Newsletter
September 2010
The Society of Actuaries in Ireland

Solvency II – A Pan European Perspective

On 23 June 2010, Seamus Creedon of KPMG gave a presentation entitled "Solvency II – A Pan European Perspective" to members of the Society.

Seamus opened the presentation by providing an overview of the Groupe Consultatif Actuariel Européen including its purpose, membership and representation across the EU. The Groupe is independent of industry interests, and is concerned with the coherence of Solvency II rather than the calibration. The Solvency II project team within the Groupe is comprised of about 50 volunteer actuaries and responds to most consultations on behalf of the Groupe's members. Seamus noted that the feedback from the Irish Actuarial Profession to the Groupe on the Solvency II Consultation Papers to date could be improved, and mentioned that the main issues facing the Irish Actuarial Profession from a Solvency II perspective appear to be in relation to unit-linked products, operational risks and proportionality.

He commented that Europe is at a crossroads in terms of its economy and economic governance, and questions whether Solvency II will make for a more competitive market.

Not everyone views Solvency II positively. Seamus briefly presented the view that Solvency II may be counterproductive and harmful, not only as it favours short-term guarantees and penalises the holding of equity assets in certain markets but also due to its sheer complexity. These concerns are not without some merit.

For the typical firm, the overall financial requirements are not expected to be much different under Solvency II. Some larger diversified international multiline firms using internal models may see some reduction, and some smaller monolines (particularly non-life mutuals operating in a single country) may see an increase in requirements. QIS 5 may give a better idea of the requirements. Although one of the key issues under QIS 5 remains what is the relevant risk-free interest rate structure. The classification of future premiums as Tier 1 own funds is also a key issue and the subject of much lively debate in Ireland.

In terms of products, it is expected that pure life protection business may become less expensive due to a more realistic calibration of baseline mortality and mortality shocks. There are some indications that unit-linked products may become relatively less expensive than with-profit funds, so there may be some change in the mix of insurance-based savings. There is also an expectation that the current conservative approach to the definition of illiquidity premium may increase annuity prices to a certain extent. There are also some indications that certain non-life lines may be more expensive, although it is not clear why. It may be that Solvency I was simply under-calibrated. The increase in bank capital requirements may improve the relative competitiveness of life insurance products, but there may be different impacts by country.

In addition, business models may change (demutualisation, diversification, group consolidation) as a result of Solvency II, but it remains to be seen whether these changes will be beneficial or sub-optimal.

One question raised was whether Solvency II will help Europe achieve a better balance of social insurance and private insurance. The strength of the social nets varies considerably within the EU and the capacity of states to sustain the level of promised benefits are doubtful. There are also considerable differences in pension schemes across the EU, and the effects of discretionary actions may be significant (analogous to with-profits business).

A topical issue is whether Solvency II will make for greater financial stability across the EU. There is much criticism of the Basel accord in light of the recent economic crisis. The crisis raised the issue of procyclicality of regulatory regimes. There are also long-standing insurer concerns that the application of fair value will not be understood and threaten consumer confidence. The fact that the original concept of Solvency II failed to take account of the relative illiquidity of most life insurance liabilities raises concerns.

The position of CEIOPS following the peak of the economic crisis was that Solvency II should proceed but that the level of governance, risk management and internal controls in the insurance sector needs to be strengthened.

It was noted that CEIOPS is targeted to be replaced with EIOPA on January 1, 2011, and a new omnibus insurance directive is to appear in early 2011 which will include areas where EIOPA can develop binding standards.

Looking forward, the Groupe will continue to have exchanges with CEIOPS on actuarial function and technical standards. There will be the need to consider ORSA (own risk and solvency assessment), the remaining level 2 measures, concepts of fungibility / transferability / equivalence, as well as a review of financial reporting templates. There are also some professional issues to be considered with respect to the standards and guidance that would apply to the actuarial function holder, and the dovetailing of the actuarial function with residual responsible actuary functions.

Devika Prashad

Contents:

Concepts and Methods

The second of a series of presentations scheduled by the Enterprise Risk Management (ERM) Committee took place on Monday 14th June 2010. The presentation was entitled "Concepts and Methods of Risk Mitigation" and speakers on the evening were Lukas Ziewer from Oliver Wyman and Eamonn Phelan from Milliman.

The presentation covered a range of concepts and methods used for risk mitigation and was split into the following five sections:

- Section 1: General concepts for risk mitigation
- Section 2: Fundamentals and case studies in market risk management
- Section 3: Fundamentals in operational risk mitigation
- Section 4: Fundamentals in reinsurance
- Section 5: Risk reporting

Section 1: General Concepts for Risk Mitigation

Lukas began the presentation by looking at why a company would seek to mitigate risk, discussing the following 4-dimensional approach to identifying the reasons for risk mitigation:

- Adequate Capital Level: To maintain regulatory requirements and credit ratings along with meeting target economic requirements. This point is particularly topical in recent times with the introduction of Solvency II.
- Stable Profitability and Growth: To keep up stable earnings and EV growth.
- Sufficient Liquidity: To maintain dividend & debt cover.
- Sound Reputation: To limit any reputation risk, ensuring the company consistently delivers on promises and maintains a sound reputation.

Lukas highlighted that a fundamental aspect of the concept of risk mitigation is identifying a company's risk appetite and the risks that are outside of the risk appetite. ERM can be used to help ensure that the risk profile of the company stays within its risk appetite. Good ERM considers each dimension of the risk fully by considering each activity under each risk appetite heading and also by each risk type. A number of instruments can then be used to manage the risk profile within the specified risk appetite e.g. through the use of Modelling & Analysis and Risk Mitigation.

