Newsletter
August 2012
The Society of Actuaries in Ireland

SAI Volunteer Award 2012

The President, Paul O'Faherty, presented Jim Murphy with the inaugural award for outstanding voluntary contribution to the Society at the Society's Annual Convention on 15th June last. Paul told members that Council had decided to introduce this award in order to recognise the extraordinary voluntary work carried out by members. He stressed that the input from members was vital to the work of the Society.

Jim became a Fellow of the Society of Actuaries in Ireland and a Fellow of the Institute of Actuaries in 1997. He was elected to the Society's Council in 2003, re-elected in 2006 and elected to the office of Treasurer, a position he held until this year's AGM. He is a member of the Society's International Committee (which he previously chaired), Solvency II Committee, Studies in Irish Demography Experience Steering Group and PRSA Committee.

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Jim has also participated in numerous working parties. He has been a member of the Groupe Consulatif Insurance Committee since 2007.

One of the members who nominated him for the award summarised Jim as follows:

If you were trying to design an actuary to represent the Society, or even more widely to represent the profession, I think you would end up with someone very close to Jim. You would need someone with the smarts to think clearly on complex issues, someone with the perfect concentration to read through the reams of paper that are produced when big issues are debated nationally and internationally, someone with the ability to communicate those issues clearly and well. But more than that you need someone with diplomacy skills and charisma – someone who can inspire others to action. Having all of these qualities is fairly useless if your dream actuary turns out to be lazy, so ideally you want an actuary who will work tirelessly and make a huge contribution to the profession at home and abroad. But most of all you need someone who is utterly professional, with honour and integrity. So the perfect actuary turns out to have been Jim Murphy all along.

How Jim finds the time for his role in the Society, and for the trips to Brussels and beyond that are a necessary part of working with the Groupe Consultatif is beyond me. Mind you, it is not uncommon to get emails from Jim with comments on papers that he is reading at 1am or 6am, sometimes on the same night. He is a man who burns the candle at both ends and he really puts a huge effort into making our profession what it is. I am proud of the positive image he portrays of our shared profession. I am proud when I see him representing our profession on an international stage. In summary, I think it is fair to say that Carlsberg don't make actuaries, but if they did, they'd make Jim!

In accepting the award, Jim told members at the Convention that he enjoys his involvement in the Society and he encouraged those who are not currently involved to give it a try as he is sure they will also enjoy their involvement and gain professionally from it.

Congratulations Jim!

Paul O'Faherty

Update from Paul O'Faherty, SAI President

Hello all,

I hope that you are making the most of another "Irish" summer!

Firstly, I was delighted to unveil our new logo at the Convention on 15th June. It maintains a link to the past by keeping the symbols of our old crest (the hour glass and the owl as connections to our Institute and Faculty roots; the Student's t distribution which was developed by an Irish statistician, William Gosset, in the early 1900s; and, of course, the harp) but renders these in a more contemporary way. I hope that you like it - and if you don't that it will grow on you! This new look will be rolled out across all our communication channels (including www.actuaries.ie) over the coming months. But at this point I would like to thank our Communications Committee, led by Ciara Regan, for their hard work on this project.

The Pensions Board published the long awaited Funding Standard guidelines in early June. While these fill the dangerous vacuum which was created when the minimum funding regime was suspended in October 2010 the new regime is a disappointment.

The following is a summary of our concerns:

- The problems associated with the pensioner priority rule and the automatic revaluation of deferreds have not been addressed as promised;
- The new risk reserving requirements, which we support in principle, are being brought in at a time when schemes, many of which are already in difficulty, are having to cope also with unprecedented annuity costs; and
- The deadlines within which sponsors and trustees will have to make some very fundamental decisions are extremely tight.

On the other hand, the new regime enabling sovereign annuities and bonds might give some schemes some relief. But these are no panacea and moreover they have been implemented in a highly cumbersome way.

As a result more schemes will wind up than might previously have been anticipated and active and deferred members (especially those close to retirement) will be penalised unfairly.

This outcome is all the more disappointing as it had appeared earlier this year that our views were being taken into account. We are continuing though to lobby for mitigating changes. A copy of our recent submission on the topic can be found on our website under *Guidance/Communications /Consultations*. To assist Scheme Actuaries in formulating funding proposals a working party has been formed to consider methodologies for yield reversion assumptions.

Also on the pension side, with the support of PublicPolicy.ie, we have commissioned a study on fiscal incentives for retirement savings which we hope will be a valued contribution to the anticipated debate on the taxation of pensions in the run up to December's budget.

Continuing the retirement theme it is interesting that this area also figures prominently in the Big Ideas suggestions which you have submitted in response to my invitation in our April Newsletter. Specific retirement topics include the sustainability of the first pillar and the challenges of retiring in a DC world. Related suggestions are the impact of an ageing population and maintaining intergenerational equity. And then there are other ideas including the health system, communicating risk, peak oil and climate change. Thanks to all who contributed. Council will now carefully consider and prioritise these with the objective of formulating strong positions on a small number of major issues which we can then consistently support.

Meanwhile in the insurance world the waiting game continues. Will the impementation date for Solvency II be 1st January 2014, 2015 or even 2016? Whatever the date, will it be a full implementation or will it be staggered, for example, Pillars 2 and 3 to start to be followed by Pillar 1? How will policymakers factor in the current "disequilibrium" in eurozone markets? It is possible by the time you are reading this, that all will be clear.

In the meantime we have been keeping open the very constructive formal line of communication with the CBI which we established earlier this year.

We had an election to Council in May - our first in quite a few years. Congratulations to Elena McIlroy De La Rosa, Brian Morrissey, Conor O'Neill and Padraic O'Malley on their success but thanks to all the candidates for allowing their names to go forward. In addition Keith Burns has taken over from Evelyn Ryder as Hon Secretary, similarly Sinead Kiernan has taken over from Jim Murphy as Treasurer and Dervla Tomlin (the incoming chair of the Life Committee) has been co-opted to the new Council. Best wishes to all in their new roles and thanks on your behalf to Evelyn, Jim and also to those who have completed their terms on Council - John Armstrong, Ciara Regan and my immediate predecessor, Kevin Murphy - for their great service to the Society over many years.

Finally, you can expect a busy schedule of events when we are "back to school" in September but there are four dates I would ask you to mark specially in your diaries.

- **Thursday 27th September**
  morning half-day
  Pensions Conference
  Convention Centre
- **Wednesday 17th October**
  morning half-day
  Healthcare Conference
  Conrad Hotel
- **Thursday 8th November**
  40th Anniversary Dinner
  Shelbourne Hotel
- **Thursday 6th December**
  evening meeting
  Current Topics Paper
  Burlington Hotel

Paul O'Faherty

Trends in

Earlier this year the Society organised a presentation on recent Trends in Asset Allocation – a wide-ranging topic that should be of interest to actuaries from all corners of the profession.

The speaker for the evening was Dan Farley of State Street Global Advisors, the Chief Investment Officer of their Investment Solutions group, a team responsible for advising clients on tactical asset allocation, portfolio management and liability-driven investment (LDI) strategies.

Dan was keen to share the insights that he has gathered from performing asset allocation exercises for his global clients, in particular, the challenges and issues that exist in the market currently and how the use of bespoke solutions and unconventional approaches is helping their clients meet their investment objectives.

He began by setting the scene to the current investment market by identifying the two central themes that he believed were driving current behaviour in the markets, namely:

- Heightened levels of risk and volatility observed in the market place
- Acknowledgement of a more "muted" return environment *– with lower expected returns than historical averages likely across most asset classes.*

In support of this view, he outlined the previous 12 months returns and highlighted how the second half of 2011 saw a large spike in the volatility of investment returns across a number of different asset classes. Interestingly, he also mentioned how this spike in volatility seemed to focus investor's attention to managing downside risk only and not general volatility.

He then presented some of SSGA's 2012 forecast returns for popular asset classes. These forecasts were below the long-run historical averages for most asset classes and he made the point that these may well be lower than people had factored into their portfolio assumptions.

Current Hot Topics in Asset Allocation

Dan then introduced some of the issues and questions that he believes have become hot-topics on agendas in recent years in the world of investment management, these were:

Increased focus on Risk Management:

- Limiting downside risk and managing left-tail risks
- How do we deliver more consistent return distributions?
- What is happening in the regulatory environment? Will it affect our liability hedging program?
- Can our traditional portfolio modelling methods properly estimate downside risk?

Living in a lower-return world:

- De-risking of portfolios and the trend towards increasing fixed income allocations could make hitting return objectives increasingly difficult in the future.

Rethinking the Asset Allocation discussion

- Movement away from allocating by standard asset-classes towards portfolio risks
- Wider use of risk-budgeting or risk-factoring techniques – although still not used by everyone, so no universal risk factors accepted across the market.

