

## SYNOPSIS

### **Insuring Cyber Risk – A Collaborative Approach**

**Actuaries Institute Cyber Working Group – Peter Yeates, Susie Amos, Dean Marcus, Andrew Kwok, David Xu, Jeremy Waite**

**Key words:** Cyber, Insurance, Data, Product, Underwriting, Pricing, Exposure, Market, Australia

**Purpose of your paper:** To provide a comprehensive introduction of the risks and opportunities of insuring cyber insurance in Australia. It attempts to demystify how cyber insurance fits in to the business and insurance market and highlights how a collaborative approach across different disciplines is required to thrive in the digital work. The paper focuses on the perspective of the General Insurer offering cyber insurance. It is relevant for actuaries, underwriters, product and claims managers, as well as anyone interested in understanding cyber insurance in Australia.

#### **Synopsis:**

Cyber risk is now seen at the top of the list of concerns facing businesses and governments around the world. Given the digital world that we now live in, varied cyber-related risks are emerging and insurers are well placed to provide protection to businesses against these risks. In Australia, the cyber insurance market is in its infancy and there is little data or consistency in the way businesses and insurers are managing cyber risk. There are many questions and concerns for those insuring cyber – Are cyber risks insurable and what is the exposure potential? What is the best way to provide cover? How do we price and underwrite and what data is available ?

The Actuaries Institute Cyber Working Group provides an introduction to insuring cyber risk in Australia and explores the risks and difficulties this creates for General Insurers. The paper touches on the current state of the market, available data, product design, underwriting and pricing, aggregation, claims and reserving.

Australia is at the start of the journey towards understanding and insuring cyber risks. Insurers will need to work through the concerns and difficulties of insuring cyber risks to remain relevant in the digital world. Collaboration with other experts is required to best tackle these difficulties and concerns.

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### **Life Insurance Underwriting in the New World**

*Elizabeth Baker, Nia Reen and Meera Sardana*

**Key words:** Life insurance, product underwriting, customer outcomes

**Purpose of your paper:** The purpose of the presentation is to discuss redesigning traditional forms of underwriting for Life Insurance business.

**Synopsis:** The focus of underwriting functions and processes of Australian Life Insurers has mainly been the rating of risks of more complex Retail policies with larger sums insured.

There are a number of challenges for underwriting in the current environment as many customers want a simple application process, there are increasing levels of claims and associated anti-selection, changing product definitions and benefit design features and an increasing requirement to be able to provide cover for all (as a result of antidiscrimination challenges).

This presentation will look at how using behavioural analytics can enhance the underwriting process whilst reducing costs and assist the pricing process for Direct products and voluntary cover on Group insurance.

Areas for discussion in the presentation include:

1. The current state of underwriting by Australian Life Insurers.
2. The gaps in current underwriting practices under the changing market landscape.
3. The options for redesigning underwriting (including for short form underwriting and personal statements) to achieve better rating of risks and better customer outcomes.

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### **Disability Income Experience and Economic Indicators**

*Hoa Bui and Briallen Cummings*

**Key words:** Disability Income, Incidence, Terminations, Trends, Economic Indicators

**Purpose of your paper:** To analyse the pattern of the deterioration in disability income experience this economic cycle and contrast with the previous deterioration in the late 90's.

**Synopsis:** Disability income experience historically deteriorates when the economic environment deteriorate. In this paper, we consider the deterioration in disability income observed in the current economic cycle, the correlation with economic indicators and contrast it with the previous cycle.

We also consider whether Best estimate assumptions have been lagging behind the deterioration and potential drivers of this lag in practice, including dynamic assumptions.

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### Thinking about life insurance through a genetic lens

*Dr Damjan Vukcevic and Mrs Jessica Chen*

**Key words:** Genetics, Life insurance, Trauma Insurance, Product Design, Underwriting, Ethics, Risk genes, Genetic mutation, Genetic variant, Premium rating

**Purpose of your paper:** A summary of the state of genetics research, a vision of where it is headed in the near-term future, and ideas on how these advances could impact life insurance and its product design.

#### **Synopsis:**

"The Economist asks: How has DNA shaped the human race?<sup>1</sup>" We ask "How will DNA shape life insurance?"

