

2018 AICT/CAS Joint Property/Casualty and Health Actuarial Seminar

Session Information

9/26 Session	Outline
A-3	<p>Pricing long term health insurance product Korean Health Market Overview – historical development of health products, recent health product trend / regulatory issues / loss ratio etc.</p> <ul style="list-style-type: none"> ➤ Summary of health product lineup and major product features by category (possibly including some high level comparison with TW products) <ul style="list-style-type: none"> - death-embedded like CI / standalone riders - SI (Simplified Issue) - Diagnosis of cancer or other dread diseases and long-term care - Dental - Hospital cash, surgical operation and medical reimbursement - Segment-based such as children, female and senior ➤ Key considerations when developing long-term guarantee health products and deviate risk table <ul style="list-style-type: none"> - Adequacy of pricing - Reasonableness of sum assured - Possibility of moral hazard
A-4	<p>Block Chain: Application in Insurance</p> <ul style="list-style-type: none"> ➤ Introduce the latest developments of block chain applications in the general insurance industry. ➤ Discuss the integration of big data, IoT and block chain technology in product development, pricing & underwriting, with actual examples of agricultural insurance, patent insurance and its integration with ABS (asset-backed securities) for Insurtech companies, and community health insurance application. ➤ Discuss the potential use of block chain in insurance securitization through smart contracts with actual examples in the property and commercial liability reinsurance application.
A-5	<p>Insurance Tech</p>
B-1	<p>Machine learning application on pricing and underwriting Actuaries are pioneers of data science to monetize the assumption of risks by insurers. Despite the maturity of actuarial mathematics, the recent development of machine learning technology can be found crucial in enhancing our actuarial practice. Many insurance companies are still utilizing one-way analysis as the primary pricing tool and some are adopting generalized linear model (GLM) for prediction accuracy. On the contrary, in other industries, GLM is no longer considered and many are utilizing generalized additive modeling, boosting, random forest and deep learning. In this session, we share some of the machine learning techniques that impact the society and study a few use cases on insurance application, particularly on pricing and underwriting.</p>

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B-2-1	<p>Cyber Insurance</p> <p>Over the past year, cyber security risks have been in the spotlight, with incidents like the WannaCry ransomware attacks recorded on at least hundreds of thousands of targets across 150 countries globally. Many organizations, including businesses across sectors and industries, government agencies, and even emergency services, had experienced disruptions in their operations. From the onset of these events, organizations are seeking advice, interested in finding out how to deal with the fallout from the situation, whether they had been directly affected or otherwise. There is also a high level of interest in the measures that organizations can adopt to better protect themselves from future attacks. We have invited a specialist in risk management & insurance to share his thoughts in addressing these concerns and how to better leverage the use of risk management quantification approaches to help these corporations to manage their risks.</p> <p>Outline:</p> <ul style="list-style-type: none"> ➤ Overview ➤ Cyber Risk Landscape & Threat Environment ➤ Data Breach Regulations ➤ Insurance Solutions ➤ Cyber Risk Management ➤ Cyber Incidents in Asia 	
B-2-2	<p>A Deep Dive into Cyber Insurance</p> <p>This session offers the audience with case studies which will help illustrate cyber insurance coverage, followed by underwriting and pricing factor insurers should consider. The speaker will also share with the audience the personal experiences and lessons learned from working in cyber insurance underwriting field.</p>	
B-3	<p>CAT Risk and Modeling</p> <ul style="list-style-type: none"> ➤ The major changes of latest version of RMS and AIR ➤ Un-modeled natural CAT losses ➤ Actuary's treatment of CAT loss from Standards of Practice ➤ CAT's impact on company's ERM 	
9/27 Session		Outline
C-1	<p>IFRS17 General Overview- focus on short term liability</p> <ul style="list-style-type: none"> ➤ Accounting change on insurance contracts measurement models ➤ Accounting change on presentation of financial report ➤ Accounting change on earnings pattern ➤ Challenges and strategies 	
C-2	<p>Stochastic Reserving</p> <ul style="list-style-type: none"> ➤ Introduction on Stochastic Reserving – What is it & how it compares to deterministic reserving. ➤ Commonly Used Stochastic Reserving Models – Introduction of models, technical & practical considerations, pros & cons, etc. ➤ Applications of Stochastic Reserving)– introduction to risk adjustment under IFRS17 & how to apply stochastic reserving concept to compute risk adjustment. 	
W1 W2	<p>IFRS 17 Reserving and Risk Margin IFRS 17 Premium Allocation Approach (PAA) and General Measurement Model (GMM) with numerical examples</p> <p>This session aims to provide walk-throughs of two common Stochastic Reserving methods. There will be a demonstration for the Mack's method and a hands-on experience for the bootstrapping method. The participant will use Excel and/or R to perform bootstrapping and to understand how the process is carried out in a step-by-step fashion. In addition, there will be demonstrations of PAA and GMM using numerical examples, as well as looking into the impact and implication of IFRS 17.</p>	