Introduction to Microinsurance for Indonesian Actuarial and Risk Management Professionals

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List of Acronyms

ACA	Asuransi Central Asia
BOP	Bottom of the pyramid
CSOs	Civil Society Organizations
GIZ	Deutsche Gesellschaft for Internationale Zuszammenarbeit
IAA	International Actuarial Association
MFIs	Micro Finance Institutions
MI	Microinsurance
OJK	Financial Service Authority (Indonesia)
Rp	Rupiah

Introduction to Microinsurance for Indonesian Actuarial and Risk Management Professionals

The purpose of this paper is to give actuaries and lecturers who teach actuarial science and risk management in Indonesia an introduction to microinsurance (MI). It reviews definitions, key issues and trends in the micoinsurance area as well as highlights some core differences between microinsurance and standard insurance offered by the private sector. It is intended to provide an overview of key issues for private sector companies considering whether they should offer microinsurance products as well for lecturers who would like to include content on this aspect of risk management in university level courses/programs. It also provides a brief summary of recent microinsurance offerings in Indonesia.

The paper covers:

1. Definitions of Microinsurance
2. The Business Case for Microinsurance
3. What Microinsurance Can and Cannot do
4. Success Factors
5. Key Performance Indicators
6. Types of Microinsurance Products
7. Gender Issues to Consider in Microinsurance
8. Implications for Indonesian actuaries, insurance industry and government

1. What is Microinsurance

The Microinsurance Network defines microinsurance as:

> "a mechanism to protect low-income people against risk, such as accident, illness, and natural disasters, in exchange for insurance premium payments tailored to their needs, income and level of risk." (Microninsurance Network: 2018)[1]

Churchill defines it similarly, stating that:

> "Microinsurance is the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved [noting that] this definition is essentially the same as one might use for regular insurance except for the clearly prescribed target market: low-income people." (Churchill, 2006)

[1] http://www.microinsurancenetwork.org Accessed Feb. 22, 2018

Microinsurance essentially provides the same core elements of standard commercial insurance and risk management but with lower premiums and payouts as well as different payment and payout options that take the key characteristics and needs of low-income consumers into account. It also assesses risk in a different context than that of standard commercial insurance and often uses a combination of public-private sector or civil society organizations (CSOs) to deliver the MI products. It is designed:

> "for persons ignored by mainstream commercial and social insurance schemes, persons who have not had access to appropriate products, [and is of particular relevance] … to persons working in the informal economy who do not have access to commercial insurance nor social protection benefits provided by employers directly, or by the government through employers." (Churchill, 2006, p. 13)

Microinsurance refers to the size of the payouts and premium costs as opposed to the size of the risk carrier. There is a wide range of microinsurance providers from the small to very large companies, such AIG Uganda, Delta Life in Bangladesh and all insurance companies in India.[2] MI is also offered by governments, CSOs, and diverse micro-finance institutions (MFIs).

While some people conflate microinsurance with a form of corporate social responsibility note, however, it has its own strong business case and rationale.[3] Offering microinsurance products can be a very profitable venture due to the volume of potential clients – it is thus not a charitable function, but rather a presents the opportunity to be a shrewd business decision which can serve as a win-win for both consumer and the insurance provider.

In their Microinsurance Toolbox, the Deutsche Gesellschaft for Internationale Zuszammenarbeit (GIZ) and Allianz SE also note that it can be challenge to develop a microinsurance definition that works for all markets or countries. In general, there is a need to use a definition that is context-specific. Allianz itself uses the following criteria to determine what it would consider to be MI in different countries:

1. It is possible to apply generally accepted insurance principles to the MI products.
2. The target consumers are in developing countries or emerging markets.
3. Income level of target consumers i.e., if a product is being offered to low-income consumers.[4]

It is common practice to consider the countries on the World Bank's list of low and

[2] Churchill, Craig, 2006, "What is insurance for the poor", cited in Churchill, Craig (ed.), 2006, Protecting the Poor: A microinsurance compendium, Geneva: ILO, p. 12.

[3] GIZ GmbH and Allianz SE, n.d., A Microinsurance Toolbox: Solutions to Challenges, Bonn, GIZ, p. 8

[4] GIZ and Alllianz, op. cit., p. 8

middle-income economies as “emerging markets” for microinsurance purposes. For its own market assessments, Allianz defines low-income consumers as the lowest 60 per cent of a country’s population by income. [5] One could also potentially consider developing microinsurance products for specific low-income groups in higher-income countries but this is not yet commonly done and would require further market analysis to determine if this would be a commercially viable option.

A key difference between consumers of standard commercial insurance and potential and actual MI customers is in how they address risk in their lives and the degree of their vulnerability to risk events. The main challenge for low-income groups is that a risk event can readily lead to individuals and families spiraling downwards into permanent poverty. This is, in part, as the poor have fewer assets and resources to mitigate risk. It is also because poor people often use risk management strategies that, while effective in the short term, can exacerbate their poverty in the long term. These include coping strategies such as: selling assets, pulling children from school, and using business profits to cover short-term emergencies instead of making longer term investments.[6] The poor also may spread financial and human resources across several income-generating activities to mitigate their risks. However, this strategy frequently results in low returns.[7] Microinsurance products and offerings therefore have to take these commonly used risk strategies into account, in addition to people’s ability to pay and often limited levels of financial literacy.

2. Why Offer Microinsurance Products

Social Protection Perspective
Products that extend social protection to the poor in the absence of appropriate government schemes serve to fill a gap in social protection services when governments are either unable to afford to offer these services to all of its population or do not consider it a priority to do so. The groups most commonly in need of these services are those who work in the informal sector. Since their businesses are not formally registered and they generally do not pay taxes they are also often not eligible to participate in existing government or private sector social protection schemes. At the same time, informal sector businesses often operate at a fairly marginal profit level and are particularly vulnerable to risks such as theft, harassment by authorities, and the death or illness of the owner or key employees. Globally the poor dominate in informal sector business ownership.

[5] GIZ and Alllianz, op. cit., p. 8
[6] Banthia, Anjali; Susan Johnson, Michael McCord, and Brandon Mathews. 2009. Microinsurance Paper No. 3 - Microinsurance that Works for Women: Making Gender-Sensitive Microinsurance Programs. Microinsurance Innovation Facility. Geneva: ILO
[7] Churchill, op. cit., p. 12.