Having identified an exposure that the company wants to bring in line with the risk appetite, the company must then consider what mitigation technique is most appropriate e.g. Securitisation, Reinsurance, Hedging or Longevity Swaps. Risk mitigation techniques for a given scenario can be assessed using a Cost/Benefit analysis where the higher the cost of the mitigation the more the risk is reduced. As part of the Cost/Benefit analysis, consideration needs to be given to the speed at which a risk mitigation technique can be implemented. For example, two effective but very different risk mitigation techniques are Securitisation and a Change in Asset Allocation. As Lukas pointed out, Securitisation is a slower more expensive tool when compared to a Change in Asset Allocation but both methods have their own merits and a Cost/Benefit analysis can be used to determine the most suitable technique for a given scenario.

Having considered the risk appetite and potential risk mitigation techniques there can often be confusion around who is responsible for risk mitigation. It was at this point that Lukas briefly referred to the '3 lines of Defence' model:

- 1st Line - Risk Taking. The risk takers within the business, those who seek to meet group objectives and to optimise the risk versus return trade-off.
- 2nd Line - Risk Oversight: Those responsible for defining mandates and guidelines to keep the business within its risk appetite. This line of defence would also have responsibility for the monitoring of the risk profile, identifying any potential breaches and initiating any corrective actions. This line should have the best overview of the risk profile.
- 3rd Line - Independent Assurance: Key responsibility is to carry out an independent review of adherence to risk and control standards, mandates and guidelines. This line should ensure integrity of decisions and information, and identify any operational weaknesses.

So where does the responsibility for risk mitigation lie? Is it under the 1st Line of Defence as a 'negative' risk taking or is it as part of the oversight role of the 2nd Line of Defence? There are arguments for both and with the introduction of Solvency II it is now more important than ever that every individual within an organisation considers risk mitigation as part of their role.

Section 2: Fundamentals and Case Studies in Market Risk Management

It was at this stage in the presentation that Lukas handed over to Eamonn to concentrate on two main areas of market risk: Investment Risk and Counterparty Risk.

Investment Risk

Eamonn gave a brief overview of the types of investment exposures, covering the more common exposures in terms of asset classes e.g. equities and property but also highlighting exposures that can commonly be overlooked such as lack of diversification and model risk.

In addition to considering the risk appetite boundaries mentioned by Lukas earlier in the presentation, Eamonn also covered some further considerations to be taken into account when determining the suitability of a given mitigation technique:

- What is market best practice?
- Constraints: costs and availability are two more obvious constraints but other constraints may exist such as regulatory constraints or restraints imposed by a parent company.
- Secondary Benefits; for example improved credit rating resulting from the introduction of a risk mitigation technique.
- Secondary/New Risks that may be introduced via the use of a specific mitigation technique.

A range of risk mitigation techniques, both external and internal can be used. External techniques are those that are available in the market place by engaging third parties such as hedging, reinsurance and securitisation. Internal techniques are those that are implemented by a company itself such as product design, tighter policy conditions and management actions. Eamonn also highlighted the use of ALMs and derivatives as risk mitigation tools which have come to the forefront following the market crash of 2001.

The recent credit crisis and the introduction of Solvency II can only lend themselves to further focus on risk mitigation tools which leads to the question of 'What lessons have we learned' from the recent crisis? Eamonn cited some interesting case studies from the Credit Crisis to demonstrate the impact of investment exposure in the insurance industry. Some examples mentioned were;

# of Risk Mitigation

- AIG and SWISS RE who incurred significant losses resulting from the depreciation of Credit Default Swaps.
- Yamato Life insurance - a Japanese medium sized life company which became insolvent due to over exposure to equities and sub-prime investments.
- Old Mutual which incurred large hedging losses on its variable annuity business in 2008.

The Credit Crisis had a significant impact across the insurance industry and as distinct from other crises this recent Credit Crisis was not limited to a stock market impact, it affected many companies in many different ways. It led to insurers being hit by significant falls in asset values and it identified shortcomings across the industry in the use of hedging techniques and processes. These shortcomings were partly a result of insufficient exposure being hedged, a lack of understanding of hedging strategies and a lack of availability and liquidity of suitable instruments.

Trying to lift our spirits somewhat, Eamonn then pointed out that it is not all bad news for the insurance industry citing some risk mitigation successes in Variable Annuities(VA) recorded in recent Milliman surveys:

- November 2008: US VA writer hedge programs over the period Sep-Oct 08 noted that US VA hedge programs have been 93% effective in achieving their goals, saving the US VA insurance industry $40 billion due to hedge gains.
- May 2009: European VA hedge programs over the period Sep-08 to Dec-08 have been 94% effective in achieving their goals.
- July 2009: US VA writer hedge programs over the period Nov-08 to Mar-09 have been 94% effective in achieving their goal.

These results highlight a consistent achievement of goals in relation to the use of hedging programs but key to this point is that a clear understanding of the goals and the uses of an appropriate hedge program was established.

Looking forward there will be a focus on the importance of asset stress and scenario testing, the need for Market Consistent Valuation techniques as a useful risk management tool and also the need for appropriate liquidity risk management. Eamonn closed off the discussion on how investment risk mitigation looks post Credit Crisis by quoting some recent commentary from the CRO forum and CEIOPS whose thoughts formulated part of the Solvency II guidelines:

CRO Forum:

- "Risk management is just as much about preparing for what has not happened as it is for understanding and preparing for what has been experienced in the past".
- "Risk management is much more than models…risk models are indispensible for managing the business. However the risk models must be – and in many cases are already – complemented with Internal Controls…there is no substitute for a deep understanding of the risks involved in the business and for common sense".

