highlight and recommend ways to address some of the operational and technological challenges that most start-up microinsurance providers experience. Particular reference is made to how understanding an organization’s internal processes may help in identifying the right process, optimization solutions for client satisfaction and the overall competitive advantage of the institution.

The FinScope Ghana 2010 report indicated 44 percent of Ghanaians have no access to financial products, and a vast 95 percent no access to insurance products (FinMark Trust, 2010).

Traditional insurance companies in Ghana are increasingly showing interest in selling microinsurance. To maintain this involvement and sustain interest the microinsurance option must contribute to the overall profitability of an enterprise, even though it is argued that, in microinsurance, the social connection with clients is far more important than the commercial connection.

For traditional companies to venture into microinsurance entails a major shift in the way they approach the market. Premiums are generally relatively low compared with traditional lines so larger numbers are required to make economic sense. Larger numbers require an efficient Management Information System (MIS). At the customer level whatever is communicated must be simple and easy to understand as this can make or break a microinsurance business. It is vital that insurance companies employ all available tools to make their processes efficient and cost-effective.

As members of the management team at Donewell Life Company Ltd (DLCL) we recognised changing microinsurance market conditions and asked what we could do as a business to keep pace with change. Changing market conditions obviously favour businesses that are able to move with the times and invest in innovative new business
development solutions, rather than simply cutting costs and hoping market conditions will improve.

With competition expected to increase in this untapped market we needed to put a strategy in place to ensure that we were proactively and effectively approaching new clients and properly managing our policyholders. Therefore, we embarked on an exercise to use technology to eliminate redundancies and embezzlement within our operations, reduce our cost of labour, improve our customer service and adapt to global trends.

Technology is defined as any tool that assists in delivering better services than available alternatives (Smith et al., 2012). Some of the benefits technology can provide include:

- lowering administrative cost via paperless administrative processes
- reaching new markets and unbanked low-income households
- improving customer service and lowering transaction costs
- reducing fraud by more effective means of identifying clients
- linking to different operations by connecting to other clients such as those of Microfinance Institutions (MFI).

An Enterprise Information System (EIS) is a single system central to the organization that ensures information can be shared across all functional levels and management. Typically it should offer high service quality, deal with large volumes of data and be capable of supporting a large organization. An ‘enterprise class’ system is vital for your business.

There are various factors to consider should a microinsurance company want to procure or access an EIS but the three most important areas are:

- optimising your process (process mapping)
- vetting and selecting a supplier
- cost benefit analysis.

**Process mapping**

Process mapping is a technique used to describe business processes visually, making it easier to analyse and improve them (Steinmann, 2011).

In addition to the business processes and sequences, the analysis focuses on the five key dimensions of the process: time, complexity, costs, risks, and responsibilities attached to each stage of the process. A process map helps people clearly understand how business is done and serves as a basis for improving the quality of service provided. It can highlight which parts of the product design or the service process the parties involved need to understand better.
A process map will help you understand how your business is done which can help improve the service quality of your business. It will also provide a clear picture of which processes, or parts of product design, need to be understood better. A process map may highlight issues such as: dead time, duplication of tasks and multiple data entries to different systems. The mapping can also:

- help reduce operational costs
- lead to higher client retention rates
- lower operational and reputational risk
- improve your organization’s internal culture.

Generally it entails optimising existing processes i.e. removing bottlenecks and redundancies, maintaining adequate controls, and using technology to improve the efficiency of the business.

**Figure 32: Example of a simple process map**

Process mapping involves tracing an ‘as-is map’, the basis for any analysis, then coming out with a ‘could-be’ map which is suggested, but untested, ways of doing business. A ‘should-be’ map is then devised which depicts how a business should be run.
The ‘as-is’-map
This is a graphical representation of what actually happens on the ground and forms the basis for analysing, and eventually improving, the business process.

The ‘could-be’ map
After generating the ‘as-is’ map, you then plan an improved way of doing business. The ‘could-be’ map charts all the other approaches and ideas, even though not tested, which could improve business efficiency.