Of great significance from a social protection and microinsurance perspective is that currently, more than half the world's population is excluded from any type of social security protection, including contribution-based schemes and tax- financed social benefits.[8] This means approximately 2 billion people are uninsured, with 97% of the poor in the world's 100 poorest countries not having microinsurance.[9] Also of note is that women and girls make up 70% of the world's poorest. Thus a disproportionate amount of the female half of the population experiences the risks and particular vulnerability associated with poverty, with limited options available to them to mitigate these risks.[10]

A 2012 study by Lloyd's puts the total protection gap at USD 168 billion and identifies 17 countries as underinsured, 15 of which are in developing or emerging markets. When the study looked at the non-life insurance gap over time, it also found that over the past 40 years, the shortfall in social protection increased continuously from about 0.02 per cent to 0.13 per cent of global GDP.[11] Thus significant parts of the low-income population in multiple countries do not have access to social protection. Microinsurance can serve to address some of this need and gap.

The establishment or expansion of social protection programs often have to address challenges identified by Deblan and Loewe:

1. Most existing social protection schemes are based on formal employment relationships and contributions shared by employees and employers. These rules are difficult to apply to people who work in informal employment, especially for those who are self-employed or whose informal work is fairly unstable.

2. From an administration perspective, it can be difficult for social insurance organizations to monitor the enrolment of workers in the informal economy, collect their contributions and properly administering their claims.

3. Groups of employees already insured often oppose inclusion of additional groups in social insurance schemes for fear it will have an adverse effect on them, especially when the new groups are poorer on average than they are.[12]

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8 Churchill, op. cit., p. 21

9 http://www.microinsurancenetwork.org/sites/default/files/Microinsurance%20Network_Africa%20landscape%20full%20report-WEB_0.pdf. Accessed Mar 1, 2018.

10 Peebles, Dana, Feb 8, 2018. Microinsurance in International Development, University of Waterloo, PPt presentation.

11 http://www.microinsurancenetwork.org/why-we-do-it

12 Deblon, Yvonne and Markus Loewe, 2012, "The potential of microinsurance for social protection" in: Churchill and Matual (ed.s), 2012. Protecting the Poor: A microinsurance compendium Volume II, Geneva: ILO, pp. 47- 48

A variety of insurance providers have used diverse microinsurance products to overcome these particular challenges. Governments do not always have the flexibility needed to be able to provide some types of social protection to informal sector workers. This is as, in part, as there is a potential conflict with government requirements to formally register a business and pay taxes and the nature of the informal sector that by its very nature operates outside of a regulatory framework. This does not preclude governments from working in partnership with private sector and civil society organizations to provide microinsurance to low-income groups as there are growing numbers of this type of partnership. However, in some contexts it can make it more challenging to do so.

It is also important to understand that MI is a risk mitigation product. It is not designed to reduce poverty but rather to prevent low-income groups from sinking into deeper poverty due to the impact of diverse risk events in their lives. Having access to coverage for these risk events – even with small payouts - gives the poor a more stable footing from which to rebuild the economic aspects of their lives. It can also help the poor make economic decisions that could contribute to their increasing their incomes in the future. For example, it can give them a greater sense of security that it is both possible and prudent to invest in the longer-term prospects of their businesses than might be the case if they are constantly under threat of losing everything due to diverse risks. Having access to this protection also means there is likely to be less demand on government or alternative social protection services, potentially leading to a reduced tax burden for countries with large numbers of low-income people in their population.

Business Perspective

There is also ample evidence that it is possible for private sector, cooperatives, MFIs and CSOs to offer MI products using a business model that is profitable. This is largely due to the potential large volume of customers. Thus while MI premiums are small, when the insurers' risks of having to payout are pooled across a large-scale population group, even a small amount of profit per subscriber can lead to a highly viable and profitable business model for the insurer.

In India, insurance companies are required to allocate a percentage of their insurance portfolio to persons in the "rural and social sectors". Churchill observes that in practice this means low- income households. As a result, all Indian insurance providers have become involved in some aspect of microinsurance and they have had to develop microinsurance innovations that will allow them to both make a profit and provide needed services for low-income groups.[13] These could readily stand as potential effective business models for other insurance providers. There are also multiple other examples of successful MI business models from other countries in Africa, Asia and Latin

[13] Churchill, op. cit., p. 15

America. In general, MI represents huge potential and largely untapped market for insurers to expand their business operations.

Despite this many insurers tend to assume that the low-income market cannot afford insurance.[14] This is not the case. Rather it is a matter of coming up with the right combination of MI products and premiums to meet the needs of both the subscriber and insurance provider. The Microinsurance Network notes that the microinsurance sector is a fast-growing industry that has a potentially untapped market of over 2 billion people worldwide.[15] This represents a huge market opportunity for the companies and organizations that have the vision and adaptability needed to venture into the MI arena.

3. What Microinsurance Can and Cannot Do

While evaluating the impact of microinsurance can be challenging due to the diverse factors that influence economic and related outcomes, a review of 121 diverse evaluations on microionsurance impact by Radermacher, McGowan and Dercon found some evidence that microinsurance can:

Health Outcomes

- Improve policyholders' and beneficiaries' ability to obtain the health benefits covered quickly and cost-effectively which, in turn, can increase service utilization rates potentially leading to better health outcomes.
- Encourage policyholders to use, modern medical providers a opposed to traditional, religious or "quack" healers also potentially leading to better health outcomes.[16]
- Facilitate provision of higher-quality care since microinsurers are sometimes able to negotiate service standards with selected providers in advance. This leads to the placement of customer advocates in hospitals, the building of new facilities and employment of skilled personnel to provide services for their clients' use.
- Improve policyholders' health by increasing their access to care. This can also reduce local disease burdens and thus improve the health of nearby uninsured people.[17] This impact is particularly critical for women since the burden of family health care largely falls upon them.

[14] Churchill, op. cit, p. 20

[15] http://www.microinsurancenetwork.org Accessed Feb. 22, 2018

[16] Noting that some forms of traditional medicine can be quite effective in some contexts.

[17] Radermacher, Ralf, Heidi McGowan and Stefan Dercon, 2012, "What is the impact of microinsurance, in Churchill and Matul (ed.s), op. cit., pp 59 -60

Economic Outcomes

- Encourage households to reallocate money they may have saved for emergencies to other more profitable purposes.
- Make it less risky for low-income farmers to consider planting more most high-value items as opposed to planting a variety of crops that can survive diverse weather conditions as a risk mitigation strategy.
- Limit the duration and financial repercussions associated with potentially long waiting times required to raise funds to seek care when ill when not insured. [18]

Equality and Inclusion

- Address historic, economic, spatial, and gender disparities in the provision of insured goods and services by extending access to members of excluded groups. [19]

Radermacher et al also found that microinsurance potentially had five types of positive spillover effects on the communities where it is offered:

1. **Job creation –** This is as microinsurers need sales people, actuaries, plan administrators, claims adjudicators, premium collectors, IT providers and personnel such as doctors and meteorologists to create, implement and oversee their product range.

2. **Investment -** Premiums collected by microinsurers can be saved or invested either locally in microinsurers' related microcredit activities, or in national and international markets.

