

Parallel session 10

The role of the actuary in microinsurance

By Shilpi Nanda

There is a general acceptance in the microinsurance industry that actuaries can add value, but the question is to what extent. Since there is a wide variety of insurance risks, not all tasks require the same level of actuarial expertise. This session discussed how an organisation may determine the type and level of actuarial skills needed for a particular task. It also reviewed regulatory aspects that may apply.

Most developing countries have very few actuaries (see Figure 29). Micro-insurers there often have to hire external consultants, and need to better understand the level of actuarial skills required for a particular task. To deal with such challenges in demand and supply, the IAA (International Actuarial Association) and IAIS (International Association of Insurance Supervisors) have a joint project on inclusive insurance.

The project is producing two complementary papers on proportionate actuarial approaches, with the IAA paper focusing on it from a business perspective, and the IAIS paper from a supervisory perspective. These papers have been developed jointly and are essentially two sides of the same coin.

Figure 29
State of the actuarial profession



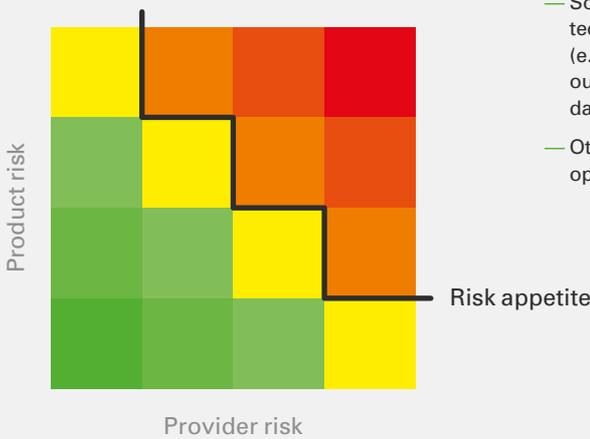
Source: Bowman, Nigel. Presentation "Role of actuaries in microinsurance – The actuarial profession's perspective." 13th International Microinsurance Conference 2017.

Parallel session 10

The role of the actuary in microinsurance

Figure 30
IAA Paper — Conceptual approach

Extent of actuarial involvement depends on two dimensions:



- ▶ Greater risk implies greater actuarial involvement
- ▶ BUT: need to consider underlying causes of risk
 - Some speak to narrow, technical actuarial skills (e.g. variable experience outcomes, lack of historic data)
 - Others speak to wider operational skills

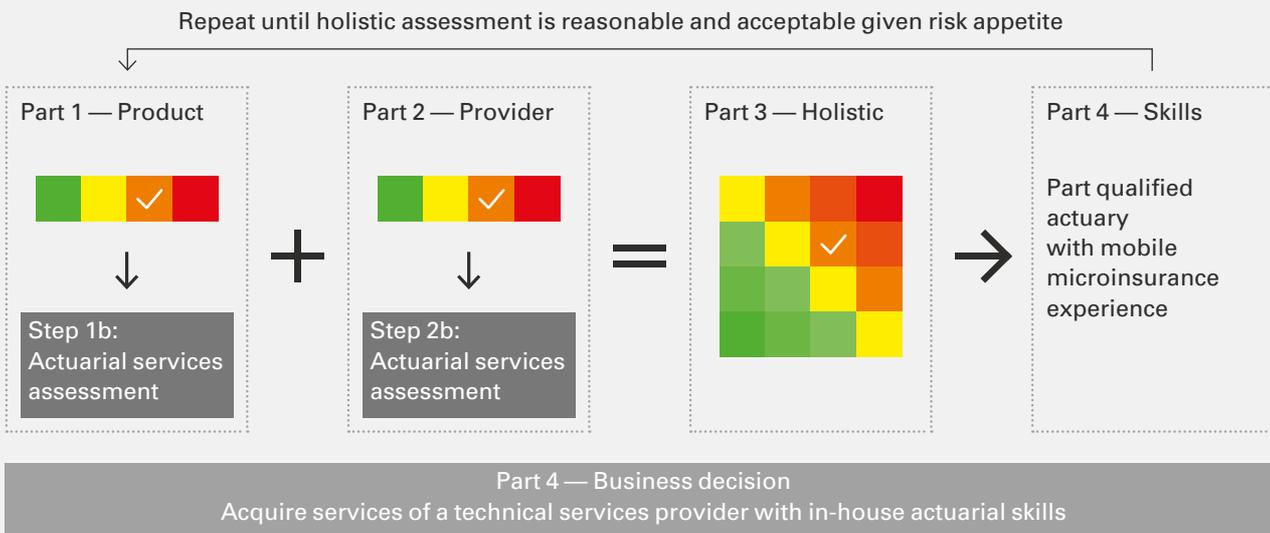
A framework to guide insurers

The IAA paper provides a tool to determine, in an inclusive insurance market, when actuarial services are required and what type of skills are called for. The target audience of this tool are people in the actuarial profession, insurance providers (both formal and informal), and other players in the insurance value chain, e.g., service providers, distributors and NGOs.

At a conceptual level (see Figure 30), and from a business perspective, the actuarial involvement depends on two risk dimensions:

Source: Bowman, Nigel. Presentation "Role of actuaries in Microinsurance – The actuarial profession's perspective." 13th International Microinsurance Conference 2017.

Figure 31
IAA Paper — Example assessment



Source: Bowman, Nigel. Presentation "Role of actuaries in microinsurance – The actuarial profession's perspective." 13th International Microinsurance Conference 2017.

Product risk

These are factors that decide the level of risk within product design, e.g., size of sum assured, propensity for fraud, predictability of claims, and catastrophe risk.