Taking a Fresh Look at Portfolio Allocation

Dan commented that he had seen a significant amount of press and debate in the past questioning *"Whether Asset Allocation was Dead?"* and *"Does Modern Portfolio Theory (MPT) actually work?"* given some of the modelling failures that have happened in the past.
He was not convinced that all aspects of MPT should be abandoned, as it could still be a highly useful tool. He cautioned users to better manage their expectations of diversification benefits and that more work needed to be done in reflecting the cyclical nature of correlations and to consider their sensitivity on asset allocation results. He also gave a few pointers for those that might seek to refresh their asset allocation practices, such as:

- We need to be more realistic about diversification benefits and seek out assets that provide "true" diversification benefits, in particular:
  - moving towards global equities and away from home/domestic bias
  - portfolios need meaningful allocations to diversifying classes – needs to be more than just token allocations (~1%) to real and alternative assets.
- Review manager styles to blend *Convergent* and *Divergent* approaches
- Consider alternative portfolio construction techniques using traditional asset classes
  - Managed volatility
  - Dynamic asset allocation

Following this, Dan drilled down into some of the emerging trends in asset allocation in greater detail, only a few of these are summarised here.

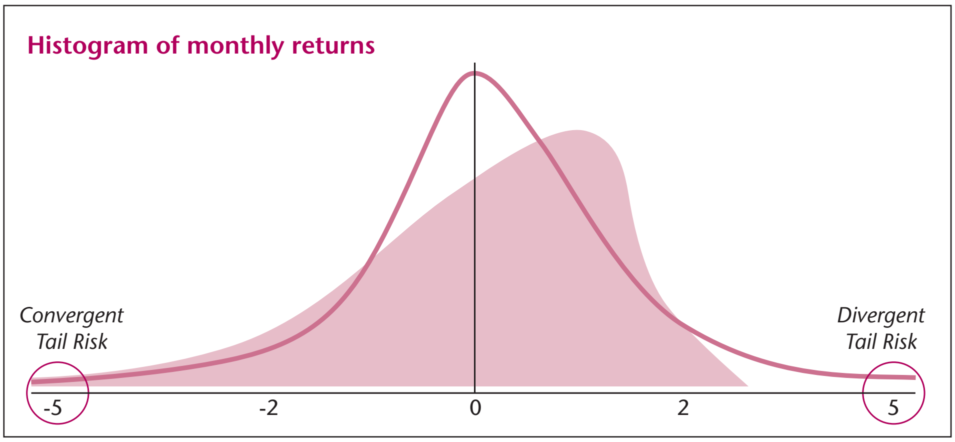
Convergent Versus Divergent Strategies

For members who may have been unfamiliar with the differences between convergent and divergent investment strategies, Dan provided more detail on this new and emerging area, giving examples of when a blended mix of convergent and divergent managers can be useful in managing downside risk.

Convergent Hedge Fund Strategies are strategies that tend to perform best during periods of relative calm, in which, the market processes all available information in an effort to determine assets that are overvalued and undervalued.

Divergent Hedge Fund Strategies are strategies that tend to perform best during periods of rising volatility and uncertainty, capitalising on serial price movement across many markets in a marketplace that temporarily ignores fundamental information.

Asset Allocation



He explained by comparing return distributions how convergent strategy returns (solid curve) are often skewed to the right but they have a fat left tail, so when a convergent strategy fails they can generate large losses, whereas divergent strategy returns (line) tend to have a fat right tail. Therefore, Dan suggests that a blended mix of convergent and divergent style managers can lead to better outcomes for investors.

A Lower Beta Focus can Smooth Return Distribution

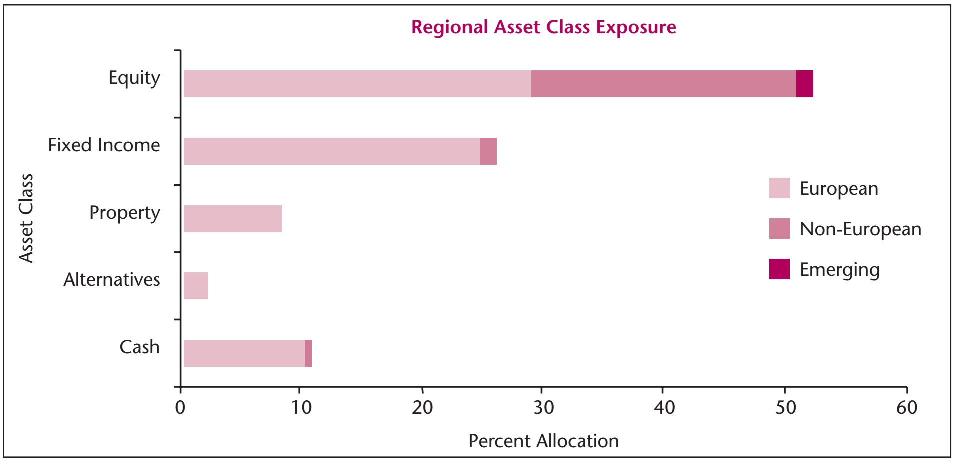
Dan also presented some interesting analysis which suggested that lower beta stocks have historically performed much better than would be expected under CAPM at a stock level. This suggests an opportunity exists to build a portfolio with a higher proportion of lower volatility (lower beta) stocks without sacrificing much in the way of returns over time.

Dan gave some real world examples of his experience in using such a managed volatility approach to build portfolios that can offer more stable return distributions, reduce overall risk and manage the volatility that concerns all investors.

Dynamic De-risking Strategies for Pension Schemes

Another technique that has become more mainstream, and one that Dan was keen to encourage, was the use of dynamic asset allocation practices based on specified trigger points over time (e.g. Funding ratios for DB pension schemes) to create a flightpath that would actively increase/decrease a scheme's risk in reaction to its funding levels. He believed that having such pre-agreed strategic actions could promote good governance, and help to force discussions among investors at the right time.

As he approached the end of his presentation, Dan directed his talk to discuss some Irish specific asset allocation matters. He presented the following graph for Irish pension plans and outlined some interesting features.



Irish pension plan regional asset class allocations

(Source: IAPF Asset Allocation Study 2009)

Dan commented that the IAPF graph suggested there was some evidence of home bias in the Equity and Fixed Income allocation based on market capitalisations, especially with regard to emerging markets. However, he did mention that Ireland was not unique with regard to being underweight in emerging markets. Despite a great deal of talk about emerging markets opportunities in recent years, the level of capital actually allocated to emerging markets is still quite low internationally. He was keen not to be overly critical of Irish pension plan allocation but stated there were definite opportunities to tweak Irish pension portfolios to take advantage of other classes with better risk premia.

Dan summarised his views and finished his presentation by encouraging trustees and investors to:

- Investigate more dynamic methods of asset allocation
- Ensure meaningful allocations to alternative classes
- Fully understand new trends in asset allocation
- Retain a focus on where the sources of return and diversification will come from in their portfolios.

At this point, the presentation concluded and it was followed by an interesting Q&A session which provided an opportunity for members in attendance to get the speaker's opinions and views on other aspects of the asset allocation process.

For any members who were unable to attend and would like to know more about this interesting topic, the podcast and a copy of the slides are available on the Society's website.

Gregg Murphy and Ken Deane

The current job market for recent qualifiers and how to manage your career progression

An evening meeting entitled "The current job market for recent qualifiers and how to manage your career progression" was presented by Jenny Johnston, Irish Manager of Acumen Resources. She was joined by a panel of nearly/newly qualified actuaries, all of whom had recently changed roles and practice areas. The meeting was instigated by the Recent Qualifiers' Committee to give recently qualified actuaries and senior students an insight into career planning and the challenges and benefits of moving actuarial practice areas. The interest in this topic was evidenced by the large attendance.

The President of the Society, Paul O'Faherty, opened the proceedings, mentioning how broad the definition of recently qualified is and introducing Jenny who, in addition to managing Acumen's Irish operation, has previously worked for Standard Life.

Professional image and networking

Jenny talked through an interview scenario where social media (namely photos on Facebook) have heavily negatively influenced a potential employer's view of a candidate prior to the interview. Perhaps unnervingly, this scene is not outside the realms of possibility for any Facebook user who has not selected adequate privacy settings. In the USA, interview candidates are being asked to share their online profiles with their interviewer as part of the application process. This is perfectly legal and, although it represents the extreme, it does give an indication of how telling an online persona can be.

Users of LinkedIn should also be wary of the opportunities the information posted can provide, as essentially the information on LinkedIn renders it similar to an online CV. A particular case was cited where the profile details of a senior actuary were copied from LinkedIn and circulated to companies, in the hope of generating speculative offers.

Professional image is something that should be looked after, so what can be done to maintain and project it positively? Networking the old fashioned way, by joining committees or working parties and attending a range of CPD meetings is a solid way of approaching this. Keeping abreast of financial news and current events is also important.

Planning a successful career path

In this section, Jenny talked about how vital it is to recognise at an early stage what you want from your career and to have a plan in place to get you there. Reaching out to senior actuaries and finding out what skills they needed to develop on their career paths can help to steer you. In terms of your current employment you should be challenged, happy and constantly learning.

For those who are considering changing roles, consider your motives first. The most common reasons for leaving were discussed – a good first step can be to have an initial discussion with your current employer as there may be a solution that can be found, e.g. an internal role change.