3. **Changing local disease burdens –** Highly subscribed health-related plans can reduce local disease burdens and produce potential related behavioural changes among uninsured individuals in the regions where they operate.

4. **Group solidarity –** Because of the emphasis on group solidarity and cooperation, community-based plans are further believed to increase community cohesion.

5. **Financial literacy –** Microinsurance providers and related organizations are thought to increase overall financial literacy and help create an insurance culture in their areas of operation, e.g., through hosting public insurance information events tailored to potentially illiterate low-income people with little formal

[18] Radmacher et al, op. cit, pp 67 - 74

[19] Ibid, pp 67 – 74

education[20] and to help generate greater trust in this type of financial product.

Limitations of Microinsurance

Microinsurance is not always the most appropriate risk management tool in some contexts. Churchill points out, for example, that:

> "for risks that result in small losses, for risks with high predictability of occurring or high frequency of occurrence, savings and emergency loans would be more appropriate risk-managing services [and that] savings and credit are also more flexible than insurance as they can be used for a variety of different risks (and opportunities)." (Churchill, 2006, p. 14)

Traditional and more informal risk management processes at the community may also be more appropriate for small losses as they help maintain social cohesion and may cost the participants in these informal schemes less than more formalized MI premiums. These informal schemes can, however, be less reliable since they are dependent upon the goodwill and motivation of the community participants to mutually support each other to cover each other's small losses. In addition, if there is a risk event that affects more than one member of the informal social protection scheme, the scheme may not have the capacity to provide sufficient support for all of its participants.

4. Success Factors

Given the specific needs and characteristics of low-income groups and their higher risk of increased poverty due to the negative impact of risk events, insurers need to understand the unique parameters of the MI market as well as multiple factors that contribute to successful MI offerings and business models. Garand has identified four main factors that contribute to successfull microinsurance offerings for both provider and subscriber. These include:

1. Efficient, accessible and low-cost distribution systems
2. Affordable quality care
3. Efficient management
4. A good understanding of the overall picture by actuaries and insurance providers.[21]

[20] Radermacher et al, op. cit., pp 80- 81

[21] Garand, Denis, Feb 8, 2018. Microinsurance in International Development, University of Waterloo, PPt presentation.

Distribution Systems
These need to be readily accessible at the community level as well as easy to understand and use, particularly for customers who may have low literacy rates. In recent years, mobile phones have become a popular means of assisting with both distribution and a means of providing consumer education, e.g., by sending verbal as opposed to text messages.

Affordable Quality Care
The premiums have to be set at a level low-income subscribers can afford. Insurance providers also need to take into account what options would work best for particular groups, individuals and communities regarding frequency and means of payments. The services provided also must be set up so that payouts are almost immediate and cover all services promised. Currently, products generally available from insurers are not designed to meet the specific characteristics of the low-income market, particularly the irregular cash flows of households dependent upon the informal economy for their income.[22] In addition, microinsurers should use diverse strategies to make microinsurance more affordable. These can include (but are not restricted to) offering small benefit packages, spreading premium payments over time to correspond with the household's cash flow, supplementing premiums with subsidies from governments[23] as well as linking savings deposits and interest to insurance premiums.

Efficient Management
Given that premiums are small and that there are large numbers of subscribers, to maintain MI offering at a sustainable and/or profitable level, management of microinsurance products needs to be quite efficient. Successful MI product management has to do a delicate dance between providing the more intensive and expensive face-to-face contact often required to initially educate and win the trust of new MI subscribers and finding ways to ensure efficient and less expensive management. This generally requires finding ways to simplify claims and distribution processes as well as using alternative distribution models such as supermarkets and mobile phones.

Churchill also notes that while group insurance is more affordable than individual coverage, it can be challenging to find groups of people in the informal economy. Thus there is a need to work with existing organizations such as women's associations, informal savings groups, cooperatives, small business associations, etc. to help find potential customers in this market. This also can add to the efficient management of MI services.[24]

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[22] Churchill, 2006, op. cit., p. 19
[23] Ibid, p. 23
[24] Ibid, p. 23

Actuary Understanding of Microinsurance

It is important for actuaries to understand both the overall context of microinsurance as well as the specific community and regional level issues that influence the success of MI offerings. This includes understanding the risks and financial realities faced by low-income customers, particularly those who work in the informal sector and what skills and knowledge the product provider needs. Bowman, an actuary with subsatnial expertise in the microinsurance sector, notes that there is generally a low level of contextual knowledge on the part of product providers, particularly when they are coming from a developed country insurance market.[25]

He also has found that there is a tendency for actuaries to take more of a technical than business approach to MI development. However, most challenges in the MI industry are more related to business issues and ensuring that the providers adopt the most appropriate business models. From a technical perspective, it is also important to understand just when and where actuarial skills are required. Some types of technical insurance skills, especially for small scale risks, do not require full scale actuarial services. By keeping this in mind and allocating the right level of technical expertise to a particular type of MI risk assessment , MI providers can also help keep their costs down, thus contributing to efficient management.[26]

The International Actuarial Association (IAA) has launched a project on proportional actuarial services in microinsurance which examines this issue in detail. It is attempting to answer the questions of when actuarial skills are required; what level and type of skills are required; and when the risk involved is operational as opposed to technical. [27] This project is based on the premise that the high cost of actuarial services in and of themselves can sometimes act as a barrier to the growth of MI services, particularly as the supply of actuarial skills may be limited or non-existent in some markets. The project is also examining how to address the fact that regulatory framework and supervisory capacity may be limited in some markets.[28]

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[25] Bowman, Nigel, Feb. 8, 2018, Microinsurance in International Development, University of Waterloo, PPt presentation

[26] Bowman, op. cit.

[27] http://www.munichre-foundation.org/dms/MRS/Documents/Microinsurance/2017_IMC/PS10-IMC2017-Prestentations-Nigel-Bowman/PS10%20IMC2017%20Prestentations%20Nigel%20Bowman.PDF

[28] http://www.munichre-foundation.org/dms/MRS/Documents/Microinsurance/2017_IMC/PS10-IMC2017-Prestentations-Nigel-Bowman/PS10%20IMC2017%20Prestentations%20Nigel%20Bowman.PDF. The key project findings will be published in mid-2018.

Innovation Principles for Bottom of Pyramid Market related to Microinsurance
Churchill has adapted Prahalad's 12 principles of Innovation to bottom of the pyramid (BOP) markets as another means of summarizing key success factors related to microinsurance. Several of these are already addressed above so the summary below addresses the remaining nine principles.

1. Combine advanced technologies with existing infrastructure
By doing this, it is possible to enhance efficiency and productivity, e.g., by experimenting with technologies to enhance distribution and premium payments such as ATMs with biometrics, smartcards, palm pilots and point-of-sale devices and at a slightly lower tech level, the use of mobile phones.

