Malaysian Insurance Highlights 2024

Malaysia's Insurance Industry in a Rapidly Evolving Risk Landscape

Prepared by

faber

SUBSTANCE IS OUR STRENGTH

Exclusive Partner

Exclusive Partner

Supporting Organisations

Prepared by

faber

SUBSTANCE IS
OUR STRENGTH

For more information, please visit:
www.faberconsulting.ch

Malaysian Insurance Highlights

For more information about the report, please contact:
Faber Consulting AG
Zollikerstr. 19
CH-8008 Zurich
Switzerland
Telephone: +41 44 256 10 80
info@faberconsulting.ch
www.faberconsulting.ch

To download a soft copy of the report, please visit:
https://faberconsulting.ch/pulse-reports.html

© 2024 Faber Consulting AG

All rights reserved. No part of this publication may be reproduced, republished, uploaded, posted, framed, modified, sold, transmitted or otherwise distributed in any way, without the prior written permission of the publisher.

Disclaimer: The published views expressed by the executives participating in this research are not necessarily those of their respective organisations.

Cover photo: Getty Images

Contents

Foreword Malaysian Re 4

Foreword Faber Consulting 5

Introduction 6

Climate change tests the limits of insurability of climate-related risks 7

Climate change and catastrophe risk modelling 14
An Interview with Dr. Steffi Uhlemann-Elmer,
Director Product Management, Moody's RMS

Insurance products for the poor 19

Inclusive and simple 24
An interview with Mohd Radzuan Mohamed,
CEO, Malaysian Takaful Association (MTA)

Expanding and improving formal insurance coverage in Malaysia 27

Overcoming underinsurance 34
An interview with Ravinder Singh, Co-Founder &
Chief of Commercial & Product Officer at AQM Technologies

Changing consumer demand 36

Foreword Malaysian Re

According to the Global Risk Report, a survey issued annual by the World Economic Forum (WEF), societies and institutions around the globe see themselves increasingly confronted by risks which are beyond their control and which they cannot manage themselves. Since these risks or sometimes crises – the change in climate, pandemics, inflation, rising geo-political tensions and often enough also a loss in societal cohesion – often coincide, we speak of a polycrisis, which people perceive as quite unsettling.

Malaysia has been affected by these crises too – be it the pandemic, the December 2021 flooding or a rise in inflation. These events have contributed to shaping the attitude of Malaysia´s consumers, corporations and institutions, as well as the government and Bank Negara Malaysia. Awareness of the benefits of insurance has risen among consumers and corporations, for risks in property and casualty, as well as in life and health. Equally, the government – and with it the regulator – have recognised that insurance is in many cases the most efficient form of protection. In addition, policymakers acknowledge that they can encourage the uptake of insurance through subsidies. However, they are unable to shoulder and finance the protection of their people out of their budgets alone.

This year´s edition of Malaysian Insurance Highlights focuses on how the changed risk landscape alters Malaysia´s insurance market, in particular in personal lines, where consumers´ demand and the government´s intervention drive demand for new products in response to climate change, for protection of the B40 segment and for new products in life and health.

At Malaysian Re, we are keen to demonstrate how our industry captures new developments in the market and fulfils its responsibility towards society and the economy. The examples in this report show how much our industry changes, embraces new opportunities and lives up to its promise in providing protection to people and enabling the progress of our economy.

We would like to express our deepest gratitude to the industry leaders who participated in the survey that forms a central part of this edition. Their invaluable contributions were complemented by the in-depth research of Faber Consulting, which we hope you will find interesting and inspiring.

We are also grateful to Bank Negara Malaysia and the Malaysian General Insurance Association for their steadfast support of this initiative.

We hope that you will enjoy reading this edition and we look forward to your valuable feedback.

Ahmad Noor Azhari Abdul Manaf
President & Chief Executive Officer,
Malaysian Reinsurance Berhad

Foreword Faber Consulting

Now in its fifth edition, we are honoured to present this year's Malaysian Insurance Highlights, which focuses on how Malaysia´s changing risk landscape impacts on insurance demand and consumer expectations for our industry.

Against the backdrop of rising damages from climate change, a harsh and prolonged pandemic and economic and geopolitical uncertainties, consumers are looking for more risk protection. Awareness and interest in insurance seem to have improved, although in light of elevated inflation, affordability has only increased in some parts of society. Policymakers and the regulator are trying to accommodate for these needs by encouraging the development of new products or by providing incentives or subsidies.

Consequently, this year´s Malaysian Insurance Highlights is structured slightly differently to previous editions. We have put more weight on the research part, as we wanted to investigate the causes for recent developments and shed light on the success factors for some of the government´s initiatives. In addition, this year we discussed the risk landscape and its implications with select market pundits. These experts share with us their insights on natural catastrophe risks and climate change modelling, providing Sharia-compliant protection to the poor, and on forging partnerships with public institutions to extend the uptake of life and health insurance.

Once again, we would like to express our deepest gratitude to Malaysian Re for facilitating this research. In addition, we would like to sincerely thank our interviewees who kindly took the time to share with us their market knowledge and expertise.

We hope you enjoy reading this edition of Malaysian Insurance Highlights and find its insights useful.

Henner Alms
Partner
Faber Consulting AG

Andreas Bollmann
Partner
Faber Consulting AG

Introduction

In the ever-changing landscape of global risk management, the insurance industry is at a pivotal point. Beyond the traditional realms of underwriting and claims, insurers must continuously address a complex web of emerging challenges. From the tangible impacts of climate change to the nuanced shifts in demographics and consumer and public demands, proactive assessment of new risks and trends is not just a strategic choice, but an imperative to remain relevant in a dynamic world.

By taking a proactive stance, the insurance industry is moving from its traditional purpose of covering risk to a more societal role. Beyond their fiduciary responsibilities to shareholders, insurers have a critical role to play in enhancing the resilience of the communities in which they operate. By proactively addressing these changing risks, they contribute to the stability of economies, the well-being of communities and the overall fabric of a resilient society. The imperative for the insurance industry to proactively assess new risks that may come onto its books goes far beyond risk management. It is a commitment to societal well-being, economic stability and the continued relevance of an industry that stands as a bulwark against uncertainty. In navigating the future, proactive assessment is not just a strategic choice, it is the compass that guides insurers to a landscape where staying relevant ensures resilience – not just of our industry, but of society and the economy.

Societies are facing an era of unprecedented technological, environmental and geopolitical change. The Malaysian insurance landscape is at a cross-roads, forced to navigate uncharted waters. This publication serves as a compass for stakeholders in the Malaysian insurance industry, highlighting the contours of risks and trends that reflect the increased responsibilities of the industry. The constellation of interrelated risks - technological, climatic and socio-economic – reverberate throughout the industry, demanding attention and adaptation, and a proactive response that will help guide the future development of the Malaysian insurance industry.

In this publication, we explore the dynamic landscape of risks that transcend borders and industries, shaping the fabric of insurance practice in Malaysia. Following initial discussions with stakeholders, we have concluded that a more in-depth consideration and analysis of (1) the increasing uncertainty in the frequency and severity of extreme weather events due to climate change, (2) the need to provide attractive yet cost-effective insurance products to the poor, (3) enhancing insurance protection in particular in life insurance and (4) responding to changing insurance demand – in particular in health insurance – is of particular interest to the insurance industry and its stakeholders in Malaysia. Each chapter unfolds a narrative of challenges and opportunities, and encourages stakeholders to read between the lines of conventional risk management, from the impact of climate change to the challenges of a more equitable coverage of life and health risks.

Climate change tests the limits of insurability of climate-related risks

A NOTABLE TREND TOWARDS INCREASING PREMIUMS AND REDUCING COVER IN ASIA

Through their pricing and underwriting strategies, insurers have a significant influence in supporting climate risk mitigation efforts and promoting risk adaptation measures. For insurers, proactively assessing climate risks is not just about developing policies that respond to the consequences, it is about building resilience.

By integrating climate models and projections into risk assessments, insurers can tailor products that not only protect their customers, but also contribute to the broader societal goal of sustainability. But whether and to what extent insurers will be willing and able to contribute to these goals in the future is not yet clear. Based on a survey of insurers and regulators in Asia, the Global Asia Insurance Partnership (GAIP), in collaboration with the Financial Stability Institute (FSI), published a study[1] which found that while most insurers surveyed do not currently explicitly take climate change impacts into account when pricing insurance policies, there is already a noticeable trend towards increasing premiums and reducing coverage. While uncertainty remains about the trajectory of climate change and the effectiveness of transition measures, additional and well-coordinated efforts by governments, regulators and insurers are needed to ensure the availability of affordable and accessible climate risk insurance.

FOUR PER CENT OF AUSTRALIAN HOUSEHOLDS WILL BECOME UNINSURABLE DUE TO CLIMATE IMPACTS BY 2030

The insurance industry is at the forefront of climate change mitigation and adaptation. The frequency and intensity of extreme weather events pose a tangible threat to property, infrastructure and livelihoods. Furthermore, climate change is accelerating and the likelihood of widespread disruption to the financial sector, the economy, society and humanity as a whole is increasing. It is meanwhile broadly acknowledged that human activities are undoubtedly causing profound changes in the Earth's climate system, mainly through the emission of greenhouse gases. Due to these rapid and significant changes, climate change is testing the limits of the insurability of climate-related risks and thus the critical role of insurers in mitigating potential financial losses for consumers and businesses. For example, in Australia, the Climate Council projects that one in 25 Australian households will be uninsurable due to climate impacts by 2030.[2] From Australia to the United States, insurers in several countries are withdrawing residential insurance coverage in certain regions, in part due to the increasing climate-related risks of natural disasters such as wildfires and hurricanes.

These developments show that the way in which insurers assess and price climate-related risks could have a negative impact on financial stability. A large-scale withdrawal of insurance cover from key sectors of the economy could lead to unintended economic disruption. Conversely, an underestimation of climate risks and overly optimistic underwriting practices could lead to solvency or liquidity problems for insurers. In addition, the lack of availability of insurance could also lead to spill-over effects to other financial sectors, including the banking sector.