CEIOPS (Paper: "lessons learned from the financial crisis") recommendations for actions that can be taken:

- Develop basic expertise in credit products, we should not be relying on external third parties.
- Put liquidity contingency plans in place under Pillar II of Solvency II.
- Stress and scenario testing including reverse test testing whereby a company should consider what will make it insolvent and identify the risks from there. It could be argued that in the past some companies may have not paid enough attention to those scenarios that were thought to be improbable.
- Internal asset limits should be set at a level which the company is comfortable with as opposed to just following a prescribed set of rules (under Prudent Person approach for Solvency II).

CEIOPS' final advice on Governance (formerly CP33) sets out detailed guidelines on investment strategy, liquidity management, ALM and reinsurance strategy taking into account the lessons learned from the financial crisis.

Counterparty Risk

Eamonn looked at Counterparty Risk both in terms of understanding the exposure and the use of mitigation techniques.

Process for Understanding the Exposure

- Examine Direct and Indirect exposures: a holistic view of the overall risks is important.
- Latest Solvency II thinking is a good starting point on counterparty risk.
- Counterparty risk can change frequently and vary significantly, regular monitoring is essential.
- It is important not to place too much reliance on third party credit ratings.
- Estimation of Loss-Given-Default: it is important that a company establish an understanding of potential losses.
- Risk Appetite Framework should be established to understand the exposures.

Mitigating Techniques

Eamonn listed some considerations for the choice of mitigation technique:

- Unfunded techniques such as those available in capital markets e.g. total return swaps, parental guarantees, swapping one third party for original counterparty.
- Funded techniques such as the posting and receipt of good quality collateral with regular balancing and on-balance sheet netting. Good quality collateral becomes more topical under Solvency II with the need to hold risk capital for collateral not deemed to be of sufficiently good quality.
- Other techniques can be adopted such as avoiding undue concentration of exposure where possible and ensuring that any agreements are worded tightly.

Eamonn finished off this part of the presentation with some further views from CEIOPS:"Insurers were over relying on the ratings and models of Credit Rating Agencies, without an internal assessment of the underlying risks". "In many cases, due to credit risk, risks thought to be transferred were not" and "further consideration is required in order to assess whether (the) risk has effectively been transferred, and if such transfer implies additional risks".

The underlying theme in understanding risk exposures is that there is no substitute for developing our own expertise both in terms of understanding risk exposures and understanding the tools available to use to mitigate risks.

Section 3: Fundamentals in Operational Risk Mitigation

Lukas then spoke about the topical area of operational risk. In recent times operational risk has become more of a prominent concern and now forms part of Company Regulation.

continued

Concepts and Methods

The Sharma report, which was commissioned by the EU, identified operational risks (including strategic risks) as the main cause of past insurance failures in the EU.

Lukas referenced the FSA Insurance sector briefing – 'Lessons learned and looking ahead at Solvency II' from November 2007 which reviewed ICAs and had the following feedback:

- "Firms should be able to demonstrate that operational risk assessments have been subject to robust and objective challenge and validation."
- "We were concerned that some firms had not considered the effectiveness of controls under adverse conditions."
- "Many assessments had neglected consideration of whether there was correlation or independence between individual operational risks."

The findings of the FSA were that companies were not clear on where the operational risks lay in the organisation. They specifically identified consistently inappropriate reserving, inappropriate policy wording and insufficient controls as areas of concern. So what do we do differently going forward?

There are three perspectives from which we can take operational risk mitigation actions:

- Put Adequate Controls in place to meet audit/ legal requirements efficiently e.g. SOX
- Ensure Survival: this is the key risk mitigation area. To ensure the risk appetite and exposures are considered fully and mitigate the risks that could keep the Board awake at night!
- Operational Excellence: put strong processes in place in the business with continuous improvements to reduce operational losses.

Section 4: Fundamentals in Reinsurance

Lukas moved on to speak about reinsurance, what may be considered one of the more obvious risk mitigation techniques used by insurance companies. Lukas gave a high level overview of the different types of reinsurance relationships, the cover provided by different reinsurance arrangements and the uses of reinsurance.

There are two general types of reinsurance relationships, Facultative and Treaty. A Facultative relationship lends itself well as a risk mitigation tool as it is available quickly and can be tailored to reduce a specific exposure that is outside a company's risk appetite whereas a Treaty arrangement is an ongoing acceptance of risk that is specified in terms of a book of business and not specific to a particular exposure.

There are two general types of reinsurance cover, Proportional and Non-Proportional. Both forms of cover work well to stabilise earnings and protect capital with Non-Proportional cover being more efficient in terms of reducing volatility and capital requirements.

Lukas spoke about the uses of reinsurance. The traditional use of reinsurance is an operational approach used to transfer risk and more recently a more strategic approach to reinsurance has been adopted to manage a company's balance sheet.

Risk Transfer

The aim being to optimise risk-carrying economics:

- Reduce volatility
- Reduce "downside" risks
- Enhance underwriting capacity
- Support business and financial strategy

Balance Sheet Management

The aim being to minimise cost of risk-adjusted capital:

- Optimise the use of capital
- Stabilise after-tax earnings
- Improve financial ratios (e.g. ROE)
- Optimise cash management
- Bottom-line optimisation
- Regulatory, rating, accounting, tax.

