SAS Monthly

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Contents

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Editorial

This month we are pleased to present a new look newsletter under the banner of "SAS Monthly". Much of the previous content has been retained but some of the new initiatives include:

- A table of "Upcoming Events" which may appeal to our membership; not just SAS events but other "industry" events in Singapore or around the region, for example the upcoming Pacific Insurance Conference.
- Reports on recent SAS events, hopefully with photos (we generally encourage more photos for inclusion in SAS Monthly..!)
- A list of recently approved new members to SAS
- Space for technical articles. We encourage members to submit topical technical articles which can be printed in this newsletter. We aim to publish at least one article each month.
- Some "Brainteasers"

We hope you like the new format and look forward to any feedback.

Richard Holloway

Message from the President

The 2011/12 Council year is shaping up to be another great one. Congratulations and kudos goes to the organizers of the General Insurance Conference at the beginning on June which was a great success and we all look forward to next year's.

We have many educational activities on the roster for the summer months so please check out the Events Section.

As you have already noticed the monthly SAS newsletter has undergone a facelift. Thank you to Vice President, Richard Holloway for his hard work and adding new life to the newsletter.

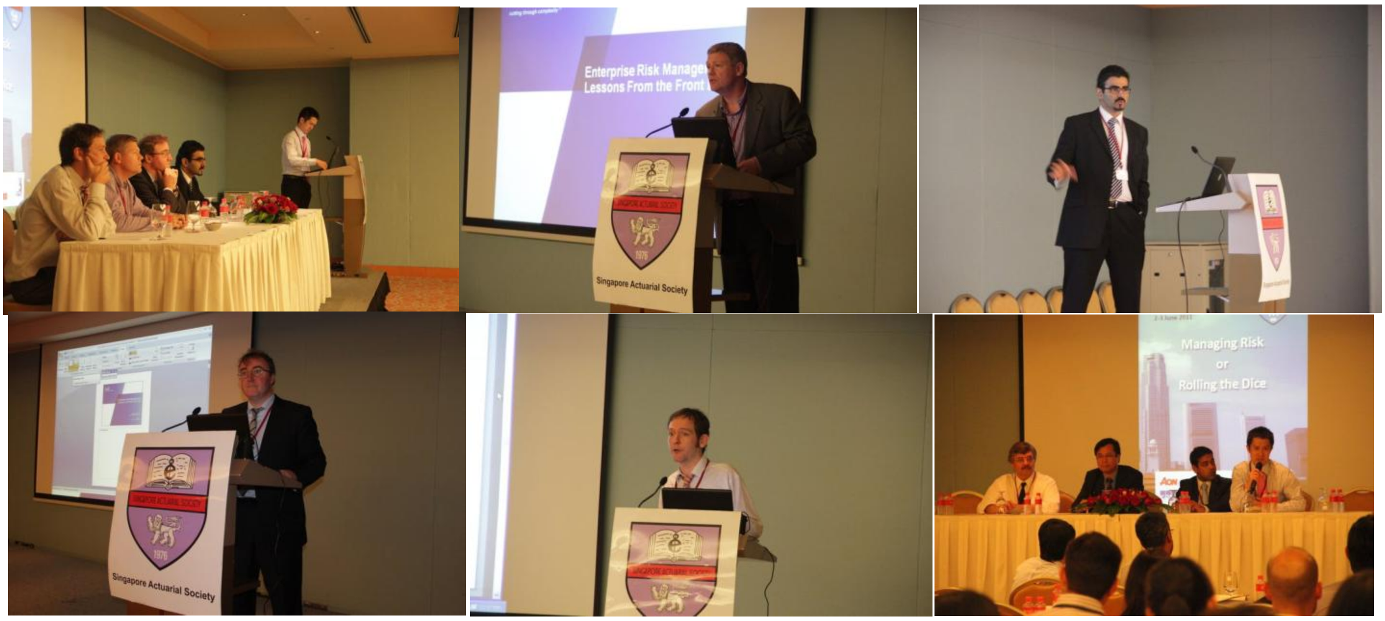
Please do not hesitate to contact me if you have any questions, concerns or desire to volunteer.

