General Insurance and General Takaful Ratemaking Seminar

Organized by:
Casualty Actuarial Society (CAS)
Actuarial Society of Malaysia (ASM)

Co-sponsored by:
Institute of Actuaries of Australia (IAAus)

Date: 21-23 September 2015

Venue: Forum, Sasana Kijang,
2 Jalan Dato’ Onn, 50480 Kuala Lumpur
Seminar Overview

In view of the impending market liberalization of the Malaysia Motor and Fire market, the Casualty Actuarial Society, the Actuarial Society of Malaysia, and the Institute of Actuaries of Australia are jointly organizing a ratemaking seminar to address the needs of the general insurance and general takaful industry and the actuarial profession. This seminar is open to, and suitable for, actuaries from across the region.

The selected panel of speakers brings an extensive wealth of technical expertise and experience from the United States, East Asia, and South East Asia regions. We are pleased to announce the following distinguished practitioners on our speaker panel:

- Mary Frances Miller (USA)
- Scott Yen (Japan)
- Jim Qin (Thailand)
- Simon Lee (Hong Kong)
- Rob Malattia (Singapore)
- Nurul Syuhada (Malaysia)
- Grace Ng (Malaysia)
- Kelvin Hii (Malaysia)
- Ong Shze Yeong (Malaysia)

We have also appointed an experienced takaful practitioner, Miss Nurul Syuhada, as our Takaful Expert, to enlarge the scope to the takaful audience and to lead discussions from a takaful perspective.

This ratemaking seminar has two components:

**Day 1 & 2**
The seminar is split into the core sessions that focus on the essential ratemaking fundamentals, and the optional parallel sessions for the more experienced practitioners that cover the advanced ratemaking topics.

*Note: The spaces for the optional parallel sessions are limited.*

**Day 3**
Half day limited-attendance, hands-on workshop presented by Towers Watson.

*Note: This Day 3 workshop is limited to 25 participants from the Day 1 & 2 Ratemaking Seminar. Each participant must bring a laptop computer with suitable hardware and software configuration, including Wi-Fi connectivity.*

This valuable event is not to be missed! Limited spaces available – first come, first served basis.
Speaker Panel

Mary Frances Miller – USA
Mary Frances is a founding partner and consulting actuary with Select Actuarial Services in Nashville, Tennessee, also known as Music City USA. She provides risk management consulting services to a wide variety of companies and public entities that retain risk, including several Fortune 1000 corporations. She also has extensive insurance company experience including personal lines ratemaking and reinsurance reserving. She is a past President of both the CAS and the American Academy of Actuaries and has served on the Board of Directors of the Conference of Consulting Actuaries.

Scott Yen – Japan
Scott is a Fellow of the Casualty Actuarial Society (FCAS 1993) and a Member of the American Academy of Actuaries. He has over 30 years of professional experience in pricing, loss reserve analysis, claim analysis and portfolio analysis. He started his career with Royal Insurance in New York and was with Balboa Insurance, the National Council on Compensation Insurance and Allianz in the US before relocating to Taiwan in 1995 as Regional Actuary, Asia for Zurich Insurance. Since 1999, Scott was the Regional Actuary, Personal Lines for AIG Southeast Asia and now as the personal property regional actuary for AIG Asia Pacific. Scott has been involved in CAS activities after moving back to Asia; was the past chair of CAS Asia Regional Committee, have been serving as a facilitator of Course on Professionalism and engaging on various educational events.

Jim Qin – Thailand
Jim is Chief Operating Officer and Executive Director of Tokio Marine Insurance Thailand. Responsibilities include IT, Finance and Investment, Personal Lines Underwriting, Motor Claims, Actuarial and Risk Management. Since 2012, Jim is also Regional Chief Risk Officer for Tokio Marine Asia. Prior to joining Tokio Marine, Jim was Director and Head of General Insurance Consulting in Southeast Asia for Towers Watson. Jim was Council Member of Singapore Actuarial Society and Chair of General Insurance Committee in 2014. Jim is a Fellow of the Institute of Actuaries Australia. Jim also served as Chief Examiner for Institute of Actuaries Australia from 2007 to 2012, covering Part 3 courses including Finance & Investment, and General Insurance Pricing and Capital Modeling.