Maintaining your CV and interviewing well

Jenny presented a rather generic and vague CV profile and gave her reaction - "waffle". CVs are scanned and making an impact quickly and concisely should be the motive in preparation. In particular, you need to differentiate yourself and be explicit about your past experience, in particular where you added value and made a difference to an organisation in real terms. The key aspect of your CV is your most recent work experience, and the CV should be tailored to the role you are applying for.

Regarding interview skills, the old adage certainly applies "Fail to prepare - prepare to fail". Research the company thoroughly prior to interview. In interview scenarios, actuaries generally seem comfortable talking through technical capabilities, but struggle with describing their softer skills. A good suggestion is to use the job description as a guide, linking your abilities to the competencies listed.

General job market

The job market in Ireland is currently buoyant, with many opportunities. With the impending Solvency II legislation, capital modelling and risk management roles have come to the fore. Risk management is an area actuaries are naturally suited to but, as further opportunities in this field emerge, the competition for these roles from other professions is increasing. To make an impact in this area, actuaries should be putting themselves forward as professionals with the ideal capabilities and skill sets to add value to the risk function of a company.

Panel discussion

The panellists were then introduced (Sheila Harney, Louis Hui, Eoin King and Emmet Leahy) all of whom are nearly/newly qualified actuaries and who have moved practice areas recently. Jenny kicked the discussion off by asking the panellists about the differences and similarities between their old and new roles. The overriding message was that IT, communication and problem solving skills were transferable. Prior experience in a different practice area was seen as an advantage, particularly where the two areas were linked, such as Pensions and Investment within the same company.

In terms of exams, some of the panellists found that there was a lot to learn very quickly in their new practice areas and they felt at a slight disadvantage initially. However, colleagues were helpful in bringing them up to speed and there were plenty of other resources they could turn to for reference.

The interview process was asked about, and the panellists echoed the earlier advice about being well prepared and researching the company and hot topics in the practice area you are hoping to move into.

Some additional questions then came from the floor, including what attracted the panellists to their new roles. Several of the speakers had always had an interest in a different practice area and so timing and opportunity led to their moves. The prospects of a different variety of work, getting exposure to a range of products and working with different people were also contributing factors.

Following the discussion, Paul O'Faherty closed the meeting, speaking about the importance of both professional and personal development and thanking Jenny and the panel for their informative and engaging presentation. A drinks reception and finger food followed the meeting which was an enjoyable networking opportunity for all those who attended.

The podcast and a copy of the slides are available on the Society's website.

Cora Ciechanowicz

Report of the Solvency II ORSA Working Party

The ORSA working party, established by the Life Committee, was tasked with looking at the practical implications of a life company's compilation of the ORSA document. The working party was chaired by Dave Roberts who was assisted by six other members of the Society from various actuarial backgrounds. It is hoped that the conclusions or opinions of the working party will encourage informed debate on the topic and an open exchange of views. After some considered thought and significant effort a paper has been prepared by the working party, the highlights of which were presented at the Society meeting on April 24th by members of the working party, Dave Roberts, Liam Dempsey and Viviana Pascoletti.

After a quick refresh of what the ORSA is, Dave presented a slide summarising the requirements of the ORSA. The requirements include taking account of a company's risk profile, risk limits and business strategy and will be used in strategic business making as well as being embedded in the company's regulatory reporting. These requirements, being only part of the overall requirement, mean that the compilation of the ORSA document is quite a significant undertaking for a company, especially the first time around.

Dave went on to note that aside from Article 45 of the Directive and limited EIOPA guidance there is little other formal guidance for a company to reference as it looks to complete its ORSA. The ORSA is a risk management exercise not a compliance exercise, the limited guidance allowing greater scope for its effective completion. Dave then pointed out that this was actually an opportunity for a company-wide assessment of risks into a useful document for a company’s own purposes as well as for the Regulatory Body. The ORSA needs to be readable at a level that doesn't assume an intricate understanding of the company's embedded processes and as such allows more insightful decision making and risk management at all levels. The ORSA will also formalise within a company how it measures, compares and articulates its risks. In particular it was thought that the ORSA would be of great interest to the Board as it will present the key drivers of risk, profit and balance sheet changes at a point in time as well as being a point of reference for changes over time. Initially, there might be a tendency to increase capital requirements as the various risks in the ORSA are considered but this should be managed by the Board with each risk being considered in the overall context of the company. It is also expected that the Board and second line functions will use the ORSA as a means to challenge current practices across all the various risk types. At this point of the presentation it was clear that the ORSA has potential for use within a company far in excess of the uses that it will have for the Regulatory Body.

Liam took on the difficult task of linking the ORSA to a company’s economic capital noting that neither the confidence levels nor time horizons to be considered in the ORSA are defined. Left to the individual company these elements should be set to maintain a consistency with the company’s business strategy. The ORSA is then an assessment of the adequacy of a company’s economic capital and not an alternative measure. Liam noted the alignment of the benefits of an economic capital calculation with the ORSA process both underpinned by a greater understanding of the company’s risk and profit drivers. In particular it was noted that a company’s economic capital should be key in providing a link between its risk profile, approved risk tolerance limits and solvency limits as required by the ORSA.

Viviana took us through the quantitative element of the ORSA, involving projections over the business planning period, likely to be 3 to 5 years into the future. The ORSA is required to be forward looking, with a requirement to calculate the SCR and MCR for each year in the business planning period separately. Complexities arising out of this requirement include projecting an internal model with a one year time horizon at a point in the future when the company’s situation is unknown. Looking at the various methodologies for the projections Viviana noted that more complicated (and theoretically ideal) methods such as stochastic and nested stochastic methods can often be quite difficult to apply in practical terms. This is because the large computing power required to run these models may require simplification and/or estimates to be made elsewhere, for example, the model may need to limit points. A more basic model type may be able to run each policy individually preserving this information in the results. The model needs to be practical and should be chosen with this in mind.

Viviana concluded the presentation with a suggested ORSA process. This starts with the company’s business strategy with all of its elements. The business strategy is followed by the quantitative elements and the review of this output. The risks are then considered over the time horizon of the projection with the cycle being completed by an overall assessment and conclusions from the analysis before the process beings again. Viviana noted its similarity to the well-known actuarial cycle so it should be a familiar process to most.

A number of questions followed the presentation. Of particular interest was a question from Tony O’Riordan asking how prescriptive the Regulatory Bodies may become in relation to the form that the ORSA takes. The working party envisaged an evolving process whereby as long as a company can justify their approach to risk management, as documented, to the Central Bank, they should be in a good position. That is not to say however that certain items won’t be requested to form part of future ORSA papers as the Central Bank considers the submissions from across the industry. There are limits to a standardised approach given the diverse field of (re)insurance companies in Ireland, each facing different risks and requiring various approaches to their management.

The working party paper as well as the presentation to the Society and the podcast of the event are all available in the usual location on the Society's website. The paper is a valuable resource for anyone involved in compiling an ORSA document and includes a sample policy outline which may be useful to those considering the approach that their company is to take. I suspect those who refer to the paper will want to extend their thanks to the working party for a job well done.

Mark Lanigan.

Pensions Levy and Pensions Board DB Survey

Pensions Levy

– Frank Downey

Frank began the meeting by recapping on the major provisions of Finance (No. 2) Act, 2011 that relate to the levy and noted that in 2011 the levy had yielded €463m.

Frank then highlighted a couple of interesting surveys regarding the levy.

An Invesco Red C poll showed 52% of those surveyed were aware of the levy. He noted that publicity surrounding some high profile companies and how they had dealt with the levy had helped to raise awareness of the issue. Another outcome of the survey mentioned was that 52% said the levy had a negative impact on their view of pensions, 8% said it had a positive impact and the remainder said it had no impact.

The results of an IAPF survey showed that approximately one-third of schemes had decided to reduce benefits, one-third had agreed to pay (directly or as part of a Funding Proposal) and one-third had not yet agreed an approach.

Benefit Reductions

Frank then spoke in some detail about the issues that surround potentially reducing benefits because of the levy. He noted that the legislation states that benefits may be adjusted to reflect the cost of the levy but that it is at the Trustees' discretion.

Some reasons why employers might fund the levy that were discussed included

- that it was required under the Trust Deed and Rules
- that benefit reductions had already been agreed
- that the cost of administering the levy was greater than the cost of the levy itself

Frank talked about several reasons why the Trustees might choose not to reduce benefits including

- the employer funds the cost of the levy
- the scheme is in surplus
- the Funding Proposal remains on track after payment of the levy
- it could be offset by other gains
- it could be allowed for through the treatment of discretionary benefits

If benefit changes are made then further questions for Trustees to consider include the basis for the calculation of the reduction, the need to amend scheme documentation and the administration and the implementation of the reductions.

There are many complex issues and stakeholders involved in this process and Trustees would be advised to take legal advice before reducing members' benefits.

Frank answered several questions from the floor on various aspects of the levy before concluding his presentation.