Jill Hoffman

Upcoming Events

Date	Event	Location	Contact
7th July 2011, 16:00 to 17:30	SAS Afternoon Talk: Presentation by David Maneval "Theories Underlying Reinsurance Efficiency"	The Executives' Club #33-01 OCBC Centre (West Lobby)	Gavin Maistry
19th – 20th July 2011	Joint Regional Seminar 2011	Hotel Istana, Kuala Lampur	Rattiya Singlor rattiyas@mittare.com
26th – 28th July 2011	Joint Professionalism Course: Coordinated by Mr. Neil Hilary	Singapore Management University, School of Economics & Social Science	Andrew Linfoot
29th July 2011, 8:30 to 18:00	Professionalism Event for Experienced Actuaries: Coordinated by Mr Neil Hilary	Singapore CBD Hotel	Andrew Linfoot
29th July 2011	SAS Quiz Night	TBC	Annette King
11th – 14th September 2011	Pacific Insurance Conference	Marina Bay Sands, Singapore	Secretariat: 25thpic@pacificinsuranceconference.org
10th – 13th October 2011	The 16th East Asian Actuarial Conference	Kuala Lumpur	David Goh: admin@actuariesasia.org
20th – 22nd November 2011	Accident Compensation Seminar	Brisbane, Australia	Emma Simonson: emma.simonson@actuaries.asn.au
Nov/Dec 2011 (TBC)	Appointed Actuary Symposium 2011	Singapore	Patsy Lau
19th – 21st February 2012	14th Global Conference of Actuaries	Mumbai, India	Aparajita Mitra: aparajita@actuariesindia.org

Recent Events



The beginning of June saw the hosting of the 3rd SAS General Insurance Conference at Resorts. It was a very well attended event with nearly 120 delegates and the general feedback has been very positive. The quality of the presentations, speakers and venue improves year-on-year which is reflected in the attendance each year.

Matthew Maguire

My personal thanks go out to all those who helped contribute to making this such a great success including my fellow committee members, the presenters, the sponsors, the delegates and of course Patsy.

More pictures are available at **SAS Facebook**.

Committee Reports

• General Insurance

Given the success of the conference we are all looking forward to 2012. Next year we are planning a new addition to the programme. To encourage the development of the industry in the region, we are proposing the establishment of a number of working groups to do some research into a local topic and then provide a presentation at the conference next year. We are proposing a prize for the "best" paper which will be split amongst the contributors of the paper. This is a good opportunity for people to get out and meet some others like-minded actuaries across the industry and also to do some interesting research that may not normally be possible by a single firm or consultancy. So we are looking for suggestions for topics to be researched and presented. One example we have already received is some research into the cost of motor vehicle repairs by make and model in the region. So, please send me your suggestions for topics or if you are interested in joining a group.

Finally, following some retirements over the past year, we have a couple of spaces available on the committee. So if you are interested in joining a lively discussion once a month (with free lunch) and some ad-hoc analyses from time to time, please let me know and we will get back to you.

Matthew Maguire

• Life Insurance

Firstly, the Mortality Workgroup met up on 9 Jun to review the draft mortality report. The workgroup targets to submit the report to the life committee and council for review by the end of July.

Secondly, the Guidance Note on Par Business will be finalised based on the feedback at the last EGM and circulated.

Lastly, the Internal Model Workgroup will be working on a document aimed at providing guidance on the MAS Internal Model Guideline.

Koo Chung Chang

• Public Relations

Quiz Night – Friday 29th July

In response to overwhelming demand after last year's inaugural SAS Quiz Night, we are pleased to announce there will be a Quiz Night this year. Please put a place holder in your diaries for Friday 29th July. Venue and further details will follow.