Simon Lee – Hong Kong
Simon is a leading expert on predictive modeling, data mining and price optimization and frequent presenter in actuarial conferences, including U.S., Canada, Australia, Singapore, Indonesia, China, and Hong Kong. He was also awarded “The best paper award” in an international symposium organized by SOA and CIA. He was a lecturer and teaching assistant at University of Toronto is 2005-2008 Before joining E&Y, he was working as a director of Royal Bank of Canada insurance in pricing innovation for Home and Auto insurance for 3 years. He had also worked for Intact Insurance, Bank of Montreal, and Claim Analytics. He is serving the Open Source Software Committee of CAS and served the CLEAR committee of Insurance Bureau of Canada. Simon is a Fellow of the Casualty Actuarial Society.

Rob Malattia – Singapore
Rob joined Towers Watson in Singapore almost 3 years ago. He is Director of General Insurance Consulting Practice in South-East Asia. Rob has almost 15 years experience in general insurance and he has performed a wide range of actuarial services including ratemaking, reserving and capital modeling, but also product design, portfolio management, price optimization and Usage Based Insurance. Personal lines pricing is Rob’s particular area of specialism and his career in global insurance organizations has enabled him to get exposure to state-of-the-art best practice and deal with a wide variety of distribution channel models across several markets in Europe and Asia. He has provided consultancy service to many insurers in both deregulated and regulated markets. Rob is a Fellow member of the Institute and Faculty of Actuaries in the UK, Actuarial Society of Malaysia and Singapore Actuarial Society. He also holds a Master degree in Insurance and Risk Management.
Speaker Panel (continued)

Chua See Ju – Singapore
See Ju specialises in pricing and portfolio management. At Towers Watson, See Ju helps clients in South-East Asia develop their pricing function and capabilities, and also has a prominent role in providing software support and training to Towers Watson pricing software users. See Ju has hands-on experience in predictive modelling using GLM, rate setting, rate change implementation and price optimisation. She has been involved in pricing models peer review and a wide range of projects related to detariffication in Malaysia. See Ju is a Fellow member of the Institute and Faculty of Actuaries in the UK and she holds a PhD in Statistics.

Nurul Syuhada Nurazmi – Malaysia
Syuhada joined Actuarial Partners after completing her BA in Actuarial Science and Risk Management & Insurance at University of Wisconsin, Madison (USA). She has been with the company since May 2004 and is among the first in Malaysia to qualify as a Fellow of Casualty Actuarial Society (FCAS). She has performed reserving for Incurred But Not Reported (IBNR) claims and Risk-Based Capital (RBC) works for general insurers and takaful operators in Malaysia, Brunei, Mauritius and Bahrain. Her experience in appraisal valuation ranges from due diligence of the general insurers/takaful operators to determining the potential value of a bancassurance general operations of a Malaysian insurer. She has also assisted in the feasibility study for the set-up of a family takaful operations in Malaysia and was involved in the modeling of a stress testing tool for a retakaful company in Malaysia. She had performed a review of the insurance and takaful operations of a few banking entities in Malaysia with focused areas on profitability, capital allocation, accounting treatment, rating and underwriting processes. She is currently the Appointed Actuary for several general insurers and takaful operators in Malaysia. Syuhada is also involved in the pricing and certification of Medical and Health insurance and takaful products in Malaysia. This includes the pricing of Life Insurance Association of Malaysia’s and Malaysian Takaful Association’s Critical Illness Scheme for Employee Provident Fund and National Insurance Association of Malaysia’s Sihat Malaysia and Cergas Malaysia products.

Grace Ng – Malaysia
Grace is a Fellow of the Institute of Actuaries of Australia and is currently the Chief Actuary at AmGeneral Insurance Berhad. Prior to joining AmGeneral, Grace was practicing as an actuary in Australia for 10 years whereby she has specialized in general insurance and lenders mortgage insurance risks. Grace has experience in both consulting and corporate actuarial roles. Grace also served as an examiner for the Institute of Actuaries of Australia for Part III General Insurance subjects from 2011 to 2015.