Modern-day genetic research has uncovered thousands of genetic mutations that are associated with greater risk of many common human diseases, such as cancer, diabetes, Alzheimer's and heart disease. These mutations are generally fairly common throughout the population, with all individuals carrying at least some of the 'high risk' genetic variants. With direct-to-consumer genetic testing now cheaply available, provided by companies such as 23andMe, this potentially provides more insightful health information, while at the same time increasing adverse selection risks for insurance companies. We ask:

- What implications do these discoveries actually have on our knowledge of diseases and our ability to predict risk? How strongly predictive are these genetic tests?
- Should we use these discoveries and tests as part of pricing and designing insurance? How can we do this optimally? Does this give rise to any ethical concerns?
- How can the product and pricing design process and governance procedures adequately allow for current and future ongoing genetic advances?

We tackle all of these questions in our presentation.

We present an overview, for a general audience, of the latest genetics research. We then explain the types of discoveries that are being made and put them in context to what was previously known. In particular, we assess the risk factors of these discoveries and consider how they aid our ability to actually predict risk for individuals. We also consider the importance of modifiable lifestyle factors such as diet and exercise, compared to genetic variants.

We then turn to the latest developments in research and present the current best thinking on how these are likely to affect insurance. We propose a few ideas on how insurers can think differently to respond to the challenges and also take advantage of new opportunities that are likely to arise.

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### **Building consumer trust in the life industry – alternative approaches to recent issues**

**Kim Cohen**

**Key words:** Customer, life industry issues, profitability, UK, product design, pricing, reinsurance, awareness, and technology

#### **Purpose of your paper:**

This paper explores a range of industry issues impacting the life industry and challenges actuaries to think differently about potential approaches to build consumer trust for a prosperous industry, including taking learnings from other markets.

#### **Synopsis:**

Australians' perceptions of the life insurance industry do not reflect the significant support the industry provides those facing disability or the loss of a loved one. How can we build consumer advocacy and trust so that Australians' feel confident that the industry will provide protection when they need it most.

#### Recent Issues

- Profitability across Group and Retail
- Significant reprices and shifts in product design
- Reputation and media
- Awareness and anti-selection
- Capacity and competition

#### The path to addressing issues, steps taken to date:

- Introduction of the FSC Code of Conduct
- FoFA and LIF to build trust with advisers by aligning to customer interests
- Changing the conversation to health and wellness

#### Further considerations:

- Product design: Simple vs complex. Essential vs comprehensive. Adviser requirements (e.g. best interests duty) vs customer needs
- Transparency: Consumer awareness and education. Plain English communications. Alignment across Group, Retail and Direct to meet customer expectations with consistent experience.
- Distribution: Working together with super funds and advisers for clear communication and awareness through member engagement.
- Pricing sustainability: Group profit share arrangements. Alignment of insurer and reinsurer interests (deviation contributed to Retail DI increases).
- Customer lifestages: flexibility to adjust cover and provider as needs change and reduce barriers to achieve best solutions for existing customers. Dealing with legacy products.

#### Leveraging Learnings from other arenas

- Lessons from the UK:
  - Differences between the UK and Australia to meet similar customer needs – guarantees, level premiums, role of reinsurers, etc.
  - Standardised definitions
  - Standardised underwriting applications and comparison underwriting outcomes
  - Software for efficiency
  - Risk Distribution Review
- Lessons from General Insurance:

- Customer engagement
- Technology

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### **IFRS 17 Implications for life and general insurers**

***Brendan Counsell, Shweta Krishna, Paul Harris***

**Key words:** IFRS 17, IFRS 4 Phase II, life insurance, general insurance, reinsurance, accounting standards, IASB, AASB,

**Purpose of your paper:** IFRS 17, the new international accounting standard to be issued by the International Accounting Standard Board (IASB) represents the most significant change to Australian insurance accounting requirements in 20 years. This paper discusses the key implications for Australian life and general insurers and reinsurers.

#### **Synopsis:**

The International Accounting Standards Board (IASB) is expected to issue the new Insurance Contracts standard, IFRS 17 in the first half of 2017. This will represent the most significant change to Australian Insurance accounting requirements in 20 years in a number of critical aspects, particularly for life insurers. While the principles underlying the measurement approaches under the new standard are similar to current Australian practices, the detailed requirements are markedly different. These differences are expected to lead to changes in profit emergence patterns, loss recognition, and additional complexity in a number of areas including valuation processes, assumption setting processes and analysis and explanation of profit. This presentation examines the expected features of the new standard and discusses the key financial implications for Australian life insurers, general insurers and reinsurers. It also offers practical suggestions on how insurers can best prepare for the new accounting regime.

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### **ICAAP/ORSA Survey results – Stress & Scenario Testing** ***Brialen Cummings, Gerard Callaghan, Georgina Hemmings***

**Key words:** ICAAP, ORSA, Stress & Scenario testing.

**Purpose of your presentation:** To provide the results of our survey on the latest developments in ICAAP notably stress and scenario testing. Companies surveyed include Australian and UK companies.