Annette King

There were no updates from the other committees for the month of June.

New Members

Fellow Membership:

Mr John Martin Charles
Mr Hamish Celeb Worsley
Mr Vincent Songbo Shi
Mr Ng Yen Siong (Upgraded from Ordinary)

Ordinary Membership:

Ms Leong Li Li
Mrs Anupama Kapoor
Mr Tan Yeow Hau

Student Membership:

Mr Lam Chun Wai

News & Articles

- ## General News

IAA creates Task Force to recommend a Permanent Structure for Model International Actuarial Standards

IAA, 21 June 2011

The IAA is pleased to announce the creation of the Task Force on a Permanent Structure for International Actuarial Standards, which has been established by the Executive Committee (EC) of the IAA, under the leadership of Immediate Past President, Paul Thornton.

This is the third strand of activity initiated by the EC following the recommendations of the Task Force on Convergence of Actuarial Standards, which were broadly endorsed by the IAA Council in October 2010.

The first strand was the establishment of an Interim Actuarial Standards Subcommittee (IASSC) at the start of 2011, also reporting to the EC.

The IASSC's charge is to deliver model International Actuarial Standards covering general actuarial practice, IFRS 4, IAS 19, social security calculations and enterprise risk management work; it is close to issuing an Exposure Draft on General Actuarial Practice.

At the same time, the EC set up a Task Force on Due Process to overhaul the current due process. This group reported its initial ideas to Council in April and, following a more in-depth discussion by Council this coming September, it is expected that a new due process will be adopted by IAA member associations before the end of the year.

The third strand of activity, which has deliberately been left until some progress had been made on the others, is to design a permanent structure for preparing model International Actuarial Standards. The Task Force is preparing some ideas for discussion with Council in September, with a view to bringing formal proposals to Council in 2012 for implementation from the beginning of 2013.

These three strands of activity demonstrate the IAA's commitment to the impetus for convergence of international actuarial standards arising from the recent global financial crisis.

For more information on the work of the IAA on this topic, please contact the **Secretariat** for the attention of the Chairperson of the Task Force.

Insurers Cite Regulation as Top Risk Concern

Channel News Asia, 02 June 2011

Insurers in Singapore cited regulation as the top risk concern for them over the next two to three years, according to a survey by PricewaterhouseCoopers (PwC) and the Centre for the Study of Financial Innovation.

A new wave of regulatory measures is expected to swamp the industry and may lead to higher compliance costs. Tighter regulatory measures that may hit the insurance industry here include the European Union's Solvency II Directive. The directive - which is the insurance equivalent of the Basel framework - revolves around risk management controls, which include stricter disclosure rules and higher capital requirements. It will affect insurers in Singapore, especially those which are subsidiaries and joint ventures of European insurers.

Bob Gibson, director of Asian Actuarial Practice at PwC, said: "There're many aspects to Solvency II which also bring up issues within the survey - for example, the impact on the need for capital, the pressure on costs, and the pressure on making investment returns with this risk capital."

Observers said insurers here are probably about a year away from full implementation of the new standards. While the new standards may mean additional compliance costs, it should improve consumer protection in the insurance industry.

Mr Gibson said: "While many of the practices of Solvency II, for example, may be seen as an overhead, they do give the opportunity for management to raise the standard in some ways, to embrace risk management into the day-to-day management practice."

Insurers are also concerned about a shortage of talent well-versed with Solvency II and new corporate governance standards.

Alywin Teh, the Singapore insurance leader at PwC, said: "As we have seen in the European market now, it is sucking up a lot of people and talent into resolving the problem.

"Therefore, it is not difficult to imagine when those regulations come into our local marketplace, there will be severe shortage of talent, not now, but eventually we will need to skill our people up."

Other risks that local insurers are concerned with include the ability to raise capital and investment performance.

Reported by Linette Lim.