The ‘should-be’ map
Following a thorough analysis of the ‘as-is’ map and testing the new ideas in the ‘could-be’ map, a new map called the ‘should-be’ is drawn. This is a reference document depicting how business is, and should be, done. It visualises what you believe to be the optimised version of your business processes.

‘Should-be’ maps are also created whenever you want to introduce a new process. Obviously you cannot draw an ‘as-is’ map for a process that exists only on paper, so you draw a process as it should be.

After a certain trial period, the existing process and ‘could-be’ map have to be compared. Any differences found between reality and map should be gauged. Parts of the ‘could-be’ map may not be followed, for example, people continue to do things the way they have always been doing them. Some ideas from the ‘could-be’ map may also simply prove to be impractical. In this case, the should-be map has to be adapted to what is actually realistic and doable on the ground.

The resulting map is the document of reference according to which processes are carried out. However, periodically a reality check in form of internal audits is needed to identify nonconformities between the map and reality.

A microinsurer needs to have simple products and processes, therefore, employing process mapping, even though it involves time and effort, can show a business how to avoid hurdles along the way.

Selecting a supplier
Supplier selection and evaluation are processes that can take time and energy but the effort will be rewarded when the product or services are supplied in a timely and cost-effective way.

The first step in supplier selection is often research, particularly if the item or service has not been purchased before.

1. **Recognise need for software**
   - Identify a tedious, cumbersome process that can be automated through software.
- Payroll? Employee Reviews? Website Content?
- Identify an opportunity for growth that can only be made possible by software.

2. **Educate yourself**
   - Read about how other companies like yours use software to address issues.
   - Understand the software cost, such as licensing, support, implementation and training.
   - Understand the additional cost, including the time to train employees and potential changes to your business process.
   - Research all the features available and how they could benefit you.
   - Learn about common pitfalls.

3. **Determine your goals**
   - Write down your requirements. Distinguish between must-haves and nice-to-haves.
   - Articulate your expected benefits. How will the software save your company time and money? How will it generate additional revenue?
   - Develop an initial budget based on the benefits of what you learned about the software cost from your initial research.
   - Create a list of criteria by which you will grade each vendor.
   - Get buy-in from future software users, executive team, and technical team.

4. **Identify potential vendors**
   - Create a long list. This should be as comprehensive as possible; there are likely to be dozens of potential vendors.
   - Narrow to a shortlist. Based on your criteria, cut your long list down to three to six vendors.
   - Schedule demonstrations. These are a closer look at your shortlist solutions with online demonstrations, usually lasting 30-90 minutes.

5. **Evaluate the short-listed vendors**
   - Include end users in the demonstrations. If your users do not like using the software, they will not use it.
   - Take excellent notes. How the salesperson treats you is a great indicator for how they treat customers.
   - Ask about integration with other software products. Ask about training.
   - Request references from companies that are similar to yours, but also find your own additional references.
   - See Table 25 for a vendor evaluation checklist.
6. **Choose your vendor**
   - Receive quotes/proposals.
   - Negotiate.
   - Pick one.
   - Thank the others.

7. **Implement the software**
   - Schedule training.
   - Make necessary changes to business processes.
   - Perform data migration and integration.
   - Schedule periodic reviews to measure usage and benefits.

