



Fifth Joint Annual General  
Insurance & Takaful Seminar



Facing the Future: Tomorrow's Challenges & Opportunities



Institute  
and Faculty  
of Actuaries

12-13 December 2018, Kuala Lumpur



# What you can expect

The fifth joint annual general insurance & takaful seminar 'Facing the Future: Tomorrow's Challenges & Opportunities' will consider the impact of changes in the business environment on general insurance and takaful. The sessions will provide insight on how the industry is responding. The topics cover local, regional and global challenges and innovations, including:

- Cyber risk
- Machine learning
- Peer-to-peer insurers
- IFRS17
- GLM reserving
- Private medical insurance

This event is relevant for actuaries and general insurance professionals. The sessions have been designed to cater for experienced professionals, students and those new to the general insurance industry alike. Attendees will also have the opportunity to network throughout the event and are invited to a networking reception at the end of day one.

Registration: <http://actuaries.org.my/fifth-annual-gi-takaful-seminar-2018/>



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# Registration

## Venue

DoubleTree by Hilton Hotel

The Intermark, 348, Jalan Tun Razak, 50400, Kuala Lumpur, Malaysia

## Price

Early Bird rate available until 23 November

775MYR – Member

975MYR – Non-member

Normal rate for booking after 23 November

825MYR - Member

1025MYR - Non-member

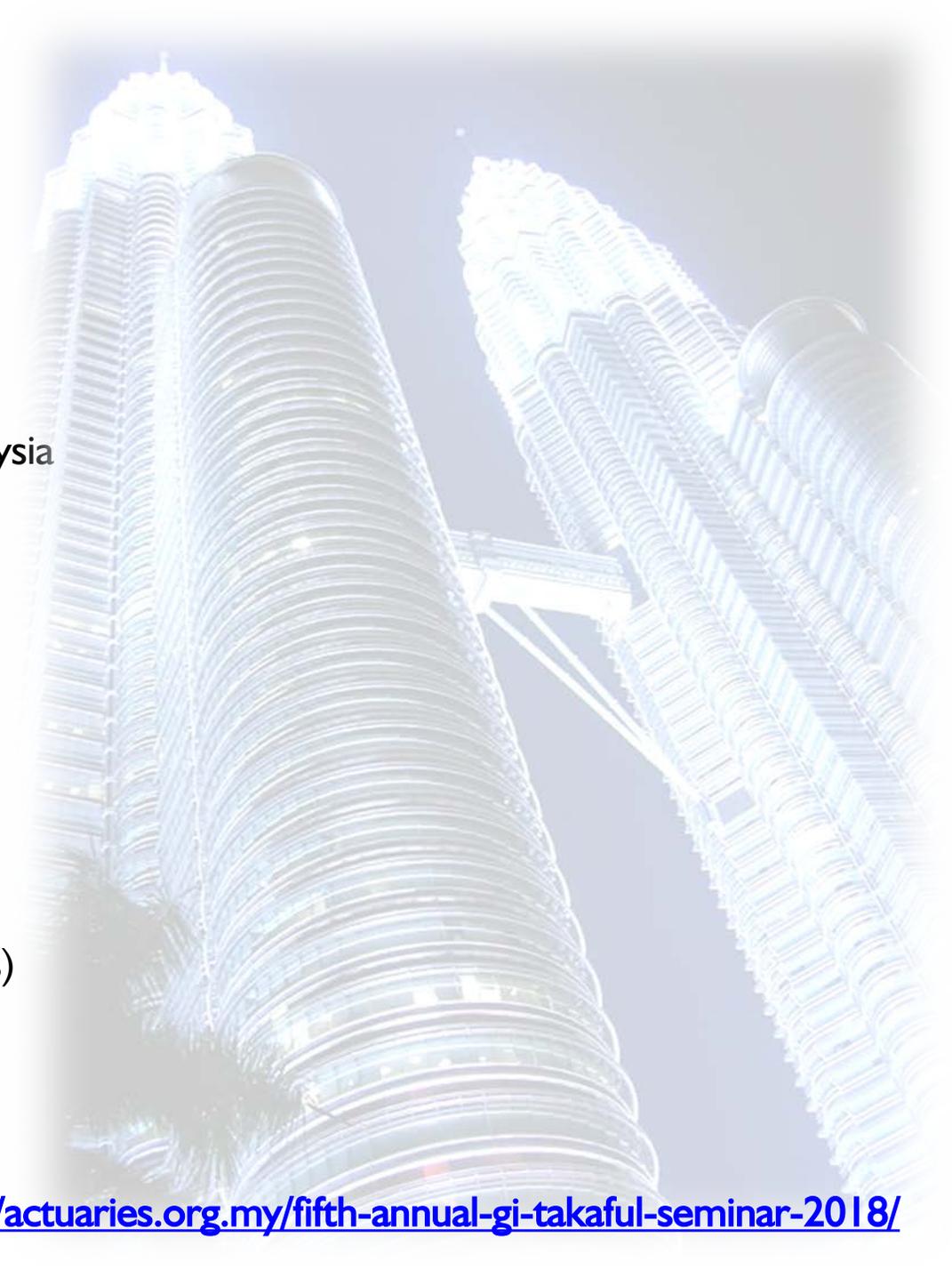
University students

250 MYR (limited number of places allocated on a first come basis)

## CPD

10 hours are available

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# Day 1: Programme

Session	Description
08:30 – 09:00	Registration (coffee, tea and a light-breakfast will be served)
09:00 – 09:15	Welcome
09:15 – 10:15	<p><b>Peer-to-Peer Start-ups: Rediscovering the Roots of Insurance by David Maneval &amp; Jin Sheng Ooi</b></p> <p>Back to the future! Experimentation with, and introduction of, various models of peer-to-peer insurance is a fascinating area of insurance innovation. It is being used to leverage outreach and the power of personal networks, as well as customer selection and behaviour. This session will provide an overview, comparison, and progress report on various peer-to-peer insurance initiatives, and an insightful analysis of how the core elements of many of these programs hark back to the early days of community-level insurance.</p>
<i>10:15 – 10:45</i>	<i>Break</i>