2. Understand scale of operation
With MI, the basis for returns on investment is volume. Even if the per unit profit is minuscule, when multiplied across a huge number of sales, the return can be attractive to shareholders. It is particularly important to ensure that projections of actual claims versus the projected claims in a larger risk pool are estimated fairly accurately to ensure that the product pricing does not have to include a large margin for error. This means insurance providers can make their micro- products more affordable for the poor.

3. Be eco-friendly
Prahalad has observed that all MI innovations must minimize packaging and consider product impact on the environment since the resources associated with products in developed countries would be unsustainable if used for the enormous BOP market.

4. Pay attention to different functionality
Prahalad also notes that products and services for the bottom of the pyramid market cannot just be scaled down or be presented as less expensive versions of traditional products. They need to take the different payout options that might work best with low-income households such as in-kind benefits (e.g., funeral service, groceries, school fees, etc.) possibly spread over a period of time as opposed to lump sum payments.

5. Ensure process innovation
Product designs for the low-income market also need to adapt their distribution processes to take the limited infrastructure typically available for the poor into account. For example, for microinsurance subscribers the premium is not the only expense. There are often indirect costs related to accessing and using that product such as transportation to the payment points or the cost of having a mobile phone.

6. Make significant investments in educating customers
Low-income groups may not be familiar with or trust insurance products. Therefore to succeed it is critical to create consumers in this market through education and awareness- raising, using innovative mechanisms to reach persons who may not have

access to more traditional media or may be illiterate or only semi-literate.

7. Design for hostile conditions

Products and services designed for microinsurance market must take the unsanitary conditions and limited infrastructure often experienced by subscribers into consideration (e.g., electricity blackouts, poor water quality). For MI providers, this involves investing in loss-prevention measures such as promoting low-risk behaviour, water purification and hygiene to help reduce claims for health and life insurance.

8. Look for Alternative Distribution Models

From a microinsurance perspective, companies are particularly weak at distribution as well as are working with a sometimes hard to reach market. To help overcome this challenge, they can collaborate with organizations that already have financial transactions with low-income households. This will allow the insurer to leverage existing organizational and physical infrastructure to reach the poor.

9. Challenge conventional wisdom

An overall observation that insurance providers can apply to all of these principles is to keep in mind that to serve the low-income market, insurers have to think differently – about customers' needs, product design, delivery systems and even business models. Prahalad observes that there is a viable market if insurers are willing to learn about that market and develop new paradigms for serving it effectively.[29]

Deblon and Loewe also observe that commercial insurers often face difficulties in obtaining important information on the risk profile and behaviour of people working in the informal economy and living in informal settlements.[30] It is possible for insurance providers to overcome this challenge by working in partnership with organizations that commonly work in these sectors and have more in-depth knowledge of their living conditions and characteristics as well as have often developed ongoing trust relationships in these sectors and communities.

Esser outlines several additional factors and actions that contribute to successful microinsurance offerings. These include:

- Learning more about what clients want by spending more time in the field and "less in the boardroom". This could include insurers, reinsurers, aggregators, etc. going out to test out their products, e.g., by travelling to branches by public transport, buying a policy, and trying to make a claim to get a better understanding of the hurdles faced by low-income households and why their offerings are not being taken advantage of.
- Communicating beyond sales as face-to-face interaction with low-income clients is crucial both at the point-of-sale and when a customer has already signed up. Word-

[29] Churchill, op. cit., pp. 12- 13

[30] Deblon and Loewe, op. cit., p. 48

of-mouth is extremely powerful in the close-knit communities microinsurance targets and if insurers can provide a personal face-to-face service this could translate into satisfied customers driving awareness and up-take through their positive experiences.
- Use a combination of fixed and mobile branches. Physical branches in busy shopping malls and popular hubs are important for branding and to raise an insurer's profile. But building these structures might not make economic sense if the consumer base is low and insurers cannot cover their costs. For example, mobile branches and stations can be positioned near taxi ranks or markets to interact with people who would usually not pass by the physical branch. [31]

5. Key Performance Indicators

Garand has identified a series of key performance indicators towards which MI providers can strive to help ensure the success of their business model(s). These include the following:

Indicator	Calculation	Standard
Net income ratio	Net income / Earned premium	Not more than 10% of subscriber income
Incurred Claims Ratio	Amount of Claims paid + Reserve changes / Earned premium	65%, but not more than 80%
Incurred Expense Ratio (including commissions)	Operating Expenses / Earned Premium	Less than 25%
Renewal Rate	# of Renewals / # of Potential renewals	More than 85%
Coverage Rate	# of Active Insured / Size of Target Population	More than 10%
Growth Ratio	# of Policies (t) / # of Policies (t-1)	No target – depends on what the organization can support

[31] Esser, Antonia, 14 October 2016 - http://www.microinsurancenetwork.org/community/blog/insights-and-perspectives/7-things-i-learned-min-field-trip-and-workshop

Indicator	Calculation	Standard
Promptness of Claim Settlement	Measure in # of days	15 days max, less time the better
Claims Rejection Ratio	# of claims rejected / # of claims in sample	No target – gives information of product and processes
Solvency Ratio	Admitted Assets / Liabilities	>110%, but <250%
Liquidity Ratio	Cash (or equivalent) / Short Term Liabilities	>100% (not too much bigger)
Source: Denis Garand and Associates training materials, John Wipf, Denis Garand, *"Performance Indicators for Microinsurance: A Handbook for Microinsurance Practitioners"* (Oct 2010), Wipf, Garand and ADA		

