Newsletter
March 2008
The Society of Actuaries in Ireland

Current Topics 2007

L to R; Mary Hall, Joanne Roche, Julia Moore, Niamh Gaudin, Karl Murray, Mairead Coleman, Maria McLaughlin, Paul Kenny (Absent from photo: Patrick Needham and Donal Keating)

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Introduction

The Current Topics 2007 paper was presented to the Society on December 10th 2007 in the Westbury Hotel. This paper, which was prepared by recently qualified actuaries, aimed to give actuaries an update on issues outside of their main area of practice. For each practice area, the paper discussed both the major developments since the Current Topics 2003 paper and the challenges expected to be faced going forward.

The presentation was well attended by both senior actuaries and by more recent members of the profession. Given the success of the evening, it is hoped that the Current Topics paper will become an annual event for the Society.

Overview of the Paper

The paper is divided into four main sections corresponding to each of the practice areas of Investment, Life, General Insurance and Pensions. For each section, two actuaries working in that practice area undertook to research the key issues facing their sector and to present them to actuaries in other practice areas as well as other industry professionals.

For each issue, the paper gives a background to the issue being faced, the developments that have occurred to date and the future work required, where appropriate. Technical detail is limited as the paper is intended to be of use to anyone seeking a high level overview of issues being faced by a

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Current Topics 2007 *continued...*

Mike Claffey chairing the Current Topics 2007 meeting

particular practice area. It is hoped, in particular, that the paper will give new students a useful introduction to their particular sector in an Irish context.

The paper was prepared by the following Society members:

- Investment: Mairead Coleman and Paul Kenny
- Life Insurance: Maria McLaughlin and Karl Murray
- General Insurance: Niamh Gaudin and Julia Moore
- Pensions: Patrick Needham, Donal Keating and Joanne Roche
- Organiser: Mary Hall

The presentation to the Society involved each practice area giving an overview of their key issues, emphasising those issues unlikely to be familiar to actuaries in other practice areas. The highlights of each presentation were as follows:

- **Investment** – presented by Mairead Coleman: Mairead gave an update on Irish market trends in recent years, how climate change is influencing markets globally and new and emerging investment trends.
- **Life Insurance** – presented by Maria McLaughlin: Maria covered the role of the Appointed Actuary, how Solvency I was implemented and the preparations being undertaken for Solvency II and IFRS 4, and various new product developments.
- **General Insurance** – presented by Julia Moore: Julia gave an update on the Personal Injury Assessment Board (PIAB), the impact of the European Gender Directive, the implementation of recent reinsurance regulation and the new reserving requirements for General Insurance.
- **Pensions** – presented by Joanne Roche: Joanne covered Irish Defined Benefit and Defined Contribution pension schemes, the government's Green Paper on pensions and the potential impact of new legislation in the pensions arena.

The presentations were followed by questions with members commenting, in particular, on the impact of new products and regulations within each area.

Mike Claffey closed the meeting and thanked all involved for their contribution to the production of the Current Topics paper 2007.

Mary Hall

New Qualifiers from the April 2007 exams enjoying the Society's New Qualifiers' Reception in Dublin Castle on Thursday 8th November 2007

L to R standing; Kate Tobin, Sinead Fennessy, Niall Gallagher, Naomi Cooney, Eamon Loughnane, Ciara Ganley, Stuart Redmond, Grainne Kelly, Philip Shier (SAI President), Martin Kelly, Laura Eyres, Elaine Walsh, James O'Connor, Anthony Joyce, Brendan McCabe, Richard Walsh, Anne Marie Nestor
Sitting: Fiona Doyle, Stephen Hardy, Sandra Grant, Joanne Ryan, Niamh Nolan, Debbie White

How Risky is My Investment?

John Caslin of Alder Capital Limited and Damian Fadden of Irish Life gave a presentation to the Society of Actuaries on November 28th 2007 entitled "How risky is my investment?". John and Damian are members of the society's Finance & Investment Committee

Background

John and Damian opened their talk with a brief background on previous papers to the Society of Actuaries and also an explanation of methods currently used to illustrate market risk, including standard deviation, stochastic based tools and past periods of outstanding returns.