10:45 – 11:45	<p><b>GLM Reserving by Kate Chen and Mehul Dave</b></p> <p>Most of the traditional methods used for predicting the reserves are in nature deterministic, without providing additional information on (un)certainty of the results, i.e. estimating confidence intervals and enabling diagnostic tests.</p> <p>The GLM model, on the other hand, by being essentially an extension of multiple linear regression models, provides stochastic features and enables interactions between the key factors which determine the final results. By considering a non-normal underlying distribution for ultimate claims, GLM enables usage of skewed distributions to model claims reserves that are in line with observations of insurance severity data (usually not symmetric). GLM can be further utilised in statistical approaches, such as bootstrapping GLM to incremental development triangles based on residuals (such as Pearson residual). To illustrate the latter, we will demonstrate the analysis by using R, as well as other software packages to simplify the process.</p>

Session	Description
11:45 – 12:45	<p><b>Machine Learning on Insurance Ratemaking and Underwriting by Simon Lee</b></p> <p>Actuaries are pioneers of using data science to monetize the risk assumptions used by insurers. Despite the maturity of actuarial mathematics, the recent development of machine learning technology could be crucial in enhancing our actuarial practice. Many insurance companies are still utilising one-way analysis as the primary pricing tool and some are adopting a generalised linear model (GLM) for prediction accuracy. On the contrary, in other industries, a GLM is no longer considered and many are utilising generalized additive modelling. In this session, we will share some of the machine learning techniques that impact society and use a number of case studies on its application in insurance, particularly on pricing and underwriting.</p>
<i>12:45 – 14:00</i>	<i>Lunch</i>
14:00 – 15:00	<p><b>Panel discussion on managing new teams with Sophia Ch'ng, Jimmy Molyneux &amp; Gary Wang Moderator David Maneval</b></p> <p>Consider a hypothetical scenario where you have just been hired as the Chief Actuary for a start-up general insurance company in Malaysia, or you have been given a chance to set up a brand new actuarial team in an existing company. With a decent budget and knowing the relatively low supply of experienced general insurance actuaries here, how would you go about designing, organising, and staffing your brand new team? In this session, we will discuss some traditional actuarial organisation structures that have been tried and tested and their relevance in a start-up environment versus a legacy organisation. We'll cover the common issues and challenges facing local and international actuaries and the future shape and form of a high-functioning actuarial team.</p>
<i>15:00 – 15:30</i>	<i>Break</i>

