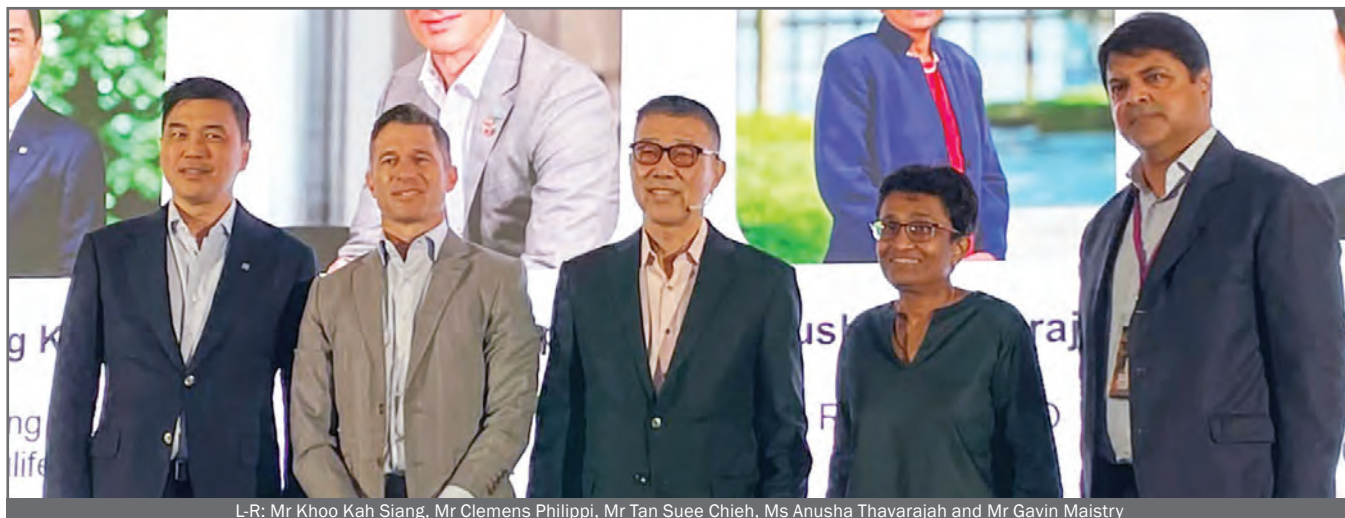


Emerging risks redefine actuarial domain



L-R: Mr Khoo Kah Siang, Mr Clemens Philippi, Mr Tan Suet Chieh, Ms Anusha Thavarajah and Mr Gavin Maistry

At the Asian Actuarial Conference 2026, industry experts emphasised that actuaries must continuously adapt as risks become increasingly interconnected and frequent, in order to beat the odds and price uncertainty fairly.

By Sarah Si

Through the years, actuaries have kept redefining what it means to take risk: they price new risks, reserve for risks already underwritten and set aside capital to withstand extreme events.

At the Asian Actuarial Conference 2026, with the theme 'Beating the Odds: Redefining Risk', Singapore Actuarial Society, Chair of the Asian Actuarial Conference 2026 and Council Member Akash Gupta, also mentioned that by constantly sharpening every aspect of risk taking, actuaries contribute to making societies resilient to shocks in the most efficient way possible.



Mr Akash Gupta

Surviving and thriving for a reason

"Our profession has survived and

thrived through many a catastrophe, and it continues to beat the odds," said Mr Gupta in his opening address. "That said, we should not be complacent."

Guest-of-honour Minister of State, Ministry of National Development and Ministry of Foreign Affairs, and Board Member of the Monetary Authority of Singapore Alvin Tan echoed the sentiment, noting that just as Singapore's pioneers took calculated risks and planned with discipline, the same ethos exists in the actuarial profession, where they "stress test the system and build the resilience that keeps our financial ecosystem secure".



Mr Alvin Tan

The factors defining risk today

According to Mr Tan, the odds are

changing today, and "assumptions are being tested".

"Risks, which were once isolated, are now interconnected, and events that were once considered rare are now occurring with more frequency," he said.

"The operating environment is changing rapidly."

New tools

In his opening address, Mr Gupta had mentioned AI, urging actuaries to engage with it – mindfully.

Mr Tan leaned into the theme as well, saying, "AI and advanced analytics are changing how we conduct underwriting, manage claims and engage customers. It is also increasingly embedded in how insurers operate."