**Synopsis:** To provide an update on developments on the ICAAP and the Solvency 2 equivalent (ORSA). The focus is largely on the stress and scenario testing i.e. types of scenarios, level of plausibility of scenarios, calibration approach adopted.



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### **Data Driven Approach To Engagement in Superannuation**

**Surath Fernando**

**Key words:** Big data, superannuation, data analytics, member engagement, customer experience, digital strategy, defined contribution super, industry super.

**Purpose of your paper:** This paper investigates current member engagement strategies in superannuation, evaluating how successful they are at meeting their underlying purpose. It investigates the emergence of digital engagement in superannuation, considers currently available and emerging data sets as funds expand their digital footprint. It consider how a data driven approach to engagement in superannuation can facilitate better member and fund level outcomes whilst also considering digital risks associated with fraud and data breaches.

#### **Synopsis:**

Australia has one of the more developed defined contribution retirement systems in the world. However, when it comes to engagement most superannuation fund members exhibit high levels of apathy, disengagement and disinterest towards superannuation.

This paper considers engagement strategies currently employed by superannuation funds, with a focus on fund goals, how current engagement strategies fit with overall fund strategy and how these strategies have changed with the advent of the digital age.

We explore existing and emerging data sets available and consider how data driven engagement can facilitate better engagement levels, improving customer experience and drive better member and fund outcomes. Importantly, we consider how to funds can integrate a solid customer analytics function which improves customer experience whilst providing value adding strategic insights that can be used to improve a funds operating model and enhance its value proposition.

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### **Reading between the Numbers**

**Matthew Noyce, Adrian Fortescue**

**Key words:** Group Life Behavioral economics Australia External Environment Data Product

**Purpose of your paper:** The behavioural and external affects that impact pricing in the Australian Group Life Insurance market

### **Synopsis:**

*We can no longer afford to approach our work by just focussing on the quantitative. The industry has progressed and limiting our understanding to just past experience is no longer sufficient to equip us for the future.*

*As global leaders of reinsurance, Swiss Re will share insights on the behavioural impacts affecting large group insurance schemes in the Australian Market including:*

- *Behavioural economics*
- *The macroeconomic environment and market (local and global) impacts*
- *Product terms and conditions and the correlation on Claimant behaviour*
- *Pricing and the external environment*
- *Behavioural considerations in data analytics*

*Through broadening our approach and living the 'Think Differently' mantra we will continue to help build a more resilient industry*

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### **FURTHER ADVENTURES IN HEALTH RISK: AN UPDATED HISTORY OF AUSTRALIAN HEALTH INSURANCE**

**Andrew P Gale**

**Key words:** private health insurance, history, mergers, acquisitions, regulation

**Purpose of your paper:** This paper reviews historical developments in the Australian Private Health Insurance industry over the past decade.

**Synopsis:** In the ten years since the commencement of the Private Health Insurance Act and the 2007 Convention Paper *Adventures in Health Risk*, the private health insurance industry has continued to change and evolve. This paper builds on the 2007 Convention Paper, presenting an historical analysis of private health insurance in Australia, including the origins of today's health funds, major regulatory developments in the market, and merger and acquisition activity, focusing on developments in the past decade.

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### **Experience investigations: more than a regulatory box-ticker**

*Emily Galer, Jason Sun*

**Key words:** Experience Investigation, Business Insights, Communication, Data Analysis, Adapting to Change, Encouraging Collaboration

**Purpose of your paper (max 220 characters):** Provide insights to delegates on the practical benefits and challenges encountered when seeking to derive greater benefit from experience investigations, rather than solely meeting our regulatory requirements.

#### **Synopsis:**

Traditionally, experience investigations were a technical actuarial endeavor focused on setting valuation and pricing assumptions. The investigation would often produce a historical report, full of detail that might be overlooked by all except for the team that wrote it and the auditors. In a world that is changing quickly, where non-actuaries are getting excited about data, resources are scarce and the past may not be a good indicator of future trends, can we really justify this closed door approach?

In this session, the manager of an experience investigations team, and a graduate that started their career in the team, share the journey they have been on to “think differently” about experience investigations and evolve them away from a process that is run just to get a number. They will explore some of the challenges and benefits of an approach which does more than satisfy regulatory requirements – a collaborative approach which is forward looking and focuses on engaging non-actuarial teams and driving business actions. With a side order of assumption setting!