Kevin Murphy gave a paper to the Society of Actuaries in May 2005 where he highlighted the need in the Actuarial Profession for investment tables. In this he stressed that investors should be made aware of the range of expected returns rather than simply the average expected return. His paper built a simple investment table based on long-term investment assumptions.

Proposed New Approach to Illustrating Risk

John and Damian's study aimed to see if it is possible to produce better guides to the risk associated with different investments based on the large repository of past daily returns that exists for many funds. They used the Bootstrap Re-Sampling Technique which was pioneered by Bradley Efron in 1979 which does not look for a neat algebraic solution but instead is a computer based data intensive sampling technique whereby a random sample is taken from the past daily returns of funds. This daily return is registered and replaced in the data set and the procedure is repeated to build up a month, a year etc.

The presentation then showed separate results for an Irish Equity Fund, Currency Fund, Fixed Income Fund and Consensus Fund. The results from using the Bootstrap Re-Sampling Technique from past daily returns showed the mean return and the spread of returns over a calendar month, calendar year and a five year period.

In the comparison between results from each fund over a calendar year it was clearly shown how the spread of possible returns from the Irish Equity Fund and Currency Fund was much wider than the tighter range of possible returns from the Fixed Income Fund.

John and Damian suggested that using these types of tables could have real applicability in the consumer environment as it makes it much easier to communicate risk and the likelihood of losing money. It would allow informed conversations on risk tolerance to assess if an investor really has the tolerance for the proposed investment's risk and volatility. Even if an investor is planning to invest for the long term, these tables can help demonstrate the likely short term volatility that is expected. These tables also allow the relative risk of different funds to be illustrated.

Assumptions underlying the Bootstrap Re-Sampling Technique

The presentation then explained the assumptions behind the method used and the validity of these assumptions.

The technique assumes the daily returns are independently and identically distributed. This is not true for all asset types, for example equity indices are serially correlated.

Where daily fund returns exhibit positive serial correlation the downside and upside returns using this technique are understated. If negative serial correlation existed in the daily returns, the downside and upside returns would be overstated.

John and Damian have not corrected for serial correlation in the tables that they produced as there is no universally agreed method for correcting for this in a Bootstrap Re-Sampling. While they acknowledged the method is not perfect, they feel it is a big improvement on current risk disclosure practices.

Regulation

In this section of the talk, John and Damian outlined how these tables could fit with current regulation and how the Financial Regulator could be involved in the use or publishing of these tables.

In the new Markets in Financial Instruments Directive environment, where the suitability of investment must be discussed, the tables could be useful in explaining risks to customers. The tables would not be incompatible either with the assumed "growth rates" in life assurance illustrations, although each would have different objectives.

Simple rules for producing the tables could be enforced by the regulator to ensure all daily returns have to be used and also the rules allowing for adjustments for change in strategy. Another area that was discussed was the option that the Financial Regulator could collate and publish average tables instead of every company producing individual tables.

Comparing the Performance of Investment Managers and Illustrating Diversification

In order to use tables to make a valid comparison between investment managers, the volatility, investment strategy and opportunity set of the two managers being compared should be similar. Otherwise the returns should be standardised for risk. John and Damian demonstrated using a comparison between annualised 10 year returns from Managed Pension Funds how after adjusting for risk the order of the best performing funds changed.

This section of the presentation also showed how the technique can be used to demonstrate the benefits of diversification. In an example using a 75%/25% combination of Consensus Fund and Currency Fund, it was shown the downside risk is greatly reduced for slightly lower upside potential.

Summary

To end the presentation John and Damian highlighted three key points:

- Investment tables could be used to provide more informative risk disclosure for certain investment funds
- It is important to adjust for risk before comparing returns of different investment managers
- Diversification matters

The many questions and comments following the talk was testament to the interesting and thought provoking presentation that was given by John and Damian. The slides from the event and the paper written are available on the Society's website.