Insurance Risk and Finance Research Centre Founded by SCOR

NTU, 02 June 2011

Global reinsurance company SCOR has established the Insurance Risk and Finance Research Centre at NTU and it has officially launched on 31 March 2011. The Centre will promote and conduct applied research in actuarial practice, insurance risks, and related issues specific to the Asia-Pacific.

Combining market insights with intellectual rigour, the Centre aims to produce research that will help the insurance industry meet Asia's growing protection needs. It also seeks to encourage in the region a greater culture of study and dialogue of insurance and actuarial issues.

Funded by SCOR, the Centre will undertake two to three research projects every year. These projects will be supervised by the NBS faculty in actuarial science and insurance and involve collaboration with leading experts from overseas institutions. The Centre will also help fund PhD students at NBS for relevant research projects. The Centre's findings will be shared at an annual regional conference, the first of which is proposed to be conducted in June 2012.

For more information, please contact **Jackie Li.**

Featured Articles

ERM Strategy: Plan of Action

Written by Tom Durkin & published with permission from The Actuary UK, June 2011
Link: http://www.theactuary.com/875687

Economic turbulence and regulatory pressures have focused a bright spotlight on risk, and companies are more engaged than ever with risk management. Now is the time for more actuaries to really make a name for themselves in this exciting and growing area, by helping our clients manage these new challenges.

In our experience, companies' risk management strategies typically fall into one of four types:

1. Awareness — the areas where there is most uncertainty are identified
2. Measurement — risks are quantified in silos across the business
3. Understanding — a holistic picture of the overall risk profile is built
4. Harnessing — the detailed risk profile is an important consideration when making business decisions.

The most appropriate strategy will be different for each business. Individual companies must determine what works best for them and this is a decision for the board. Identifying the current type of strategy is helpful when assessing the actions that will be most effective right now and how strategy should best develop in the future. Actuaries can add particular value for companies looking to understand and harness risk, where quantitative analysis is often needed. However, our analytical skills, judgment and clear communication are important throughout.

In this article I consider typical characteristics of each type of risk management strategy and draw on my experience in the field to give case studies of how actuaries are helping with the development of risk management outside traditional areas of actuarial work.

Risk

Almost all companies have processes in place to identify and monitor key risks. Tools such as risk registers or matrices are common. These provide an important foundation for all risk management by creating awareness of where uncertainties lie.

Companies with an 'awareness' type of risk management strategy typically:

- Have developed these risk registers separately within each business function, which can lead to inconsistencies and overlap.
- Do not have a dedicated risk manager and, if they do, it is a compliance role with limited presence at board level.
- Have limited risk controls.
- View risk only as a threat, rather than an opportunity.

This can lead to companies overstating their risks, resulting in money wasted on unnecessarily high insurance premiums, or other disproportionate and expensive action.

Risk measurement

For companies with a 'measurement' type of risk management strategy, the potential severity and frequency of each risk is typically estimated using a qualitative scale such as 'one to five' or 'low, medium and high'. Risks are considered in isolation, rather than holistically.

A log of historical loss incidents is maintained and risks are reported upwards. A rudimentary aggregation of the risks may have been attempted, but the business will not yet have tackled diversification, often meaning the overall risk exposure is still overstated. For example, this siloed approach does not allow for natural hedges between different areas of the business.

It is important to have effective processes in place to measure and monitor risk. This allows companies to focus on the most important risks, and avoid long checklists that hide the wood from the trees.

Understanding risk

For companies really wanting to get a handle on risk, a more sophisticated understanding and quantification is required. In addition, companies with this type of strategy usually have a dedicated risk manager or department and undertake regular reporting of risk to senior management and externally.

It is for the 'understanding' type of strategy where the actuarial skill-set really starts to come into its own, particularly as companies analyse the interactions between different risks.