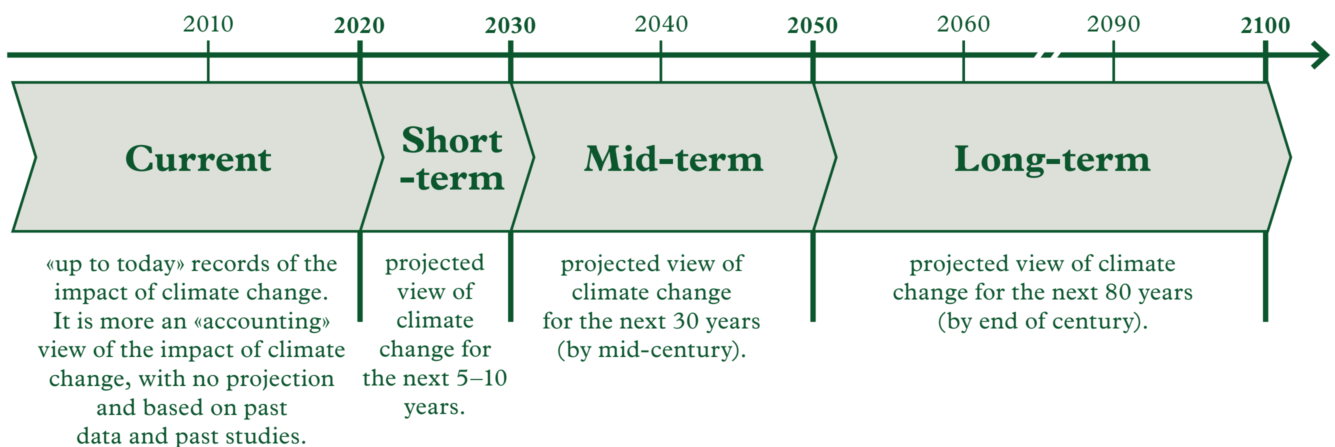
CLIMATE CHANGE MAY ALSO AFFECT MORTALITY, DISABILITY AND PANDEMIC RISK

As illustrated above, the issue of climate change has far-reaching implications for the stability of the financial services and insurance sectors, and therefore for supervisory authorities in particular. In 2021, the European Insurance and Occupational Pensions Authority (EIOPA) addressed the question of whether and to what extent climate change should be considered in the future calculation of the Solvency Capital Requirement for European life and non-life insurance companies.[3] In the area of health and life insurance risks, climate change may have an impact on mortality, longevity, catastrophes and disability/morbidity risks. But climate change may also have an impact on pandemic risk. Diseases such as malaria or dengue fever, which are currently confined to certain parts of the world, may spread to other parts of the world in the future.

1 GAIP / FSI, Too hot to Insure – Avoiding the insurability tipping point, 2023
2 Climate Council, One in 25 Australian homes uninsurable by 2030: Climate Council launches cutting edge digital climate-risk map, 2022
3 European Insurance and Occupational Pensions Authority (EIOPA), Methodological paper on potential inclusion of climate change in the Nat Cat standard formula, 2021

In the case of non-life underwriting risk, there is concern that climate change could have an impact on premium risk (underpricing/insufficient premiums) with a particular focus on catastrophe risk. Where climate change effects have already been observed, it can be assumed that they have already been priced into premiums, as non-life insurance premiums are generally adjusted annually. The EIOPA therefore assumes that the data used to calibrate the standard deviation of the premium risk reflect a current view of climate change. But the situation is different for the future. Based on information from the European Environment Agency (EEA), the Peseta studies of the Joint Research Centre (JRC) and the report of the Intergovernmental Panel on Climate Change (IPCC), the EIOPA has defined a time horizon for climate change, as shown in figure 1.

Figure 1: Climate change time horizon.
Source: EIOPA, 2021



CLIMATE CHANGE SHOULD BE CONSIDERED WHEN CALIBRATING SOLVENCY FRAMEWORKS

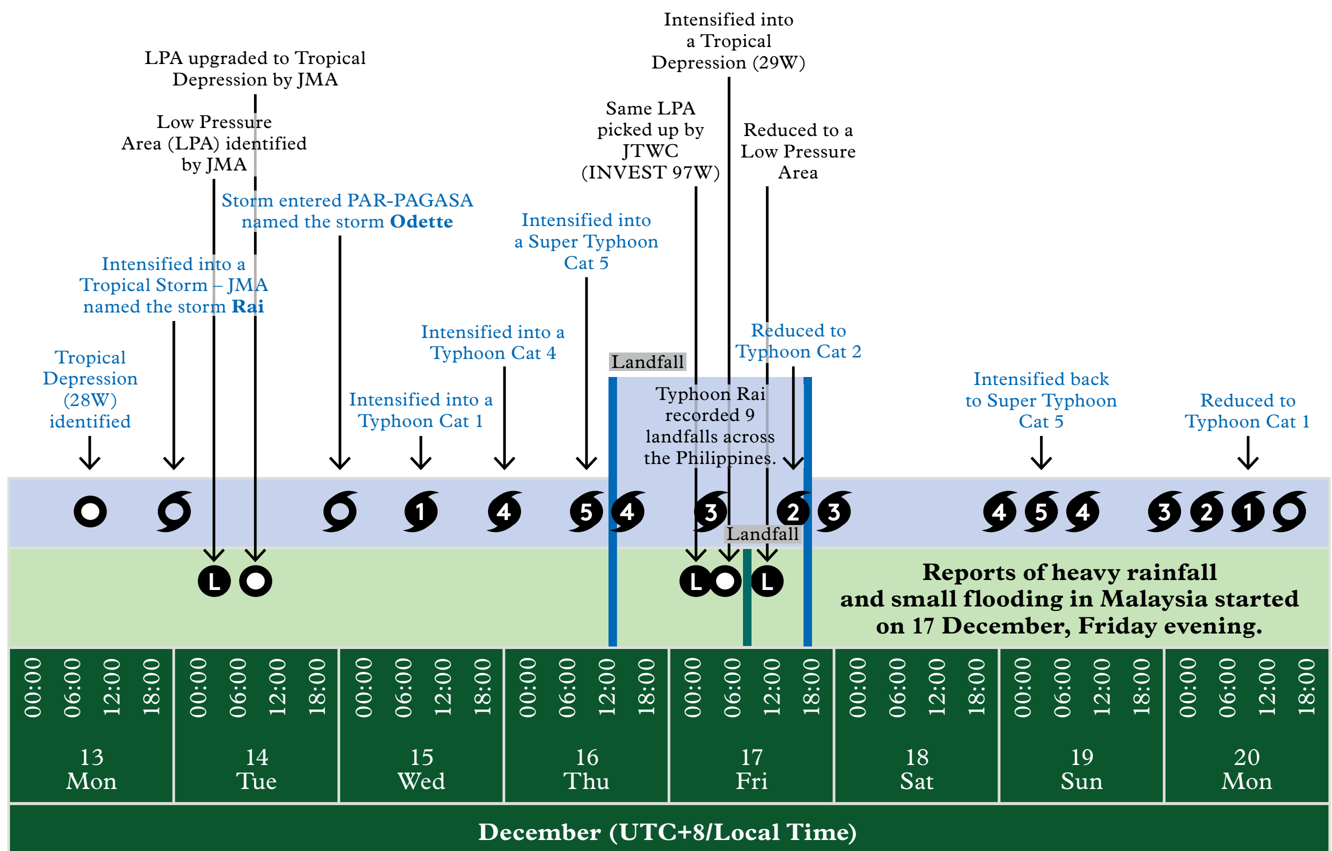
The EIOPA limited its analysis to the current impact of climate change and short-term projections, concluding that there is a clear need to explicitly take climate change into account when calibrating the solvency framework for natural catastrophe risk for wildfire, extreme precipitation, hail, drought and subsidence perils in most European regions. As an example, the EIOPA refers to an analysis by RMS from 2020, which concludes that average annual flood losses will increase by 34 % to 75 % by 2050 due to the influence of climate change on precipitation patterns (depending on greenhouse gas emission pathways). For wind risk, on the other hand, no need was seen to change the existing calculation method due to climate change, at least in the short-term, i.e. up to 2030. Furthermore, it is recommended that the influence of climate change be regularly reassessed and that new considerations, such as natural hazard models that explicitly take climate change into account, be included.

CHANGES IN CLIMATIC FACTORS INCREASE THE PROBABILITY OF FUTURE EXTREME WEATHER EVENTS IN MALAYSIA

The above example from Europe illustrates that the potential impact of climate change can vary significantly both geographically and across different natural hazards. By taking a closer look at the December 2021 floods in Malaysia, we will now shed some light on the importance of climate change on the uncertainty in determining the expected loss burden from future natural catastrophes in Southeast Asia and Malaysia in particular.

According to the UN, floods are the second largest contributor to natural catastrophe losses in Southeast Asia, accounting for 22.5 % of the total annual economic loss from natural catastrophes of USD 86.5 billion. Natural disasters in the region are often highly transboundary, affecting several countries at the same time. This was also the case in December 2021, when Super Typhoon Rai caused significant damages in the South Philippines and East Malaysia. At a similar time, but 2,000 km away from the path of Rai, a devastating flood event occurred in Peninsular Malaysia, causing similar socio-economic impacts as the Super Typhoon. A detailed analysis revealed that two consecutive medium-sized convective systems were responsible for the heavy rainfall, which was generated by a tropical depression passing over the peninsula. The precipitation levels were significantly enhanced by Super Typhoon Rai, which provided long-range water vapour transport, adding more moisture to the tropical depression. Such long-range moisture transport has become more frequent during the northern winter season, increasing the risk of flooding in Southeast Asia.

Figure 2: Chronological order of events, Typhoon Rai and 29W. Timeline of events at local time (UTC+8). PAR = Philippine Area of Responsibility; PAGASA = Philippine Atmospheric, Geophysical and Astronomical Services Administration; JMA = Japan Meteorological Agency.
Source: JBA Risk Management - Super Typhoon Rai and South East Asia Floods: A Retrospective



ACCORDING TO HISTORICAL WEATHER RECORDS, THE DECEMBER 2021 FLOOD WAS AN EXTREMELY RARE EVENT …

Unprecedented rainfall was recorded in Malaysia from 16 to 18 December 2021. According to the Department of Statistics Malaysia, the series of floods caused economic losses of more than USD 1.2 billion and displaced more than 65,000 people. In a 2023 study, scientists from several Asian universities looked at the key drivers of this flood event and the possible occurrence probabilities of both the flood event and the individual meteorological sub-events that contributed to the floods.[4] Based on historical rainfall records alone, such as those provided by the ERA-5 Land database, the estimated return period for an event with similar 3-day cumulative rainfall amounts averaged over the entire peninsula is 178 years. Alternatively, the joint probability of the two main meteorological drivers of this event, i.e. the presence of a tropical depression as measured by the MSLP (mean sea level pressure) together with an extensive IVT (integrated water vapor support) injection fuelling the extreme rainfall event, can be calculated. While the independent historical frequencies of similar MSLPs is about once every 7 years and similar IVT values is about 37 years, the probability of their simultaneous occurrence is much lower, at only 158 years, which is very close to the value determined based on historical precipitation records alone (178 years).

It is therefore appropriate to note that, based on the analysis of historical weather data alone, the floods that caused enormous damage in Malaysia in December 2021 were a very rare event with an even longer return period than the 100-years often cited in the media in this context. However, given changes such as increasing greenhouse gas emissions and the associated rise in temperature, it is questionable whether historical probabilities are an appropriate measure for estimating the future probabilities of extreme weather events. A first indication of this is given by the observation that in the period from 1950 to 2000 there were only seven IVT values higher than the December 2021 IVT, which was one of the two key meteorological drivers of the devastating floods. In the last 20 years, however, there have already been nine cases of higher IVTs than the one recorded in December 2021.