### Table 25: Checklist to evaluate vendor capabilities

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product vs. System requirements</td>
<td>The chosen vendor’s product should come as close as possible to meeting the defined requirements of the system. If no vendor’s product meets all of the defined requirements, the project team, especially the users, will have to decide whether to accept the deficiencies. An alternative to living with a product's deficiencies is for vendor or the purchaser to make customized changes to the product.</td>
</tr>
<tr>
<td>Customer references</td>
<td>Project manager should check vendor-supplied references to validate the vendor’s claims of product performance and completion of work by the vendor.</td>
</tr>
<tr>
<td>Vendor viability / financial stability</td>
<td>The vendor supplying or supporting the product should be reputable and able to provide evidence of financial stability. A vendor may not be able to prove financial stability; if the product is new, the higher risk to the organization.</td>
</tr>
<tr>
<td>Availability of complete and reliable documentation</td>
<td>The vendor should be willing and able to provide a complete set of system documentation for review prior to acquisition. The level of detail and precision found in the documentation may be an indicator of the detail and precision utilized within the design and programming of the system itself.</td>
</tr>
<tr>
<td>Vendor support</td>
<td>The vendor should have available a complete line of support products for the software package. This may include a 24-hour, seven-day-a-week help line, onsite training during implementation, product upgrades, automatic new version notification and onsite maintenance, if required.</td>
</tr>
<tr>
<td>Source code availability</td>
<td>The source code should be received either from the vendor initially or there should be provisions for acquiring the source code in the event that the vendor goes out of business. Usually, these clauses are part of a software escrow agreement in which a third party holds the software in escrow should such an event occur. The acquiring company should ensure that product updates and program fixes are included in the escrow agreement.</td>
</tr>
<tr>
<td>Number of years of experience in offering the product</td>
<td>More years indicate stability and familiarity with the business that the product supports.</td>
</tr>
<tr>
<td>A list of recent or planned enhancements to the product, with dates</td>
<td>A short list suggests the product is not being kept current.</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
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</tr>
<tr>
<td>Number of client sites using the product with a list of current users</td>
<td>A larger number suggests wide acceptance of the product in the marketplace.</td>
</tr>
<tr>
<td>Acceptance testing of the product</td>
<td>Such testing is crucial in determining whether the product really satisfies the system requirements. This is allowed before a purchasing commitment must be made.</td>
</tr>
</tbody>
</table>

**Cost benefit analysis**

A cost benefit analysis is performed to determine how well, or how poorly, a planned action will turn out. It is very important, therefore, that before you select any supplier you do a cost benefit analysis to determine if it is sound financial decision. To find out whether the benefits outweigh the cost, and also by how much, you may need to compare the total expected cost of the project against the total expected benefits.

The management of DLCL needed to respond to the ever-growing competitive environment. There was a general belief that the main challenge for us was not responding proactively to the changing environment and the lack of an efficient administrative system. We, therefore, had to explore ways of improving or replacing the current IT system.

The management had to work with the IT providers to develop a client-oriented system addressing all its IT needs. It also needed to assess the business cost of not having a system which could perform the entire set of tasks the users would like to perform. Management also needed to know to what extent we were losing income by retaining the existing administrative system.

To do this, we designed a research questionnaire survey for all our core business processes and areas of operations, collecting relevant data including:

- What are the core processes?
- What proportion of our time is spent on the core processes?
- How is the current system rated in each core process?
- What proportion of staff time is spent using the system in the selected core process?
- What desirable features in a new system will improve staff efficiency?
- What will be the cost saving (staff time) with the implementation of a new improved system?

From the above we were able to compute our monthly cost per core process, monthly cost of using IT in core process, and the monthly cost savings if stated features were implemented in the new system.

One solution considered was how to minimise the cost of mobilising daily premium collection with technology. After computing all the tangible and intangible benefits we came up with a cumulative cost to the business of not using a premium collection device.
Figure 33 shows the cumulative cost of introducing a mobile collection device for our premiums.

**Figure 33: Cumulative cost of a mobile collection device for DLCL**

![Graph showing cumulative cost of device and not having the device over years](image)

**Conclusion**

DLCL is pursuing the implementation of an EIS. Though the process is slow it will provide a robust and adaptive interface for other ancillary solutions such as mobile technology.

Selecting software is no different from selecting any product or service. Software addresses a very real need on which personal and professional success often depends. You may have generated a solution to a problem, and you may have been rigorous in your selection of the best supplier available, but the solution may still not be worth implementing, as you may invest a lot of time and money in solving a problem that is not worthy of this effort.