15:30 – 16:30

### Healthcare Financing and the Role of Private Medical Insurance by Pang-Hsiang Chye

Governments are expected to ensure their citizens have access to adequate healthcare. In most countries, this takes the form of subsidised public healthcare delivery systems, mostly financed by some form of taxation. With the proportion of retirees to working population increasing, governments are increasingly looking to insurance as a source of additional financing. This presentation looks at the role of insurance in various countries and the role of government vs. private sector.

16:30 – 17:30

### Actuarial Reflections and Projections from three generations of actuaries by Robert Glicksman, Kelvin Hii and Zainal Kassim Moderator Chin Yang Ong

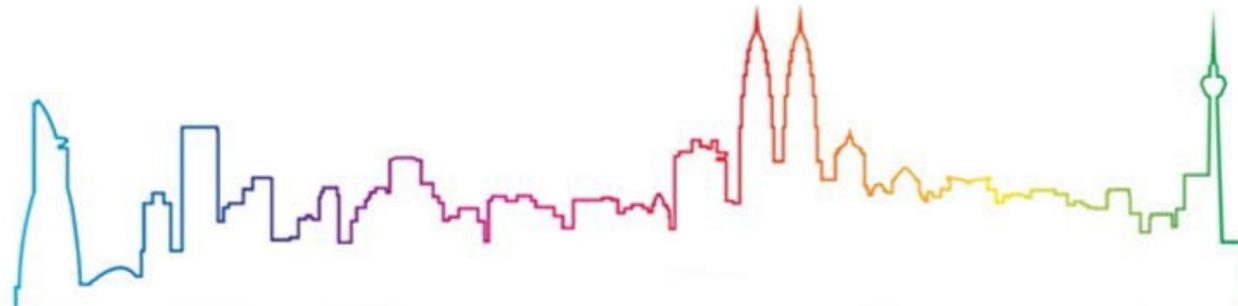
Actuaries spanning three generations will reflect on changes in the:

- exams, syllabus, professional development and job market for actuaries;
- software, tools and techniques at their disposal; and
- biggest challenges they faced.

The session will consider what the past can tell us about the future adaptability and relevance of the profession.

17:30 – 19:30

*Closing and Networking Reception*



# Day 1: Speakers

## David Maneval, Head of P&C, ICT South Asia and Emerging Markets, Willis Towers Watson

David helps insurers transform and innovate with new concepts and technology. He also acts as the signing actuary of several insurers.



## Jin Sheng Ooi, P&C Consultant, Willis Towers Watson

Jin Sheng joined Willis Towers Watson as a Consultant in May 2018. He supports the insurance consulting and technology team based in Malaysia. He has been involved in pricing reviews, reserve reviews and building stress testing models for general insurance companies across Asia. Prior to this, Jin Sheng worked at one of the largest general insurance companies in Malaysia and led the pricing team in preparing for detariffication.



## Kate Chen, Assistant Vice President, Guy Carpenter

Kate is Assistant Vice President of Strategic Advisory for Asia-Pacific. She focuses on Structured Reinsurance Solutions, Growth and Capital Advisory services for clients in the APAC region. Kate joined Guy Carpenter in February 2018. Prior to that she has worked in China, the US and Singapore covering pricing and reserving, risk quantification, captive feasibility studies, and broking roles in financial lines' risks. Kate is a Fellow of the Institute and Faculty of Actuaries, UK and holds a Master's Degree in Financial Engineering from State University of New York at Buffalo. Kate is a member of the Data Analytics Committee, Singapore Actuarial Society.





### Mehul Dave, Director, Deloitte

Mehul is a Director based in Deloitte Singapore and leads the actuarial team for South-East Asia. Mehul brings over 12 years' of experience in all aspects of actuarial work including reserve valuation, insurance risk consulting, Stress Testing and M&A valuation and due diligence work carried out in Europe and Asia. In addition, Mehul leads the Singapore Centre of Excellence work stream for the Exponential Actuary, a unique partnership between Deloitte and the Economic Development Board of Singapore focused on the role of the professional in the future.