Lukas summarised the reinsurance section of the presentation by looking at future trends in reinsurance. The modern view is the strategic approach of using reinsurance to optimise aggregate Cost of Capital and also the use of internal reinsurance to optimise capital structure, taxes etc. There is a clear trend towards centralising internal and external reinsurance within Business Groups with strong links to the Finance and Risk functions e.g. AXA Cessions. This move is towards Business Groups retaining more and trying to optimise aggregate risk transfer.

Section 5: Risk Reporting

Finally Lukas spoke about the importance of good quality information on where risks lie in an organisation and the importance of a risk reporting system which is not something commonly in place across the industry at the moment. Lukas listed the following items as key elements of a good risk report:

- The report should help identify current and emerging risks bearing in mind that risks are constantly evolving and changing. The report should help identify trends, looking at a range of scenarios and factor in expert opinion where possible.
- It should identify early warning signs through tracking changes in key risk indicators.
- It should include a review of available risk management techniques listing different options and a cost/benefit analysis of these options.
- It should be tailored to stakeholder needs. A common tendency is to write the report from the view of the risk taker and not the stakeholder. With the introduction of Solvency II the ultimate stakeholder for risk reports will be the Board.

Q&A session

Lukas' and Eamonn's presentations were followed by a Q&A session with a number of questions and comments from various attendees, a sample of which are included below:

One attendee asked how a Risk Management team would look in a modern day company and how Actuaries would fit into this role?
The speakers responded by highlighting that Actuaries haven't established a stronghold in this space as yet despite having the necessary skill set to do so. CERA qualifications should help Actuaries position themselves better as risk managers. It is important that Actuaries across the industry become risk managers in their own day to day roles.
Solvency II will lead to more transparency and greater recognition of the risks within an organisation, encouraging a holistic view of risk and may lend itself to an integrated risk management function within an organisation. The '3 lines of Defence' model provides a structure to the risk management framework within a company and the second line of defence, the 'Risk Oversight' role, is where Actuaries may have a natural fit.

# of Risk Mitigation... *continued*

One attendee raised Agency Risk as an area that doesn't seem to have been covered in ERM publications to date. The speakers acknowledged Agency Risk resulting from different agendas between management, shareholders and policyholders as a key risk that companies should consider. It is unclear however how this risk could be mitigated. It was noted that remuneration structures in the past were often misaligned. As Insurance Risk mangers should we now be thinking of incentives which incorporate risk mitigation? It was agreed that educating the Board on where the risks lie in an organisation is a move in the right direction.

More recent reports focus on the importance of companies not relying on third party/credit rating agencies. One attendee asked what is the alternative to using these third parties? It was noted that credit rating agencies can be subject to conflicts of interest and are not regulated so there can be the subject of some scepticism. The speakers agreed that it is difficult to identify a suitable alternative but irrespective of this companies should be familiarising themselves with all counterparties. Due diligence and research are natural courses of action that should be undertaken by organisations to educate themselves on the counterparty involved and to understand the level of risk and therefore not rely on third parties.

At this point the meeting was brought to a close with both speakers being thanked for their work and contribution towards the meeting. A copy of the presentation and a podcast is available on the Society's website.

Denise Kavanagh

Updates from Practice Committees

We have not included committee updates in this issue, as since the July issue most committees have taken a summer break. The next update will be included in our October issue and we also intend continuing to email these updates to members.

Meanwhile, minutes of the practice committees are available on the Society's website at: https://web.actuaries.ie/committees (member login is required)

DID YOU KNOW?

We have now developed Professional Interest Areas, for the ERM, Life, Pensions & Solvency II Committees. Logon to: www.actuaries.ie / Professional Interest Areas

DID YOU KNOW?

Details of other organisations' events, of interest to members, are available at: https://web.actuaries.ie/events/external

DID YOU KNOW?

When you are logged in to www.actuaries.ie/ My Reservations, you can check the events for which you have booked.

ERM and the CERA Qualification

On 21 June 2010 Lindsay Smitherman, a staff actuary with the Institute of Actuaries, gave a presentation to members of the Society on the current 'hot' topic of ERM. The presentation had been delayed from its original date, ironically, due to a 'black swan' event, the eruption of the Icelandic volcano Eyjafjallajokull and the subsequent disruption to air travel. The talk gave a brief introduction explaining what ERM means, followed by a review of the contents of the ST9 (Enterprise Risk Management, Specialist Technical) syllabus and an update on the CERA qualification. It also looked at opportunities for actuaries in relation to ERM and gave a brief summary of some of the areas in which "ERM actuaries" have found careers.

Enterprise Risk Management (ERM) has seen a large increase in the number of actuaries employed in the area recently, and as such has many definitions. Taking the Institute of Actuaries website description; *'The generally agreed concept is that ERM is a wider subject than traditional risk management and covers all the risks within an enterprise (or company). Traditional risk management focuses on identifying risks, measuring and monitoring risks and designing strategies to limit losses to agreed limits. ERM recognises that businesses take risks in order to make a profit for their owners and therefore considers the upside of taking risks, and attempts to strike a balance between too much risk and not enough risk compared to the enterprise's strategic direction. A fully functioning ERM process will incorporate risk information (e.g. risk based capital) into strategic planning, management decision making, product design and more. The focus of ERM is to make sure that the risk taking activities of the company are aligned with the objectives of the firm and the willingness of the company to take losses.'*

In November 2009, 14 actuarial associations from 12 countries signed a treaty under which they agreed to collaborate on developing a global ERM designation, the Chartered Enterprise Risk Actuary (CERA). The Institute and Faculty of Actuaries will be seeking, and by the time you read this may have obtained, CERA accreditation for the ST9 (Enterprise Risk Management, Specialist Technical) course. CERA was developed by international working parties and minimum learning requirements are laid down. Any accreditation process must focus on the quality and scope of syllabus and exams, and the quality of examination process and controls. Those obtaining CERA status will end up with a globally recognised additional qualification.