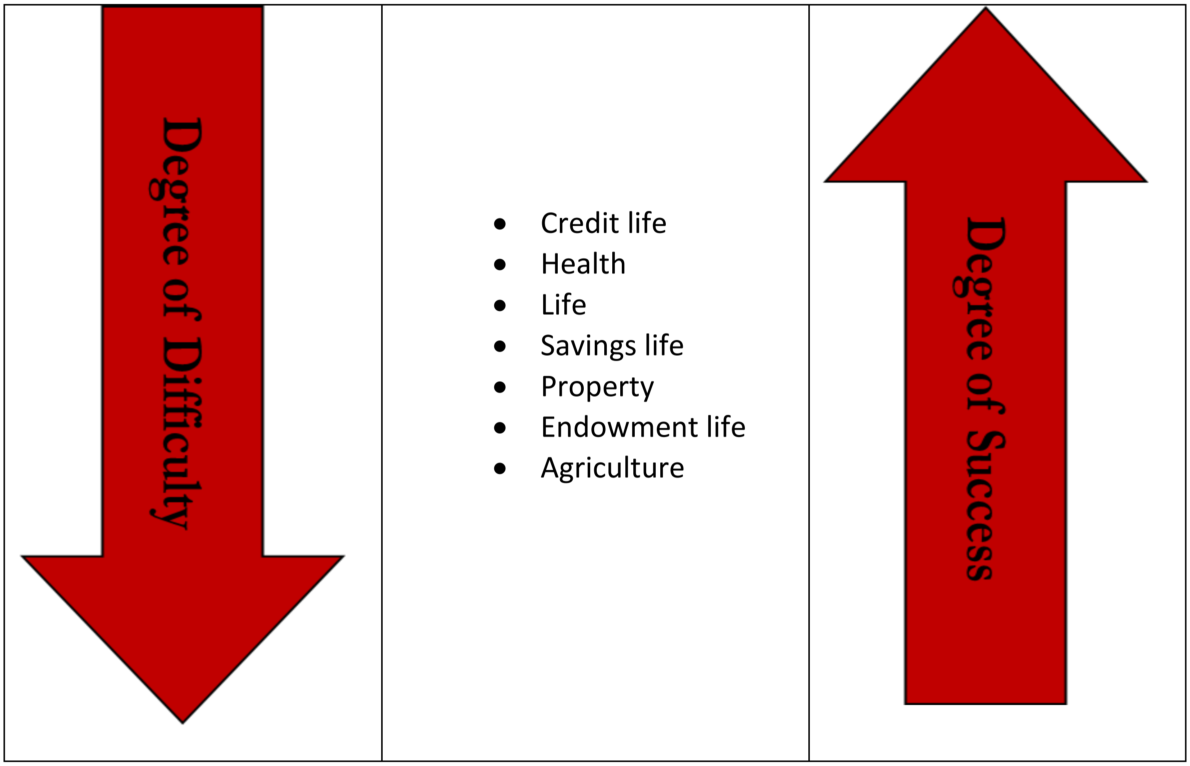
Garand's experience has been that organizations that use these benchmarks to make changes have superior results. This is, in part, because keeping these performance indicators in mind helps them focus on key issues on which insurance providers need to take action. It also facilitates the benchmarking of their operations against other organizations and firms working in the sector as well as provides them with a checklist to see where they need to make improvements.[32]

6. Types of Microinsurance Products

It is possible to offer the same categories of insurance within a microinsurance context as with standard insurance. However, there are often different distribution, risk, payout and premium factors insurance providers need to take into account. In addition, some insurance categories present greater challenges. Garand's chart below summarizes the degree of difficulty of offering some categories of micro-insurance juxtaposed against the degree of success generally experienced in these offerings. The top three categories in terms of success and least difficulty are those of credit life, health insurance and general life insurance. Deblon and Loewe also indicate that disability microinsurance generally does not present too many problems.[33] In general, life and health insurance are the two types of microinsurance most in demand from low-income consumers.

[32] Garand, 2018, op. cit.

[33] Deblon and Loewe, op. cit., p. 51



Source: Garand, Denis, Feb 8, 2018, Microinsurance in International Development, University of Waterloo, PPt presentation

6.1 Credit Life

Credit life is generally a mandatory condition for low-income borrowers who take out micro-loans from MFIs. Feedback from credit life consumers included the fact that some borrowers would prefer this option to be voluntary. While this does present greater challenges for the lending institutions, there are some successful examples of MFIs that have been able to make voluntary credit life work. However, in general, as a business practice linking the two together has been more financially viable for the MFIs concerned and also constitutes less risk to the borrowers.

There are however, still some common challenges with credit life. Wipf, Kelly and McCord have identified these as including the following:

- Financial value to clients is often poor, especially for cooperative-based programmes. Cooperative-based credit life tends to have limited competition as well as a policy of building up surplus and contingency reserves without necessarily infusing external funds. There is also a lack of focus on providing financial value as opposed to just risk coverage and often cautious overpricing due to a lack of actuarial expertise.
- The involvement of multiple parties such as lender, broker, insurer and reinsurer,

can also add inefficiencies to credit life products.

- There are also often constraints on expanding credit life products to meet customer demand for this option, such as limited technical capacity, financial capacity, management requirements, an unclear business case and price sensitivity in the market. [34]

6.2 Health Insurance

Health microinsurance is often linked with microloans. This is as health issues tend to be the largest risk factor leading to loan payment defaults.[35] Thus including a mandatory health and life insurance requirment as a loan condition is one means for a microfinance institution to protect itself from losses. At the same time, it protects the borrower from the risk of not being able to pay back their loan due to related risk events.

In developing countries, illness is also cited more often than job loss as the main cause of poverty.[36] Therefore having access to health microinsurance is an important poverty reduction mechanism. It reduces out-of- pocket health expenses, especially for catastrophic health events, and improves access to quality health care for those who are insured.[37] Where there are significant groupings of subscribers, it can also lead to improved quality of the actual health services provided.

Designing health microinsurance, however, is a more complex process than for other insurance products that are based on fairly straightforward processes for compensating loss. This is as health microinsurance is about service delivery. This makes it difficult to control demand and ensure appropriate delivery of services. In addition, healthcare services covered by insurance are generally delivered by third party health-care providers. This leaves these processes vulnerable some degree of risk of fraud and irrational pricing to maximize revenue. [38]

Leatherman, Christensen and Holtz have also identified several other challenges associated with health microinsurance:

- Most health products cover catastrophic risks that occur with low frequency and

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[34] Wipf, John, Eamon Kelly and Michael J. McCord, 2012, Improving credit life microinsurance, in Churchill and Matul (ed.s), op. cit, pp 215- 216.

[35] Garand, op. cit.

[36] Leatherman, Sheila, Lisa Jones Christensen and Jeanna Holtz, 2012, Innovations and Barrier in Microinsurance, in Churchill and Matul (ed.s), op. cit, p. 112

[37] Leatherman et al, op. cit., p. 112

[38] Ibid, pp. 113-114, p. 116

are often unpredictable - this results in a need for high-cost services. As these catastrophic events are more easily insured than routine healthcare needs insurers have tended to design in-patient-only cover and not offer insurance for more day-to-day health costs.

- However, HMI programmes struggle to reach sustainable membership for the higher value in-patient policies, in part, as the poor perceive more value in cover for high-frequency, predictable and low-cost services.
- The extreme poor often cannot afford even microinsurance premiums and therefore are not being reached by these services. However, in India, SEWA has worked to get around this problem for it low-income clients by offering a special loan program just for health microinsurance.[39]
- Health microinsurance generally refunds the costs of medical treatment to policyholders, irrespective of their income or assets. This means that for any given indemnification package the insurer expects to spend on average the same amount on the benefits provided to all policyholders. Consequently, the insurer cannot readily sell the package to low-income clients at a lower price than that they offer for high-income clients. Alternatively they may only be able to offer low-income clients smaller packages that do not cover certain illnesses, exclude expensive medical treatments or are restricted to a limited maximum annual amount.[40] This makes the value of the health microinsurance less for low-income subscribers.