### Simon Lee, Regional Chief Operating Officer, AXA Partners Asia

Simon Lee is the Regional Chief Operating Officer at AXA Partners Asia. He is also a Fellow of the CAS and Associate of the SoA. He is responsible for driving operational innovation through data and technology. In his career, he has managed multiple data partnerships between multinational financial institutions and AXA. All of the projects led simultaneous improvements of the loss ratio, new business acquisition and retention for a major insurer in North America, which ultimately led to a triple digit uplift in financial KPIs. He has published multiple papers on machine learning in academic journals and received a best paper award.



### Sophia Ch'ng, President-elect, Actuarial Society Malaysia

Sophia has around 20 years' experience in the insurance industry, ranging from life insurance, general insurance, takaful business and insurance shared services. As a qualified actuary she has held several senior roles in insurance companies, such as Chief Financial Officer, Appointed Actuary, Head of Strategic Pricing and Head of Product Pricing and Product Management. Sophia also had the distinction of being in charge of the risk management portfolio of the 16th Commonwealth Games (1998) in Malaysia. She was the first woman and Malaysian to win the ASEAN Insurance Council's Award for Young Managers. She has authored two books for the Malaysian Insurance Institute and regularly contributes articles to the Edge.

### Pang-Hsiang Chye, Principal & Consulting Actuary, Milliman

Pang is a principal and actuary with Milliman. He joined the firm in 2002, after spending more than two and a half years with Milliman in New York and six years with an actuarial and management consultancy in Southeast Asia. Pang specialises in property and casualty insurance and healthcare. On healthcare issues, he has consulted to governments, insurance companies, health plans, hospitals, physician groups, and pharmaceutical companies in Asia, the US and South Africa. He has consulted to more than 100 property and casualty insurance and reinsurance companies in Greater China and Southeast Asia.



### Chin Yang Ong, Actuarial Executive, MSIG Insurance

Chin Yang graduated from the University of Wisconsin-Madison with a degree in Business Administration in 2015. He majored in Actuarial Science, Risk Management and Insurance Mathematics. He was on the Leadership Committee of the University's Risk Management and Insurance Committee. He is now taking the CAS exams. He works in MSIG's pricing team, focusing on motor and fire.





### Robert Glicksman, Actuarial Analyst, Actuarial Partners Consulting

Robert Glicksman is an actuarial analyst at Actuarial Partners Consulting. He has been with the company for one year. Before his current role, Robert worked in the United States. The scope of his work includes reserving projects, pricing studies and captive management support. Robert Glicksman graduated cum laude from Tulane University with a Bachelors of Science in Mathematics. He is currently pursuing credentials under the Casualty Actuarial Society.



### Kelvin Hii, Vice President, MSIG Insurance

Kelvin is the Vice President of Actuarial and Appointed Actuary for MSIG Insurance (Malaysia) Bhd. His previous roles include Group/ Chief Actuary, Chief Risk Officer & Appointed Actuary, and Senior Consultant & Actuary across general insurers and actuarial consultancies. He previously held various positions in the Actuarial Society of Malaysia such as Vice President, Treasurer, Professional Development Chairperson and Head of the General Insurance Committee. He is a Fellow of the Institute of Actuaries of Australia and a Fellow of the Actuarial Society of Malaysia. He holds a Bachelor of Commerce (Actuarial Studies) from the University of Melbourne.



### Zainal Kassim, Senior Partner, Actuarial Partners Consulting

Zainal, age 63, is the Senior Partner at Actuarial Partners Consulting Sdn Bhd. He has been a consulting actuary with the company since 1982. He has over 35 years of consulting experience spanning the full spectrum of actuarial services including life and general insurance consulting, family and general takaful consulting, retirement benefit consulting and investment consulting. His work takes him to many parts of the globe from Asia to Africa. He is a Fellow of the Institute and Faculty of Actuaries, UK and an Associate of the Society of Actuaries in the USA. He is a past President of the Actuarial Society of Malaysia.