### How Can Life Insurers Optimise Customer Outcomes in a Low Yield World?

*Mark Griffiths and Nick Symons*

**Key words:** Low interest rates life, insurance, customer outcomes, retirement, saving, government, reserve bank, ALM

**Purpose of your paper:** This paper looks at the potential implications of low interest rates on Australian life insurers and the future outlook under different economic scenarios and makes comparisons to the situation in Japan and Germany.

#### **Synopsis:**

In the aftermath of the 2007-2008 global financial crisis, many prominent developed economies including the US, Germany and the UK have seen interest rates drop to unprecedented low levels. In fact, interest rates on 10-year government bonds in Germany turned negative in July 2016. Australia has not been immune from this, with interest rates setting new historical lows across the term structure throughout the first half of 2016 and potentially into 2017.

If interest rates remain low for decades to come this will impact the profitability and viability of a range of products with embedded guarantees, the vast majority of which were developed at a time when assumptions relating to interest rates and investment returns were much higher.

Life insurance companies will need to carefully consider the legal implications of actions they take to manage the situation – especially those relating to policyholder reasonable expectations. In several other markets companies have responded in a number of ways:

- Accepting a lower level of return on these business lines
- Increasing premiums and making policy terms less generous over time in order to reflect the current economic climate
- Reducing guaranteed benefits, with government approval, in order to remain solvent
- Hedging interest rate risk using derivatives in order to protect against further interest rate cuts
- Investing a larger/lower portion policyholders' premiums in riskier asset classes with higher expected returns

Such actions have a range of potential impacts on customer outcomes, and overall tend to shift some of the problems of lower interest rates and investment income from shareholders to customers. Those customers who can afford increased premiums and lower returns may choose to delay consumption today in order to ensure they have adequate savings to sustain them in retirement. Those who cannot afford to may extend their working lives or go back to work after they have retired. Some policyholders may choose to accept a lower level of guaranteed benefits relative to their premiums and invest more into riskier assets.

These concepts and issues will be explored thoroughly in this paper using a case study approach by looking at how companies in other life insurance markets have been dealing with this problem of chronically low interest rates. In doing so we will also look at emerging trends in these markets, with a particular focus on how insurance professionals are thinking about this problem differently and coming up with novel solutions. By evaluating the approaches used in these markets, we intend to “think differently” about the issue of ongoing low interest rates their impact on customers and life insurance products in order to co-design optimal outcome with customers, while at the same time preserving company stability and shareholder's return on investment.

This paper will consider:

- The likelihood of prolonged low interest rate environment given central bank's interest rate policy and inflation targeting credibility
- Possible management approaches for guaranteed life insurance products should interest rates remain at historically low levels for decades,
- Possible risk sharing mechanisms, management actions and their impact on consumer outcomes.
- How life insurers can think differently about the way these products are managed and developed in order to optimize customer outcomes without undermining their stability or shareholder returns?
- How might customers begin/need to think and act differently if interest rates remain low for decades and how can life insurance companies think differently to address these changes:
  - Can young people, simply start saving from an earlier age in order to achieve their desired quality of life in retirement
  - How might the pooling of mortality/longevity risk provide customers a buffer against the impact of reduced returns?
  - What mindsets/skills/tools might customers need to effectively manage the challenges of pooling/not pooling risks?
- How do different approaches to solving this problem stand up to differing economic environments?

Ultimately, if the life insurance industry is to play a continuing role in optimizing customer's retirement outcomes and protecting their family's financial security we need to begin thinking differently about how to respond to chronically low interest rates, which pose a substantial challenge to these goals.

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### **How the Life Insurance Industry Adapts and Survives in the Face of a Doomsday Scenario** *Dion Russell, Nicole Marshall*

**Key words:** Emerging risks, innovation, life insurance,

**Purpose of your paper:**

We plan to present a thought exercise in innovation within the life insurance industry:

- Sketch out an extreme, yet plausible, scenario based on our Emerging Risks view for the global insurance industry – for example antimicrobial resistance or a Eurozone breakup
- Show how this scenario impacted the insurance market, with a particular focus on the Australian life insurance industry
- Describe how successful life insurers adapted to this scenario, focusing on the key winners and losers, and what actions they undertook
- We will conclude with some lessons learnt and our suggested key characteristics of successful innovators

**Synopsis:** This session will have a key focus on innovating and adapting to a changing world.

We are living in a time of change. Risks are materializing in new ways and the consequences are becoming broader reaching given increasing globalization. Climate change is becoming more evident in the increasing frequency of natural disasters and water shortages, we have entered into a new age of fragmentation of societies given the increasing terrorist activity and disenchanted members of communities and the global economy continues to struggle in its recovery from the GFC.