Deblon and Loewe also note that some health microinsurance schemes require patients to pay cash when they receive healthcare services and then submit the receipts to the insurer for reimbursement. Low-income households sometimes need to borrow the initial payment funds from family, friends or moneylenders while still running the risk that the insurer might reject their claim. It is possible, however, to get around this challenge by setting up a third-party payment mechanism with selected service providers.[41] Nevertheless factors such as these and those identified above can all make health microinsurance offerings less attractive to potential low-income consumers.

6.3 Savings Life

Rusconi notes that for low-income families adding an insurance component to their

[39] Leatherman et al, op. cit.,

[40] Deblon and Loewe, op. cit., p. 51

[41] LeRoy, Pascale and Jeanna Holtz, "Third party payment mechanisms in health microinsurance", in Churchill and Matul (ed.s), op. cit., p. 132

existing saving mechanisms and strategies usually means that their savings has to done on a regular pre-determined basis over an extended period. While these payments can represent a heavy financial burden for the poor, they do help families deal with more catastrophic life events such as the death of a family breadwinner.[42]

Savings life also addresses the reservation many low-income consumers have about about insurance products not building value for them over time if they do make any related claims. This is a particular concern with regard to other microinsurance products such as such as term life or property insurance. At the same time, standard savings life endowment products generally provide poor value to customers compared to other saving options, due in part to high commissions paid to agents. Other challenges Rusconi has observed are that because of their irregular cash-flows, low-income customers may have difficulty paying regular premiums in a consistent way. This can lead to a low surrender value of the product. [43]

To be effective savings life microinsurance providers thus need to ensure that they can offer flexible payment options. As with other forms of microinsurance, they also need to ensure that the insurance distribution and payment processes have a simple and readily accessible design.[44]

6. 4 Agriculture Microinsurance

With the increase in extreme weather events and related natural disasters associated with climate change and variability, there is also an increasing need to develop crop, livestock and farm property insurance designed specifically to protect the smallholders who make up the majority of the world's farmers (noting that depending upon the region, between 40 and 30% of smallholders are women). Agriculture microinsurance, however, is even more complex in nature than health microinsurance.

The Microinsurance Network obsserves that agricultural insurance has great potential to provide value to low-income farmers and their communities by protecting farmers when shocks occur and by encouraging greater investment in crops. However, it also notes that, in practice, its effectiveness has often been hampered by the difficulty of designing good products and by demand constraints.[45] Unlike other microinsurance products, instead of indemnifying policyholders for actual losses it is more common for agricultural microinsurance to be index-based. This provides farmers with payouts tied

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[42] Rob Rusconi, 2012, "Savings in microinsurance: lessons from India", in Churchill and Matul (ed.s), op. cit., pp. 176-177

[43] Rusconi, op. cit., p. 177

[44] Ibid, p. 196

[45] http://www.microinsurancenetwork.org/microinsurance/key-concepts/agricultural-insurance. Accessed March 6, 2018

to the performance of an index (such as a rainfall gauge), rather than indemnifying them for crop losses actually experienced. This has the advantages of both helping limit fraud and means that farmers can avoid the need for costly and often difficult verification of damage.[46]

Adding to this complexity, Müller, Ramm, and Steinmann posit that for index insurance to develop its full short-term potential related to small-holder farming, the following preconditions have to be in place to address the diverse constraints smallholders face:

- Credit institutions are in place that can extend agricultural credit
- Availability of quality farm inputs and relevant farming know-how
- Ideally also availability of formal savings opportunities to allow individuals to gradually build up assets and a financial buffer beyond insurance
- A long-term development plan with policies and programming for smallholders that address issues related to land property rights, national and international trade policies, the provision of quality health care, and an improved infrastructure to facilitate smallholders storing their harvest and bringing it to markets at times when prices are high.[47]

Agricultural microinsurance does, however, address two main constraints affecting smallholders, that of limited access to means of production and income uncertainty. Agriculture microinsurance serves to directly reduce uncertainty and Müller et al note that suppliers are more likely to be willing to provide increased access to collateral on credit if the smallholder has insurance as a form of collateral. [48]

Sandmark, Debar, and Tatin-Jaleran have identified several key lessons learned from existing MI offerings that apply specifically to agriculture microinsurance. These include that:

- It takes time to build well-functioning, actuarially-sound crop insurance systems, and governments have a crucial role to play in creating an environment favourable to agricultural insurance
- Substantial premium subsidies and public reinsurance may be needed to reduce premium cost and attract a large number of farmers, at least to help start the system, but there are clearly some challenges with this approach
- It is a sound policy to encourage farmers to insure instead of relying on ex-post calamity funds, but not all risks and commodities are insurable
- Area-based yield insurance represents a compromise between weather index insurance and indemnity-based crop insurance

[46] http://www.microinsurancenetwork.org/microinsurance/key-concepts/agricultural-insurance. Accessed March 6, 2018

[47] Müller, Silvia, Gaby Ramm, and Roland Steinmann, 2014, Agriculture, Microinsurance, and Rural Development - A thematic paper, Luxembourg, Microinsurance Network, p. 39

[48] Müller et al, op. cit. p 39.

- There is a need to increase the role of farmers' organisations in the conception, management, and distribution of crop insurance.[49]

All this being said, despite the complexities and challenges identified above, there is both a clear and growing need for agriculture microinsurance and great potential to both expand market coverage and profits in this sector as well as to make a genuine contribution to poverty reduction among smallholders.

7. Gender Issues to Consider in Microinsurance

One objective of microinsurance offerings of civil society organizations, MFIs and governments is to use these insurance products to contribute to increased equality for specific low-income groups that might otherwise be excluded from diverse types of social protection. However, as indicated previously it is also possible for commercial insurance providers to also work towards greater inclusion equality while still maintaining a profitable business. Within this context an important market segment for microinsurance is women. To be effective in capturing and serving this market however, there are multiple gender issues that insurance providers need to be take into account. These include developing an understanding of both the specific vulnerabilities and risks poor women face and their specific insurance needs.

Banthia, McCord, Johnson and Mathews have identified the following women-specific risks that insurance providers need to understand in order to develop appropriate microinsurance products:

1. Women are over-represented among the world's poor, comprising 70% of the poor. This is due in part due to their having lower incomes than men generally and less ownership and control of property. It also means that they have fewer assests they can use to address the costs of risk events when they happen.

2. Due to pregnancy and childbirth women face highly specific health risks, many of which are not covered by existing microinsurance programs. They are also more vulnerable to some types of disease, most notably HIV/AIDS.

