



# Actuarial Capacity in Microinsurance

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# Goals

- Micro-insurance products can protect low income individuals from risks
- To help maximize coverage with our current actuarial capacity
- Help support micro insurance actuaries by expanding our actuarial and pricing knowledge

# Market Demands

- Life, health, and agriculture
- Pricing out consumers is a major concern
- Trust - new markets may be unsure of insurance products
  - Quick payouts/building relationships

# Actuarial Capacity

- Micro-insurance is growing despite a low number of actuaries
- Risk management skills lead to better consumer outcomes
- Required skills can vary greatly with product types

# Product

- Challenges stem from business issues
  - The biggest difference is a lack of historical data
- Products are similar to traditional insurance in technical skills
- Large administrative expenses compared to traditional insurance
  - Strong distribution system are a major factor in product success
- Micro-insurance is not always high risk

# Berliner's 9 Criteria of Insurability

## Actuarial

- 1) Randomness of loss occurrence
- 2) Maximum possible loss
- 3) Average loss per event
- 4) Loss exposure
- 5) Information asymmetry

## Market

- 6) Insurance premium
- 7) Cover limits

## Societal

- 8) Public policy
- 9) Legal restrictions

# Life

- High insurability
  - Asymmetric information
- Credit life/industrial life model
- World Health Organization's tables

# Vietnam

- Credit life product line that's tied to a microfinance network
  - Additional hospitalization benefit
- Women in rural agricultural areas with avg. household income of \$4.80 USD
- Willingness to pay - 1.2% life/health
- Member's mortality rates 22.7 percent higher than expected



# Health

- Medium insurability
  - Maximum possible loss
  - Asymmetric information
  - Insurance premium

# Health Continued

- Proxy method - Approximate incident rates using a similar population
- Pilot method - Starting and monitoring a new product on a small subpopulation
- Both methods are often combined

# South Asia

- Group insurance product designed for villages in south asia
- First product for most customers and focused on maternity coverage
- Willingness to pay - .357%
- Pilot - sold to 40 percent of target (1,700 families)
  - Smaller groups than expected; more nuclear families

# Agriculture

- Low insurability
  - Randomness of loss occurrence
  - Average loss per event
  - Insurance Premium
  - Loss exposure/Legal restrictions

# Provider Risk

- Insurers must be aware of their own risks
- Experience in designing Micro-insurance products
- Customers' insurance knowledge
- Use of reinsurance

# Toolkit

## IAA-IAIS

	Product feature	Risk weight (%)	Risk score (0, 1, 2, 3 or 4)	Weighted risk score (= risk weight x risk score)
1	Client insurance awareness and product understanding	0%	Not yet completed	0.00
2	Sum insured: amount and predictability	0%	Not yet completed	0.00
3	Insured event: frequency and predictability	0%	Not yet completed	0.00
4	Data: availability, quality and suitability	0%	Not yet completed	0.00
5	Product features: coverage term, deductible, exclusions, waiting period, guarantees, etc.	0%	Not yet completed	0.00
6	Moral hazard and anti-selection	0%	Not yet completed	0.00
7	Fraud potential	0%	Not yet completed	0.00

# Toolkit

<b>Colour code</b>	<b>Technical qualification</b>	<b>Experience requirement</b>
0.01–1.00 = Low risk	Technical insurance skills, not necessarily actuarial	Understands challenges of the specific target market
1.01–2.00 = Moderate risk	Actuarial technician	Understands challenges of the specific target market
2.01–3.00 = Medium risk	Actuarial technician	Experience of the product (or similar products) and understands the challenges of the specific target market
3.01–4.00 = High risk	Qualified actuary (preferably a fellow)	Experience of the product (or similar products) and understands the challenges of the specific target market

# Summary

- Identifying markets using insurability criteria
- Setting up or locating strong distribution systems
- Collecting high quality market data and testing new products
- Reviewing and advising on actuaries on specific government regulations
- Smart use of actuaries and risk management resources
  - Toolkit can be used to help determine the best individuals for each product line
  - Additional webinars available through the IAA and IAIS