Sinead Fennessy

IAA Council and Committee

It was a great pleasure to welcome the IAA to Dublin for its half-yearly Council and Committee Meetings last October. It was a wonderful opportunity to participate and get an insight into the IAA's activities.

My experience of the meetings that I attended was that they were well organised and ideas were shared and different views debated very openly.

At the **Chief Staff Officers'** Meeting, we had a good exchange of information between member associations on developments within the IAA, experiences of CPD, practising certificate and disciplinary schemes, and approaches to public relations. Our CPD requirements are light compared with most other associations – some require up to 50 hours CPD and the average is about 25 hours.

CPD was a topic of discussion at the **Education Committee** too. The Committee is preparing a CPD strategy document, which will encourage associations that have not yet introduced CPD requirements to do so. The Committee is also drawing up guidelines on professionalism education.

The IAA has secured substantial funding for the development of an International Actuarial Education Programme. This would involve researching what actuarial education is currently available around the world and, based on the syllabi, courses etc currently in place, putting together a modular programme from which associations could assemble their education programmes (in conjunction with local universities etc). The first step is a feasibility study.

Educating actuaries about Enterprise Risk Management (ERM) is exercising minds around the world. The Society of Actuaries in the US has added ERM to its examinations syllabus. The actuarial associations from Australia, UK, Canada, South Africa and Mexico have entered into an agreement to work together on developing a global ERM designation. The Institute of Actuaries of Australia, in conjunction with Macquarie University Applied Finance Centre, has designed a 5-day CPD module on the subject.

At the **Professionalism Committee** meeting there was a discussion about the classification of International Actuarial Standards of Practice (IASPs). Currently, there are four classifications – Class I (mandatory), Class 2 (voluntary), Class 3 (recommended practice) or Class 4 (practice guidelines, i.e. educational). All IASPs issued to date have been issued as Class 4. It is likely that the classifications will change in the future to just two – Model Standards and Information Notes. Member associations will be free to decide whether or not a Model Standard should be applied in their jurisdictions and if so, whether or not it should be adapted to reflect local circumstances.

IASP 2, "Actuarial Practice when Providing Professional Services Concerning Financial Reporting of Employee Benefit Arrangements", is currently being reviewed with a view to introducing a new version as a Model Standard at a future date.

The Professionalism Committee is currently preparing a paper on the governance of international actuarial work. This relates to the situation where actuaries are working across several jurisdictions.

The Committee's future agenda includes work on model approaches to conflicts of interest and whistle-blowing, and an exploration of different approaches to the question of the profession's public interest role.

The then President of the IAA, Hillevi Mannonen, chaired a lively discussion on a number of motions at the **Council Meeting:**

- Revised terms of reference for various committees were adopted.
- A Task Force on Mortality was created. This Task Force will conduct a survey of current international research on mortality and will facilitate a process to enhance future efforts of actuaries in this area. John Armstrong has joined the Task Force as the Society's representative.
- A motion to establish a Task Force to review the role, authority, responsibilities and governance of the IAA Sections was debated and has since been approved by electronic ballot.
- Council also discussed proposals from the Task Force on Strategic Planning regarding vision, mission and values statements. The Task Force has since amended the proposals to take on board input from Council.

The final day of the meetings was devoted to the **Presidents' Forum.** The following topics were discussed:

- A review of the IAA's strategic planning and corporate governance processes, which is currently being undertaken by the Executive Committee;
- Developments in Enterprise Risk Management practice and education worldwide;
- Global mutual recognition of actuarial qualifications at core syllabus level;
- The need for a comprehensive CPD framework;
- Challenges and opportunities for small and medium sized associations.

Philip Shier, SAI President, made a presentation about the "Evolution of the Society of Actuaries in Ireland", which was very well received. Group discussions generated some ideas around how the IAA could help small associations in a practical way - e.g. develop a model professionalism course, provide funding for attendance at IAA meetings, share information on CPD activities.