At the same time, positive changes are occurring too given the advances in technology which are changing the way businesses operate and people live their everyday lives. This brings about further emerging risks such as those related to cyber-attacks.

This session will deal with and consider such emerging risks. An emerging risk is characterized by a very high degree of uncertainty and includes new but also evolving risks. Emerging risks are often pre-existing to their appearance on radars of organisations and governments and are frequently ignored by society. An emerging risk, if it occurs, can cause significant negative across countries and/or industries over considerable time.

As actuaries, we are well equipped to think about these risks and will likely be involved in finding solutions if any of these do eventuate.

Throughout this session, we will present a thought exercise by discussing an extreme, yet plausible scenario and considering how this would impact the insurance market, with a particular focus on the Australian life insurance industry. We will consider the flow on effects and the issues faced by the industry. We will then paint a picture of how successful life insurers adapted and what the future may look like as a result of this as well as the opportunities that can arise from being innovative and thinking differently through the situation.

We will conclude this session with some key lessons learnt and takeaways which can help actuaries think differently in the face of emerging risks or day to day business and operations.

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### **Mental Health and its Impact on the Insurance Industry**

*Joshua Martin, Jane Dorter and Michael Dermody*

**Key words:** insurance (life, general, health), claims management, mental health

#### **Purpose of your paper:**

The intention of this paper is to raise awareness of the growing impact that mental health is having currently, and will have in the future, on the insurance industry.

#### **Synopsis:**

Whilst everyone is aware of the issue of mental health in our society, few know the statistics implying that mental health (specifically depression) will be the second leading cause of DALY's (disability-adjusted life years) lost by the year 2020<sup>1</sup>, only behind heart disease. Naturally, this will have significant impact in areas where mental health is already known to be prominent and perhaps will venture into areas of insurance unseen before.

This paper looks to outline the impact of mental health not only in life insurance but in general insurance and the overall claims management of mental health claims. It then aims to frame what the future may look like if the projected pattern of growth for mental health issues eventuates.

The paper then looks at the overall claims management for mental health claims, reflecting on experience from a claims management perspective. Further, the paper will discuss possible risk mitigation techniques towards mental health claims.

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### **Globalisation of the Insurance Capital Standard: Should we be concerned?**

**Paul Caputo & Kenneth McIvor**

**Key words:** ICS, IAIS, Risk Based Capital, G-SIFI, Target Capital, Economic Capital

**Purpose of your paper:** Illustrating the implication of the IAIS Insurance Capital Standard for various jurisdictions and the potential implications for Australia, answering the question: should we be concerned?

#### **Synopsis:**

Measures being developed by the International Association of Insurance Supervisors (IAIS) herald a new era of insurance regulation, one where international standards take centre stage. Insurers simply cannot afford to ignore the important debates that are currently taking place.

The IAIS has challenging work to do. The risks facing (re)insurers in any particular jurisdiction are a function of idiosyncratic market developments which have evolved over decades. Commensurately, there are also substantial differences in capital regimes in place across jurisdictions.

These differences arise not from subtle technicalities, but because the fundamental philosophy about solvency and capital can differ between one regime and another. Global acceptance of the IAIS activities will depend on the ability to reconcile these philosophies.

The insurance industry is a major component of the world economy owing to the scale of assets it manages and the essential social and economic role of insurance. Low economic growth and persistently low (or negative) interest rates look set to continue. Amid these global challenges, regulatory change threatens to exacerbate an already difficult outlook.

Whilst Australia is arguably 'ahead of the curve' with the implementation of LAGIC, how will the roll out globally of the Insurance Capital Standard impact Australian insurers in respect of capital, products, pricing and risk management?



## SYNOPSIS

### DEATH BY DATA

Marc Mer, Basem Morris

**Key words:** Data Analytics, Big Data, Internet of Things, connected devices, smart technology, insurance as a service, behavioral science, nudge theory

**Purpose of your paper:** The purpose of this presentation is to explore how the emergence of smart technology and connected devices has opened up a new world of possibilities for insurers, and firms at large, to think differently about how to obtain and analyse increasing volumes of data. This presentation will explore new and unique ways for firms to use big data and the potential benefits this provides, as well as some of the dangers and common pitfalls which lead to 'Death by Data'.