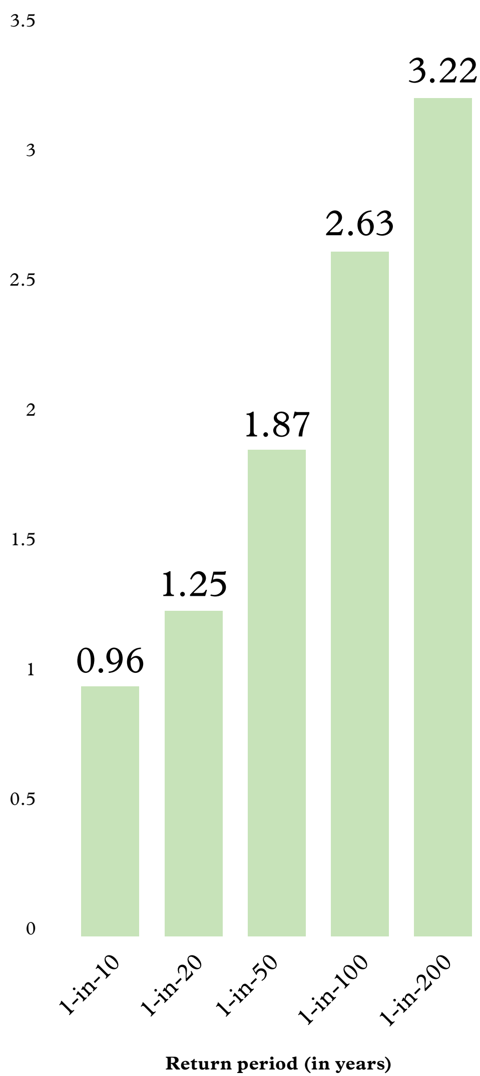
… ALTHOUGH THE PROBABILITY OF SIMILAR ECONOMIC LOSSES FROM FLOODING IS WELL BELOW 25 YEARS

In this context, it is important to distinguish between event occurrence and economic loss probabilities. Event return periods help to explain how often specific events can be expected to occur, e.g. they may refer to the probability of a flood of a certain magnitude occurring in a river basin. Economic loss probabilities, on the other hand, focus on quantifying the likelihood of economic losses associated with specific events. These events may be similar to those discussed above, but the focus is on the financial impact rather than the occurrence of the event itself.

Following the 2021 floods, UK-based modelling firm JBA carried out a probabilistic analysis of Malaysia's exposure to combined river and surface water flooding for a reference market portfolio of residential, commercial and industrial properties, also taking into account the effectiveness of existing flood defences.

4 Dong, L., et al. (2023). Revealing the key drivers conducive to the «once-in-a-century» 2021 Peninsular Malaysia flood. Geophysical Research Letters, 50, e2023GL106112.

Figure 3: Estimated economic losses for Malaysia from combined river and surface water flood for a range of return periods, USD billion.
Source: JBA Risk Management – Super Typhoon Rai and South East Asia Floods: A Retrospective



CURRENT CATASTROPHE MODELLING FRAMEWORKS ARE EXTENDED TO QUANTIFY THE FINANCIAL IMPACT OF CLIMATE CHANGE

When projecting the future impact of climate change on insurance claims, modelling experts are primarily concerned with selecting the appropriate emissions scenario. The long-term uncertainty is large and includes, but is not limited to, future emissions pathways and the ability of climate models to predict shifts in extreme weather patterns due to changes in the Earth's energy balance because of changes in the impact of radiation from space. Nevertheless, the production of such projections serves a valuable purpose: they raise awareness among governments and stakeholders of the potential costs of climate change and facilitate the assessment of different mitigation and adaptation strategies.

As a result, a new generation of catastrophe models are emerging to quantify the financial impact of future climate risks. These models seek to integrate the most effective elements of General Circulation Models (GCMs) and the existing catastrophe modelling framework to assess future risks. The potential for using catastrophe models to assess the impact of climate change in various industries is significant. However, catastrophe models are still relatively unknown outside the insurance sector, and the associated business opportunities and ability to inform policy decisions are only slowly being realised. Although the methodologies and approaches of these new models vary, their estimates are generally based on credible science and suggest manageable loss projections.

Climate change and catastrophe risk modelling – insights from Moody's RMS

An interview with Dr. Steffi Uhlemann-Elmer, Director Product Management, Moody's RMS

What are the different ways of incorporating the effects of climate change into catastrophe models?

Fundamentally, catastrophe models are designed to represent present day climate, also called the reference view. The impact of future states of the climate is considered separately as an alternative view of risk at different points in time, from a near future (in the next 10 years) to a distant future (the end of the 21st century).

In catastrophe models, it is important to distinguish between climate variability and climate change.

Climate variability represents natural cycles on timescales of years to decades, detectable throughout the historical record. Changes due to climate variability can occur over smaller areas and timeframes than climate change and with a stronger signal. But these anomalous conditions are not persistent. In contrast, climate change is independent of natural cycles with no natural historical presence. Disentangling climate change from climate variability in the historical record is challenging and incorrectly interpreting recent historical climate variability trends as climate change can lead to inaccurate predictions.

Reference catastrophe models for perils like flood are built using a time series of observation data like rainfall and discharge for a reference period to create a stochastic set of events over a period of tens of thousands of years, capturing the full range of probable events that could affect a certain domain and go way beyond the limited set of historical events. For the model to represent present day climate, climatic variability as well as potential changes in the climate and the environment need to be reflected. Observations are being checked for potential trends to ensure that the reference period for the model is consistent with present day climate.

For example, at the larger scale, we need to be able to capture circulation patters like the El Niño–Southern Oscillation (ENSO) that influences precipitation patterns in 3- to 7-year periods in Southeast Asia. During El Niño phases of the ENSO, Southeast Asia experiences warm and dry weather. El Niño has been associated with droughts in Thailand and forest fires in Indonesia. Conversely, during La Niña phases of the ENSO, sea surface temperatures around Indonesia are higher than average, leading to increased rainfall which amplifies the flood risk across Southeast Asia. Some of the worst floods in the region have occurred during La Niña events, including the 2007 floods in Jakarta, the 2011 Thailand floods and the recent 2021 Malaysia floods.

The assessment of factors such as climate change, however, can be challenging in the presence of climate variability and in data-scarce regions like Southeast Asia. The past observed precipitation and potential trend signals therein show very high uncertainty, with no clear consensus yet as to whether these signals are due to climate change or climate variability.

The impact of climate change on current and future climate remains highly uncertain for all except two variables: increases in global temperatures and sea-level changes. For many other variables, a combination of factors means that establishing the likely direction of changes to extreme weather is difficult, and the magnitude even more. Many studies have referred to Global Climate Models (GCMs) to assess the impacts of climate change on the intensity and severity of relevant drivers such as rainfall and discharge in flood models, tropical and extratropical cyclones or hurricanes in cyclone/hurricane models, or sea level rise in coastal flooding models.

In your modelling work, what are the fundamental differences between the effects that have already been observed and those that can be expected in the future?

In our catastrophe modelling framework, future states of the climate are part of an extra set of model versions that we provide. For flood, this would e.g. reflect how possible climate change scenarios could modify extreme and total precipitation patterns. These projections are based on global climate models such as those developed by the World Climate Research Program and its Climate Model Intercomparison Project (CMIP). Climate models allow us to peer into the future and simulate how increasing greenhouse gas concentrations affect the frequency and severity of precipitation events. Given the uncertainties around historical data and the difficulty drawing robust signals from available historical data, climate models are useful for developing views of climate change.

The December 2021 Malaysia flood, caused by more than 36 hours of continuous rain, was by far the largest and costliest flood event that the country has ever experienced. In addition, flooding moved from the Eastern Coast across the mountain ridge to affect the industrialised western regions of Malaysia – something not seen before. In your opinion, was an event of this magnitude an exceptional and rare event, or should such an event have been expected? Should Malaysia prepare for more frequent events of this magnitude, given, for example, that rainfall patterns in the region have changed in recent years?

The flood event of December 2021 was one of the worst flood events in the recent history of Malaysia. It led to an unprecedented insured and economic loss. However, flood loss history alone is never a good indicator of the actual risk. Limited record length leads to uncertainty in capturing extreme events. At the same time, exposure and exposed values have increased over time, also in flood plains.

A catastrophe modelling framework explores the physically plausible events that go way beyond the limited set of historical events and their consequences that have been observed in the recent past, either in its magnitude in a particular location or its spatial extend. In order to understand the frequency at which an insured loss like that from the 2021 Malaysia floods can be expected, we can compare this loss to the occurrence exceedance probability curve that our Southeast Asia Flood Model outputs. Persatuan Insurans Am Malaysia (PIAM) has estimated that the total flood related claims exposure in the affected region could total up to RM 2 billion to 3 billion (up to USD 720 million), other estimates from Malaysia Re were around RM 1.5 to 2 billion. This corresponds to a range of the return period of 35–80 years. So, no, this is an event that had to be expected.

Rainfall patterns are likely to change in a warmer world, but at the same time it's hard to attribute specific events to climate change directly. Whether such events like the December 2021 Malaysia flooding are more likely to occur in the future is hard to say.

The quality of the output of catastrophe models depends very much on the quality and quantity of the available data. This is one reason why catastrophe models are always subject to uncertainties. Do you see significant differences in data availability between different regions, e.g. between Southeast Asia, Australia and North America? How does this affect your work and the models?

Catastrophe models are made up of broadly four components: hazard, vulnerability, exposure and the financial model. The degree of uncertainty introduced in each component is indeed dependent on the quality of the data that it is either built on or that it is being fed with.

In the hazard component for example, the quality but also the quantity of the observations that describe the environment is pivotal. There are major differences between countries like Australia, the UK and the US, where high-quality data is publicly available and the observational grid is dense, and other regions like Southeast Asia where this is not the case. That is why we invest a lot of time in gathering local data, as well as data available from regional or even global data providers. Most importantly, a lot of expertise is required to develop data quality checks and create robust, reliable data sets informed by the best available data, suitable for modelling natural hazard risk at a high spatial and temporal resolution.

The most important source of uncertainty in catastrophe model output, however, is introduced by poor exposure data. In mature markets, the risks in a portfolio are often described by their primary building characteristics and the location of the building is known by its coordinates or street address. This means the model can associate the exact vulnerability for that type of building to the hazard level it is exposed to at that very location. In emerging markets, oftentimes only limited information is known about the building characteristics and only geographically aggregated risks are available. We explicitly address this problem by building what we call smart defaults; based on a very detailed building inventory, we assign the most likely vulnerability for a building of unknown characteristics. Using high-resolution exposure data and region- and peril-specific rules we have built methods that allow disaggregating those risks to risk-level.

Does artificial intelligence (AI) already play a role in catastrophe modelling, or do you expect it to in the future?