Pensions Board Defined Benefit Survey 2010 Results

– Pat O'Sullivan

Following Frank's talk, Pat O'Sullivan gave a brief overview of the results of the Pensions Board Defined Benefit Survey 2010.

Pat noted that in 2009 the Pensions Board had asked actuarial firms to contribute data to the survey and this was followed by another request for information in 2010. Pat felt that the quality of data had improved in the more recent survey.

The 2010 survey comprised of 1,000 schemes, approximately categorised as 580 'small' schemes (under 100 members), 340 'medium' schemes (under 1,000 members) and 80 'large' schemes (over 1,000 members).

The findings included:

- The financial environment had been difficult between 2009 and 2011.
- Scheme numbers were relatively stable between 2008 and 2010.
- The Funding Standard liabilities for the schemes in the survey increased from €45bn at the end of 2008 to €52bn at the end of 2010.
- The total assets of the schemes surveyed amounted to €43bn at December 2010. This had increased from €32bn at the end of 2008.
- 71% of schemes failed the Funding Standard at the end of 2010. This was a reduction on the approximately 84% who failed the Standard at the end of 2008.

Pat concluded by saying that although there were no immediate plans for another survey at the minute, there may be further such surveys in the future.

Pat answered several questions from the floor and then the meeting was concluded.

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

Paul Torsney

Property Market Update

On Tuesday 1st May 2012 the Society welcomed Duncan Lyster, who presented an update on the commercial property market. Duncan is a Director of Lisney, one of Ireland's largest commercial and residential real estate agencies. He has significant experience of commercial investment, letting and development, including advising clients on large-scale investment transactions in Ireland, the UK and Europe.

In the update, Duncan included the outlook for the commercial property market in Dublin and topical issues in the property investment market including structures such as Real Estate Investment Trusts. Duncan's talk covered many issues of relevance to actuaries, including historical market indices and trends in institutional investment, and this was reflected in the strong attendance on the night.

Commercial Market

Duncan first gave an overview of the commercial market. He informed us that the Lisney Commercial Rental Index (one example of Lisney's ongoing market research) is down about 50% from 2007. He explained however, that the rate of fall in the index is slowing, showing some evidence that the bottom is being reached and that office rent has been stable in the last quarter. The IPD Capital Value Growth Index is down about 60% from 2007. There were falls of about 11% in both 2010 and 2011. Duncan commented that the negative capital growth in 2011 was partly caused by fear that the government would retrospectively ban upward-only rent review clauses. Since then, this plan has been shelved due to potential legal difficulties and lobbying from various bodies. In the budget in 2011, stamp duty on commercial property was reduced from 6% to 2% and CGT relief was made available for investors who hold a property for 7 years. Duncan also told us that outside Dublin the commercial property outlook is less favourable.

Duncan then gave a brief update by property type;

Industrial: Industrial take up on the north side of the city is increasing with some bargain rates available. Previously Dublin prices were equivalent to London but this was not sustainable. Duncan suggested regional UK cities such as Manchester and Edinburgh as more reasonable comparisons.

Retail: Several trends are clear in the general retail market. Sectors that are performing well include footwear, discount stores, takeaways and jewellers. Flexible leases are also becoming popular including features such as a base rent plus a percentage of turnover. Rent reviews can be upwards or downwards. Duncan said that McDonald's, a key tenant of Grafton St, will review its tenancy this year and its current rent of about €1m is expected to drop significantly. He said that Henry St has fared better than Grafton St and has fewer vacancies. However, new lettings are renting for less than half of peak prices.

Office: The office market was severely affected by the recession but is expected to recover. Overall availability has doubled since 2006 with a current city centre vacancy rate of 16%. Take up is rising and the rate of decline of rent is slowing, which is positive. Several big companies are actively looking for premises. Duncan felt that there is a lack of quality city centre sites available and that attractive and high-profile stock is being let first, e.g. Minerva House.

Investment Market

Duncan said that in the first quarter of 2012 there were 3 deals in the investment market with a combined value of €11m. Values however, continued to weaken with a drop of 2.5% on average in that quarter. The proportion of international buyers of Irish properties is rising compared to Irish buyers and Duncan gave several examples of recent trophy deals.

Duncan then moved on to describing the features of some of the investment structures that exist around the property market;

Qualifying Investment Funds (QIFs) are specialist investment funds regulated by the Central Bank targeted at sophisticated and institutional investors. They are exempt from Irish tax and have a fast approval process. For these reasons they are the investment structure of choice for overseas investors such as hedge funds and private equity funds. They can be an investment company, unit trust, limited partnerships or a contractual fund. There are eligibility requirements such as a minimum investment of €100,000.

Real Estate Investment Trusts (REITs) are generally publicly traded companies that own and manage investment property. 75% of both assets and income must be from real estate and over 90% of income must be distributed to shareholders. The benefits of REITs include liquidity, regulation and diversification, the lack of which is one of the key drawbacks of direct property investment. However, REITs do have several downsides. In particular they are subject to stock market sentiment and trade at a discount to Net Asset Value (around 15% in the UK in 2011). There are also reporting requirements, listing costs and annual UK tax obligations.

Duncan described some of the major REITs. In the UK there are 23 REITs, compared to 170 in the US, but currently regulations do not permit one to be set up in Ireland. To put some of the NAMA portfolio in a REIT would require a change in UK or Irish legislation, which Duncan felt was unlikely in the short term.

Residential Market

Duncan gave some brief highlights of the residential market. He felt that some demand is now coming through from potential buyers who have held off for several years. Cash purchases are more common because mortgage lending is very much down.

Questions

The talk was followed by a lively Q&A session. Duncan expanded on the reasons why he expects growth in the office market. He said that some leading technology companies have bought or are seeking to expand in Dublin and that their brand recognition is a big boost to the city. This attracts non-Irish skilled workers, which further increases property demand.

Recent media coverage of the property market was discussed in detail. Duncan forecasts that economic pressure along with tax treatment will lead to apartment ownership becoming more concentrated in the hands of professional investors. Lisney welcomes the new property price register as it will reduce the uncertainty in the market.

Paul Kenny thanked Duncan on behalf of the Society and concluded the meeting.

The podcast and a copy of the slides are available on the Society's website.

Robert Carruthers

Stochastic Reserving in

On the 16th May 2012, the General Insurance committee of the Society organised an evening meeting on the topic of "Stochastic Reserving in Non-Life Insurance". The speaker for the evening was Grainne McGuire, an actuary with Taylor Fry Consulting in Sydney who has produced a number of publications in this expanding area.

Having spent the last decade working in Australia, Grainne was ideally positioned to speak about the different reserving methods used down-under compared to Europe, and in particular, she wanted to discuss how statistical models such as Generalised Linear Models (GLMs) can be used to develop a complete reserving and stochastic monitoring framework.

As part of her introduction, Grainne discussed how the field of stochastic reserving in Australia has evolved slightly differently to other markets in the last decade. Some of the factors mentioned by Grainne that have shaped the Australian market in recent times include:

- High profile insolvency of HIH Insurance in 2001 caused a great deal of discussion on reserve adequacy in Australia and prompted APRA (prudential regulator) to instigate early reforms in this area, demanding risk margins at the 75th percentile for outstanding claims and premium liabilities.
- Statutory schemes for third party motor bodily-injury and workers compensation, government schemes with large, long-tailed liabilities and extensive historic datasets that are ideally suited to implementing the best dynamic reserving models.
- Greg Taylor (Taylor Fry) has had a significant influence on the research and implementation of statistical techniques in actuarial work in Australia in the last 30 years.

What is Stochastic Reserving?

For the purposes of her presentation, Grainne defined stochastic reserving as the use of statistical models in the claims reserving process; she then went on to identify some of the possible uses of stochastic reserving in actuarial work, such as:

- Providing a central estimate of outstanding claims and premium liabilities
- Obtaining full distributions of outstanding claims liabilities
- Stochastic monitoring – monitoring emerging experience including deterministic (central estimates and scenarios) and stochastic output (uncertainty measures, simulations)
- Can allow faster repeat valuation work from review to review
- Forms a significant part of an ALM/internal model
- Provides insights into the claims experience for both actuaries and non-actuaries.
- Produces output (especially graphical) that is easy to communicate to non-actuaries

The advantages and disadvantages of adopting a GLM approach to stochastic reserving versus using traditional techniques such as chain-ladder methodology in non-life reserving work were considered. There were pros and cons for each but Grainne believed that there were considerable benefits for actuaries in deploying a full GLM-based reserving framework.

Advantages

- Flexible set of established models with readily available software (SAS, R).
- Provides a more objective basis for modelling with greater validation; i.e. significance tests, goodness of fit, model diagnostic tests, graphical tools etc.
- Allows multivariate models that can capture complicated experience with a small number of parameters (at least relative to chain ladder method).
- Easier identification of trends and level shifts in experience.
- Opens the door for reserving actuaries to:
  - better communication; graphical tools for illustrating assumption-setting transparently.
  - stochastic monitoring; drilling down to the drivers of the movement in liabilities and automatically updating liability estimates each quarter.