Further information on the Council and Committee meetings is available in the IAA's Special Newsletter at ***http://www.actuaries.org/LIBRARY/Newsletters/November_2007_EN.pdf.***

Overall, the meetings were lively and enjoyable, with a high level of participation in the discussions and a very open atmosphere. Many people commented on how successful the event was. It was not all work either – the social events went very well – and two of the attendees even managed to take advantage of the opportunity to run in the Dublin City Marathon!!

Yvonne Lynch

Meetings, Dublin, October 2007

Message from the President, Philip Shier

The Society was very pleased to host the IAA meetings in Dublin last October. Over 200 delegates attended, making it one of the biggest gatherings for these meetings. Yvonne Lynch, SAI's Director of Professional Affairs, has summarised on the previous page, the meetings she attended.

There was very good attendance by SAI members at the IAA committee meetings, as representatives of the Society of observers. The Society's current representatives on IAA committees are as follows:

Pat Healy- IAA Council Member; Member of Committee on Insurance Regulation

Jim Kehoe- Member of the Pensions & Employee Benefits Committee

Philip Shier- Society Alternate for the IAA Council

Brian Morrissey- Member of the Insurance Accounting Committee

Bill Hannan- Member of the Actuarial Standards Sub-Committee of the Insurance Accounting Committee

Brian Mulcair- Member of the Accounting Standards Sub-Committee of the Pensions and Employee Benefits Commitee

Stephen Devine- Member of Reinsurance Committee

Yvonne Lynch- Member of the Education and Professionalism Committees

Paul Duffy- Member of the Financial Risks Committee

John Armstrong- Member of the Task Force on Mortality

The Society, once again, sincerely thanks the following companies for their support of the official IAA dinner in the Shelbourne Hotel on 27th October.

Allianz
AXA
Bank of Ireland Life
Canada Life
Deloitte
Eagle Star
Friends First
Hewitt Associates
Hibernian
Irish Life
KPMG
Life Strategies
Mercer
Prudential International
Royal & Sun Alliance
Tillinghast
Transamerica Int'l Reinsurance
Watson Wyatt