[49] Sandmark, Thérèse, Jean-Christophe Debar, and Clémence Tatin-Jaleran, 2013, The Emergence and Development of Agriculture Microinsurance, Luxembourg, Microinsurance Network, GIZ, Federal Ministry for Economic Cooperation and Development (Germany), Future-Makers, pp 61- 62

3. Women generally live longer than men. This can lead to long years of increased poverty due to the loss of spousal income or relatives appropriating their property once they become widows in some regions and cultures. [50]

4. Larger numbers of women work in the informal sector than men. In addition to the risks associated with informal sector noted previously informal sector workers are also more likely to work in unsafe conditions than in the formal sector. Women also face particular risks of sexual harassment and assault and often can count on little or no protection from authorities.[51]

Women also make a large proportion of the worlds farmers and smallholders. However, female farmers face increased risk of praedial larceny (crop theft) than men. In addition, compared to male farmers in some parts of the world more women farmers also work on land that has less secure tenure, is smaller, and of poorer quality with regard to irrigation, drainage, fertility and location. More women than men also have to lease as opposed to owning their land. In general, farming is also more expensive for women farmers as they have to hire more labour because of the difference in physical strength between men and women and for security reasons.[52]

In addition, women are more vulnerable to **gender-based violence** – either domestic violence within the home or sexual assault (either within the home or in public spaces). This leads to a loss of both short and long term productivity and income, with women losing work time due to both physical and psychological injuries.

Exacerbation of **natural disasters** due to climate change is also increasing women's risk of injury or death from these events. While both sexes are affected by natural disasters multiple studies show that in many cases, women and children are more vulnerable to the resulting injury or death, with women, boys and girls being 14 times more likely than men to die during a disaster.[53]

Women generally play key roles in managing risk and resources for their families and Banthia et al observe that this and women's role as primary family caregivers makes them a "natural target segment" for insurance companies. Women are especially

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[50] Banthia et al, op. cit.

[51] Kartini International, 2018, Evaulation of She Can Project, London: ActionAid

[52] Kartini International, 2012, Gender and Youth Strategies for PROPEL Project Implementation Plan. Ottawa: Canadian Hunger Foundation

[53] Peterson. 2007. Cited in: Cited in: Disaster and Gender Statistics – Fact Sheet. IUCN. http://www.unisdr.org/files/48152_disasterandgenderstatistics.pdf

interested in microinsurance and savings strategies because they generally have the main responsibility for:

> "dealing with urgent household shocks, such as the health care needs of children, losses to family income due to a spouse's ill-health or death or ensuring the future of their children in the event of their own death". (Banthia et al, 2009)

The ILO Insurance Innovation Facility Paper No. 3 also notes that women have characteristics that may make them more attractive to formal insurers. This includes the fact that women are less mobile than men and thus more stable clients and that wpmen are more likely to be more reliable in making regular payments.[54] A 2009 World Bank Group study by D'Espalier, Guérin and Mersland that reviewed the experience of 350 Microfinance Institutions in 70 countries confirmed this overall pattern of women's reliability. The study found that **having "*more women clients is associated with lower portfolio-at-risk, lower write-offs, and lower credit-loss provisions (other things being equal)*"***.* These findings confirm the common perception that women in general are a better credit-risk for MFIs.[55] This reliability, in turn, would also be highly likely to apply to payment of associated microinsurance premiums.

7.1 Key Microinsurance Challenges Women Face

Feedback from poor women that microinsurance providers also need to consider include:

1. Some insurers do not provide coverage for pregnancy-related costs. This is despite the fact that the World Health Organization reports that:
    - Every day, approximately 830 women die from preventable causes related to pregnancy and childbirth
    - Maternal mortality is higher in women living in rural areas and among poorer communities (i.e., precisely the women who need increased access to micro health insurance policies)
    - Skilled care before, during and after childbirth can save the lives of women and newborn babies.[56] These services become more readily available with the extension of microinsurance to cover pregnancy and childbirth.

[54] Ahmed, Mosleh; Gabriele Ramm. 2006. "Meeting the Special Needs of Women and Children". In Churchill (ed.). 2006, op. cit.

[55] D'Espalier, Bert; Isabelle Guérin, and Roy Mersland,. 2009. Women and Repayment in Finance. https://www.microfinancegateway.org/sites/default/files/mfg-en-paper-women-and-repayment-in-microfinance-mar-2009_0.pdf

[56] WHO. 2016. Maternal Mortality Fact Sheet. http://www.who.int/mediacentre/factsheets/fs348/en/

2. Currently many microinsurance products are available mainly through microfinance institutions. These consist primarily of life and health insurance policies tied to micro-loans. Poor women involved in these microinsurance schemes have indicated that they would like to have access to these life and health insurance policies even after their loans are paid and also to be able to pay a higher premium that would allow them to ensure that all their family members are covered and not just themselves as the individual holders of the loan.[57]

3. Some poor women also have concerns that their spouses would not necessarily give priority to using life insurance payouts to cover critical costs for their children's welfare such as school fees. For this reason, they would like to have microinsurance products that include diverse payout options such as either staggered payouts over several years or with direct payments going to cover school fees or other core expenses for their children or to a nominated beneficiary of their choice (i.e., with beneficiaries not automatically being their spouses). [58]

Considering gender issues and the different priorities and needs of male and female subscribers is just one of the many highly contextual factors that insurance providers need to take into account when developing effective microinsurance products.

8. Microinsurance in Indonesia

There is growing interest in Indonesia as a potential market for microinsurance with several large companies having launched microinsurance offerings in the country in recent years. This interest is based both on the viability of microinsurance as a profitable business model and given Indonesia's large population. Indonesia is the fourth most populous country in the world, with over 250 million people.[59] A World Bank survey in 2009 also revealed that 32 per cent of Indonesians (± 70 million) do not have adequate saving nor insurance to protect against risk. In the third quarter of 2015, the number of policyholders in Indonesia was only 73 million (16 million individual policyholders and 57 group insurance).[60] Thus just under 30 per cent of the population is covered by insurance.

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[57] Banthia et al. 2009a. op. cit.

[58] Ahmed and Ramm, op. Cit.

