



Actuarial capacity in microinsurance

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The views expressed in this presentation are those of the presenter.

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Agenda

- Context for actuaries in microinsurance
 - What is an actuary?
 - Ways to address supply of actuaries
 - When do you not need an actuary?
 - When might you need an actuary?

- International developments
 - International guidance for supervisors
 - International actuarial developments
 - Proposed microinsurance actuarial course outline



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What is an “actuary”?

- UK
 - Analyst, associate, fellow
 - Education, experience, professional development, code of conduct

- International Actuarial Association
 - 67 full members & 29 associate members

- Developing markets
 - no uniform definition of actuary
 - may be linked to qualifications of IFoA or IAA member or postgraduate university qualification in actuarial studies



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Types of markets for MI purposes

- Developed market (eg UK)
 - MI targets low-income customers
- Developing market with developed market insurance (eg SA)
 - MI targets low-income customers
- Developing market with developing insurance market
 - Need to consider insurance needs of entire market including MI



The supply of actuaries is limited

Region	Country	IAA Status	Number of actuaries
Africa	Ghana	Associate	100 members, 1 fellow, 4 associates, 1200 graduates from local universities
	Cote d'Ivoire	Full	15 members, 9 fellows
	Kenya	Full	17 fellows
	Uganda	Associate	300 members, 0 fellows
Asia	India	Full	8500 members, 260 fellows, 150 associates
	Mongolia	Associate	21 members, 0 fellows
	Philippines	Full	310 members, 69 fellows, 67 associates
	Vietnam	No act association	
Latin America	Brazil	Full	867 fellows
	Colombia	Full	5 fellows
	Peru	Not IAA member	

Source: International Actuarial Association Issues Paper: Addressing the Gap in Actuarial Services in Inclusive Insurance Markets, 2014



Ways to address the supply of actuaries

- National level:
 - training programs in line with international standards
- International level:
 - Actuarial analyst or technician (UK, South Africa)
 - Actuaries Without Borders
 - Training of non-actuaries in actuarial issues
 - Training in microinsurance such as microinsurance course by Frankfurt School of Finance and Management



When do you not need an actuary?

- If actuaries are not present, markets adapt
- Non-actuaries can do pricing, eg credit life products
- Some providers simply follow the leader
- The sum insured may not be material, even for aggregate risks, so simplified approach is possible
- Loss ratio may be small compared to distribution and admin costs so a simple loading can be used
- Reinsurers can provide pricing and underwriting expertise
- Regulator can define products that do not need actuarial certification



When might you need an actuary?

		Product complexity		
		Low	Medium	High
Business complexity	Low			
	Medium			
	High			

- Don't need an actuary
- Might need an actuary
- Need an actuary

Under discussion by IAS-IAA Working Group



When do you need an actuary?

- Regulation requires it
 - Sum insured is high
 - Product complexity is high eg health, index insurance
 - High long term reserving is needed eg annuities, disability, catastrophe
 - Risks are not predictable
 - Operational risk is high, eg fraud, lack of experience, high insolvency risk
- Lack of data doesn't necessarily mean you need an actuary



International guidance for supervisors

Insurance Core Principles	<ul style="list-style-type: none"> • Key elements in a supervisory system for financially sound insurance sector and adequate customer protection
2007 Issues Paper Regulation & Supervision of MI	<ul style="list-style-type: none"> • Intro to MI and prelim analysis of the then ICPs as they relate to MI • Application of ICPs can have a positive or negative impact on MI
2010 Issues Paper Regulation & Supervision of Mutuals etc in MI	<ul style="list-style-type: none"> • Mutuals should be regulated like other insurance providers • Aspects of mutuals differ from commercial insurance eg finite pooling
2012 Application Paper Regulation and Supervision of MI	<ul style="list-style-type: none"> • Barriers – affordability, geography, culture, education • Innovations – product design, coverage and service delivery • Proportionality – nature, scale and complexity of risks
2015 Issues Paper Conduct of Business in MI	<ul style="list-style-type: none"> • Fair treatment of customers • Vulnerability of low-income customers at all stages of insurance process
[2017 Application Paper] Proportionate Prudential Requirements for MI	<ul style="list-style-type: none"> • Will consider supervisory requirements for MI like solvency and actuarial

IAIS = International Association of Insurance Supervisors: www.iaisweb.org
A2i = Access to Insurance Initiative: www.a2i.org



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International actuarial developments

2013 Paper Role of the Actuary	<ul style="list-style-type: none"> • Generic document that can be adapted by member associations • Role of a professional actuarial association and role of IAA
2014 Issues Paper Addressing the Gap in Actuarial Services in MI	<ul style="list-style-type: none"> • Issues regarding actuarial functions in MI markets • Challenges re actuarial resources in MI and recommendations
Actuarial toolkits	<ul style="list-style-type: none"> • Credit life toolkit • Health insurance toolkit by Millman
[2017 Paper] Actuarial Approaches to MI	<ul style="list-style-type: none"> • Framework for determining role of the actuary in MI • Proportionate actuarial approaches to MI • Guidance on supply / demand issues and framework for training ?

- IAA = International Actuarial Association
- IAA Microinsurance Working Group
- IAS-IAA Working Group
- IAA Actuaries Without Borders



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CAA MI proposed course outline

Context	<ul style="list-style-type: none"> • Microinsurance products, features and stakeholders • Role of the actuary in microinsurance, role of regulation and consumer protection • Product development process • Application of actuarial control cycle
Pricing	<ul style="list-style-type: none"> • Steps for pricing a MI product • Pricing issues - data, exclusions, moral hazard, adverse selection and fraud • Pricing applications and toolkits
Implementation	<ul style="list-style-type: none"> • Introducing a MI product to market • Monitoring experience; product and process changes • Intro to financial management – planning, reserving, profitability, solvency

- Notes:
- CAA = Certified Actuarial Analyst (or Actuarial Technician)
 - Optional subject for CAA
 - Assessment by 2 hour exam



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