Yes, absolutely and it will increasingly play a role in the future. A couple of examples are:

In our development we already use various machine learning methods in the data processing. For example, one key data source for flood models is the digital terrain model (DTM) which depicts the elevation of the ground. Those DTMs tend to be noisy, i.e., there are artefacts from the remote sensing, such as elevation is not representing the ground but rather the tip of the tree or house. Further for hydrological modelling, objects like bridges would lead to blocked flow in the river. Removing all those artefacts or unwanted structures can now be done at higher quality with well-trained machine learning algorithms.

Also, to create weather patterns that are realistic but that go beyond the historical catalogue of weather, we employ GenAI models. We're increasingly using these machine learning models to enhance traditional weather modelling methods.

When it comes to post event damage assessment, we have developed AI-based methods that help us to identify roof damage in an affected area which we can utilise to provide rapid responses about the expected insured loss.

How important is it for RMS Moody's to work with, discuss and advise insurance regulators on the impact of climate change? In your experience, what are the key issues of interest to regulators? Are there any aspects that have become more important in recent years?

The role of insurance and banking regulators is to ensure financial stability and the adherence to standards in risk management. Understanding the tools and methods available for risk management is therefore of high importance to regulators. For Moody's RMS' clients in P&C insurance, this concerns first and foremost the assessment of present-day catastrophe risk, which can be a major driver of capital allocation and is therefore often subject to direct review with supervisors. Moody's RMS is regularly being called on to provide detailed insight into our models for regulators for this purpose and for an exchange on capabilities and limitations of models.

With increasing demands for insurers to include a perspective on climate change related financial risk in their reporting and risk management practices, insurance regulators have and continue to be interested in understanding the tools available to the industry to meet those new requirements. Assessing future risk requires not just new tools, but also data, adjusted internal governance and decision-making processes, board education, etc. It is a maturing process of both the solutions available but also their implementation into the businesses. Insurance regulators are aware of this and wish to help speed up the process. Against this context Moody's RMS is usually approached to provide insight on a) our climate change conditioned models, b) our perspective on meaningful approaches to absorb analytical insight of those models, in particular under consideration of multiple uncertainties involved, c) our perspective on peril-region specific future risk and d) what challenge we observe amongst our client base to implement climate change related risk assessment. Furthermore, Moody's RMS' subject matter experts on climate risk have been asked to contribute to the design of climate change specific insurance stress tests and have provided insight into our analytics to inform policy reviews (e.g. assessment of potential policy changes to account for a climate change capital charge).

Initial discussions on climate change with the regulatory community just a few years ago tended to focus on stress-test design, appropriate climate scenarios and time horizons, and which peril regions around the globe seem most affected by climate change. Today, topics of most interest tend to be on the insurance market's maturity to absorb new available tools and implement decision making processes that allow to meaningfully act on new insights gained. We value those exchanges and plan to continue to support the industry in the ongoing transition towards reaching standard ground on how to best manage climate risk – considering the present and the future.

The ability to quantify risks and thus to estimate expected losses is a basic requirement for insurability. Do you think this basic requirement is still met, even in the face of increasing uncertainty due to climate change?

Catastrophe models are now available for a large range of natural and man-made perils and for almost all regions across the world. More so, catastrophe modelling has evolved strongly and now even complex high-gradient and high frequency perils, such as flood or severe convective storms, can be modelled at a granularity that allows for robust loss modelling not only at the portfolio level but down to the location level. It is that leap in informed decision making that has led insurers to provide coverage also in markets that thus far had very low insurance penetration or limited cover due to the daunting uncertainties associated to the expected loss estimates for these perils.

As described earlier, uncertainties are part of each component in the modelling chain, including from the uncertainties in the hazard modelling to incompleteness of exposure information leading to uncertainties in the loss calculation for the risk. The key difference being that catastrophe models help in the understanding and controlling of these uncertainties and making them manageable.

How does the added complexity of climate change play into this? The basic requirement for any model to be representative of present-day climate does hold. Where climate change so far has already had an impact on the physical processes and significant trends can be identified in the observations, this is being accounted for in the catastrophe model methodology itself. The same holds true for present day risk mitigation or building standards – i.e. these are being considered in modelling. Therefore, the ability to compute robust expected losses that inform underwriting and risk management decisions today is at the core of catastrophe model output.

Moody's | RMS

INSURANCE CAN HELP BUILD AND SUPPORT CLIMATE-RESILIENT COMMUNITIES AND ECONOMIES

The culmination of global efforts to raise awareness of climate-related risks is producing tangible results. The undeniable link between climate change and the financial sector is now widely recognised. In Malaysia, for example, Bank Negara Malaysia published the Climate Change and Principles-based Taxonomy (CCPT) in 2019 to help financial institutions assess and classify climate-related exposures to support risk assessments. Looking ahead, it is clear that the factors that influence the pricing of insurance products, such as the probability of occurrence, the severity of extreme weather events and the amount at risk, are all trending upwards for climate-related risks.

In response, a growing number of insurance regulators are prioritising the mitigation of climate-related risks. The recognition that climate change impacts cut across the established risk categories of insurance, market, credit and operational risks, underscores the urgent need for supervisors to address climate change. Many insurance supervisors have already issued guidance on climate-related risk management, often drawing on the International Association of Insurance Supervisors (IAIS) framework.[5] In addition, some supervisors have begun to actively monitor how climate change affects the pricing and underwriting of insurance products as part of their risk management practices.

It is obvious that inactivity is not an option. While uncertainties remain about the trajectory of climate change and the effectiveness of transition policies, one thing is certain: without decisive action by insurers, regulators, governments and the public, insurance against climate risks will inevitably become less accessible and less affordable. The possible emergence of an insurability tipping point in different regions and for different risks threatens to create a detrimental outcome for all concerned.

However, in the midst of these challenges lies an opportunity for decisive action and innovation within the insurance industry. By embracing risk and proactively addressing climate-related challenges, insurers can not only ensure their own sustainability, but also help build and support resilient communities and economies around the world.

5 IAIS, Application Paper on the Supervision of Climate-related Risks in the Insurance Sector, 2021

Insurance products for the poor – reducing disparities and fostering inclusivity

INSURANCE IS ALWAYS SOLD AND NEVER BOUGHT

People living in poverty face heightened vulnerability and limited means to protect themselves. Events such as unexpected death, illness, injury and loss of income or assets can exacerbate their precarious situation and perpetuate the cycle of poverty. Insurance provides a means to mitigate the impact of such risks. However, despite the proliferation of insurance services tailored to low-income households, many still lack adequate coverage.

Selling insurance to this population is challenging. Without coercion, individuals will only invest in insurance if they perceive its value to outweigh the opportunity cost. Therefore, analysing the decision to purchase insurance requires consideration of various factors that influence perceived cost and value. Perceived cost includes not only the level of the premium, but also the sacrifices required to afford insurance, which are significantly higher for low-income consumers. Perceived value, on the other hand, is influenced by factors such as the prioritisation of current consumption over future benefits due to budget constraints, confidence in the insurer's ability to pay claims and the likelihood of the risk event occurring, with health and life risks often taking precedence in consumers' minds.

Research consistently shows a high theoretical demand for insurance, but when insurance products are carefully piloted, take-up is often slow and renewal rates low, even though they appear attractive to observers. This phenomenon, known in the insurance industry as «insurance is always sold and never bought», is difficult to explain. While the upfront cost of insurance premiums may explain some of the reluctance, it does not fully account for the scale of the problem. In addition, the complexity of insurance as a concept and the uncertainty it creates when taken up may also contribute to low uptake. Moreover, in environments where formal insurance experience is limited, it is difficult to build trust in insurance products, especially when they require an upfront payment to an external institution for future benefits. These challenges underscore the critical importance of institutional delivery mechanisms for insurance products targeted at the poor. Introducing a novel product to sceptical individuals will inevitably present difficulties, highlighting the potential importance of educating potential clients about insurance principles and fostering trust between insurance providers and potential low-income clients.

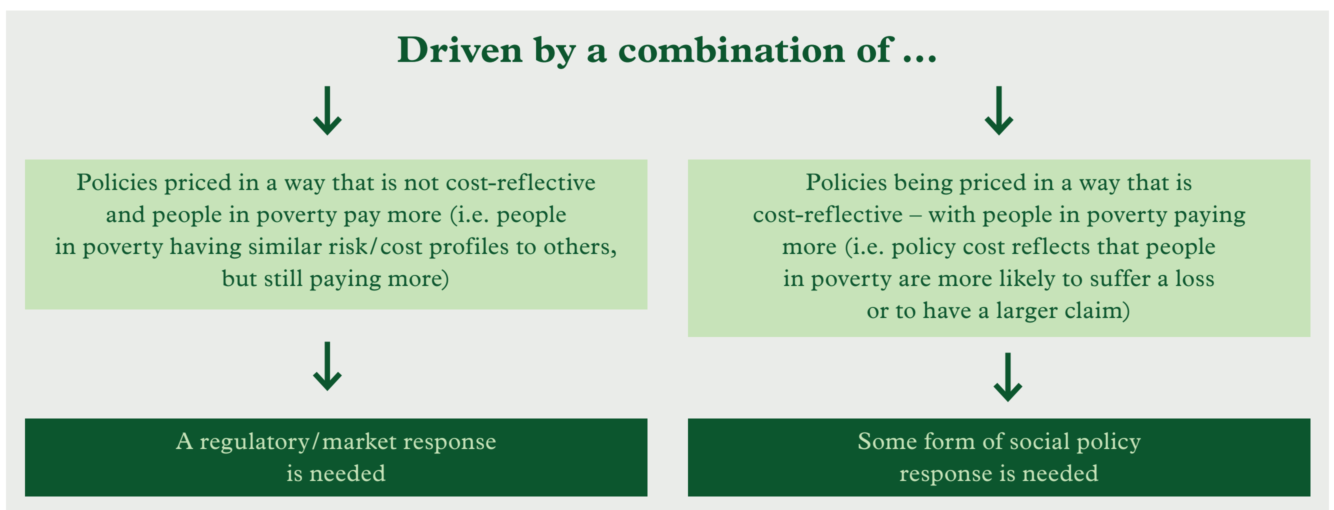
THOSE WHO NEED INSURANCE THE MOST ARE OFTEN PRICED OUT OR LEFT OUT

Insurance provides financial stability and reassurance in the event of unforeseen financial upheavals, such as illness, bereavement and unemployment, which frequently precipitate individuals into financial distress. Low-income and vulnerable consumers often struggle to access affordable insurance due to factors beyond their control. Insurers may view them as a higher risk and charge elevated premiums, or even refuse coverage altogether. Consequently, those who are most in need of insurance often find themselves unable to obtain the crucial protection it offers.

Research conducted by the Institute and Faculty of Actuaries (IFoA) and Fair By Design (FBD) in 2021 has revealed that insurers frequently charge higher premiums to low-income and vulnerable consumers or deny them coverage altogether.[6] This is often justified by citing individual risk-based pricing as a fair practice. While insurers and consumer advocates may have differing views on what constitutes fairness in insurance, it is important to ensure that all consumers are treated fairly and equitably.