[59] https://www.insurancebusinessmag.com/asia/news/breaking-news/allianz-life-indonesia-launches-microinsurance-product-50082.aspx Accessed March 9, 2018

[60] Moch. Muchlasin, Director Sharia Non-Bank Financial Institutions, 2015, Protecting the Growing Seeds: the Role of Microinsurance and Microtakaful in Indonesia, Otoritas Jasa Keuangan, PPt Presentation

Recognizing this gap, the Financial Service Authority (OJK) rolled out its Grand Design/blueprint for Microinsurance in 2013.[61] This included guidelines regarding premium price and benefit limits and stipulates that the price of a micro-insurance premium must not exceed Rp 50,000 (US$4.4) and its benefits may not surpass Rp 50 million per customer.[62] There was a need for these guidelines as prior to this in Indonesia microinsurance was governed by the same laws and rules as traditional insurance.[63]

Since 2013, several large-scale private sector insurance providers have entered the Indonesian microinsurance market. This includes both Allianz and Tapp. In July 2015, Tapp Commerce launched its Tapp Market microinsurance products. They set up this insurance offering so that anyone can become a mobile 'point of sales' if they have a phone and can make a small deposit. The process has been structured so that can store value online and conduct safe transactions through their mobile phones. Tapp then uses middlemen in the market to collect cash for the products and services transacted. To assist them with this process and market, as of February 2016, Tapp Commerce appointed PT ACE Jaya Proteksi, a Chubb Company, as its sole insurance partner to provide microinsurance products to its customers in Indonesia.[64]

Allianz is also making its microinsurance policies available by using mobile technology and local markets/stores as locations to facilitate its sales. For example, Allianz is selling accidental death and dismemberment policies in Alfamart (the Indonesian supermarket chain). Under this offering, for Rp25,000 (around $2.80 USD), the buyer receives a one-year insurance policy that pays Rp25,000,000 (around $2,800 USD) in the event of death or a certain percentage for a body part dismemberment. To obtain a policy subscribers only have send a text message with their name, Indonesian ID #, birthdate, and number on the Insurance card provided by the supermarket. Allianz then sends a text with a few minutes to confirm that the policy will be activated within 24 hours and provided a a 24-hour support number for assistance related to claims.[65] Currently, Asuransi Allianz Life also has a 5.4 million customer base and its MI product *Payung Keluarga* credit-life generated USD 2.9 million in gross written premium in 2016.[66]

Asuransi Central Asia (ACA) also provides a unique microinsurance offering in Indonesia that covers the medical costs associated with dengue fever, which affects millions of

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[61] Thorton, Nick, March 30, 2015, "Salience of Microinsurance in Indonesia", Jakarta Post. Jakarta
[62] Sipahutar, Tassia, October 13, 2013, "OJK launches microinsurance blueprint", Jakarta Post. Jakarta
[63] Young, Laurie, KF16, Indonesia, Microinsurance in Indonesia: Current Challenges and Innovations, https://www.kiva.org/blog/microinsurance-in-indonesia-current-challenges-and-innovations Accessed March 9, 2018
[64] TappTeam News, March 17, 2016, Tapp launches microinsurance in Indonesia http://tappcommerce.com/news/tapp-launches-microinsurance-indonesia-markets-follow/
[65] Young, op. cit.
[66] http://www.microinsurancenetwork.org/country/indonesia-0 Accessed March 9, 2018

people each year. Premiums range from 10,000Rp to 50,000Rp (around $1.10-$5.60USD) with benefits of Rp 1,000,000 to Rp2,000,000 (around $110-$220USD).[67] People can either purchase it directly at an ACA branch or through agents including at Post Offices, supermarket chains and convenience stores. When they buy the policy, the consumer receives a credit-card sized policy and small information booklet which they can then activate through their mobile phone. To make the product user-friendly and accessible, ACA has designed the claims process to be as simple as possible. To make a claim the client can call the ACA 24-hour Hotline or send an SMS. They then only have to send three documents to obtain their payment: a certificate from doctor stating the insurance participant was diagnosed with dengue fever, the lab results of blood test, and evidence of identity such as a copy of ID card.[68] ACA also provides coverage for agriculture microinsurance in Indonesia.

The key to the success of these diverse microinsurance policies are affordable premiums along with simple and easy to use processes for both policy purchases and claims. Currently, ACA sets its average micro-insurance product price at Rp20,000 each (USD 1.40),[69] while Allianz's average price tag is between Rp8,000 and Rp9,000 (56 and 63 cents respectively).[70] Policies from Asuransi Jiwa Life, which just entered the microinsurance market in 2017, cost Rp6,250 (46 cents) a month for one year of coverage and payouts up to Rp20 million (USD 1,410) if the policyholder dies and Rp300,000 (USD21) in case of surgery.[71]

Even this brief survey demonstrates that there is both a large potential market and need for microinsurance in Indonesia and that credible private sector insurance companies have recognized this fact and are working actively to capture this market.

9. Implications for Indonesian Actuaries, Academics Insurance Industry and Government

The overview this paper provides raises several key questions for the different groups of professionals that work in the actuarial science and risk management sector. These questions include:

For Government:

1. What percentage of the population and which low-income groups do not have access to existing government-based social protection programs?

[67] Exchange rates provided in article but no date included.

[68] Young, op. cit.

[69] Exchange rates used in this paragraph based on rate available on March 13, 2018 of Rp1 = .00007 USD

[70] Sipahutar, op. cit.

[71] Nikkei Asian Review, October 20, 2017, “Indonesia’s Sequis Life joins microinsurance game”, https://asia.nikkei.com/Business/Companies/Indonesia-s-Sequis-Life-joins-microinsurance-game

2. What percentage of these groups are women or other commonly excluded or marginalized groups?

3. Which groups and types of social protection is it not possible for the Indonesian government to provide given the current regulatory frameworks for businesses, insurance, etc. in the country, e.g., can informal sector workers be covered if they have not registered their businesses?

4. How could the government partner with CSOs and the private sector to broaden social protection through microinsurance products to the more vulnerable parts of the population and to low-income households?

Academics

1. Do existing curriculum and post-secondary level courses include the teaching of key information and issues related to microinsurance?

2. What would post-secondary courses on microinsurance need to include as core content to serve as an effective means of training future actuaries and risk managers?

3. What are the key gaps in terms of research and statistics related to microinsurance in Indonesia and how could Indonesian academics work to fill these gaps?

Actuaries

1. What kind of training would Indoneisan actuaries need to become well informed about the differences between standard and microinsurance?

2. Which organizations could offer this type of training?

Private Sector Insurance Companies

1. Which civil society organizations could private sector insurance companies partner with to both understand the microinsurance better and to help ensure a wider and more inclusive reach for insurance products?

2. Have the existing microinsurance offerings of private sector insurance companies in Indonesia taken gender issues into consideration in their development, marketing, premiums and payout processes and options?

3. There is still considerable room for the offering of agriculture microinsurance in Indonesia. Is this an area of potential market expansion different insurance companies in Indonesia are considering or actively seeking?

4. What kind of training do private sector insurance company personnel need to be able to develop and deliver effective microinsurance that is both profitable and highly responsive to the needs of and risks faced by low-income Indonesians?

10. Additional resources

Identified by Denis Garand[72]:

1. Access to Insurance Initiative: www.access-to-insurance.org

2. Microinsurance Network: www.microinsurancenetwork.org

3. ILO Microinsurance Innovation Facility: www.ilo.org/microinsurance

4. Munich Re Foundation: www.munichre-foundation.org

5. MicroInsurance Center: www.microinsurancecentre.org

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