#### Synopsis:

As our computers and mobile devices become more connected, so do our cars, watches, televisions, fridges, and even our plumbing. Thanks to these advances, data is now being generated at an unprecedented rate. As we go about our day-to-day activities, we all leave a trail of digital breadcrumbs behind – our driving behavior generates data, our movements and location are constantly captured, and every touch of our smartphones is logged. Consequently, firms now have the opportunity to find new and innovative ways of obtaining and using data to their advantage.

Across all forms of insurance, the increasing use of Big Data to write policies on an individual risk basis is changing the application of underwriting, risk pooling and risk management. In addition, by utilising available data and technologies, Insurers can now change the playing field and take up a newfound role of proactive risk mitigation. This allows insurers to, not only get involved in the lives of their customers at claim time, but also throughout the life of the policy. Similarly, firms at large can now use data to better understand their customers, the market they play in and even their own businesses.

However, although the potential benefits of data are abundant, firms are still struggling to maximize the value of their data. If firms were to use data to its potential, what kind of results could they expect? We will explore case study examples around insurance as a service, as well as how the combination of analytics and behavioral science yield surprisingly powerful results. By combining advanced analytics with the study of human behaviour, it is possible to, not only predict the likelihood of future scenarios, but also influence potential outcomes.

We will also look at some of the potential dangers that come with this outpouring of data and the common pitfalls to be avoided when embarking on this journey in order to escape 'Death by Data'.

## SYNOPSIS

### **Man versus Machine - the rise of the robo actuary**

***Gloria Yu, Marc Mer, Adam Karasiewicz***

**Key words:** Actuarial processes, core insurance processes, streamlining, optimisation, exponential technology, robo reserving, robo actuaries, RPA (Robotics Process Automation), Artificial Intelligence, digital, disruption

**Purpose of your paper:** The purpose of this presentation is to challenge actuaries to re-think the way we do our work by adopting automation technologies. We will provide practical examples in the insurance space and highlight the benefits of adopting such technologies.

#### **Synopsis:**

There is little debate that modern technology is advancing at an unprecedented rate. Many of these technologies that are on exponential growth curves, commonly referred to as exponential technologies, have significant potential to disrupt the insurance industry, the actuarial function and the work we do as actuaries. In an “eat or be eaten” environment, those who embrace the disruption will be the ones that survive and thrive.

This presentation will explore the disruptive, exponential technologies that may be relevant to actuaries, in particular RPA, and present survey results demonstrating current actuarial progress and thinking on the matter.

We will consider the implications of these technologies on actuarial work and more broadly, the actuarial function of the future, which may include resourcing model changes.

We will examine the challenges as well as opportunities presented to actuaries by robots, automation and cognitive computing, particularly in relation to the optimisation of core insurance and actuarial processes. These may take the form of robo reserving, robo underwriting, robo data cleansing, robo claims management and so on.

In collaboration with a Robotics Expert (Adam Karasiewicz), we will provide practical case studies in the insurance industry to demonstrate how robotics can be applied and the subsequent benefits.

## SYNOPSIS

### **Liquid Biopsies and cancer detection – hype or a milestone in cancer detection and management?**

**Bill Monday**

**Key words:** Cancer, Product, Definitions, Advancements, Medical, Screening, Treatment, anti-selection, Critical Illness, Detection

#### **Purpose of your paper:**

This paper explores the impact of advancements in the detection of cancer through liquid biopsies and the potential impacts for the life industry in terms of screening, treatment, anti-selection, pricing and definitions.

#### **Synopsis:**

Cancer is by far the most important component to critical illness experience and is a significant cause of premature death as well as disability. Any advance in the detection and management of cancer will therefore have a ripple effect on the life insurance industry. Liquid biopsy in cancer detection is such an advancement.

A 'liquid biopsy' is the name given to the detection of cancer cell DNA in the bloodstream through a simple blood test. The ability to do this is enticing as it can be performed in 'real time' and is not invasive or dangerous. The development of novel non-invasive methodology to detect cancer opens up a whole spectrum of considerations to the life insurance industry. Can the industry itself use these tests for screening? How will early detection and optimizing cancer treatment from this technology translate into mortality and morbidity improvement? Is there an increased risk of anti-selection with such non-invasive methods to detect cancer?

Increasingly the Scientific community is developing novel screening tools for cancer detection and monitoring of which liquid biopsies is only one. This presentation will provide insight into this exploding area of research and provide modelling of the impact it may have on the insurance industry.