Here are some photos of the members and guests enjoying the IAA Dinner

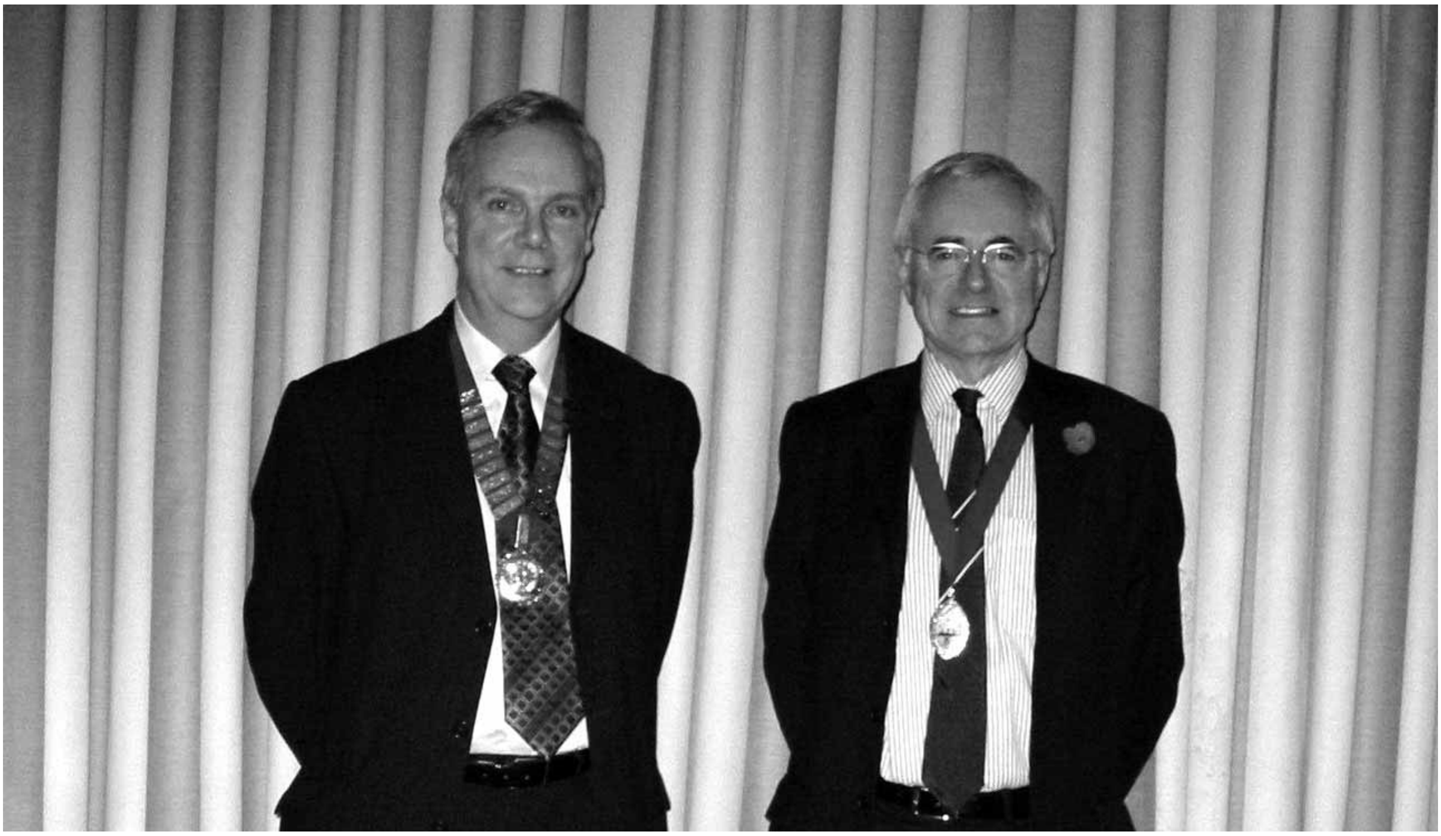
L to R; Philip Shier, SAI President, Sarah Shier, Neil Parmenter (USA) Roland Van Den Brink (Netherlands) and Hillevi Mannonen, President of the IAA

L to R; Lony Levay, Marguerite Bolger, Jim Murphy, and Edward Levay, Chairman of the IAA's Actuaries Without Frontiers committee

L to R; Peter, Elizabeth & David Martin with Stewart Ritchie, President, Faculty of Actuaries

L to R; Malcolm Campbell (Sweden) and Michael Pomery, Past President, Institute of Actuaries

Faculty President's Address to the Society:



L to R; Philip Shier, President, Society of Actuaries in Ireland and Stewart Ritchie, President, Faculty of Actuaries

It is an annual tradition for the Presidents of the Institute and Faculty to come to Ireland and address the Society. On 6th November, Stewart Ritchie OBE, the President of the Faculty of Actuaries, made his appearance in the Alexander Hotel, where he presented a paper on "Actuaries Looking Forward". He discussed 5 areas of recent interest to the UK Profession which may be of relevance to the Irish Profession in the future challenges it faces.

1. Update on Faculty & Institute Structure

A possible merger between the Institute and Faculty of Actuaries has been under consideration for quite some time now. The two bodies work closely together and in many ways already operate as one, for example they have a common secretariat, student members sit the same exams, subscription costs are linked, etc. Further efficiencies could emerge if the Faculty and Institute united as one single body, however they still maintain their separate identities and many have questioned the relevance of this.

A recent poll of members showed that the majority may be in favour of such a merger, although those more closely involved with the Faculty tended to be less in favour. The feedback showed that the membership considered it important that the Profession avoids being London-centric and that Scottish activity is preserved.

The President even asked the First Minister of Scotland, Alex Salmond, for his opinion on the matter when he had the opportunity recently. Mr Salmond drew an analogy with the TGWU, the Transport and General Workers Union, which spans the UK and Ireland. The Irish Council deals with Irish local matters and if a merger between the Faculty and Institute were to take place, then the Faculty should have something similar.