6 Institute and Faculty of Actuaries and Fair by Design (September 2021): The hidden risks of being poor: the poverty premium in insurance.

Figure 4: Sources of the poverty premium in insurance.
Source: Social Market Foundation (SMF)[7]



Individuals living in poverty may end up paying more for insurance coverage due to several factors. Firstly, they may pay more for the same coverage because of the need to pay premiums monthly instead of in a lump sum and prevalence of single-item insurance policies among low-income individuals, which could be more cost-effective if bundled into household contents policies. Secondly, individuals in poverty often face higher risks, such as driving older cars or motorbikes, living in lower-standard buildings, or having an increased likelihood of taking on debt. As a result, insurance companies charge higher premiums to account for these increased risks.

The lack of transparency in insurers' pricing models exacerbates the problem, leading to debates about political responsibility. Regulators argue that it is a social policy issue for the government, while the government sees it as a regulatory issue. The need for a better understanding of the basis of the poverty premium is highlighted by this ping-pong of responsibilities. This understanding is crucial in determining the appropriate balance between regulation and social policy. To address the poverty premium in insurance, it is important to recognise the complexity of individual risk-based pricing, understand the root causes of the premium, and find a balanced approach between regulation and social policy to ensure equitable access to affordable insurance for all consumers, especially those most in need.

Government-sponsored insurance products, insurance vouchers, stricter pricing regulations and reductions in insurance premium taxes are possible interventions to address the poverty premium.

7 SMF, Insurance and the poverty premium, March 2023

MALAYSIA RESPONDS TO THE POVERTY PREMIUM CHALLENGE WITH BOTH SOCIAL AND REGULATORY MEASURES

In recent years, the Malaysian government has expanded social protection programmes such as Bantuan Sara Hidup (BSH), Bantuan Prihatin Rakyat (BPR) or Bantuan Keluarga Malaysia (BKM) to provide financial assistance to low-income households. These programmes are administered by the Inland Revenue Department of Malaysia and serve as the basis for eligibility for schemes such as mySalam, which aims to provide insurance coverage to the poor, particularly the B40[8] segment.

mySalam

Launched by the Ministry of Finance (MoF) in 2019, mySalam was initiated to assist 4.3 million eligible members during financial hardship due to critical illness or other health-related challenges. The scheme specifically targets Malaysians in the B40 income bracket who are enrolled and receiving benefits from the Bantuan Sara Hidup (BSH) and Bantuan Keluarga Malaysia (BKM) programmes, which are administered by the Malaysian Inland Revenue Department (LHDN). Hospital patients and those suffering from critical illnesses in the bottom 40% income group now have access to guaranteed social protection through the mySalam scheme, which is fully funded by the government.

Covering 45 types of critical illnesses, including cancer, Alzheimer's and stroke, the scheme enables vulnerable individuals and persons with disabilities to better manage their treatment and maintain their quality of life. It provides a lump sum payment of RM 8,000 (USD 1,700) if the beneficiary is diagnosed with one of the defined critical illnesses. There is also a daily hospitalisation allowance of RM 50 (USD 10.50), up to a maximum of RM 700 (USD 150) per year.

Eligible beneficiaries are automatically enrolled and to claim benefits only need to submit their hospital discharge documents online or at mySalam kiosks located in public hospitals across Malaysia, with the assistance of dedicated staff.

Administered by Great Eastern Takaful Bhd, the scheme has significantly raised awareness and provided valuable assistance to millions of people within the target population and has received positive feedback for providing essential coverage.

8 B40 refers to the classification of household income groups in Malaysia. B40 represents the bottom 40% of household incomes.

REGULATORY INITIATIVE FACILITATES ACCESS TO AFFORDABLE PROTECTION FOR THE POOR AND VULNERABLE

Perlindungan Tenang is an initiative introduced by Bank Negara Malaysia, the central bank of Malaysia, aimed at enhancing access to affordable insurance and takaful protection for the underserved segments of society, particularly those in the low- and middle-income groups. The background of Perlindungan Tenang can be traced back to Bank Negara Malaysia's efforts to promote financial inclusion and improve the accessibility of insurance and takaful products for all Malaysians. Financial inclusion refers to ensuring that individuals and businesses have access to affordable and appropriate financial services, including insurance, to meet their needs and improve their financial well-being.

Prior to the introduction of Perlindungan Tenang, there were challenges in providing affordable insurance and takaful coverage to certain segments of the population, particularly those with lower incomes or in rural areas. These challenges included limited awareness about insurance, affordability issues and lack of suitable products tailored to the needs of these segments.

To address these challenges, Bank Negara Malaysia collaborated with insurance and takaful industry players to develop Perlindungan Tenang. The initiative focuses on offering simple and affordable insurance and takaful products with standardised features, making it easier for consumers to understand and access coverage.

Perlindungan Tenang

The lack of insurance and takaful products for B40 households is a good example of market failure to protect the underserved segment. In Malaysia, this market failure has prompted regulatory intervention. On 24 November 2017, Bank Negara Malaysia launched Perlindungan Tenang to expand insurance and takaful solutions for the B40 segment.

These products are also intended to be suitable for the general public who are currently not covered by any form of insurance or takaful protection. The initiative aims to stimulate a broader movement among insurers and takaful operators to offer products with the following key features:

Standardised products. Insurance and takaful products offered have standardised features, making it easier for consumers to understand, compare and choose the coverage that best suits their needs.

Affordability. Products are designed to be affordable, with premiums that are accessible to low- and middle-income individuals and families.

Accessibility. Products are made available through various distribution channels, including insurance and takaful agents, online platforms and other channels to ensure accessibility for all Malaysians.

Consumer protection. Bank Negara Malaysia ensures that products under Perlindungan Tenang comply with regulatory requirements and provide adequate consumer protection, including transparent terms and conditions and fair claims settlement processes.

Based on the latest information[9], there are currently 16 life insurance members and 14 family takaful members offering 13 life insurance products, 11 family takaful products and 2 general takaful products.

9 https://www.mycoverage.my/en/members/ and https://www.mycoverage.my/en/perlindungan _ tenang/

Inclusive and simple – improving insurance access for the poor

An interview with Mohd Radzuan Mohamed, CEO, Malaysian Takaful Association (MTA)

Could you please give a brief overview of how the Malaysian Takaful Association is involved in designing and delivering insurance for the poor?

The Malaysian Takaful Association (MTA) was established in 2002 to promote the concept of takaful, which is based on the Islamic principles of mutual assistance and shared responsibility. Takaful is designed to provide insurance cover in a manner that complies with Islamic law, making it accessible to a wider range of people, including those who may have religious or ethical concerns about conventional insurance. The two main objectives of the MTA are to provide affordable protection to the poor, using Perlindungan Tenang approved products, and is currently in the conceptual stage of developing blended takaful. Secondly, the MTA acts as a coordinating body for its member companies, ensuring a consistent and effective approach to reaching the underserved populations and designing takaful products to meet their needs.

MTA also aims to facilitate a marketplace for takaful products, ensuring that a variety of these products are accessible to those who need them most. This may involve working with government agencies, NGOs and other stakeholders to raise awareness, disseminating information and providing access touchpoints for individuals and communities to procure takaful.

What are the most challenging issues and critical success factors in designing and delivering insurance products for the poor in Malaysia, from both the demand and supply side?

Bank Negara Malaysia's Financial Sector Blueprint (FSB) 2022-2026 has set the ambitious 2026 target of a takaful and insurance penetration rate of 4.8–5.0% (premiums as a percentage of GDP) and doubling of the number of individuals subscribed to microtakaful/microinsurance. The current penetration rate indicates significant potential for market expansion and growing demand for takaful products. While affordability remains a primary concern in providing takaful and insurance to the poor, it's important to recognise that it's not the only barrier. Income prioritisation, where the consumer tends to give less priority to protection than to other needs, and the reliance on zakat and other government and non-government welfare assistance, also influence takaful uptake.

Zakat is an obligatory form of almsgiving in Islam, whereby wealthy individuals donate a portion of their wealth to support the less fortunate. The zakat system, which provides a basic financial safety net to its recipients, poses a challenge to traditional takaful products in penetrating this segment, highlighting the need for the takaful industry to collaborate with zakat institutions, especially to prepare those individuals who no longer qualify for zakat support or who have gaps in coverage, particularly during life transitions such as retirement or unemployment.

Agent professionalism and trust in takaful and insurance are additional key factors in driving uptake, and significant improvements have been seen since 2018. The latest customer satisfaction survey, concluded in 2022, shows that two of our takaful members are among the top five takaful and insurance providers in Malaysia, demonstrating the progress of the sector.

In conclusion, addressing affordability while respecting cultural and religious preferences, facilitating smooth transitions, and addressing unemployment and retirement challenges, are critical to the success of takaful and insurance products for the poor in Malaysia.

Can you mention one or two initiatives, programmes, or products in Malaysia that you consider successful and briefly explain why they were successful? Are there any current initiatives that you think are highly innovative and could be a game changer?

Firstly, I would like to mention the «mySalam» programme, a pioneering initiative to provide free takaful medical cover to low-income individuals and families. Launched as a National Health Protection Scheme that targets the bottom 40 per cent income (B40) group, it operates under the auspices of the MySalam Trust Fund. The programme targets a number of 9 million eligible individuals from economically disadvantaged backgrounds, providing them with access to essential takaful medical cover. Earlier this year, the Malaysian government announced that the mySalam scheme would continue for another two years, with benefits including a one-off cash payment of RM 8,000 on diagnosis of one of 45 pre-defined critical illnesses, and a cash payment of RM 50 per day for hospitalisation for a maximum of 14 days.

Key features of the mySalam programme include its focus on inclusiveness and simplicity. The programme is designed to be easily accessible, with streamlined application processes and minimal documentation requirements. Through the mySalam initiative, we aim to extend the benefits of takaful to those who traditionally face barriers to access, thereby promoting financial inclusion and social well-being.

The second is Perlindungan Tenang, a set of guidelines introduced by Bank Negara Malaysia. It aims to improve the accessibility and affordability of takaful and insurance products for the underserved segments of society, particularly the low- and middle-income groups. Key elements of Perlindungan Tenang include simplified takaful products, standardised product features to facilitate comparison and ensure transparency for consumers, and an emphasis on affordability and consumer protection.

What should be the role of insurance in relation to other microfinance programmes, safety nets and informal insurance schemes?

In Malaysia, takaful can play a critical role in complementing other protection programmes to enhance financial resilience, particularly among SMEs, including micro-enterprises. Given that SMEs contribute about 45% to the country's GDP, and that about 70% of SMEs are micro-enterprises that are often uninsured, there is a clear need to develop comprehensive risk management strategies. MTA supports and is proactively exploring opportunities to work closely with Bank Negara Malaysia, the Joint Committee on Climate Change (JC3) and the United Nations Development Programme (UNDP) to develop appropriate and robust risk management frameworks for these SMEs.