Disadvantages

- Considerable investment of time needed to become a good modeller; modelling skills are not acquired overnight and bad models lead to bad results.
- Blindly projecting (good) models can lead to silly results; considerable actuarial judgement is required, however this disadvantage is equally shared with non-statistical models in the area.

Using GLM based Stochastic Reserving Models

What do we model?

There are a variety of models that can be used as part of a GLM reserving model but Grainne suggested that the use of separate claim number and claim size models can be a good idea, as quite often, number and size trends can be very different and are easier to model (and hence project) separately.

The claim number and claim size models highlighted by Grainne as possible options for this purpose were payments per claim incurred (PPCI), payments per claim finalised (PPCF) and payments per active claim (PPAC) models.

How do we model?

In reality, a considerable amount of expertise and detail is involved in building quality GLM reserving models. However, Grainne provided an excellent overview of the process:

Non-Life Insurance

1. Decide on the structure of your model; i.e. which methods are to be used.
2. Specify the dependent variable; this is the variable that you are seeking to model. (E.g. number of claims, payments per claim etc.)
3. Select the explanatory variables; these are usually accident, development or calendar periods, the future values of an explanatory variable must usually be known.
4. Decide on the error structure for your model e.g. Poisson, Gamma or Binomial GLMs
5. Does the data need to be segmented, is a large/attritional split needed for a good model?
6. Consider the impact of correlated variables and interaction effects in your model.
7. Fit the model and obtain parameters using statistical software such as SAS or R.
8. Carefully validate the output of your model using model diagnostics.

Calculating the Central Estimate of Liabilities

Once the relevant parameters from a GLM reserving model have been obtained, the model formula can be constructed and the central estimate of the liabilities can be evaluated by combining results from all sub-models across all future periods.

Finally, depending on the exact type of figures required, adjustments can be made for:

- Economic inflation; to get IUDs (Inflated and undiscounted figures)
- Discounting; to get IDs (Inflated and discounted figures)

Obtaining a Distribution of the Liabilities

In order to correctly estimate the distribution of liabilities we must account for the following sources of error:

- **Parameter error;** the form of the model is correct but the parameters are not estimated correctly due to random variability.
- **Process error;** the form of the model is correct and the parameters are correct but future experience will not be exactly as estimated due to random variability.
- **Systemic (Model) error;** the model does not correctly allow for future systemic changes, model specification error or the model does not include economic variability.

Since a full statistical model has been constructed, there is no need to use a non-parametric bootstrap to obtain a distribution; instead we can use the statistical properties and model estimates to generate a "fast" bootstrap, addressing the three sources of model uncertainty explicitly.

Grainne addressed the questions of systemic error in more detail as it is typically the most significant source of error but also the hardest to quantify. She shared some very interesting ideas on the assessment of systemic error from an Australian working party that may be useful to Irish actuaries.
These included:

- Using a scorecard approach to assess model specification error.
- Identify sources of future/external systemic risk: then rank and quantify them.
- Assess where the business sits on a scale of riskiness and assign a CoV (Coefficient of Variation).
- Seek to use industry benchmarks as a guide.

Towards the end of her presentation, Grainne spent some time discussing how an actuary could also use stochastic reserving to obtain the Ultimo and One-year measures of reserve risk which is highly topical and also how to get added-value from a stochastic monitoring framework.

This concluded Grainne's detailed presentation and an interesting Q&A session followed providing an opportunity for the members in attendance to question Grainne on her practical experiences of using GLM techniques to perform stochastic reserving and monitoring.

For those members who were unable to attend this talk and would like to know more about this fascinating topic, there is a full podcast and a copy of the speakers' slides available on the Society's website.

Ken Deane

Possible Unintended Consequences

"Possible unintended consequences of Basel III and Solvency II" is the title of an IMF Working Party Paper prepared by Ahmed Al-Darish, Michael Hafeman, Gregario Impavido, Malcolm Kemp and Padraic O'Malley. (The views expressed in the Paper are those of the authors and not necessarily those of the IMF.)

On Tuesday 12th June 2012 Malcolm Kemp of Nematrian and Padraic O'Malley of Milliman presented the paper to the Society.

Introduction

Malcolm began by outlining the two key objectives of the paper: (i) to present similarities and differences between the Pillar I requirements of the two accords; and (ii) to discuss possible unintended consequences of their implementation.

While both Basel III and Solvency II aim to strengthen the quality of capital, they have different histories and drivers.

Basel III is being developed by the Basel Committee on Banking Supervision (BCBS) and aims to strengthen the quality of capital for globally active banks. It was initiated in response to the financial crisis and builds on the Basel II framework.

The European Commission, in close cooperation with EIOPA, is leading the Solvency II project, which aims to strengthen the quality of capital for EU insurers. This will result in harmonised standards for insurance supervision within the EU, a principles-based regulatory framework and risk-based responsive capital requirements.

Banks versus Insurers

Malcolm noted that typical bank and insurer business models differ. Banks facilitate a means of payment in exchange for goods and services. Insurers facilitate a store of value permitting deferred consumption. A bank's core business activities are largely asset driven, and often supported by leveraged balance sheets. Insurer activities are mainly liability driven, less leveraged and often less exposed to 'runs'.

However the paper also recognises the significant overlap in the business activities of banks and insurers. For example, consumers save with both banks and insurers; banks and insurers invest in many of the same types of assets and compete with one another in the capital markets. Due to this overlap, differences in the two accords can generate unintended consequences.

Malcolm went on to describe some significant differences between the sectors:

- Funding bases (excluding equity): For insurers the liabilities consist primarily of technical provisions, which are funded by the policyholders. Banks have a wider spread of financing, provided for the most part by other banks or banking like entities. Therefore the banking sector has greater interconnectedness meaning that if one fails there is a greater risk of failure of other banks.
- Capital levels: Compared to banks the insurers tend to have greater levels of high quality core capital.
- Accounting bases: Banks tend to use IFRS or similar accounting rules and can make more use of retrospective methodologies. For insurers, Solvency II uses a market consistent approach, i.e. fair values (and less reliance on general purpose accounting) and is more prospective.

Malcolm went on to describe capital tiering. While Basel III and Solvency II use the concept of capital tiering in a similar manner, there are some differences in approach, for the most part justified by the different business models.

Calculation of Capital Requirements

At this point Padraic took over to compare the accords in relation to the approaches used to calculate the capital requirements. Basel III and Solvency II each adopt a three pillar approach, with Pillar 1 relating to the calculation of capital requirements. In each case the calculations use a modularised approach to risk identification and capital calculation. Also, both Basel III and Solvency II facilitate an internal model approach as well as the use of standard formulae. In each case the primary role of capital is to absorb unexpected losses.

There are some differences in relation to risk aggregation. For example under Basel III:

- It does not fully reflect the importance of diversification or adequately penalise portfolio concentrations ("portfolio invariance")
- These features can instead be introduced by the supervisor
- Some types of risk mitigation contracts are recognised (mainly credit risk mitigation)

Solvency II on the other hand:

- Gives greater explicit recognition to diversification effects and risk interdependencies
- Uses correlation matrices
- Recognises virtually all types of risk mitigation contracts

Possible Unintended Consequences

As noted earlier, the banking and insurance sectors overlap. However the two accords are being developed largely independently of each other and to similar timelines. Padraic went on to describe how this may result in unintended consequences in relation to the following in particular:

- Cost of capital
- Funding patterns and interconnectedness
- Product and/or risk mitigation

Cost of Capital

It is unclear whether, and if so to what extent, the cost of capital for banks is going to increase compared to the cost of capital for insurers.

According to the Modigliani-Miller theorem, in an efficient market the value of a firm is unaffected by how that firm is financed. One argument in support of a higher cost for banks relates to the market imperfections that invalidate this theorem. Amongst these are debt interest deductibility, moral hazard, asymmetric information, safety nets and bankruptcy costs.

For example:

- Debt interest deductibility: Banks benefit more from this to reduce their

# of Basel III and Solvency II

total cost of capital because they are more leveraged than insurers. The debt-equity swap (i.e. deleveraging) that Basel III aims to achieve reduces this benefit.

- Moral hazard: A reduction in the "too-big-to-fail" (TBTF) benefit, enjoyed on average more by banks than insurers, could lead to higher cost of capital for banks.

In addition, there is more scope to take credit for risk mitigation under Solvency II. Also, capital deductions appear more stringent under Basel III. A case in point is intangible assets (other than goodwill), which are deducted under Basel III but not Solvency II.

On the other hand, there are arguments in support of a higher cost of capital for insurers: the more risk based approach under Solvency II is likely to increase the cost of capital for riskier insurers; the costs of unwinding undesired positions may be greater for insurers than for banks due to the very limited market for many insurance liabilities.

Funding Patterns and Interconnectedness

Under Solvency II the SCR standard formula for credit spread risk makes lower rated and/or longer dated private sector instruments less attractive. This has lead to the concern that Solvency II may reduce the demand for banks' long term instruments when banks most need to issue them. In addition, the corresponding capital requirement is zero on similar instruments issued and/or guaranteed by EEA states, irrespective of credit rating. However it was acknowledged that insurers are not the main buyers of bank debt.