New terrain

Mr Tan, drawing from his experience in the Ministry of Trade and Industry, noted that trade has fragmented, supply chains have shifted and global geopolitical tensions are now redefining the global trade, economic landscape, as well as how countries

interact with one another.

"These do affect investment portfolios and long-term planning assumptions," he said. "It also raises the bar for insurers, for stress testing and long-term financial resilience."

New needs

Even as new tools and terrain unfold, Mr Tan also pointed out that people's needs "are evolving alongside demographic shifts and consumer expectations."

Citing Singapore as an example, he noted that its rapidly ageing population is big challenge.

"As people live longer, particularly in Singapore and parts of Asia, they need retirement adequacy, healthcare and long-term financial security. Customers' profiles and needs have changed," said Mr Tan.

"They expect products and services to be more affordable and accessible."

The challenge of beating the odds

In a panel session, Munich Re Global Chief Actuary for Life and Health Gavin Maistry said that even though the role of (re)insurance was to make the world more resilient, "in an uncertain world, you do not know all possible outcomes".

Citing the global COVID-19 pandemic as an example, he said, "From an actuarial modelling point of view, actuaries always had the pandemic risk in their models, but we were still surprised by how different the experience was across countries; certain countries experienced much higher mortality rates than others."

According to Mr Maistry, actuarial models did not take into account factors that drove links to human behaviour, different societal norms and different hospital systems that had to cope with the pandemic for the very first time.

"This complexity was very hard to factor into already complex models, and what we learned was that some of these risks were very difficult to model in practice," he said.

Being multidisciplinary

To beat these odds, another panellist, Allianz APAC Regional CEO Anusha Thavarajah, suggested that actuaries "be multidisciplinary".

Using the training actuaries undergo that sets them up to be resilient as an example, Ms Thavarajah cited the floods that devastated Indonesia, Malaysia and Thailand in December 2025.

"Actuarial models and technical science meant we could use predictive analysis to see that these areas were going to be affected by floods," she said.

Ms Thavarajah then called on actuaries to use the models to do good, saying, "It is not so much about predicting, pricing and calculating, but transcending to shaping the risk, creating awareness and addressing it."

"It is about using the data that you have to be able to price, and taking it one step further and engage policymakers and bodies to address the various things that can be done."

Dealing with uncertainty

Becoming better at critical thinking

To that, Mr Maistry said, "First, we have to become better at critical thinking and critical thinking skills. But what is critical thinking?"

"It is building expertise to make good decisions under conditions of uncertainty."

"Actuarial models often lack multidisciplinary, which means looking wider, speaking to other experts outside the actuarial domain and asking fundamental questions about what is driving poor experience in particular countries."

Developing expertise through experience

Secondly, Mr Maistry posited actuaries should "develop expertise in fundamental rules".

"These may be simple rules that one could apply when making decisions without complete mathematical models, and learn from experience," he said.

"Once those rules and insights are extracted, there will be a certain level of expertise that can help critical thinking skills."

Making systems resilient

Lastly, Mr Maistry touched on "making the systems actuaries work in more resilient".

"It is very important that we have alignment of interests with different

stakeholders, so we can look more holistically at managing risk for business client, like being more diversified, having a more antifragile business model and putting limits in budgets where we feel there is uncertainty," he said.

Can risk be truly priced for fairness?

In a breakout session, Optum India, Manager, Actuarial Advisory Services Ankit Nanda, drawing on the US health insurance market, warned that pricing risk fairly would not be "as easy as it seems on paper".



Mr Ankit Nanda

"A very small, concentrated proportion of claimants drives expenditure year after year – catastrophic and critical cases that may lack the right navigation of care, and that remain in the pool," said Mr Nanda.

While he noted that this is when risk adjustment tends to come into focus, Mr Nanda also pointed out that "it is not a viable solution for all problems".

"There is a certain amount of risk which is catastrophic, and you cannot predict who is going to be involved in an accident, who is going to have a neoplasm and who is going to need chemotherapy, radiation and extended hospitalisation stay," said Mr Nanda.

Since such catastrophic risk cannot be prospectively attributed to individuals, Mr Nanda argued the residual tail must be handled through pooling mechanisms rather than prediction. He proposed two options: a reinsurance framework that he noted has been used in other markets, or a risk corridor with a model in place "that is probably going to be off by a fair bit the first few years".

The Asian Actuarial Conference 2026, with the theme 'Beating the Odds: Redefining Risk', was held in Singapore from 18 to 21 August 2026. 