What are the key roles and responsibilities that regulators and supervisors can and should play in creating an enabling market environment for the design and delivery of insurance for the poor?

We welcome the approach of regulators to move away from prescriptive enforcement of regulation and supervision towards a more collaborative and cooperative approach. In this way, regulators can facilitate the creation of an enabling market environment. The Perlindungan Tenang initiative, which aims to expand the availability and quality of takaful and insurance solutions to meet the needs of the under-served, is an excellent example of such an approach.

What is the role of technology in broadening the insurance customer base and making insurance available to the poor?

As referred to above, in January 2022, Bank Negara Malaysia unveiled Malaysia's five-year Financial Sector Blueprint (FSB) for 2022 to 2026, which outlines the vision and strategies for the development of Malaysia's financial sector. The FSB is underpinned by the three broad outcomes of finance for all, finance for transformation and finance for sustainability.

The FSB outlines five strategic thrusts for the financial sector to drive the nation's economic agenda. These encompass financing Malaysia's economic transformation, enhancing the financial well-being of households and businesses, promoting the digitisation of the financial sector, fostering a resilient green economy and harnessing Islamic finance to drive value-based financing. The success of these strategic thrusts relies heavily on robust digital infrastructures, encompassing both financial and non-financial domains. The development of these infrastructures will prioritise inclusiveness and adaptability, ensuring accessibility to all segments of society. Key components, such as connectivity and digital identity, will play pivotal roles in fostering innovation and facilitating the widespread adoption of digital financial services.

IN 2021 AND 2022, THE MALAYSIAN GOVERNMENT SUBSIDISED INSURANCE PREMIUMS THROUGH VOUCHERS, BUT THIS STOPPED IN 2023

The Perlindungan Tenang Voucher (PTV) Programme was an initiative of the Malaysian government to further extend social protection to the low-income group. The programme was launched in September 2021 and is offered to eligible Bantuan Prihatin Rakyat (BPR)[10] beneficiaries. In 2021, a RM50 voucher had been allocated to eligible BPR beneficiaries to purchase a Perlindungan Tenang product from licensed insurers and takaful operators. Malaysian Re was appointed to manage and administer the PTV Programme.

Recognising the positive impact of the Perlindungan Tenang initiative in enhancing the social protection of Malaysians, the government included the extension of the PTV Programme for another year in Budget 2022. With this extension, the amount of the voucher was increased from RM 50 in 2021 to RM 75 in 2022. In addition, recipients of the Bantuan Prihatin Rakyat scheme were given the opportunity to use the voucher to purchase comprehensive insurance for motorcycles under 150cc. With the announcement of this extension, there was a need for a wider communication campaign to inform the Malaysian public about the PTV Programme and its benefits.

With the introduction of the PTV Programme of RM 50 vouchers for beneficiaries of Bantuan Keluarga Malaysia (BKR), now known as Sumbangan Tunai Rahmah (STR), the take-up of Perlindungan Tenang products after 2021 increased tremendously; the number of policyholders increased from 40,000 to 4 million within a year, and 44 % of the B40 segment benefitted from the programme. The cost-benefit ratio was favourable; while the government spent about RM 200 million on the Perlindungan Tenang voucher, the insurance and takaful industry, through Perlindungan Tenang, provided an estimated RM 66.7 billion to RM 213.3 billion in sum assured to the B40 segment[11], representing a cost-benefit ratio of 1:334 to 1:1067. Due to the low number of claims, the Malaysian government decided to discontinue the Perlindungan Tenang programme in June 2023, although from the insurance industry's point of view, this decision came far too early as the period of not even two years was too short to make a robust statement on loss ratios. There is no doubt that the programme succeeded in drastically reducing the protection gap within the B40 target group in a very short period of time.

10 The Bantuan Prihatin Rakyat (BPR) programme is a government assistance initiative aimed at providing financial aid to low-income households and vulnerable groups within the Malaysian population. Under the programme, eligible recipients receive cash assistance from the government on a periodic basis. The assistance is typically disbursed directly to the recipients' bank accounts or through designated channels.

11 Malaysian Re Foresights, Issue 5, April 2023

Expanding and improving formal insurance coverage in Malaysia

Fundamentally, new risks can enter an insurer's book of business from two directions – either because demand for a new type of cover arises or because the insurer decides to expand its portfolio with a risk that it had not previously covered. However, regulation might be a third avenue, where demand and supply do not yet match. In fact, in many cases insurance has demonstrated that it can protect and enable progress more effectively than either formal or informal public institutions, may it be families, communities or other private or public institutions. It is thus in the interest of society or, more specifically, the government, to increase the uptake of insurance through regulation or policymaking.

From a societal viewpoint, insurance may sometimes disappoint, particularly in emerging markets where the low-income segments of society often have little to no access to insurance due to a lack of awareness, trust or affordability. In 2022, Malaysia's insurance penetration rate (insurance premiums divided by the country's Gross Domestic Product, GDP) stood at 5 %, as compared to 3.6 % for emerging Asia and 6.7 % for the global average. The rate is relatively higher for life insurance which accounted for 3.7 %, as compared to 2.1 % for emerging Asia and 2.8 % for the global average. Non-life, by contrast, stood at 1.3 % with emerging Asia accounting for 1.6 % and 3.9 % for the global average for 3.9 %.[12]

However, these figures mask that 90 % of Malaysia's population are deemed underinsured, according to data from EY, as the resources required to continue at the current (pre-disaster) life style exceed those available in case of disaster. This includes both life and non-life insurance.[13] In addition, 85 % of small and medium-sized enterprises (SMEs) – the backbone of the Malaysian economy, accounting for 97.2 % of total businesses in the country generating 38.2 % of GDP and employing about 7.3 million people – are insufficiently protected, leaving them exposed to business interruption from fire or property damage, according to a study from AIG.[14] Even worse, over 50 % of SMEs are not insured or are at risk of losing their business due to losses caused for instance by fire, based on research provided by AXA Affin General Insurance Bhd.[15]

LIFE AND INVALIDITY RISK INSUFFICIENTLY PROTECTED

Despite the higher penetration rate for life insurance, many Malaysians are inadequately protected against life shocks, serious illness or death. According to the Life Insurance Association of Malaysia (LIAM), the percentage of the population with life policies has stagnated at around 54 % for the past few years. If multiple ownerships of policies are taken into account, only 41 % of Malaysia's population have life insurance. That figure still blurs the full picture, as only 4 % of households in the lower income segment hold a life policy and of the 41 % of the total population that do, 90 % are insufficiently covered if the breadwinner of the family was to become disabled or die. The main reason for this last discrepancy is that life insurance is often bought as a savings product (investment-linked policies). Too little attention is paid to covering the risk of death or disability.[16]

However, the Covid-19 pandemic has raised the awareness of the need to be insured and to take precautions for times of uncertainty or crisis. In this regard, the pandemic was seen as a wake-up call. In 2021, life premiums for new business increased by almost 13 % and the number of policies grew by more than 33 % as compared to the previous year. Growth, however, was still very much driven by an increase in investment-linked business. Malaysia's family takaful business also recorded strong growth in total premiums, which increased by almost 50 % in 2021.[17]

12 Swiss Re Sigma Explorer
13 EY, Will digital insurance and takaful operators close Malaysia's protection gap? March 2023
14 The Malaysian Reserve, Over 85% of SMEs at risk due to underinsurance, says AIG statistics; November 2018
15 The Star, Over 50% of SME not insured, July 2019
16 LIAM, LIAM launches consumer awareness program, #BUKANEXTRA targeting the young generation on social media, September 2020
17 Bernama, Importance of Insurance Protection takes Centre Stage in Pandemic Era, December 2021

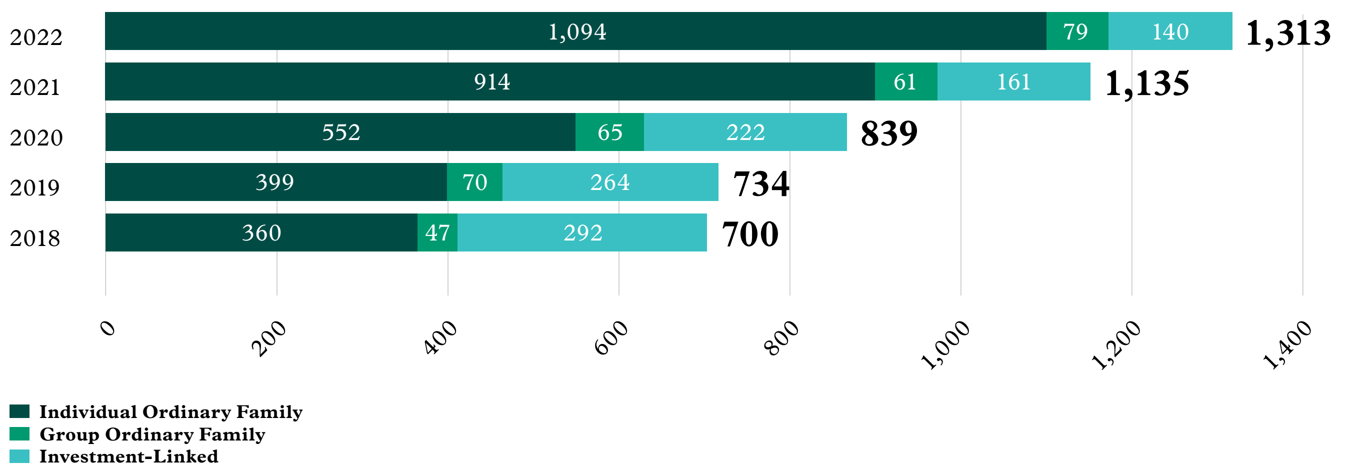
Figure 5: Life insurance – new business in total premiums.
Source: LIAM, Annual Report 2023

RM Million / Type	January to December		
	2022	2023	% change
Traditional	2,076	2,080	0.2
Investment-Linked	5,434	6,170	13.6
Group	4,467	5,113	14.5
Total	**11,977**	**13,363**	**11.6**

The momentum returned in 2023 as new business premiums grew by 11.6 %, after 2022 which had been a difficult year for new business with consumer habits shifting towards short-term spending after two years of pent-up consumption due to pandemic containment measures.[18] Family takaful also continued to grow favourably on 2023, with premiums for new certificates growing by more than 18 % in Malaysian Ringgit terms and by almost 16 % in terms of new certificates issued.[19]