Core reading for ST9 became available in June 2009 with the first examination taking place in April 2010. Any member of the Institute or Faculty of Actuaries can sit the exam, and it is expected that a number of qualified members may pursue the CERA qualification. The syllabus covers a broad number of topics that can be applied to any type of organisation not just financial institutions, including:

- ERM framework
- Quantitative methods – risk measures & methods of risk aggregation
- ERM modeling
- Risk management tools & techniques
- A series of case studies illustrating lessons learned from ERM failures and examples of good ERM practice

Further information is available from a number of sources:

https://web.actuaries.ie/professional-interest/enterprise-risk-management

http://www.actuaries.org.uk/practice_areas/erm/

http://www.coso.org/

http://www.casact.org/research/erm/

A copy of the presentation and a podcast of the meeting are available on the Society's website.

Eamon Howlin

Professionalism Event for Senior Actuaries – Friday 24 September 2010

The next SAI Professionalism Event for senior actuaries is scheduled for Friday 24 September 2010. Places are limited to 40 for this event. The next SAI Professionalism Event following that will take place in May 2011.

Members should refer to ASP PA-1 Continuing Professional Development to check when they are required to attend a Professionalism Event.

https://web.actuaries.ie/standards/asp/asp-pa-1

Professionalism Course for New Qualifiers – 10th & 11th March 2011

The next SAI Professionalism Course will take place on 10th & 11th March 2011 in the Druid's Glen Hotel & Resort, Druid's Glen, Co. Wicklow. Further details and online reservation facility is available on the Society's website at: https://web.actuaries.ie/events

Communications Survey of Student Members

Introduction

Thank you to all student actuaries who participated in our SAI Communications Survey. We were very happy with the response rate received of 195 responses out of a possible 415 i.e. 47%. The full report will shortly be available on the Society's website.

Actions & Recommendations

- Evening meetings: Society to re-iterate to the student membership that evening meetings are for students as well as qualified members. Society to investigate with student groups and the CPD/Education Committee about how to address technical requirements by practice area within evening meetings.
- SAI website: SAI website sub-committee to investigate how to cater better to student needs on the website so as to encourage usage. This will be investigated through liaising with student groups and CPD/Education Committee to identify what information would be useful. Suggestions made in the survey were: reading lists supporting exam preparation and business knowledge; communications regarding work being conducted by member committees; contributions actuaries are making outside of the traditional areas of life and pensions.
- Newsletter: Newsletter team to investigate having a specific area in newsletter targeted at student members. Being successful in this will necessarily be conditional on obtaining contributions from student members.
- CPD & Education Committee: To investigate how to put more emphasis on sharing data/ideas/research in order to promote best practice and efficiency throughout the actuarial community as a whole.

Membership Profile

- Majority of respondents, over 52%, work in the Life practice area, with 85% of respondents in their twenties.
- 95% of actuarial students have a Bachelors degree as a minimum level of education, with 55% of the student population having a degree in Actuarial Science.
- Students working in Investments are more likely to have a non-Actuarial Science degree.
- Over 60% of students work in companies with more than 20 actuarial colleagues. General Insurance and Investments students are more likely to work in companies of between 5 and 19 actuarial colleagues.

Effectiveness of Current Communication Methods

- People are broadly satisfied with the following methods of communication: General SAI emails to members; SAI eNews; Newsletter; Actuarial Profession (UK) website.
- The SAI website appears to be generally effective but is only accessed occasionnally/regularly by about 50% of students. However, the Actuarial Profession (UK) website is accessed occassionally/regularly by about 85% of students, reflective of the fact that it is simply more relevant from an exam perspective.
- The ActEd Discussion Forum is used by approximately 40% of students and is relatively effective. 95% of students never or rarely use the SAI Discussion Forum.
- Evening meetings of the Society are never/rarely attended by students (either in person or by podcast). About half stated it was because no-one ever asked them to attend or they felt intimidated.
- Students of SAI facebook page: Only 5% of students either occasionally or regularly use it.

Effectiveness or Potential Use of Other Communication Methods

- Overall, the survey results suggest that students are satisfied with the current methods of communication.
- There was a very strong view that the following should not be used: Linked-in; Twitter; Text Alerts. Webcasts were the exception to this where a small majority of students felt they should be used.
- A small number of students mentioned they didn't necessarily feel welcome at evening meetings. They recommended that more emphasis be placed on the fact that evening meetings are for students as well as qualified members and suggested organising evening meetings that were more student-focused.

What do Student Members want to hear more or less about?

Want to hear more about…

- Issues affecting the profession
- Issues affecting practice areas
- Work of practice area committees
- Industry News
- Career Opportunities
- Other: Contribution actuaries are making outside the traditional areas of life and pensions
- Other: More emphasis on sharing ideas and research to promote best practice and more emphasis on advancing actuarial techniques in communications

Want to hear less about…

- No one wanted to hear less about the topics specified!