Basel III is likely to increase the supply of covered bonds from banks. This in turn increases the risks associated with unsecured bank debt and may have a negative impact on banks' ability to issue such debt.

Solvency II and Basel III may increase the demand for, and exposure to, sovereign debt by both banks and insurers. This gives rise to the concern that the type of interconnectedness between the sectors may change and be strengthened through the balance sheet of the sovereign. However this may be mitigated through insurer internal models that capture the heterogeneity of credit risk across EU sovereigns.

Risk/Product Transfers

Increased use of risk based capital requirements may result in increased transfer of risk to customers. It may also result in the migration of business away from both sectors, e.g. through the use of securitisation or reinsurance.

Policy Considerations

Padraic explained that the Paper's analysis suggests a need for insurance and banking regulators to communicate with one another to better understand the combined implications in order to reduce the risk of unintended consequences.

Padraic concluded by noting that any policy response should be informed by further empirical investigation into the magnitude of the impact of unintended consequences.

Q&A

In the Q&A session that followed the focus was primarily on the uncertain future consequences of the new accords. For example, while the Paper suggested a potential increased use of reinsurance to transfer risk to jurisdictions with less onerous capital requirements, it was pointed out that there could also be less use of reinsurance by direct writers because Solvency II may eliminate the regulatory arbitrage that exists at the moment.

While the presentation noted that 29 banks have been indentified under Basel III as being too big to fail in a global context, it was suggested that perhaps there is not sufficient recognition of the fact that in a local context any bank may be too big to fail.

The IMF Working Paper, the presentation slides and the podcast are all available on the Society's website.

John Bolger

The Fiscal Compact, the Economic

Possible Implications for Life & General Insurance Companies

As a sign of the remarkable times we are living in, at the time of writing this review, one bookmaker was offering odds of 4/1 against Greece exiting the euro currency before their football team getting knocked out of UEFA Euro 2012. Much of this uncertainty relates to Greece's upcoming re-run of national elections rather than to the relatively modest opposition awaiting the soccer team in Group A of the championships! Before either outcome was known, Ireland was preparing itself to go to the polls in a referendum on the Fiscal Compact.

Against this backdrop, on 18th May 2012, UCD Actuarial Science Higher Diploma student, Andrew Caslin and BAFS student, Caolan O'Callaghan presented their wide ranging paper covering aspects of the debt crisis as well as the wider economic and regulatory changes.

Fiscal Compact

The first section of Andrew's presentation covered the Fiscal Compact. 25 of 27 EU member states have signed up to and are currently in the process of ratifying the Fiscal Compact – the Czech Republic and the UK opted out. 12 of the 17 Eurozone states are required to ratify the Compact for it to come into effect. One of the benefits of ratification is access to funding from the EU's new permanent bailout fund – the European Stability Mechanism (€500bn).

Article 3(2) of the Fiscal Compact was summarised and the key rules that would be enshrined in the national law of a signatory country were covered:

- the requirement to meet a balanced budget,
- rapid convergence towards the balanced budget,
- the introduction of an automatic correction mechanism with an obligation to implement measures to correct a deficit, and
- the setting up of an independent body at national level to monitor observance of the rules of the Fiscal Compact.

The failure to comply with Article 3(2) was also discussed i.e. another member state could bring the matter to the Court of Justice of the European Union.

A summary of the balanced budget was provided and covered the following points:

- The definition of the structural deficit: general government deficit adjusted for slow/fast growth & once-off items.
- Fiscal Compact sets out that the 'balanced budget' would mean limiting the structural deficit to 0.5% of GDP.
- Each country given a timeline to meet the requirements of the 'balanced budget'.
- The Irish government is talking to Eurostat regarding whether the money being put into the banking sector is included within the definition of a structural deficit.

Given that some large economies in Europe have significant deficits as a % of GDP e.g. Spain and France's deficits are 8.5% and 5.5% of GDP respectively, another key challenge was highlighted with respect to the impact a synchronised implementation of structural deficit targets by European governments would have on the Eurozone economy.

The Compact also imposes a strategy for governments to work towards a target of 60% Debt to GDP ratio, requiring them to cut the gap by 1/20th per year. The effect of this for the biggest three economies in the Eurozone (Germany, France and Italy who have Debt to GDP ratios of 81.2%, 85.8% and 120.1% respectively) is annual debt reductions of 1.1%, 1.3% and 3% of GDP respectively.

The "intergovernmental agreement" clearly has challenges. Countries will be able to deviate from targets in exceptional circumstances (encompassing once-off events and prolonged periods of economic hardship). It also seems unclear how possible sanctions would work (e.g. how effective are fines on an already struggling economy?).

Economic Environment

Caolan's presentation started by highlighting that Ireland has the highest "total debt" to GDP ratio in the EU standing at 663% of GDP at the end of Q2 2011 ("total debt" defined as including government debt, as well as debt of corporations and individuals).

Combined with the fact that 40% of mortgaged homeowners in Ireland are in negative equity, bank lending is heavily constrained, so economic growth is clearly not going to arise through the supply of credit.

With the Government cutting back on spending, few consumers and companies interested in borrowing, reduction in consumption and investment expenditure, a massive increase in net exports is needed to keep the economy growing.

Caolan then provided details of the Basel III Core Tier 1 capital requirements and the contraction in bank lending.

The formula for **Core Tier 1 ratio** is:

$$= \frac{\textbf{Core Tier 1 Capital}}{\textbf{(Credit Risk Weighed Assets + Operational Risk Weighed Assets + Market Risk Weighed Assets)}}$$

Basel III proposes that banks reach a Core Tier 1 capital ratio of 7% by 2019 which is quite demanding.

Certain EU banks were required to raise their Core Tier 1 capital to 9% of risk-weighted assets by June 2012. Banks impacted by this rule have the options of reducing lending and/or deleveraging. Both options are likely to have a negative impact on economic activity in the real economy.

Environment & Solvency II

James Keough & Tracy Gilbert

Solvency II

Andrew then presented a high level comparison between risk based regulation in banking and insurance and the point was made that internal models are often opaque from the point of view of an investor.

Investors are becoming increasingly suspicious of the lowering of risk-weighted assets arising from "parameter changes" within internal bank models.

Andrew also mentioned that internal models in banking gave false comfort to the public and the taxpayer in the run up to the financial crisis.

He emphasised the role of the Actuary with respect to Solvency II and internal models. Actuaries should ensure that "parameter changes" in an insurer's internal model don't drive reductions in capital requirements year after year. The example of adopting a standardised approach under Solvency II was mentioned, so that investors can have confidence in the share price of an insurer.

Impacts on Insurance business

Caolan and Andrew then proceeded to describe the major implications of a stagnant economy and regulatory changes on the insurance industry in Ireland. These are summarised below:

Life Insurance:

- Reduced demand for protection and savings products as a result of falling real incomes.
- Competition is likely to intensify.
- High economic uncertainty means individuals/companies are less willing to be locked into long term arrangements.
- Solvency II likely to reduce products offering long-term guarantees.
- Taxation changes on pensions discouraging consumers from investing in pension products e.g. the threat of abolishing the higher rate tax relief for pension contributions.
- Possible opportunity: the switch from defined benefit to defined contribution pensions provides an opportunity for life assurance companies provided the tax treatment of pensions is not undermined further.

General Insurance:

- Reduced demand for products in line with fall in GDP.
- Competition is likely to intensify.
- A reduction in demand for public or employers' liability insurance given increased unemployment.
- Cut-backs in public sector spending may lead to a reduction in detection of driving offences and lead to higher motor claims frequency.
- Trends in motor insurance linked to the recession were discussed, including a spike in the number of car crashes involving multiple passengers.

Q&A

Given the topical nature of the presentation, there were a lot of questions/comments from the audience. These resulted in a range of discussions regarding the effect of a no vote in the referendum on insurers, whether the Fiscal Compact being introduced sooner would have stopped a blanket bank guarantee and saved the Irish Economy and how to police deficit limits (given that many countries, including France and Germany, had broken previous, albeit unenforced, deficit restrictions almost as soon as the euro came into being).

Comments were also made regarding some reasons for optimism on the life insurance front. Given the cost of guarantees, is there an opportunity to change the type of products available on the market e.g. products involving some sort of risk sharing? Sovereign annuities as well as the possibility of mandatory pension provision were also discussed.

The world watches the continuing developments in the Eurozone and waits!

A podcast and slides of the presentation as well as Caolan and Andrew's paper can be found on the Society's website.

ST9 – Exploding the Myth

Graham Crowley gave an insightful talk on the topic of ST9, the Enterprise Risk Management exam. ST9 is a relatively new exam, the first sitting having taken place in April 2010. Successful completion of ST9 allows candidates to attain the Chartered Enterprise Risk Actuary (CERA) qualification. Graham himself completed the exam in April 2011, having qualified as an actuary in the previous year.