18 LIAM, Annual Report 2023
19 ISM, Statistical Yearbook, Insurance & Takaful, Financial Year 2022

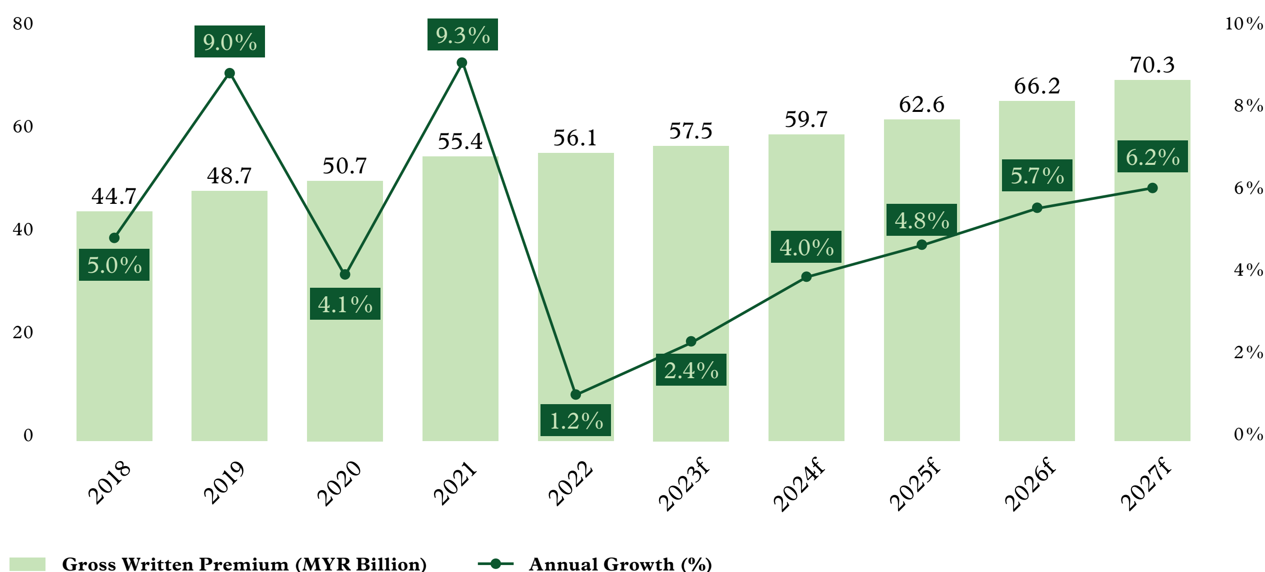
Figure 6: Family takaful – number of new certificates issued, (‘000), 2018–2022.
Source: ISM, Statistical Yearbook, Insurance & Takaful, Financial Year 2022



The outlook for Malaysia's life insurance industry is favourable, with gross written premiums expected to grow at close to or above 5 % over the next three years, benefitting from rising awareness, low-cost term life and endowment products, as well as favourable support measures from Bank Negara Malaysia. Following the Covid-19 pandemic, insurers responded to changing consumer preferences and inflation by introducing more affordable life and health products. In addition, with government founded protection programmes such as Perlindungan Tenang, the i-Lindung scheme or measures to enhance the transparency of life products, Bank Negara Malaysia aims to encourage low-income Malaysians to invest in life and critical illness policies as part of their financial planning. As a result, Malaysia's life insurance industry is expected to grow faster in the coming years.[20]

20 Global Data, Malaysia life insurance industry to surpass $15.9 billion by 2027, forecasts GlobalData, May 2023

Figure 7: Malaysia life insurance – gross written premiums (RM billion) and annual growth, 2018–2027.
Source: GlobalData Insurance Intelligence



STRATEGIC NEED FOR MORE PRIVATE HEALTH INSURANCE

Private health insurance (PHI) is another sector where rising consumer demand for protection meets the government´s interest in creating an equitable and sustainable healthcare system through greater private sector participation. Currently, the total health expenditure in Malaysia accounts for 4.3 % of the country´s GDP, up from 2.5 % in 2000. The Ministry of Health provides about 45 % of the financing, out-of-pocket expenditure accounts for a sizeable 35 % and PHI for 7.6 % (see figure 8 on the total expenditure on health for further detail). Costs have been escalating. From 2020 to 2021, they rose by almost 17 %, with the Ministry of Health registering the largest increase of 24 % in a single year, while the costs borne by PHI rose by 11 %.[21]

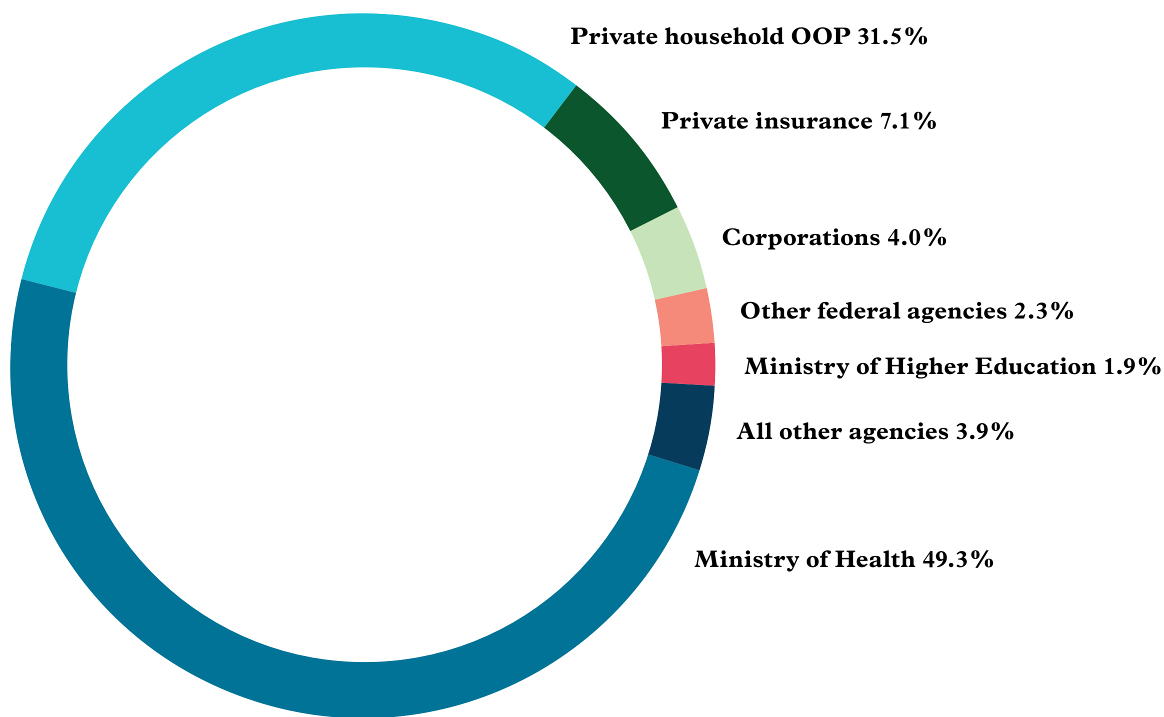
21 Code Blue, Report: Malaysia's Out-Of-Pocket Expense Rises with Higher Spending on Drugs, Inpatient Services, 2023

From both a public and consumer perspective, PHI is an important addition to Malaysia's public healthcare system, which is currently overburdened and underfunded due to an ageing population, a growing disease burden and population growth. In 2019, the proportion of Malaysians aged 60 and above stood at 10 %, and this is forecast to rise to 24 % by 2050. Urbanisation, life-style changes and environmental pollution are all factors driving the prevalence of cardiovascular diseases, obesity, diabetes and high cholesterol – and contributing to a rise in critical illnesses incidence.[22] Medical progress and enhanced access to medical treatment are improving mortality rates, but also increasing healthcare costs.

Malaysia´s healthcare system is currently regarded as heavily reliant on out-of-pocket expenses, which may cause catastrophic healthcare costs and a decline in the economic status of patients. As healthcare reform is currently not perceived as an option for Malaysia, PHI may provide healthcare financing through a pre-payment system which may reduce the amount of out-of-pocket expenses and protect patients from the devasting costs of treatment, while reserving public resources for the underprivileged segments of society.

22 Prudential, Understanding Critical Illness Trends in Malaysia: Insights from Prudential's Critical Illness Insurance Claims Data, 2023

Figure 8: Total expenditure on health by all sources of financing in 2021.
Source: MOH's Malaysia National Health Accounts (MNHA), presentation of November 10, 2022



Sources of Financing	2020	2021
	RM Million	
Ministry of Health	31,002	**38,586**
Private household out-of-pocket (OOP) expenditure	22,617	**24,643**
Private insurance enterprises	4,971	**5,535**
Other federal agencies	2,530	**3,131**
Ministry of Higher Education	1,425	**1,785**
All Corporations	1,668	**1,513**
All other Agencies	2,808	**3,027**
Total	**67,022**	**78,220**

In 1983, the potential for PHI enrolment was thought to be around 1.5 % of the Malaysian population. However, by 1995 that figure had risen to about 15 %. According to data from 2019, the proportion of PHI uptake has increased to 20.5 %, with strong demand in urban areas among the middle to higher income segments of society, where the share of PHI enrolment could be as high as 50 %.[23]

PHI in Malaysia mainly consists of critical illness insurance, private or family health insurance or disease-specific insurance. From 2021 to 2022, Prudential Malaysia recorded an 11 % increase in pay-outs for claims in its critical illness policies, which according to the insurer is in line with the global trend towards rising chronic and non-communicable diseases, which account for 71 % of all deaths worldwide.[24]

The number of critical illness policies increased from 3 million in-force policies in 2015 to 5.5 million in 2019, a compounded annual growth rate (CAGR) of almost 13 %. This growth is seen as being driven by improved market penetration of critical illness products in Malaysia, as well as increased interest in healthcare protection brought about by the experience of the Covid-19 pandemic. Policies are being bought at a surprising early age, with an average issuance age of 24 years, due to Malaysia´s relatively young population. However, according to Gen Re, the early age of issuance reinforces the need to develop products that appeal to young adults and use digital modes of distribution to further penetrate the critical illness insurance market.[25]

The insurance protection level for critical illness insurance increased from RM 56,000 in 2015 to RM 79,000 in 2019. However, the total cost for a critical illness treatment and the potential loss of income, possibly of the breadwinner of a family, by far exceed this level of protection. Due to inflation, medical inflation and higher incomes, the relative level of protection is expected to have decreased in recent years – although the absolute amount of protection has increased. Thus, despite all efforts, the vulnerability of policyholders has increased rather than decreased.

23 PLoS One, Mohd Adli Abd Khalim, Surianti Sukeri, Uptake and determinants of private health insurance enrollment in a country with heavily subsidized public healthcare: A cross-sectional survey in East Coast Malaysia, January 2023

24 Prudential, Understanding Critical Illness Trends in Malaysia: Insights from Prudential's Critical Illness Insurance Claims Data, 2023

25 Gen Re, The Gen Re Dread Disease Survey – Key Takeaways for the Malaysia Market, November 2022

Overcoming underinsurance – a life insurance example of extending the boundaries of insurance

An interview with Ravinder Singh, Co-Founder & Chief of Commercial & Product Officer at AQM Technologies

You co-founded AQM Technologies in 2022 to address the underinsurance of life risk in Malaysia. How does the market present itself?