Your view should be broad and farsighted, rather than buying based only on what immediately meets the eye, or because it is cheaper. Hasty decisions may leave you with fancy features and functions which may never be used or will not stand the test of time.
Innovations and Technology for Microinsurance

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6.4. The Use of Mobile Technology in Microinsurance in Kenya

David K. Ronoh

Introduction
The mobile phone is revolutionizing the financial sector in Kenya by providing insurance and financial access to over 13 million individual Kenyans who were otherwise excluded. This article focuses on the use of mobile technology for microinsurance in Kenya. It explains how the insurance industry is leveraging on the opportunities created by the mobile phone to increase mass market penetration. In particular, it concentrates on the CIC insurance company in Kenya. CIC has introduced an innovative, mobile phone-based platform for insurance products, which aims to improve the insurance access of the low-income sector.

Kenya’s insurance landscape
Currently, total insurance penetration in Kenya accounts for three percent of the GDP, with life insurance accounting for one percent. By comparison, it should be noted that the penetration rate of banks stands at 60 percent, (9.5 million accounts), and continues to grow, driven by innovations.

Figure 34: The Potential Market for Microinsurance in Kenya

Source: Smith A., Chamberlain, Smit, Ncube, & Grieve, 2010

The platform is available on mobile phones as well as on the Internet on www.m-bima.co.ke

Source: Smith A., Chamberlain, Smit, Ncube, & Grieve, 2010
In Kenya, the prevalent distribution channel for life insurance was through the conventional tied and non-tied agent models. In 2008, there were 3,355 registered insurance agents in Kenya. However, given the high cost involved in the agency mode of distribution, it was clear that the industry would not be able to penetrate the vast low income market using this model. The industry is, therefore, increasingly turning to technology to expand its outreach in the target market. As shown in Figure 34, the core market segment for microinsurance is formed by those 12 million Kenyans who earn between USD 2.00 and USD 10.00 per day (Smith et al., 2010).

Mobile technology

In the last decade, Kenya has undergone a major transformation with respect to Information Communication Technology (ICT) and Mobile Money. In fact, ICT has been the main driver of Kenya’s economic growth over the past decade. Since 2000, this sector has out-performed all other sectors growing, on average, at 20 percent annually. The number of mobile phone users increased correspondingly during the last years. In 2007 about eight million Kenyans owned a mobile phone; in 2012 the number exceeded 24 million. Of all the ways mobile-phone based technology has been used in Kenya, mobile money transfer has been the most popular and the most innovative. No less than 18 million, of the 24 million mobile phone owners, are mobile money users. Mobile money has contributed to the inclusion of millions of people from the middle and the bottom income groups in the financial sector. In total, mobile money is used to transfer an estimated USD seven billion annually, which equals 20 percent of Kenya’s GDP.

M-Bima

The globally renowned mobile payment platform M-Pesa is the most common mobile-phone based money transfer service in Kenya. CIC Insurance developed CIC M-Bima, an innovative platform for insurance which rides on the M-Pesa service. M-Bima reaches out to the low-income market by providing cost efficient insurance distribution and payment mechanisms. It was developed based on information from clients about how they would prefer to pay their premiums to fit their lifestyle.

The platform is used to distribute insurance products, collect money for savings, communicate to existing clients and review policy information. It allows clients to sign up for insurance, pay premiums and review their statements from their phone. Claims settlement and other insurance operations including commission payments to agents are also settled on the M-Bima platform. In general, it enables clients to interact with the insurance company from their phones and at their convenience.

The Jijenge product, a savings cover with added insurance benefits, was the first product to be distributed on the M-Bima platform (see Box 11).
**Box 11: The Jijenge product: main features**

- Saving product with life and disability benefits
- Low premium payments suitable to the policyholder’s irregular cash flows
- 12 year savings plan with options of Exit Benefits from the end of third year
- Optional family life cover that pays a shared benefit of sum assured per year for death of a member of a nuclear family
- Premium payments free of transaction charges to the clients
- Weekly premium arrears reminders sent and clients have online access to policy account status

**Marketing**

CIC’s marketing strategy focuses on building an M-Bima brand with communication that resonates with the target market. A strong brand is important for mobile products. Various marketing tools are used to advertise the product, including wall branding, leaflets and information stands.