Kelvin Hii – Malaysia
Kelvin Hii is a Fellow of the Institute of Actuaries of Australia, the Actuarial Society of Malaysia, and the Singapore Actuarial Society. In his current role, Kelvin oversees both the Enterprise Risk Management and Actuarial functions of Lonpac Insurance Bhd as Chief Risk Officer and Appointed Actuary. Prior to joining Lonpac, Kelvin was the Senior Consultant / Actuary of NMG Consulting within the Asia Pacific's Actuarial Consulting Services, where he provided insurance liability actuarial valuation and capital modeling solutions to clients in Malaysia, Singapore, Thailand, and Sri Lanka. Kelvin currently assumes the role of Vice President and Head of the General Insurance Committee of the Actuarial Society of Malaysia. He previously served as Treasurer and the Head of the Professional Development Committee.

Ong Shze Yeong – Malaysia
Shze Yeong is the general insurance actuary of AIA Berhad based in Kuala Lumpur. Prior to AIA, he was a regional actuary based in Singapore and started his career with a local consulting company in Malaysia. His experience includes general insurance liability valuation, stress testing and reinsurance optimization around Asia-Pacific region. Shze Yeong is a Fellow of Casualty Actuarial Society (FCAS) and the CAS Ambassador for Malaysia. He graduated from Drake University, Iowa (USA) with a double degree in Actuarial Science and Finance.
## Day 1: Monday, 21 September, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Core Sessions</th>
<th>Optional Parallel Sessions</th>
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</thead>
<tbody>
<tr>
<td>845am - 915am</td>
<td>REGISTRATION</td>
<td></td>
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<tr>
<td>915am - 930am</td>
<td>OPENING ADDRESS</td>
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<tr>
<td>930am - 1045am</td>
<td>PANEL: Why are we here? – The role of actuaries in pricing; rating plan basics; the potential implications of de-tariffication for the market, for an insurance company, for actuaries.</td>
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<tr>
<td>1045am - 1115am</td>
<td>MORNING TEA BREAK</td>
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| 1115am - 1230pm    | Rate Level Analysis: 
Ratemaking fundamentals; the fundamental insurance equation; overview of pure premium method and loss ratio method; introductory treatment of expenses, profit, and investment income in ratemaking.  |
|                    | PANEL A: More detailed discussion of the implications of de-tariffication; case studies from other jurisdictions; role of actuaries in a competitive insurance market; actuarial challenges and opportunities. |                                            |                                    |
| 1230pm - 200pm     | LUNCH                                              |                                            |                                    |
| 200pm - 315pm      | Rate Level Analysis: 
Exposure bases; premiums; working with exposure and premium data in ratemaking; exposure and premium trend.  |
|                    | PANEL B: More detailed discussion of expenses, profit, and reinsurance, and the types of analyses of these elements that are needed for ratemaking. |                                            |                                    |
| 315pm - 345pm      | AFTERNOON TEA BREAK                                 |                                            |                                    |
| 345pm - 500pm      | Rate Level Analysis: 
Losses & LAE; aggregating loss and LAE data for ratemaking; extraordinary events and large losses; effects of reinsurance; changes in coverage or utilization patterns; loss trend; loss adjustment expense |
<p>|                    | PANEL C: Insurance vs. Takaful                       |                                            |                                    |</p>
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<tr>
<th>Time</th>
<th>Core Sessions</th>
<th>Optional Parallel Sessions</th>
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</thead>
<tbody>
<tr>
<td>900am - 930am</td>
<td>REGISTRATION</td>
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| 930am - 1045am | **Rate Level Analysis:**  
Pulling all the pieces together to evaluate rate level indications; Sample problems and exercises; Questions and discussion. | **PANEL D:**  
What does the future hold? Usage-based insurance, Driverless cars, big data, and more |
| 1045am - 1115am | MORNING TEA BREAK                                                           |                                              |
| 1115am - 1230pm | **Classification Analysis:**  
Determining classifications and conducting relativity analysis.  
Territory analysis - determining territories and conducting relativity analyses | **PANEL E:**  
Thriving in a company environment: Can actuarial precision be too precise? Adding value to product development and pricing; communication and collaboration with your non-actuarial colleagues. How fast can things change? |
| 1230pm - 200pm | LUNCH                                                                        |                                              |
| 200pm - 315pm  | **Classification Analysis:**  
An introduction to GLM and Price Optimization  
Case studies, exercises, questions and answers, discussions. | **PANEL F:**  
Comparison across different lines of business -- what's different for ratemaking? |
| 315pm - 345pm  | AFTERNOON TEA BREAK                                                        |                                              |
| 345pm - 500pm  | **PANEL:**  
Realities of Creating Classification and Territory Pricing:  
Data issues (bad data, sparse data, missing data). Constraints imposed by customer considerations, regulatory constraints, competition; How the actuary fits in. Time for Questions and Answers; Discussion. |                                              |
| 500pm – 515pm | CLOSING ADDRESS                                                              |                                              |
Day 3: Wednesday, 23 September, 2015