Happy with what they hear…

- Views of the President
- Social Events
- Views of different members on issues
- Society Research
- Other relevant academic research

Opinions of Student Members on the Society of Actuaries in Ireland and what it offers

- Students feel well informed about the Society's activities but would not read the newsletter cover to cover nor are they regular visitors to the SAI website.
- They feel that the Society is a useful way to meet other actuarial students and that it organises enough social events with Christmas drinks/ table quiz night and the Summer BBQ being the primary two events of interest to student members.

Ciara Regan
Chairman
SAI Communications Committee

Mortality in Ireland:

The last month in the CPD calendar is often a time in which actuaries choose to broaden their horizons. Look around any meeting in the month of June and you are likely to see quite a few people out of their natural habitats, absorbing all sorts of information relating to topics quite removed from their respective practice areas. Occasionally, this all proves too daunting after a day's work and actuarial bodies have been known to instinctively shut down to escape this unfamiliar environment! However, there was no evidence of this self preservation technique to be seen on June 10th 2010 when Dr. Shane Whelan delivered his presentation to the Society on Mortality in Ireland, Past and Projected.

Shane has been writing a book on this topic for the past twelve months and presented us with a summary overview of what we can expect to find therein.
We were eased into the meeting with a look at the importance of mortality rates. Shane pointed out that in comparative measures of quality of life, mortality carries a higher weighting than GDP per capita which highlights the value we put on our own longevity. The interesting concept of the value of one extra year of life was mentioned and linked with the historic aspiration of immortality which is long ingrained in folklore and heritage. Irish people are known to have a tendency for long life but historically this may not have been completely removed from their tendency for exaggeration. Regardless, the highest official recorded ages for 'Irishfolk' are 111 for women and 107 for men so there is hope for us all.

Past Mortality

Since 1900 we have experienced mortality improvements of around 1/4 of a year in life expectancy with the passage of every calendar year. Some of the most impressive improvements have been at younger ages, for example, mortality of a child aged 10 years has reduced by a factor of 100 over the last 100 years or so. It was shown how the mortality improvements over all ages appear to be log-linear over time and Shane mentioned how this influences projections of future improvements. The apparent cohort effect for lives born around 1930 from Irish data, which corresponds with the UK data, was then discussed. Shane issued a warning about the interpretation of cohort effects because same were discovered by analysing data graphically. The hypothesis thus derived was then tested against the same data which is far from a solid methodology. However, there is only ever one set of this data which makes better analysis difficult. What is indisputable is that, early in the 20th century, massive improvements in the mortality of younger ages occurred and it was later in the 20th century that the older ages enjoyed dramatic improvements, not just in Ireland but worldwide. It is possible that this improvement pattern coincidentally lines up in UK data with the apparent cohort effect. Other potential explanations including the cumulative impact of lifetime exposures and smoking patterns were discussed. Many investigations have demonstrated that there is no or a weak link between early life trauma and later life mortality. The example was given of the Irish famine, with novel data presented to show that living through it or being borne during it did not appear to have a lasting impact on mortality. In general, Shane was sceptical of cohort effects. A final point was made - historical evidence has shown that, by giving a first world medical service to third world countries, immediate improvements were evident at later ages which would fly in the face of any cohort argument. An example given of this was Germany post reunification.

Mortality Projections

The first projection method discussed involved taking the historical log-linear mortality improvements and projecting them forward. Projections were shown based on different ranges of historical data; 10, 20, 50 and 79 years of Irish data. It was shown that the results varied greatly according to the historic period chosen as the average improvement rate was so highly dependent on the past period selected.

The second method discussed was the targeting approach, which attempts to derive the long term average to which mortality rates will converge over the next 25 years. The last CSO investigation adopted this approach.

Attention was drawn to the fact that every past official forecast of mortality improvements has underestimated them. Official forecasts have all assumed a slowdown. UK projections typically assume that long term improvements approach 1% per annum for each age, well below recent trends. The forecasts by the CSO are subject to similar assumptions of a slowdown, assuming recent trend improvements slow to 1.5% per annum after 25 years (1.5% being the average rate over the last 75 years).

Mortality at Advanced Ages in Ireland

Late life mortality in Ireland deserves serious consideration if only because most are now dying at these ages. Often ad-hoc methods were used to estimate mortality at ages over 70 years. Future mortality improvements depend crucially on how mortality at these ages change but historic trends are heavily influenced by extrapolations and other processes. Shane carried out an investigation using historic death data in each year and census data to derive and graduate mortality rates at these ages. He was able to show that the CSO mis-calculated the mortality and overestimated it by around 5%. Also, it appears that mortality limits not at 1, but at 0.63 (using the Kannisto formula for late-life mortality).

Mortality by Social Class

The breakdown of mortality by social class has never before been studied in Ireland. The CSO provided death and exposed to risk data for census year 2006 broken down by education and occupation.
This meant that for the first time mortality could be truly analysed by social class. Looking firstly at education, a direct relationship was shown between level of education and life expectancy with those with third level education enjoying much lighter mortality than those with primary only or unknown education.

Secondly, the relationship was shown between life expectancy and occupation. Professional workers enjoyed much lighter mortality than those in unskilled work. Another significant group whose occupation was either unknown or not entered on the census form experienced even heavier mortality.

Decisions

Ireland was ranked the third worst of 19 OECD countries on a recent investigation into preventable deaths. The example of the reunification of Germany shows that these are deaths which can be immediately reduced by improving healthcare and are not inevitable as a result of previous lifestyles and environment.