**Distribution**

Distribution has been the greatest obstacle to expanding insurance in Kenya, as it is in most other countries that engage in microinsurance. Even though insurance companies have been able to develop good products the route to market has remained a challenge. The M-Bima platform is an innovative solution to the challenge of reaching the mass market. This platform aims to make insurance available to the low-income market, people who do not have direct access to insurance companies or their intermediaries. M-Bima products are available at outlets around the country including mobile money agents, retail shops, barber shops, etc. The product is also available through direct registration on the mobile phone or via the Internet.

**Administration and customer service**

M-Bima leverages on mobile money technology for the distribution of the insurance products. Premium collection, agents’ commission payments and claim processes are handled through the mobile phone, as well as the administration of the policies and service given to the customers.

Customer service provides support for areas where mobile technology is being used and includes, for example, bulk SMS messaging. This has proven to be a powerful tool not only for payment reminders but also for client statements and notifications. In addition, CIC uses Twitter and other social media applications to respond to customer queries.

Furthermore, insurance companies have partnered with players in the telecommunications industry to implement the Unstructured Supplementary Service Data (USSD) technology. This technology has opened the door to interactive
communications between the client and insurance company without human intervention, allowing the client to register and report claims through the mobile phone.

**Challenges**

It is important to note that marketing through technology brings business up to speed with today’s fast-paced, technology-centred consumer market but poses challenges. First of all, the distribution model involves high initial expenses and bears the risk of misselling and corresponding brand, or reputational, risks.

Other challenges in using a mobile platform for insurance distribution include the integration of the mobile system with the existing underwriting systems, network and data outages, and the inability to use mobile money services across networks. Furthermore, the low level of knowledge of how to use mobile internet services is a great challenge in some rural areas, in addition to generally poor product knowledge and scepticism about insurance.

**Conclusion: opportunities for insurance companies**

According to a recent World Bank report, the mobile revolution has transformed the lives of Kenyans through communications and basic financial access (Demombynes & Thegeya, 2012). Beginning with the launch of the M-KESHO system in March 2010, new potential for mobile money has come with the rise of interest-earning, bank-integrated, mobile saving systems. Applying the new technology could increase insurance penetration, improve access to affordable insurance, increase awareness and reduce negative attitudes towards insurance which currently prevent low-income people from planning for life’s events.

The use of mobile technology in insurance administration creates an opportunity for access to affordable insurance and saving plans. Although the insurance industry in Kenya has been somewhat slow in leveraging on mobile and web technology as an insurance distribution mechanism, the landscape is transforming steadily.

Mobile technology provides an excellent opportunity to increase the penetration of microinsurance in Kenya, Ghana and other countries. It provides anywhere, anytime convenience, just-in-time payments, personal security and the ability to deal with insurance needs in a time-pressured business environment.

The opportunity provided by the mobile phone is revolutionary with the secret lying in crafting the right strategic partnership with the mobile networks. However, it is important to have a long-term perspective, commitment and passion to serve the low-income sector.
References
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A qualified lawyer Richard Carpenter has worked as an independent consultant to governments and financial services regulators for nearly 15 years. He specialises in the development of legal and regulatory frameworks for insurance and other financial services and has extensive experience in drafting legislation, regulations and other regulatory instruments. More recently, Richard has worked on the development of new index-based insurance products in a number of countries, and advises insurance regulators on the associated legal and regulatory issues. Before establishing himself as a consultant he worked as a financial services regulator in a range of countries; prior to that he practised as a barrister in the UK.

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Nyamikeh Kyiamah
Nyamikeh Kyiamah is the Commissioner of Insurance at the National Insurance
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