Half day limited-attendance, hands-on workshop presented by Towers Watson.

<table>
<thead>
<tr>
<th>Time</th>
<th>Workshop Sessions</th>
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<tbody>
<tr>
<td>830am - 900am</td>
<td>REGISTRATION</td>
</tr>
<tr>
<td>900am - 930am</td>
<td><strong>Workshop Session 1:</strong> Introduction and setting the scene</td>
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<tr>
<td>930am - 1130am</td>
<td><strong>Workshop Session 2:</strong> Running multivariate models following the GLM principles based on a sample of real insurance data.</td>
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<tr>
<td>1130am - 1200pm</td>
<td>MORNING TEA BREAK</td>
</tr>
<tr>
<td>1200pm - 100pm</td>
<td><strong>Workshop Session 3:</strong> Familiarizing with the dynamic pricing environment which helps to facilitate discussions with non-actuarial background stakeholders. Running impact analysis and scenario testing which simplify the rate setting and pricing decision-making processes.</td>
</tr>
<tr>
<td>100pm - 200pm</td>
<td>LUNCH</td>
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In the first part of the workshop participants will be generating examples of multivariate models applying the Generalised Linear Model (GLM) methodology. This allows participants to gain an hands-on experience in performing a typical pricing modelling exercise by fitting GLM models on anonymised sample of Malaysia market insurance data. Participants will also benefit from Towers Watson's sharing of modelling best practice from more sophisticated markets, where predictive analytics has been used extensively from decades.

In the second part of the workshop, participants will be introduced to a dynamic pricing environment, which enables participants to produce examples of impact analyses and scenario testing to pursue and optimise strategic business goals. These techniques are widely used for pricing decision making process and commercial rate setting in deregulated markets and the outputs of these analyses help facilitate discussions with Senior management and other stakeholders in the organisation with non-actuarial background.

Note:
- This workshop is limited to 25 participants from the Day 1 & 2 Ratemaking Seminar.
- Each participant must bring a laptop computer with suitable hardware and software configuration, including Wi-Fi connectibility
- Due to the nature of the intellectual property that will be utilized during this workshop, this workshop is not open to competitors of Towers Watson.
Registration Details

Registration Fees

For members of the CAS, ASM, and IAAus:
- RM 675  Day 1 & 2 only
- RM 975  Day 1 & 2 + Day 3 Limited Attendance Hands-On Towers Watson workshop

For non-members:
- RM 875  Day 1 & 2 only
- RM 1,175 Day 1 & 2 + Day 3 Limited Attendance Hands-On Towers Watson workshop

Limited spaces – First come, first served basis

*Due to the nature of the intellectual property that will be utilized during this workshop, the Day 3 workshop is not open to competitors of Towers Watson.*

CPD Hours

- 10 hrs  Day 1 & 2 only
- 13.5 hrs Day 1 & 2 + Day 3 Limited Attendance Hands-On Towers Watson workshop

Registration Link

Day 1 & 2 only

Day 1 & 2 + Day 3

Registration Deadline:  **14th September 2015**

*Note: While registering for the seminar, you are required to indicate the parallel sessions that you are interested to attend. However, please note that the spaces for the optional parallel sessions are limited and your registration does not guarantee you a spot in the parallel sessions. The number of seats may be allocated to companies (e.g. one/two pax per company). We will confirm back to you when we have allocated the limited spots to companies.*