An important point was made that it is years of healthy life which lengthen as mortality improves as opposed to years of ill-health or old age. Traditionally, there were three stages of human life – Childhood, Maturity and Facing Death. There is now a fourth stage of human life - Retirement. More people are surviving

Past and Projected

and extending this period before decrepitude and death.

Decisions need to be made as to whether we wish to pass on extra years of life or wealth to future generations? Should we devote extra resources to increase the life expectancy by more than the current 1/4 of a year per annum, perhaps aiming at 'actuarial escape velocity' of life expectancy increased by 1 year with the passage of each calendar year? Also the question arises - what do we do with this extra stage of life? Should we increase retirement ages? The decisions lie with us. The slides presented and a podcast of the meeting are available on the Society's website.

Stephen O'Sullivan

New Qualifiers

Congratulations to our recent new qualifiers. The Society will celebrate their success at a reception in Dublin Castle on Thursday 18th November 2010.

Alan Canny	Alico Life International
Robert Carruthers	Amtrust
Sinead Clarke	Milliman
Timothy Connolly	Canada Life
Graham Crowley	Imagine International
Linda Daly	Mercer
Martin Donovan	Irish Life
Marc Freyne	New Ireland
Ronan Keane	Willis
Aisling Kelly	Mercer
Eoin King	Milliman
Mark Lanigan	Aviva
Thomas Leahy	Invesco
Bernard Lee	Barclays
Tom Matthews	Bank of Ireland
David McCarthy	Aviva
Shauna McHugh	Caledonian Life
Cyra Mulvihill	New Ireland
Michelle O'Brien	Capita
Emer O'Byrne	Aviva
Barry O'Mahony	Towers Watson
Padraig O'Maille	Canada Life
Jean Rea	Zurich
Laura Robertson	Aegon
Colm Ryan	London Life
Patrick Ryan	Hewitt

Current Pricing Issues in General

On Thursday 3rd June 2010, Ger Bradley gave a presentation to the Society entitled "Current Pricing Issues in General Insurance in Ireland". Ger is the Director of Actuarial and Pricing with RSA, a member of the Society's Council and incoming Chairman of the Society's General Insurance Committee.

Vice President of the Society, Paul O'Faherty, opened proceedings by expressing his own interest in learning more about the "dark arts" of general insurance and introduced Ger to the small group in attendance.

IIF Factfile 2009

The IIF Factfile 2009 covers the experience of 23 domestic non-life insurers in Ireland, which account for over 95% of Irish non-life insurance business, during 2004-2008.

Premium income was €3.3bn in 2008, down 8% from 2007. Premium income decreased across all classes of business owing to a combination of rate and exposure reductions. In particular, Liability income was down 18%, which was largely driven by recession induced reductions in turnover / wages.

The number of claim notifications increased by 14% and total incurred cost increased by 23%. Ger's opinion was that the increase in incurred cost was due to the recession driving an increase in claims frequency; and low levels of prior year reserve release in 2008 (there had been significant prior year reserve release across the industry between 2005 and 2007).

Underwriting profit fell to €94m (€704m in 2007) representing a Combined Operating Ratio (COR) across the market of 97% (82% in 2007). Ger observed that current year (2008) profitability was likely to be worse than that indicated by the IIF Factfile, as the Factfile's figures include prior year movements, which were most likely favourable.

Natural Catastrophe Events

The August 2008 floods led to a significant Property underwriting loss of €178m in 2008 (COR 130%).

The November 2009 floods cost the industry €250m, paling previous weather related losses into insignificance. This was then shortly followed by snow/freeze losses in December 2009 / January 2010 which cost €300m. The combined cost of these two events was greater than the total market premium on the Property class in 2009. Ger commended the industry's ability to adequately handle such large quantities of claims and also noted that the €550m property claims payout was a timely boost for a struggling construction sector.

Many insurers in the market did not pay out claims in respect of the Volcanic Ash event of April 2010, as it was excluded in policy wordings.

Ger compared the natural catastrophe experience of 2009 with three large weather related events in 2002. The 2002 events acted as a catalyst for rate increases in 2003 which, during the Celtic Tiger, were absorbed relatively easily by consumers. Ger suspected that, on this occasion, increased self insurance could be a consumer reaction to rate increases.

Asset Mix and Reserving Strength

Ger then showed some analysis of historical statutory returns across the industry and compared the asset mix and reserving strength of the key market participants.

Asset mixes were broadly similar across the key players with government securities representing approximately 50% of asset portfolios. The exceptions were Aviva Health which had a large cash holding and Quinn whose portfolio was dominated by cash and property.

The industry comparison of reserving strength was based on an independent projection of paid and incurred claims data contained in the statutory return Form 8's. The reserves held, at year end 2008, by the majority of insurers were broadly consistent with the spread of reserve estimates produced by the independent analysis. The exception was Quinn where there was considerable variability in the range of reserve estimates and Quinn's held reserves lay towards the bottom of the range. Ger pointed out that, while indicative of reserving strength, there were limitations to this kind of analysis.

Private Motor Insurance Statistics 2007

A continuation of the work of the MIAB, the Private Motor Insurance Statistics is a detailed segmented exposure/claims analysis of the Private Motor class of business in Ireland. Although significantly out of date, this publication should interest General Insurance actuaries seeking an indicative view of relativities within the market. It is available for download at the Financial Regulator's website.