2. Public Interest

Working in the public interest is one of the things that distinguish a profession from a trade body. Mr Ritchie observed that the Society's mission was "to develop the role and standing of the actuarial profession and enhance its reputation, in particular for serving the public interest". Serving the public interest has a different meaning for the individual actuary than it does for the Profession. To satisfy this objective, the individual actuary should work honestly and ethically and in the best interest of his client. He must be competent to perform the duties required of him and be compliant with relevant guidance and regulations. There is an obligation on the individual actuary to whistle-blow where he uncovers (or suspects) improper activity.

However, the Profession as a body represents the collective conscience of its members and has a duty to be pro-active and speak out where it perceives the public to be at risk – this is a stronger obligation than that on individual actuaries.

An example of the UK Profession acting under its obligation to serve the public interest can be seen in its recent stance on the auto-enrolment into personal pension accounts.

The Profession noted that by auto-enrolling low to medium earners into personal pension accounts (i.e. applying a soft mandatory system

"Actuaries Looking Forward"

where they are opted in by default and must take express action to opt out) and then subsequently applying means testing to their benefits in retirement, some individuals may ultimately lose the benefit of some of those pension contributions and would have been better off had they kept their money in their pocket. It felt that it was not right to auto-enrol certain groups of society without informing them of the possible risks they faced to their future benefits. In response to these proposals, the Profession took out an advertisement in The House Magazine (a publication for Members of Parliament) explaining the problem and advised that if the Government did not address the concerns raised, then the Profession may be compelled under its public interest duty to take a more high profile stance on the matter.

Mr Ritchie considered if the Society could take a view on local matters where its expertise could add value.

3. The Story of Longevity Projections

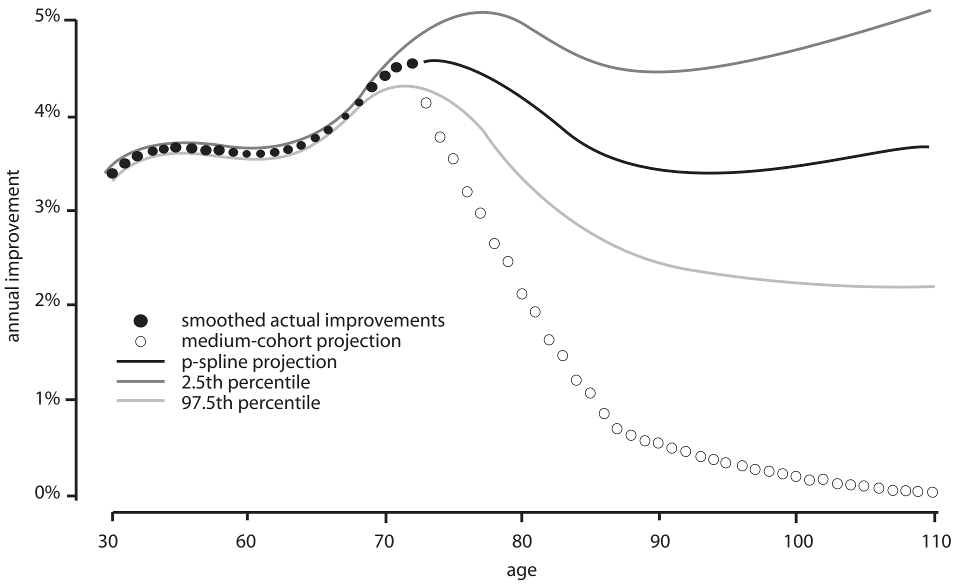
The 1992 mortality tables prepared by the CMI attempted to make some allowance for f uture improvements in mortality. These were quickly found to understate the improvements actually taking place and a set of cohort "patches" (short/medium/long) were developed to address the problem.

In developing the 2000 series of mortality tables almost a decade later, the CMI recognised the huge uncertainty regarding future mortality improvements. Accordingly, the CMI chose not to incorporate any basis for longevity projections in the 2000 tables.

This resulted in uproar from trade bodies and individual actuaries, and the CMI came under a lot of criticism. Many felt that if actuaries could not allow for longevity improvements in future projections, then who could?

