ACTUARIAL FUNCTION
THE NEXT GENERATION

20 November 2020

IAA AFIR ERM Section
presenting the IAA Risk Book Series

Moderated by: Annie Tay FIA CERA
REGISTRATION AND PARTICIPATION

- This webinar is free for all AFIR-ERM members, IAA section members and IAIS members.
About the speakers and moderator

Stuart F. Wason, FSA, FCIA, Hon FIA

- Actuary, consultant and insurance supervisor, with over 40 years’ experience in insurance, risk and capital management.
- Chair of the IAA’s Insurance Regulation Committee, IAA Delegate to the IAALS Board and visiting lecturer at Imperial Business School, London.
- Senior Director, Actuarial Division of the Office of the Superintendent of Financial Institutions Canada (OSFI) from September 2007 until he retired in April 2016

Michael Eves, FIA

- Actuarial veteran in (Re)insurance for Life and Health as well as Property and Casualty businesses.
- Currently Certifying Actuary for Swiss Re Asia Ltd based in Singapore, the Director of Swiss Re L&H in Australia and the senior officer for the Australian P&C branch
- Previously, the Group Chief Actuary in Zurich; Vice-chair of the IAA’s Insurance Regulation Committee; Chairman of the Reinsurance sub-committee and a member of IAA’s mortality working group; Director of two direct companies in the UK
About the speakers and moderator

Annie Tay FIA CERA - Moderator

- INED for Audit and Risk Committees including for the IAA and the CII.
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Importance of the Actuarial Function

Stuart Wason  FSA FCIA Hon FIA

20 November 2020
Agenda

- Actuarial Function – the basics
- IAA and other support material
- Importance of the Actuarial Function
- Next generation considerations
Actuarial Function – The Basics
Actuarial Function – The Basics

Unique role of actuaries

- Actuaries have long played unique role in managing risks and helping to ensure long-term sustainability of insurers
- All levels of management
- Involvement in marketing, product design, underwriting, risk & capital management, reserving/valuation, investments etc.. – both operational and oversight aspects

Supervisory recognition – Insurance supervisors are focusing on oversight role of the AF as part of second of the traditional “three lines of defence” in ERM.

- IAIS ICP 8.2.1 identifies the AF as one of 4 insurer control functions (i.e. in addition to compliance, risk management and internal audit)
- IAIS ICP 8.6 “The supervisor requires the insurer to have an effective actuarial function capable of evaluating and providing advice regarding, at a minimum, technical provisions, premium and pricing activities, capital adequacy, reinsurance and compliance with related statutory and regulatory requirements.”
Actuarial Function – The Basics

Risk management lines of defence:

1. Functions that own, manage, and report on risks (e.g., operational management);

2. Functions (and processes) that oversee risks (e.g., AF, risk management, compliance, risk committees, and sign-off requirements); and

3. Functions that provide independent assurance (e.g., internal and/or external audit).
Actuarial Function – The Basics

Adapted from ECIIA/FERMA Guidance on the 8th EU Company Law Directive, article 41
Actuarial Function – The Basics

- Actuaries are not restricted to providing the oversight of risk (i.e., second line of defence), but are active in some or all of the three lines of defence within an insurer.

- AF frequently expected to make material contributions to ERM.

- AF must be organized & operate within insurer/insurance group in clear, effective & transparent manner – not like this!

- Other statutory roles (e.g. Appointed Actuary, With-Profits Actuary, Valuation Actuary etc.) can add to the confusion of assessing the AF.
Insurance supervisors develop & maintain confidence in work of AF through
- Validation of important aspects of work of AF
- Presence of strong professionalism
- Presence of effective feedback loops between the supervisor, profession, standard setters, and the disciplinary process

IAIS 8.5.5 states “a robust actuarial function that is well positioned, resourced and properly authorised and staffed is essential for the proper operation of the insurer”

Supervisory requirements for AF vary by jurisdiction
- EU – AF required by legislation/AF need not be a member of an EU actuarial association
- Canada – Supervisor expects AF to be a member of the Canadian Institute of Actuaries
- US - actuaries who perform certain functions must meet certain educational and experience requirements
Actuarial Function – The Basics

- **EU Supervisory recognition**
  - Solvency II legislation in the EU requires the AF to provide an annual report to management and to the supervisor on several matters
  - European Actuarial Standard (ESAP 2) directs the AF in the preparation of this report. The contents include topics such as,
    - Technical provisions
    - Opinion on underwriting policy
    - Opinion on reinsurance arrangements
    - Contribution to risk management

- **Non-EU jurisdictions** - The identification of the AF may not always be straightforward. In these cases, it will be necessary for the supervisor to discern the actuary within the insurer who effectively executes this role.
IAA and other support material
International Actuarial Association (IAA), IAA Member Associations and other actuarial communities like AFIR/ERM have developed support material for actuaries related to the Actuarial Function

- IAA Risk Book (*Chapter 2*) *Actuarial Function*

**Actuarial Association of Europe (AAE)**

- ESAP 3 & European Actuarial Note (EAN) 1 on ESAP 3 and ORSA
- Summary of Papers on Actuarial Function Report (AFR) and Actuarial Function Holder (AFH)

**Institute and Faculty of Actuaries (IFoA)**

- Application of the Solvency II actuarial function to general insurance firms
Texts draw on regulatory guidance

Application of the Solvency II actuarial function to general insurance firms

by the Actuarial Function Working Party


3 November 2015

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Importance of the Actuarial Function
Importance of Actuarial Function

- Independent oversight by the AF is important to boards, senior management, and the supervisor, as it provides additional comfort that the insurer’s controls are effective.