Provider risk

These are factors relating to the provider or the organisation, e.g., financial controls within the organisation, and the ability to understand customers' product and education needs.

Applying these risk parameters within the framework indicates the level of actuarial skills required, e.g., higher risk product categories within organisations exposed to higher operational risks will require a more experienced actuary. It is a structured process that enables the organisation to start measuring where the risk areas are, and allows for the adjustment of product and/or operational parameters to reduce the overall risk down to the level manageable by available actuarial resources.

The product and provider risk assessments involve a number of parameters to each of which the organisation assigns a relative weight and score. Then a holistic risk rating is calculated, which determines the actuarial resources required.

A key thing to watch is the setting of the risk appetite at the start. This is crucial, as there could be the temptation to redefine the risk appetite to suit the risk rating determined by the tool. Judgement is also required to check if the final risk score makes logical sense given the context of the product and organisation.

A framework to guide regulators

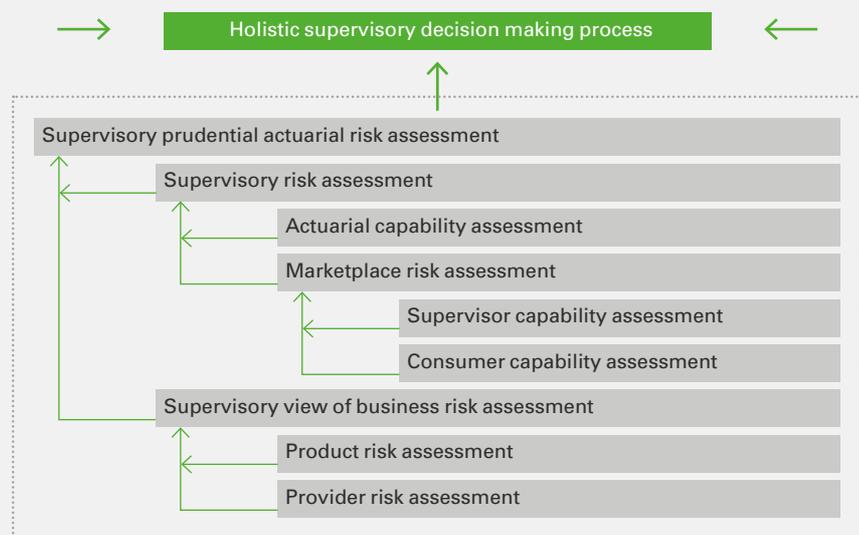
From the regulatory perspective, the IAIS has designed a similar framework that could help decide the level of prudential and actuarial oversight required on a case-by-case basis. The objective is to provide support and understanding to decision-makers about actuarial advice, and promote a dialogue between regulators and providers in the market.

Other input(s) include assessment of marketplace risk, and actuarial capability. A standard heat map is used to allocate scores to each of the risks. The process of calculating a final risk score is an iterative one (see Figure 32).

As in the IAA tool, the setting of the risk appetite is important to determine the level of risk the organisation is comfortable in assuming. This prudential risk assessment leads to a more holistic supervisory decision-making process that is more informed and proportionate in light of the risks.

The point was underscored from the perspective of an experienced actuary who has consulted with several microinsurance practitioners across the world. Governments, regulators, insurers, and donors all play a distinct and crucial role in market development. A good example is in the Philippines, where the government created a steering committee including the governor of the Bank of the Philippines, the insurance regulator and other interested parties. Its mandate was to create a stable rules framework that would enable insurance in low-income sectors to flourish in the country.

**Figure 32
Regulatory framework**



Source: Alves, Maria, and Gribble, Jules. Presentation "The role of the actuary in microinsurance – Update on IAIS Application Paper 'Proportionate Prudential Requirements in Inclusive Insurance Markets'". 13th International Microinsurance Conference 2017.

Parallel session 10

The role of the actuary in microinsurance

A change of thinking may be required on the part of regulators in emerging markets to develop proportionate approaches to regulation. One way is to combine a lower minimum capital requirement with a risk-based approach to capital, which would encourage market participants and enable innovation. Simplified product approval processes are also market-friendly measures that can be considered by regulators.

The responsibility of market development also lies with actuaries who, in the absence of traditional actuarial data, pile margins on premiums, which is not advisable for a developing market with lower levels of insurance coverage.

Lessons learnt

- Scarce actuarial skills in several sub-Saharan African countries make it necessary to hire consulting actuaries who are a cost burden to the insurer and business developers. The IAIS and IAA framework will indicate when actuaries are not required.
- The IAA and IAIS are producing frameworks to guide insurers and regulators in deciding what kind of actuarial skills are required for particular tasks. They determine the degree of actuarial skills needed based on assessments of risk for the product, the provider and the marketplace.
- An appropriate actuarial analysis helps manage pricing, operations and regulatory supervision to keep the levels of risk manageable while ensuring the right client value. However, actuaries are often not required.
- Client value is even more important in inclusive insurance, and supervisors need to ensure the availability and quality of actuarial advice or other capable people for insurers in their regimes.
- A key performance indicator for regulators is to see a greater percentage of the population having microinsurance products. If there is no increase, the regulations are not proportional and should be modified to increase access to microinsurance products.

84 — Maria Augusta de Queiroz Alves, SUSEP, Brazil.

86 — Doubell Chamberlain, Managing Director, Cenfri, South Africa.



84



86

85 — Denis Garand, President, Denis Garand and Associates, Canada.

87 — Nigel Bowman, Chair of Microinsurance Working Group, International Actuarial Association, South Africa.



85



87