Enterprise Risk Management (ERM) is currently an Actuarial Hot Topic and has featured consistently in recent Society talks. There is a growing feeling that actuaries have an important role to play in Risk Management and this was certainly reflected in the strong attendance on display at this lunchtime meeting by students and qualified actuaries alike.

The talk was designed to give people a flavour of the course's syllabus and the extent of the course's mathematical content. The benefits of passing the exam as well as the challenges of studying for the exam as an already qualified actuary were also outlined on the day.

Graham began by explaining the concepts underlying ERM. He explained how ERM involves taking a holistic view of all the risks a business is exposed to, both upside and downside risks. This can be done by carrying out quantitative and qualitative assessment of risks and responding appropriately (e.g. mitigation, removal of risk or do nothing). He went on to outline how ERM is a dynamic process, whereby companies need to consistently review and update their processes in light of emerging experience.

The next aspect of the Syllabus covered by Graham was the Enterprise Risk Management Framework. Within this area of the course, the role of a company's stakeholders and the impact that they have on a company's ERM process is outlined. Stakeholders include the regulator, shareholders and rating agencies. Other topical concepts that feature on the course that were outlined by Graham included Risk Appetite statements, the Risk Management Control Cycle (the process of identifying, assessing, managing and monitoring risks), the structure of the Risk Management Function and a company's Risk Taxonomy (a breakdown of all the risks a company may be exposed to). Indeed, the topical nature of ST9 becomes apparent when the role of the CRO in the Risk Management Function is discussed. This is a role which the actuarial profession has earmarked as an excellent fit to the skillsets possessed by actuaries today.

Another section of the course covered by Graham includes case studies of various firms whose failure to implement sound risk management led to ultimate ruin. Examples include Long Term Capital Management, Enron and Barings Bank.

Next up, Graham outlined the process for identifying a company's key risks i.e. who should be involved from the business and the key tools and forums used to successfully complete the task. He explained how all areas of the business should really be involved in risk identification. This can be undertaken by organising workshops or through questionnaires. The use of risk identification aids such as SWOT (Strengths, Weaknesses, Opportunities and Threats) and PEST (Political, Economic, Social and Technological) analyses are explained in this part of the course also.

Having identified the risks, it is then necessary to measure them. Graham explained how it is required as part of the course to understand measures such as VaR and TVaR. He also mentioned the use of financial time series as well as the use of copulas and other correlation approaches when aggregating risks.

He then went on to focus on the level of mathematics that is required to pass the exam. In the first four sittings of the exam mathematical questions have covered between 3% (April 2011) and 22% (September 2011) of the course. Graham suggested that although a quick recap on some CT concepts may be required, people shouldn't be overly daunted by the amount of maths knowledge required to pass the exam. It was particularly useful to get this clarity.

It was interesting then to get Graham's view on the benefits of passing the Enterprise Risk Management exam. He pointed out that CERA is an internationally recognised risk management qualification which could certainly assist people in their career progression, both within and outside of the traditional actuarial practice areas. Studying the exam also counts as CPD for qualified actuaries.

Graham closed the talk by giving an insight into the challenges of preparing for the ERM exam as a qualified actuary. In contrast to his time as an actuarial student Graham had to prepare for the exam without having the benefit of study leave. On top of this, a qualified actuary is typically faced with greater responsibility in the role which can often lead to long hours. There is also no guarantee of a pay rise upon passing. This means that a decision to study the ERM exam as a qualified actuary cannot be taken lightly and one must recognise the sacrifices that need to be made.

After a fast paced and very informative lunchtime meeting I think it is fair to say that the attendees left the room feeling that the ST9 myth was well and truly exploded!

The podcast and a copy of the slides are available on the Society's website.

Alan Tiernan

Hedging the Risk-Free Rate under Solvency II

Eamonn Phelan and Ross Evans gave us an interesting and informative presentation on hedging the risk free rate in a Solvency II context.

Their working party's remit was fourfold:

1. Why would you hedge the risk free rate?

2 How would you do it in a Solvency II environment?

3. Explore any practical considerations and

4. Initially focus on hedging of the best estimate liability (BEL).

Eamonn explained that the value of the BEL itself is in part a function of the risk free rate. As that rate changes then so too will the BEL. So hedging the risk free rate is a sensible strategy to adopt if you want to minimise the volatility of the Solvency II balance sheet.

He then reminded us all of the ubiquitous Solvency II timeline with its ever shortening window for consultation and adoption of level three measures. He then discussed how Solvency II itself is being influenced by a series of compromises between member states of the EU and that this answers many questions an economic capital purist would pose.

Compromises agreed at the recent ECON vote included 'matching premium / adjustments', the countercyclical premium, extrapolation to 'ultimate forward rates', spread risk dampeners and the use of 'duration approaches' for equity risk. The focus of the presentation was on those compromises which relate directly to the risk free rate. Eamonn briefly discussed the countercyclical premium before going on to outline the rules governing the matching premium approach: where the ability in practice to use a rate higher than risk free has strict conditions attached. He then handed over to Ross to speak about extrapolation of the risk free rate.

Ross began his portion of the presentation by outlining what is meant by a risk free rate in a Solvency II context, or more precisely what is meant by a risk free rate curve. It is a curve designed by committee: for the first number of years until a 'last liquid point' (LLP) it uses a market swap curve that allows for credit risk. After the LLP it trends towards an 'ultimate long-term forward rate' (ULTFR). The LLP and ULTFR are currently set at 20 years and 4.2% respectively. This approach is justified on the grounds that the market is not sufficiently deep and liquid after 20 years so an arbitrary rate is set instead. The convergence period governs the speed at which the curve trends from its 20 year position to the ULTFR. Ross showed that, in practice, the eventual risk free curve for Solvency II purposes can look very peculiar; depending on market curve and final rate before 20 years and then the convergence period applied thereafter! In particular the slope of the curve between 15 and 20 years can have a very large impact on the curve afterwards as it is extrapolated out.

The 'artificial' 20 year plus curve results in a greatly reduced sensitivity of long term liabilities to changes in real world interest rates. This is because no matter what the real world rate is beyond the LLP, the Solvency II forward rate must trend back to 4.2%. This single aspect prompted much debate in questions after the presentation: speakers queried why one would hedge this artificial position and not the true economic position, particularly depending on their business. Variable Annuity companies got a particular mention. Unfortunately this is an example of where compromise results in a deviation from theory.

Eamonn then returned to cover some of the other practical considerations to be borne in mind when hedging risk free rates under Solvency II. This part of the presentation covered topics such as dynamic rebalancing of hedges, attribution analyses, the impact of hedging the Solvency II balance sheet on results measured according to alternative metrics such as EEV, central clearing of over-the-counter derivatives and the impact of step changes in the ULTFR.

The discussion from the floor after the presentation was lively and covered the requirement to regularly rebalance the hedge as well as Eamonn pointing out that there will be slippage in the hedge if market rates are consistently below the ULTFR (due to the divergence of the Solvency II yield curve from economic reality). This again highlighted the artificial nature of the compromise at Europe.

Whether to hedge Solvency II rather than pure theoretical economic capital was discussed, with the conclusion that it really depends on the objectives of the organisation.

Another issue that was discussed was whether all insurance companies would be trying to rebalance their hedges at the same time and that investment bankers might push up the prices of hedges as a result: As an investment banker himself Ross swore he didn't take offence! In all, this presentation provided plenty of food for thought for those deciding whether or not to hedge risk free rates under Solvency II.

The podcast and a copy of the slides are available on the Society's website.

Alan Murphy

Groupe Consultatif – First

I was fortunate to attend The First European Congress of Actuaries (ECA), organised by the Groupe Consultatif, held in Brussels on the 7th and 8th of June. The title for the Congress was *'The European Actuary of the Future'* and the focus was on Solvency, ERM and the Role of Actuaries.

As a 'Recent Qualifier' (I am not sure how much longer I can keep calling myself that), I was apprehensive at the outset that this Congress would go over my head or I would feel slightly out of place among so many senior European actuaries. However, 370 actuaries from 36 countries were in attendance and they encompassed many different levels of experience and a wide variety of practice areas/roles.

With 27 parallel sessions throughout the two days of the Congress there was a lot of material being covered and, if anything, it was hard to pick between sessions at times. Speakers were from within and outside the actuarial profession and from many different European countries. We were definitely not stuck for choice.

The opening session was held by Gabor Hanak, Chairman of the Groupe Consultatif, who opened with a joke, of which I will spare you the details, (you had to be there). The moral of the joke was that all actuaries need to keep the shop open; we need to have a holistic view of all the changes going on around us, and be able to adapt to these changes – becoming risk managers, communicators and much more than actuaries; "an actuary who is just an actuary is not an actuary" *(F.Redington)*.

With this motto running through my head I was eager to get started on the parallel sessions and try and expand on my own holistic view and get as much out of the next two days as possible. With so many sessions on lots of different topics I attended a wide variety of sessions of which I will mention but a few.