- Can lead to enhanced assessment by the supervisor of an insurer’s net risk (i.e., the combined risks of the insurer net of the expected effects of applicable risk mitigation) and an appropriate adjustment of the nature and intensity of the supervisory work concerning the insurer or group – i.e., supervisory oversight can be less intrusive.

- AF is most effective when it brings independent oversight to all actuarial work within an insurer – AF is less effective when it is considered only as regulatory compliance
Next generation considerations
Next generation considerations

- **Lessons from COVID-19.** This is not all about models and parameters but about the way we work and how governments and society have responded. Our models were probably ok but what was missed was how governments have reacted with the significant economic impacts (e.g. strong connectivity; tipping points; non-linear impacts etc..). COVID-19 is as much a P&C event as L&H.

- **Climate-related risks and sustainability.** These topics are becoming increasingly important for regulators, governments, investors and society as a whole. The implications need to be understood and the actuarial function is well placed to assess business impacts.

- **Scenario testing** becomes more important for everyone in managing the financial health of the insurance industry. Balance sheets need to be seen to be able to withstand a whole range of different scenarios, be it from mortality, natural catastrophe, interest rates, credit defaults etc., etc.. The control processes around the models, assumptions and understanding of results are so important.
Actuarial Function in Practice

Michael Eves  FIA

20 November 2020
Actuarial Function in Practice

- Applying the “Act” in “Actuary”
- Models, models and models
- The importance of communication
- Demanding stakeholders
- Working with others
The Actuary needs to Act to meet the demands of a changing world

- Management is ever more demanding
- Retaining independence of the function
- Boards are more in focus with regulators and have to justify themselves. Hence they are more sensitive to the assumptions of the Actuary
- Data sources are more varied and not just in the hands of actuaries
- Regulatory pace of change is increasing
- Newer risks, including Covid19, Cyber and climate change.
- Actuarial function needs to be a valued part of the overall ERM of an insurer
Models

- Increasing in number and complexity. In addition to valuation models they can range from pandemic models to natural catastrophe models.

- Controls and governance in their use must be in place.

- Data sources will not all be internal and there is growing use of data coming from external sources. The actuarial function must ensure that it understands the data, its completeness and its relevance to the task at hand.

- Assumption setting process is key to the integrity of a model.

- The calculations in the core of the models need to be understood even if the model itself is something like a black box.

- The results need to be clear including their relevance to the business.

- Use of external models is growing but this comes with risk. Are these models realistic, are the calculations relevant and can the results be relied upon.
Communication

- We are living in a multi-valuation world for insurers and reinsurers, for example US GAAP, IFRS, Statutory, Economic, and Tax. Actuaries are heavily involved in the calculations and understand the different accounting bases yet do not take the lead in the communications of the differences and the implications for the business. The actuarial function is also very well placed to understand the capital implications. There is a gap here that the actuarial function needs to fill otherwise we are in danger of becoming expensive calculators sitting in the corner!

- Trust of the Actuarial Function is not in doubt but what is often missing is the trust to see us as part of the wider business team.

- The Actuarial Function is well placed to provide input and comment across the Company on matters ranging from Risk Management, Finance, Pricing and Underwriting.

- So important is to communicate in a language that the receiver can understand. All actuaries need to spend time to improve on their “storytelling” in their presentations and conversations.
The actuarial function is well positioned to communicate to the numerous stakeholders on more than just the liabilities and how they were calculated. Stakeholders include Management, Statutory Boards, Regulators, Investors, Rating Agencies etc.

The demands from the stakeholders seem to come at an ever increasing speed. The challenge is to keep up with the speed without impacting on the quality of the actuarial work.

Regulators in particular are increasing workload. Where the actuarial function covers many regulators then meeting their needs will require resources and an ability to deal with the differing goals of the local regulators.

The overall challenge for the Actuarial Function is to be effective in a cross-functional environment, meeting the demands of the numerous stakeholders and seen to be adding value.
Other functions are slowly chipping away at tasks that used to be in the role of the actuarial function. Our expertise is not specifically challenged but questions arise as to why certain tasks have to be performed by someone with an actuarial designation.

This challenge should be accepted. More important is to expand and use our actuarial skills into newer areas such as risk management, data analytics, digital transformations, modeling etc..

Softer skills are becoming far more important. Communication has already been considered but other skills such as working in teams, managing, showing empathy and overall wellbeing are now common in the workplace.

There has been a trend for the actuarial function to be positioned lower in a Company than in earlier years in part due to competition from other functions. The current generation needs to find ways of reversing this trend and working in the way we have always done is not the answer!
Thank you