# Day 2: Programme

Session	Description
08:30 – 09:00	Registration (coffee, tea and a light-breakfast will be served)
09:00 – 09:15	Welcome
09:15 – 10:15	<p><b>Making Sense of Cyber Risk by Nicholas Chee Lek Yeo and Dr Lee Ming Kien</b></p> <p>Cyber risk management is a complex and potentially disruptive issue in Asia-Pacific. This is even more challenging amidst the backdrop of an ever more connected society, existing protection gap, changing regulations and evolving market demands.</p> <p>This presentation will outline key challenges facing the region, and discuss areas for development. We will focus on the difficulties in measuring exposures given the varying levels of maturity throughout the region, recent vendor releases and how non-affirmative coverages are managed. Finally, broader issues from a business perspective in relation to pricing, reserving and capital management are discussed. In particular, regulatory implications, data availability and granularity, and what affirmative coverages are currently available and how they should evolve?</p>
<i>10:15 – 10:45</i>	<i>Break</i>

10:45 – 11:45

### Economic Capital in Enterprise Risk Management by Jimmy Molyneux

Enterprise Risk Management (ERM) is a framework used by companies to align their strategy with all business units and achieve sustainable financial returns while actively monitoring inherent risks. It allows companies to identify opportunities, manage threats and prioritise initiatives. Economic Capital (EC) models are a key component of ERM as they allow risks to be quantified and monitored over time. But at a practical level, how does EC modelling work and what does this mean for an insurance company?

This presentation will (1) Give a brief introduction to ERM and its importance for insurers (2) Explain the key components of EC modelling (3) Use a hypothetical case study to demonstrate how strategic business decisions work in an ERM framework.

11:45 - 12:45

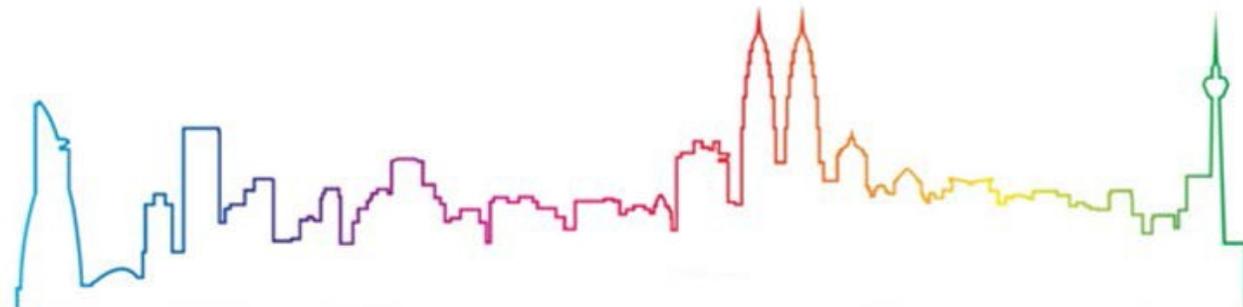
### A Walk in the Woods: Random Forests for the Actuary by Gary Wang

This presentation will introduce the concepts behind the random forest algorithm and compare the method against the actuarial modelling staple - generalized linear models (GLM). This presentation will also discuss the ways an actuary can benefit from utilising this algorithm alongside their typical GLM-based modelling exercises.

12:45 – 14:00

*Lunch*

Session	Description
14:00 – 15:00	<p><b>IFRS 17: Operational and Business Implications for P&amp;C Insurers by Ganesh Prakash</b></p> <p>This session's presentation will focus on:</p> <ul style="list-style-type: none"> <li>a) The state of play and level of adoption across the region</li> <li>b) The central elements within the IFRS 17 framework which most impact P&amp;C operators</li> <li>c) The key considerations for P&amp;C operators in the transition to IFRS 17 - operational and business</li> <li>d) Process Transformation – getting the numbers out on time</li> <li>e) Technology solutions - developing an end to end reporting solution</li> </ul>
<i>15:00 – 15:30</i>	<i>Break</i>
15:30 – 16:30	<p><b>What is risk adjustment under IFRS 17? By Judy Ng</b></p> <p>Risk adjustment is the amount required to bear uncertainty of the amount and timing of cash flows, which arise from non-financial risk. The risk adjustment should be inclusive of both favourable and unfavourable outcomes, in a way that reflects the entity's degree of risk aversion. Interpretation and measurement would be different depending on the audience, context, stakeholders, etc.. This session will provide you will some insights into some of the challenges in interpreting and measuring the risk adjustment under IFRS 17.</p>
16:30 – 17:00	Closing