## SYNOPSIS

### **Practical Application of the New International Financial Reporting Standard for Insurance Contracts**

*John Nicholls*

**Key words:** Financial Modelling, Financial Reporting, Revenue Recognition, Profit Recognition, IFRS

**Purpose of your paper:** The new IFRS for insurance contracts is soon to be issued. We will discuss the implications of the new IFRS for insurance companies, with a focus on the primary challenges life insurance companies will face in adopting the new standards.

#### **Synopsis:**

The final version of the new IFRS for insurance contracts is expected to be released by the IASB in the early part of 2017. Adoption of the new standard will present a number of challenges for insurance companies, including:

- Presentation of insurance contract revenue, rather than premium
- Separating effects between Profit or Loss and Other Comprehensive Income
- The number of product groupings for amortisation of margins and presentation of results
- Locked-in interest rates for amortisation and unlocking of margins
- Application of the variable fee approach
- Variations from expected experience
- Transition

Companies will require robust, industrialised solutions to these challenges. We will discuss how internationally companies are already looking to address these challenges, including consideration of overall approaches being followed to manage the change and implement solutions.

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### **Future of Life insurance**

**Angat Sandhu, Justin Ward**

**Key words:** Business model, strategy, innovation, industry overview

**Purpose of your paper:** Initiate discussion on what the life insurance industry needs to do to return to sustainable growth

**Synopsis:** Share findings on the evolution of the life insurance business model globally. Discuss how the drivers of growth in the past (manufacturing, distribution) will be challenged going forward. Discuss the drivers of change (regulation, consumer / societal changes, industry headwinds, technology). Discuss what capabilities are needed for life insurers to succeed.

## SYNOPSIS

### **'Retirement for Dummies' – a consumer manual which outlines the varying strategies and products to best prepare for retirement**

**Ruk Surendra**

**Key words:** Retirement, Product Innovation, Longevity, Liquidity, Pension, Annuities, Legislation, Regulation, Life Insurance

#### **Purpose of your paper:**

This paper explores the current challenges faced by pre-retirees on how best to secure themselves a financially healthy retirement and is aimed at de-mystifying the large array of products and strategies in the market to enable this.

#### **Synopsis:**

By 2050, almost a quarter of the population will be aged over 65 compared to 14% now. Australians are already one of the longest lived populations on the planet, and our longevity is steadily improving. However, the majority of Australians have no idea how long they will be retired, despite retirement being a regular thought for one in five Australians.

Key planning questions which new retirees need to answer include:

- How much should they set aside as a nest egg?
- How much to take as a lump sum?
- What products are appropriate?
- How should they invest their benefit given the contrasting risks of liquidity and longevity – and what earnings should they expect?
- Which fund should they use for their pension?
- How long will their pension last?
- Should they pay for guarantees such as annuities?

This presentation will provide a suggested roadmap for pre-retirees to address the above questions, by evaluating the variety of pre-retirement strategies and products in the market.

Other issues considered:

- Market legislation and regulation changes
- Tax benefits in transition to pension phase
- Life Insurance needs in retirement
- Product Innovation
- Overseas trends and insights
- Longevity Risk

## SYNOPSIS

### **Sharing economy: Learning from the giants**

***Weihao Choo & Quanyie Tan***

**Key words:** sharing economy, innovation, behavioural economics

**Purpose of your paper:** To share ideas about how to incorporate attributes of the sharing economy into insurance

#### **Synopsis:**

Disruption. Innovation. Uberisation. The world is changing, and it is changing fast. The insurance industry is ripe for change, and insurers are looking for ways to be a part of this new sharing economy. A lot has certainly been said about giants of this sharing economy such as Uber and Airbnb, and insurance tech start-ups such as Lemonade are increasingly gaining traction.

While there are disruptors seeking to build a new paradigm, for example via peer-to-peer insurance, this presentation aims to analyse certain winning attributes of established sharing economy powerhouses, and how these attributes can be applied within insurance to achieve incremental change.

In this presentation, we aim to provide some ideas to address the following questions:

- How can the purchase of insurance become a more tailored and seamless experience?
- How can we discard the old adage that life insurance is sold, not bought?
- How can we sharpen the pricing of insurance products?
- How can we make insurance feel like a tangible purchase?
- How can we reduce the general perception that insurers are out to deny claims?



## SYNOPSIS

### **GI & Life Actuarial streamlining – Different sides of the same coin**

***Gloria Yu, Marc Mer, Ruth Lisha***

**Key words:** Actuarial processes, core insurance processes, streamlining, synergies, life insurance, general insurance, one team, organisational structure, efficiency, people, processes, systems

**Purpose of your paper:** The purpose of this presentation is to challenge the traditional specialist industry split of actuarial resources, and look to find commonality and synergies across core insurance processes and systems. We will highlight the benefits of adopting such a structure for actuaries, processes and systems.