Road Fatalities

The number of Irish road fatalities fell to 239 in 2009, the lowest level on record, down 40 from 2008. Exhibits from the Road Safety Authority website showed that the continuing decline in Irish road fatalities can be partly explained by improvements in road infrastructure. The exhibits showed a dramatic reduction in road deaths from 2006 to 2008 along the N11 route, where motorway coverage increased during this period.

Periodic Payment Orders (PPOs)

The Government is to introduce legislation to allow for periodic payments to victims of catastrophic injuries - rather than the traditional lump sum payment. Mr. Justice John Quirke, a longtime advocate of PPOs, chairs a working group of insurance and legal personnel which is expected to draft legislation on PPOs by November 2010.

Periodic payments are intended to address the potential inadequacy of lump sum compensation to meet the actual cost of future care - on one hand; and the possibility of over-compensation should the claimant not survive for the expected term of the lump sum calculation, on the other. There are many issues to address before PPOs are introduced, including: the availability and cost of suitable annuity products; whether the PPO can be imposed by the court even if the claimant prefers a lump sum payment; and whether the PPO can incorporate unspecified possible future variations (e.g. new treatments) with associated funding difficulties for insurers. PPO's are available to claimants in the UK and indications there are that PPO costs are higher than lump sum payments on comparable claims.

Solvency II

No GI actuary, including those working in pricing roles, can escape Solvency II. Ger indicated that pricing actuaries in companies going down the internal model route should be primarily concerned with compliance with the 'use test'.

Insurance in Ireland

Conclusion

Although inhibited by a lack of publicly available industry information for 2009, Ger's presentation covered many topical issues for GI actuaries working in Ireland. A particular highlight was a YouTube clip which showed that, at the same time general insurance actuaries were busy assessing flood losses in November 2009, the young people of Ballincollig were surfing down their main street.

Following the presentation, Ger welcomed questions from the floor which prompted lively discussion among attendees focusing predominately on the difficulties UK insurers are facing when reserving for PPOs and Solvency II issues for general insurers in Ireland. A podcast of the meeting is available on the Society's website.

Seamus Fearon

SAI's Non Executive Directors' Register

There is a growing demand for people with sound business knowledge, financial acumen and the ability to manage risks, to serve as non-executive directors on the Boards of financial institutions. With this in mind, the Society of Actuaries in Ireland has compiled a register of actuaries who are available for such roles.

If your firm is seeking to recruit a non-executive director, we recommend that you contact the Society to request a copy of the register.

If you are a Fellow or Associate of the Society and you wish to be included in the register, please contact the Society and we will send you a data form for completion.

Listing of Actuarial Consultancy Firms

The Society is frequently asked for a list of actuarial consultancy firms.

Please contact the Society for a copy of the current listing held by the Society and check that the detail for your organisation is correct. If you wish to be included on this listing, please contact the Society.

Shortly, we will post this listing to the Society's website.

Student Society Update

On the 22nd of July the Student Society got together to compete in the Student Society Olympics. Unfortunately, due to low numbers and weather conditions, the event couldn't go ahead and Plan B was put into action. The event was moved indoors to Sportsco in Ringsend where the students spent the night playing indoor golf at Metro Golf. The group was split into teams and played against each other on the back nine of a virtual St. Andrews. The competition was very enjoyable and exciting as the teams turned out to be very evenly split; only one stroke separated the teams in the end. Despite our competitiveness, however, we were far from discovering the next Padraig Harrington, so back to the exams for all. After the back nine was completed a longest drive competition, or puc fada as some called it, started up. It was won by John Parks with a powerful drive of 280 yards.

Winning Team from left to right: Fergal Lillis, Catherine Curran, Brendan Kearney, Ciarain Kelly, and quizmaster, David Kelly.

On the 19th of August the Student Society held a quiz in the Russell Court Hotel. Students' minds were put to the test with tough and sometimes cryptic questions on science, sport, celebrity hot gossip, Excel shortcuts, Irish geography and much more. Spot prizes were also given out, for those that displayed the most extraordinary ability in the fields of: collecting random objects at a moment's notice, solving anagrams, naming their team, and finding high powers for numbers. The eventual winners, called Upsidedown (written upside down!) took home bottles of wine for their troubles, and all money raised went to helping victims of the earthquake that hit Haiti last January. Congratulations to all!

Donal Murphy

Evening Meeting with an international flavour – Tuesday 21 September 2010

The profession and indeed the Society is becoming increasingly more involved internationally. The Society plays an active role in the work of the Groupe Consultatif and the International Actuarial Association (IAA). It is important for members to be up-to-date with actuarial matters internationally. On Tuesday 21st September, Bruce Maxwell, FSAI, who is Chairman of the Groupe Consultatif, Paul Thornton, FIA, President of the IAA and Philip Shier, FSAI, Chair of the Groupe Consultatif's Pensions Committee, will update members on international matters being addressed by these two actuarial bodies and their relevance to Society members.

Members are encouraged to come along and brief themselves on the important roles of both of these bodies, debate the various international issues affecting members and continue the discussion over dinner.

Upcoming Calendar of Events – www.actuaries.ie/events

You probably know that you can book and pay online for all Society events.
But, did you know?

Once you are logged in

- you can print a receipt from the My Reservation's page

  and,

- check the events for which you have booked.

On the Move

Fellows

Fergus Collis has moved from Aviva to **LCP Ireland.**

Gordon Lee has moved from the Hartford to **Aviva.**

Phelim O'Reilly has moved from the Construction Industry Federation to **Attain Consulting.**

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