For example, a global investment manager can be helped to better understand the operational risks across their business and meet FSA requirements. Operational risk is both the biggest risk facing investment managers and the hardest risk to quantify as:

- There is usually limited data on historical loss incidents within a firm, in particular for rare and more extreme incidents.
- Information on losses by other firms in the industry requires adjustment so that it is relevant due to each firm's unique risk exposure, processes and controls.

These challenges mean that, when modelling operational risks, a greater reliance on expert judgment is needed than when modelling other risks such as credit and market risk. These challenges can be addressed using a method known as the Delphi process, which is an efficient and unbiased way to incorporate expert judgment within the risk modelling.

The Delphi process involves running workshops attended by relevant experts from across the business. These are similar to normal group meetings, but with a facilitator setting questions and participants giving answers anonymously. The output from the workshops provides an excellent foundation on which to build a model of the client's overall operational risk exposure, using fat-tailed distributions to capture extreme events, and copulas to allow for co-dependency between risks.

By using these advanced statistical techniques, actuaries ensure that the modelling is robust. However, the thing that clients usually value most is clear presentation and communication of the results so that the modelling is transparent and well understood.

<u>Harnessing risk</u>

As companies start to harness risk, their unique risk fingerprint becomes an important factor in corporate decisions. A consistent risk management approach is likely to be used across the business and regular reporting, including to the board, means visibility of risk management is high. The risk appetite or risk budget will usually be clearly articulated.

The idea of harnessing risk is already common across many traditional areas of actuarial work. For example, setting a reinsurance strategy, managing an investment portfolio or de-risking a pension scheme all require risk and uncertainty to be harnessed. In each case, a powerful approach is to build a model of the issue under consideration to gain understanding of the expected outcome and the range of possible variance — in other words, the risk versus reward trade-off.

In these traditional areas, techniques including stresses and scenario testing and metrics such as Value at Risk provide management with the toolkit to harness risk, reduce uncertainty and improve business decisions. Exactly the same principles apply in less well-established areas of actuarial work.

An example of this would be building a powerful predictive tool to help analyse the impact of policy on the building of new power stations on $CO2$ emissions, blackouts and electricity prices. To do this, we could develop a stochastic model to simulate the risk and reward profile of each policy under consideration, by projecting supply and demand across the whole UK power system over the next 40 years.

One possible methodology would be to use a ground-up agent-based approach to model individual agents and the interactions between them. For example, each power station is an agent and the model takes into account the cost and time of development, operations, eventual decommissioning and overall return on capital. This is an excellent example of actuaries applying their modelling and risk consulting skills to a non-traditional area as part of a multi-disciplinary team. As another example, consider a large utilities company that wants to better manage its use of offshore call centres. Advance bookings receive preferential rates, but the client is not able to accurately predict call volumes so is often forced to pay high rates to purchase additional capacity at the last minute. Here we could develop a dynamic model to predict call centre demand and variability, including allowance for weekly and seasonal cyclical trends and the impact of customer mailings on call type and volume.

This tool could then be used to manage call centre capacity and understand the risk and reward implications of related decisions.

The support that a company requires is highly dependent on the type of risk management strategy in place and the nature of the risks faced. By fully engaging with those close to the business, actuaries can help to develop appropriate and effective risk management processes. Actuaries can help businesses see not only the dangers that risk can pose but also the opportunities it creates.

Tom Durkin is a partner in LCP's Business Analytics practice and specialises in the area of risk management. The views expressed in this article are those of the author and not necessarily those of LCP as a firm.

Brainteasers

#1

In your pocket you have $6.70.

It is made up of four different denominations of coins and the largest denomination is 50 cents.

There is exactly the same number of each coin.

How many of each coin is there and what are their values?

#2

On each row place a word beginning with 'L' to fit the clue given.

When completed, a word will be read down the shaded column.

What is it?

FORTUNATE					
KINGS OF THE JUNGLE					
A WOOLLY ANIMAL					
BEAM OF LIGHT					
A LANGUAGE					

Answers will be provided in next month's newsletter.