The first session was on ERM and the CERA qualification, given by Ron Hersmis, Chairman of the ECA 2012 Organising Committee. After an interesting introduction as to the origins of actuarial science the presentation moved on to challenges currently faced by actuaries: population growth; globalisation; aging; longevity; increased healthcare costs; financial and economic crisis. The question was then posed as to whether actuaries are sufficiently equipped to deal with these challenges and specifically if the CERA qualification would help. Unfortunately for any actuaries like me debating going back to the dreaded studying and sitting the CERA exam, the answer to this question was not straightforward, though it did provide good food for thought.

After this I attended some interesting sessions. One was on The Role of the Actuary in Relation to IFRS, which dealt with the key areas of Pensions accounting and Insurance. Then there was a session on The Financial Reporting Issues arising from Solvency II. This dealt with the supplementary reporting issues arising from IFRS 4 and Solvency II and the (more than) likely time gap between the two. It also covered what these changes may mean for financial reporting and also control/governance issues.

The fourth session was on the Implementation of ERM and was presented by Eberhard Muller, CRO of Hannover Re. His presentation was interesting as it was an example of the practical implementation of ERM within Hannover Re including a look at their Risk Management Framework. A key point made by Mr Muller was directed at Risk Communication throughout the entire organisation which is key for successful ERM implementation across all legal entities and within all teams all the way up to the Board. In addition he highlighted the need for a holistic view of risk and the overriding objective that a company should adhere to its risk positions. Mr Muller stated that Active Risk Management should be a strategic principle within the organisation and should encompass local guidelines, limits and thresholds and the Risk Management Framework.

The final two sessions of the day brought me right back to the lecture halls at university. One session dealt with the theory behind Risk Measures; Dispersion, VaR and tVaR, along with their uses and limitations. The final session was on a scientific paper dealing with estimating ruin probabilities in the presence of heavy-tailed claims. This presentation was given by a young actuary; there were several 'young actuary' presentations over the two days of the Congress and a prize was awarded to the best scientific paper. The two presentations were interesting and quite theoretical; both however exposed just how much I've forgotten in the short time since I finished university.

That evening we were treated to famous Belgian culinary delights at the nearby Cureghem Cellars which allowed time for some relaxation, networking and of course some wine!

The next day my sessions kicked off with an interesting presentation on Flood Risk, Insurance and Climate change in the Netherlands. This presentation was given by Wouter Botzen from VU University Amsterdam who leads a research group on the topic. While the presentation was Netherlands specific, the ideas presented were global concepts, incorporating the impact of climate change and socio-economic developments. The presentation also dealt with the availability and affordability of flood risk and methods used for assessing this risk.

One of the plenary sessions on the second day was an interesting presentation made by two speakers – David Ingram and Michael Thompson - on the global perspective for ERM and changing risk attitudes. This started with an interesting anthropological theory of the forms of social solidarity – this involves a hierarchy of ranked groups of social attitudes. While the dormant anthropologist within me found this interesting, the actuary within me struggled to make the connection between this and ERM. Michael Thompson clarified this with the diagram opposite:

The idea was to show that a company's attitude to risk could be viewed in parallel with social attitudes, with each attitude leading to a different risk management strategy depending on the 'four seasons' of risk (boom, bust, uncertain and moderate). However, it is not sufficient to stay within one risk attitude; the perfect ERM program will adapt to the risk environment – this is what they called, ironically, a 'clumsy solution' where all four 'voices' are heard within an organisation and each 'voice' is responsive to the others. The presentation finished with some practical case studies and how these companies chose to manage specific risks.

European Congress of Actuaries

Risk Environment	BOOM	BUST	UNCERTAIN	MODERATE
Risk Attitude	Maximiser	Conservator	Pragmatist	Manager
Risk Management Srategy	Risk Trading	Loss Controlling	Diversification	Risk Steering

The final presentation on regulation was given by Karel Van Hulle, Head of the Insurance and Pensions Unit at the European Commission. This presentation had all the drama of the final scene of a Hercule Poirot film, though without the murders, obviously; it was thoroughly entertaining and informative. Mr Van Hulle's opening line was 'Regulation is not just about numbers, it's about common sense' which caught everyone's attention. The content covered topics such as the need for regulation, Professional Standards and Solvency II and the Actuarial Function. Mr Van Hulle stated that the regulation of the financial industry will lead to further professionalisation of the various sectors of the industry, that the actuarial profession has been put soundly on the map by Solvency II and that an increasing role for the actuarial profession in other sectors should be expected.

The final session of the Congress gave some closing remarks bringing together the different concepts over the two days; ERM, Solvency and the Actuary of the Future. Specifically that the Actuary of the Future needs to be technically strong but practical in orientation, rooted in professionalism, more holistic, business aware, a good communicator, with risk management skills and an acute awareness of all the stakeholders. Huge opportunities are arising in Europe for actuaries from Solvency II, and in tandem there is a greater emphasis at a global level on risk management. This is good news for all of us individually and as a profession; the future is in our hands.

The Groupe Consultatif plan to hold an ECA every four years; the next one has been pencilled in for June 2016.

A full schedule of the parallel and plenary sessions, including links to presentations, can be found at http://www.eca2012.org/schedule/.

Elena McIlroy De La Rosa

40th Anniversary Programme

Thursday 27th September
Morning half-day Pensions Conference - Convention Centre

Wednesday 17th October
Morning half-day Healthcare Conference - Conrad Hotel

Thursday 8th November
40th Anniversary Dinner - Shelbourne Hotel

Thursday 6th December
Evening meeting - Current Topics Paper - Burlington Hotel

2012 SAI Golf Calendar

- **Captain's Day - Hollywood Lakes Golf Club - Thursday 23rd August.**

The day will include half-time refreshments and a 3-course dinner, and with fingers crossed some fine weather and golf too.

Best of luck to all from the Captain, Brian Connaughton.

Enter online at: https://web.actuaries.ie/events

CPD Returns must be submitted to the Society by latest 25th August

The CPD year ended on 30th June. Most members must now submit details of CPD completed to the Society, along with a compliance declaration, by 25th August.
If you have changed your CPD category since your last declaration, you will need to let us know this too. Please submit your CPD details via "My CPD" on the Society's website (www.actuaries.ie – member login is required to access "My CPD").

Cocktail Making Class

On the 24th May, the Student Society held a new event in Harry's Bar – Cocktail Making. The 50 attendees were divided in two groups, with the first group starting the class and the second enjoying a mojito and finger food, with a switch half way through the evening.

Both groups followed the same pattern. Firstly we were shown the basics of making a cocktail – the base is typically 4 limes and two spoons of sugar. Then we learnt what measures of spirits and liqueurs to add, as well as juices, ice and garnishes. The highly knowledgeable bar men brought us through a number of famous cocktails like the Appletini, as well as some unusual cocktails such as one containing egg whites and another with balsamic vinegar and beetroot (which was surprisingly nice!). In total, 25 cocktails were made which were shared amongst the group.

Our teachers were also skilled in performing tricks such as perfectly pouring 8 drinks at one time from a tower of cocktail shakers and were able to field questions from the audience while they went.

After the hour long lesson, the groups were further divided and 6 people at a time got their chance to make their own cocktail and apply what they had just learned. Despite some of the resulting cocktails being described by one bar man as 'the worst he had ever tasted', the cocktails were enjoyed by the creators afterwards. The author made a raspberry, cherry and lime cocktail which was very refreshing!

Another group was also having an event at the bar that night. To our surprise, we found the other group was a launch party for a TV show featuring Irish 'celebrity' models, so that night the bar hosted both data and clothes modellers!

This proved to be a very enjoyable night overall. A big thank you for the members who came to the dark bar despite the lovely sunshine outside.

Rachel Gow

On the Move

Fellows:

Colin Manley has moved from the Central Bank of Ireland to **PricewaterhouseCoopers**
James Mulrooney has moved from Aviva Insurance Europe SE to **Euro Insurances**
Eamon Howlin has moved from Allianz to **RSA Insurance**
Michelle Neary has moved from Friends First to **RGA International Reinsurance Company Limited**
Petra Gawley has moved from Partner Re to **Zurich**
Devika Prashad has moved from Sun Life to **Canada Life**
Joe Kennedy has moved from Aviva to **Liberty Insurance**
Tom Donlon has moved from Chartis Insurance to **IPB Mutual Insurances Limited**
Aisling Kennedy has moved from Mercer to **Swiss Re**
Jenny Fee has moved from Aviva to the **Central Bank of Ireland**
Ciara Hennessey has moved from Aviva to **Travelers**
Martin Kelly has moved from Genworth Financial to **Allianz Worldwide Care**
Davide Casinelli has moved from AXA MPS Financial to **MetLife Europe Ltd**
Geraldine Ahern has moved from Aviva to **PricewaterhouseCoopers**
Tony O'Riordan has moved from Brennan Insurances to **PricewaterhouseCoopers**

Students:

Marija Sapkovaite has moved from Aviva to **Hansard Europe Ltd**
Martin Harold has moved from Milliman to **MetLife Europe Ltd**
Michael O'Sullivan has moved from Aviva to **Imagine International Reinsurance Ltd**