#### **Synopsis:**

Actuarial work has typically been structured and organised along specialist industry lines (e.g. General insurance, Life insurance, etc.), starting from the specialist courses through to junior and senior career paths.

As business models move from being product driven to customer driven, is it time for the traditional actuarial structure to change?

This presentation explores some synergies we can obtain across the various industries with a focus on General and Life insurance with a look-through on people, processes and systems that can service actuarial work across both industries.

The benefits of achieving such synergies are the ability to connect across different business models, connect at higher levels with other professions, perform actuarial work more efficiently and provide alternative career paths to our up and coming actuaries.



## SYNOPSIS

**Living Through Change – LIWMP’s Update on the Life Insurance & Wealth Management Industry**  
*Life Practice committee*

**Key words:** LIWMP, Life Practice Committee

**Purpose of your paper:** This presentation will focus on an update of the life practice committee’s work at the Actuaries Institute and a summary of the last year of activity.

**Synopsis:** This presentation will summarize, amongst other things, the work being done by the various life and wealth management sub committees, any changes to professional and regulatory standards that life actuaries need to be aware of over the last year, education changes, international developments that may impact Australian actuaries in the medium term and some of the industry activity and what this means for our profession.



## SYNOPSIS

### **STRATEGIC DECISION MAKING IN A RAPIDLY EVOLVING CYBER RISK ENVIRONMENT**

*Robert Menzies & Dave Millar*

**Key words:** Cyber, threat, opportunity, decision making, strategy, challenge, economics, underwriting, operational risk, insurance, product development,

#### **Purpose of your paper:**

As cyber threats continue to proliferate and grow in complexity, Boards and senior management are making strategic decisions in the absence of reliably information. In a tight economic environment, many businesses are looking to transfer cyber risks to insurers. Are insurers making the right strategic decisions in the context of the evolving cyber risks their clients face?

#### **Synopsis:**

This presentation will examine the current cyber threat landscape facing businesses across the globe. It will cover a number of topical cyber-attacks and the responses of businesses, insurers, governments and other interested and affected parties.

Then, the presentation will outline the current cyber insurance landscape; the nature of the products offered; the levels of cover/underwriting/pricing; and the current claims management and assessment approaches.

Following this, the presentation will identify the type of support needed for Boards and senior management to make the right strategic decisions in a rapidly evolving cyber risk environment.

The presentation will look at how the 'best of breed' operational risk management approaches used in the Banking environment has a key role in the management of cyber risks – both for the insurers and the businesses they insure.

Are insurers able to partner with their businesses to reduce the risks they both face?

## SYNOPSIS

**Simple**  
**Robert Kerr**

**Key words:** simple products

**Purpose of your paper:** Investigating the impact of added complexity of our products. Does this discourage consumers? Should we consider Simple Products?

**Synopsis:** Insurance products have been around for a long time and with a few exceptions, such as trauma, new developments have been limited.

In more recent years we have seen products becoming increasingly complicated with the addition of more minor benefits and conditions covered. This has been to provide a competitive advantage and score higher with the various rating houses.

Does this benefit the consumer?

The addition of more conditions makes it harder to truly compare products and leads to customer confusion about what the product delivers. There is an increased need to obtain financial advice which can be a time consuming and expensive process and not available to all lives.

This leads to a lack of interest in the product and encourage consumers to put off taking any action until a later date. And unfortunately that may be too late in some circumstances.

For those who buy the product they are often disengaged from the product feeling that they have done the right thing and then they fail to take advantage of the many benefits offered by the product.

Should we consider Simple Products?

Simplicity means a straightforward product with simple processes and a straightforward way to purchase. This can build consumer trust and increase confidence to purchase.

The presentation will discuss the current markets complexities, the disadvantages of over-complexity and the case for simplicity. It will look at developments in other markets to offer simpler products and examine some principles for good design and how they could be incorporated into a new product.

## SYNOPSIS

### **Trauma product developments**

**Robert Kerr**

**Key words:** trauma critical illness products

**Purpose of your paper:** Developments of Trauma products throughout the world.

**Synopsis:** The Australian market has developed, with only one notable exception, with competition in Trauma products primarily aimed at increasing conditions covered and the definition of condition.

This presentation will look across the globe at the development of critical illness and trauma products.

It will look at the impact that standardized definitions have had in these markets and what the impact may be on Australia.

It will bring ideas from these markets of the product structures and features which could encompass the next generation of products.