Insurance is expensive, but having no insurance is even more expensive. However, the former mustn´t be the case. AQM Technologies was launched to help overcome the challenge of the affordability of life insurance in Malaysia.

The country´s population of 34 million people is largely uninsured against the risk of the sudden death of the family´s breadwinner. 60% of Malaysians have no life insurance and of those who have, 90% are underinsured. In fact, life insurance is mainly bought as a savings or investment product, not as a protection product.

The industry is failing its customers. Those of Malaysia´s population who need a life insurance product the most to protect their families, have no cover. And in fact, even those in the industry who understand insurance well, often don´t buy it because they don't think it is good value.

We still face the familiar dilemma that insurance is bought, rather than sold. As a result, personal lines products need regulatory intervention to make them compulsory and thus overcome their initial lack of risk diversification. If life insurance was made compulsory, as is motor insurance, the price would drop to half a cup of coffee a day.

Our motivation, therefore, is to provide basic life insurance to all Malaysians to protect their families. However, this affords a shift from the current emphasis on savings and investment products to protection products and community schemes. We are in the midst of working with several partners to make this possible. For those least able to afford the policy, we envisage that schemes will be government or corporate subsidised, while for those with a middle income, cover will be partially subsidised. At similarly affordable rates, those in the top income bracket will be able to afford the cover themselves. The realisation of such community schemes is in line with Bank Negara Malaysia's vision to open up applications for the Digital Insurance and Takaful Operator license, in the hope of providing insurance to all citizens.

Making life insurance affordable to the population and substantially increasing penetration might require a very different approach to the market. How do you go about it?

We started with the ambition to launch a life insurance product which is cheaper than the existing market price. This task is quite challenging as it requires experience and processes which are very different from exisiting standard policies. We need to radically reduce costs as we are aiming for a product which is affordable for 80% of society and subsidised for the remaining 20%. However, subsidised still means that the price per policy has to be low enough for the government to fill that gap.

For insurance to be affordable and cover the lives of almost all Malaysians, insurers need to rethink the key parameters of insurance, such as claims and risk management, distribution and underwriting. To dramatically reduce the cost of claims, risk management has to start at the level of the insured. Policyholders need to be incentivized to reduce their risk, which we achieve through a health score that motivates and provides simple steps to pursue and lead a healthier lifestyle.

Second, distribution has to change fundamentally. Malaysia´s agent system is expensive, far from efficient and certainly needs a re-look. It is not suited to providing an affordable insurance product to all citizens. Instead, distribution has to be digital, based on a simplified onboarding application, which is easy to understand and seamless to handle to a level yet unseen. Furthermore, to minimise distribution costs, insurers can partner with a data owner which provides access to large consumer groups, enhances their credibility and promotes them as a trusted organisation, and facilitates the underwriting process.

Underwriting is always an aspect that drives cost and presents a barrier to consumers. How is the underwriting done at AQM Technologies?

AQM Technologies is providing voluntary additional protection for members of Malaysia´s governmental Social Security Organisation (SOCSO) scheme, which covers the risk of accidents at work and while travelling to and from work for all private sector employees. Complementing the SOCSO cover, AQM offers a platform for a self-pay option for 24-hour protection worldwide for as little as RM 1 per month.

In addition to the Life and Permanent Disability policy, AQM offers cover for Personal Accident and Critical Illnesses, which includes the Big Five non-infectious diseases: kidney failure, heart attack, stroke, cancer and major organ failure.

The underwriting process is based on SEHATi's health score assigned to SOCSO members from free health screening sessions. As part of SOCSO's welfare programme, the organisation provides free screening to their members aged 40 to 59, which includes assessment for both mental and physical health, as well as lifestyle. In an attempt to combat Malaysia´s rising prevalence of being overweight, which has risen to almost 60% of the adult population, the SEHATi app helps keep members on track with their health and offers insurance plans based on their health scores.

The SEHATi health score aggregates the results of 18 different criteria into a ranking of 0 to 100 points, based on a pool of health results from over 800,000 members. Members with an above-average health score are eligible for a wider range of insurance plans at a more affordable rate. As a result, SOCSO members have an incentive to be healthier, as this enables them to reduce the price of their cover.

Changing consumer demand

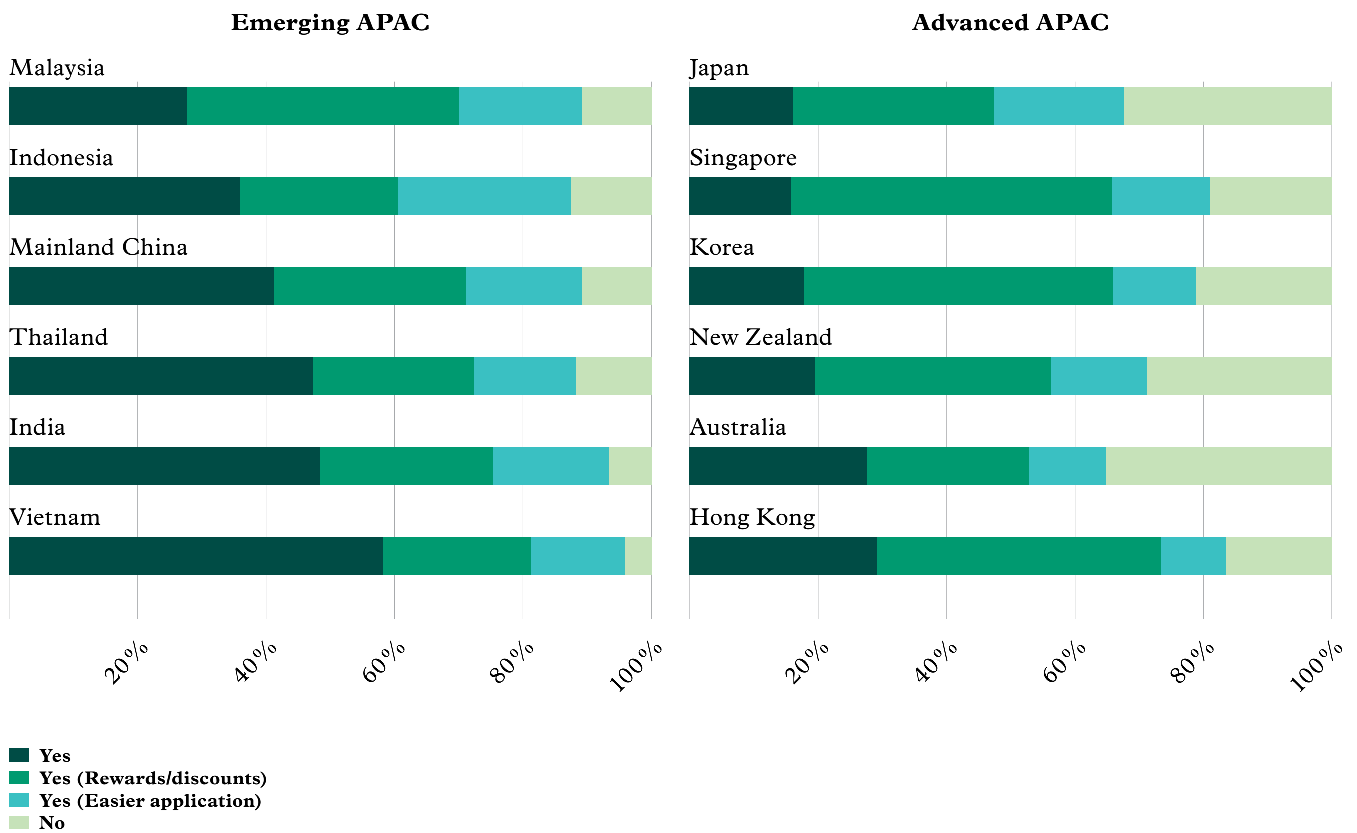
Malaysia is by no means the only country in Southeast Asia where the gap between a relatively low insurance penetration on the one side and rising demand on the other side is widening, driven by a growing awareness of insurance products, an increasing overall prosperity, an aging population and the growing impact from natural catastrophes. In addition, as shown above, insurance is responding to a public mandate of providing better protection to the low-income segments of society. Further reinforced by the experience with the Covid-19 pandemic, this adds up to a growing interest in savings and protection products across Southeast Asia.

However, a widening gap between supply and demand does not yet translate into rising insurance sales. As EY notes, insurers need to redesign their value proposition in the face of emerging risks and changing customer preferences shaped by lockdown experiences, pushing consumers towards e-commerce platforms and more digital solutions.[26] This affects distribution first. While traditional sales channels – in Malaysia the agent system – remain highly relevant, insurers are introducing digital platforms and entering partnerships with public institutions, banks and e-commerce platforms.

As seen in our interview with AQM Technologies, this also includes the introduction of digital apps that simplify the underwriting process and provide an end-to-end consumer experience that also enables consumers to manage their risks. In fact, as Swiss Re emphasised in a recent customer survey, 88 % of interviewees in emerging Asia markets report using digital health management touchpoints such as health and wellness apps or online portals to research or manage insurance policies, making insurance apps the fastest-growing distribution channel in emerging Asia.[27]

26 EY, Why embracing changing consumer demands is critical to boost opportunities for insurers in Southeast Asia, June 2023
27 Swiss Re, Daisy Ning, APAC consumers' embrace of digitalisation points the way to a better protected future, July 2022

Figure 9: Willingness to share personal data with insurance providers.
Source: Swiss Re, APAC consumers embrace digitization



However, consumers are also turning to digital channels to invest in health and protection. In return, they are also willing to share personal information on these platforms if that results in rewards, discounts or streamlined applications - which facilitate the underwriting process and help to improve the risk management process for the insurer.

More importantly though, consumers expect their insurer to help them manage their own risk, not just by reimbursing them after a claim, but by helping them to reduce or even prevent the risks that pervade their lives.[28] This will affect all types of insurance policies, be it life, health, motor or property insurance, where consumers appreciate that insurers share their risk knowledge with the consumer and provide advice, for instance through apps, on how to reduce or avoid risk. This change in demand reflects the experience from the recent turbulent and uncertain years, when a radically changed risk landscape confronted consumers with more risks and different types of risks.

In summary, there appear to be at least three trends at work that shape the region´s insurance markets, including Malaysia. First, insurers in Southeast Asia are rethinking the customer journey. A transformation is underway in which the insurance product, which protects policyholders against uncertainties, is bundled with preventive solutions and possibly value-added services. Second, insurance is embedded or combined with other lifestyle-based propositions to enhance experience and add value. And third, insurers are entering partnerships to expand their outreach and embed their product with a broader experience tailored to the interests of the customer.[29]

28 Bain & Company, Customer Behavior and Loyalty in Insurance: Global Edition 2023, July 2023
29 McKinsey, How the Asian insurance market is adapting to the future, February 2023

Exclusive Partner

Prepared by

faber

SUBSTANCE IS
OUR STRENGTH