# Day 2: Speakers



## Nicholas Chee Lek Yeo, Founder, Nicholas Actuarial Solutions

Nicholas is the Founder & Actuary of Nicholas Actuarial Solutions, a technology focused actuarial firm. He is a qualified actuary with global experience. He has experience of strategic, operational and risk management aspects of business. Nicholas Actuarial Solutions was recently nominated as Top 4 Actuarial Firm in Asia by Captive Review, an international insurance publication.



## Dr Lee Ming Kien, Managing Director, Qalybrate

Ming Kien is Managing Director of Qalybrate, a boutique actuarial consultancy. He is a senior qualified actuary with global exposure in UK, Europe, Middle East, Malaysia and Singapore. He has been involved in roles across the whole insurance corporate environment in actuarial, underwriting, enterprise risk management, natural catastrophe management, operations and analytics. He has extensive experience in Personal Lines, Commercial Lines, Reinsurance and London market business. Ming Kien holds a BEng in Civil Engineering and PhD in Engineering. He is also a Fellow of the Institute and Faculty of Actuaries, UK.



## Jimmy Molyneux, Senior Vice President, Head of Strategic Advisory Asia-Pacific, Guy Carpenter

Jimmy leads the Asia-Pacific Strategic Advisory team supporting clients in a number of areas, including Rating Agency Advisory, Counterparty Credit Risk Management, Structured Reinsurance Solutions and Growth and Capital Advisory. Prior to Guy Carpenter, he worked for 10 years in various actuarial roles covering both pricing and reserving and spanning personal lines, commercial lines, inwards facultative and inward treaty business in Australia, the US, South-East Asia and Korea. Jimmy is a qualified actuary in Australia, the US (FCAS) and Singapore, and holds a B.Commerce and B.Science from the University of New South Wales.

### Gary Wang, Senior Consulting Actuary, Pinnacle Actuarial Resources

Gary is a senior consulting actuary with Pinnacle Actuarial Resources, Inc. in their Bloomington, Illinois office. He is a Fellow of the Casualty Actuarial Society and a Member of the American Academy of Actuaries. He has been with Pinnacle for 13 years and has worked in the property casualty industry for 19 years. At Pinnacle, Mr. Wang has worked extensively on the application of modelling techniques to the insurance process.



### Ganesh Prakash, Head of Malaysia, Willis Towers Watson Insurance Consulting and Technology

Ganesh is an experienced actuary in the financial services industry, and has spent the majority of his career on the commercial side working across a wide spectrum of actuarial work, from Product Development and Pricing, Financial Reporting and Valuation, Business Planning and Strategy as well as Risk and Capital Management.

His experience has been gained across a host of ASEAN countries - Malaysia, Singapore, Vietnam and Thailand – and working with various multinationals. He is intimately familiar with the business and regulatory considerations under various regimes. He is also well versed in various international and local reporting and capital standards from Solvency II, IFRS 4 and 17, the regulatory reporting standards of Malaysia, Singapore and Thailand.



### Judy Ng, Director, KPMG Singapore

Judy is a CAS Ambassador in Singapore and has been as a Director at KPMG in Singapore since 2012, serving the insurance industry across the ASEAN region. Previously she has worked on both pricing and reserving in Canada, for various types of entities including the government sector, reinsurance and direct insurance. As part of her journey in Singapore, she has been involved in many projects such as actuarial valuations, transactional services, digital transformation, IFRS 17 gap analysis and implementation, risk management and actuarial modelling.



# Feedback from past attendees

Relevant, real-life & relatable...

Networking session allows for insightful sharing of views with experienced practitioners..

Great food!

Registration

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