In response to this, the CMI developed a "library" of projections and released it for consultation. The CMI do not suggest which particular projection would be the "optimum", rather the library is intended to illustrate the large number of possible future

Male Pensioner Longevity Improvements - Recent Past and Possible Future



projections and show the ultra-fast rate of improvement in mortality which society is currently experiencing. The Presidents of the Faculty and Institute even wrote to all holders of Practicing Certificates to make them aware of the difficulties now faced when projecting future mortality improvements.

The graph above illustrates (on the left hand side) the actual rates of mortality improvements experienced in the recent past, and (on the right hand side) an illustration of the potential ratesof improvement into the future. Alarmingly, the low dotted line, which shows a dramatic reduction in the annual rate of improvement compared to the recent past, represents the improvements underlying the medium cohort. This illustrates the extent to which the medium cohort is out of line with recent experience. The other three lines on the upper end of the right hand side show various other possibilities under the projection library.

The library of projections is expected to be finalised in the near future but the CMI does not intend to endorse any particular projection as being best estimate.

4. Solvency of Defined Benefit Pensions

Under the Irish Minimum Funding Standard, a DB scheme is regarded as solvent if it can afford to buy annuities for current retirees and pay minimum transfer values in respect of actives and deferred pensioners. Schemes need not be able to afford deferred annuities for non-retired members.

Given that there is no Pension Protection Fund or Debt on Employer legislation in Ireland, there is no safety net beyond that offered by the statutory Funding Standard.

Mr Ritchie questioned the extent to which a scheme which satisfies the Funding Standard could truly be regarded as "solvent".

He considered the reserve required for a sample member.

Member: Male aged 45
Benefit: SLP of 1,000 per annum from age 65 (escalating at CPI max 2.5% p.a.)

The required reserves under a range of bases were as follows:

Typical Funding: 4,930 (buying annuity on retirement) or 4,159 (equity backed)
FRS 17: 4,665
Buy-Out: 11,126

(**Source:** AEGON UK October 2007)

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President's Address *continued...*

There are many assumptions and qualifications underlying the above valuations but even allowing for these, it is still apparent and alarming that the buy-out valuation is more than twice that of the typical funding or the FRS 17 valuations.

Mr Ritchie observed that there was a general lack of understanding (amongst those that actuaries advise) on the implications of using different valuation assumptions - that the true value of the liabilities is determined by the generosity of the benefits and how long people will live and not by using different valuation methods and assumptions, which merely determine the pace at which a reserve is built up to meet those benefits. (A recent article in IPE.com even suggested that the introduction of Solvency II into pensions regulation might push up pension "costs" by half. More precisely, the liabilities would increase but what is ultimately paid out will be unchanged.)

He proposed that using a buy-out valuation basis would result in a level of funding which would most closely match people's understanding of "solvency", and accordingly, should therefore be regarded as the best solvency measure (particularly in Ireland where there is no safety net from a PPF or debt on employer).

Why then is there a psychology towards a slow pace of funding (relative to buy out basis)? The employer/sponsor, it seems, is happy with lower costs in the short term, and the trustees and members don't want to rock the boat if things seem to be tipping along just nicely.

Mr Ritchie feels that perhaps we need a "bogeyman" to rock the boat for them and force an increased pace of funding.

Possible bogeymen include:

- **Accounting Standards Boards**
  The increasing attention placed on FRS17 and IAS19 figures has meant these valuation bases have become the primary driver for funding for many companies. Companies may be willing to fund deficits on an accounting basis even if this is in excess of the typical funding basis. This still falls short of the buy-out basis however.

- **Solvency II**
  The European Commission will be considering how Solvency II might apply to pensions. There may be potential here for a stringent funding basis being imposed across Europe

- **Pensions Regulator**
  It is expected that the Pensions Regulator will require actuaries to adopt much stronger mortality assumptions in the near future.

5. Hybrid Pension Schemes

As pension schemes get more complex, particularly with the increased popularity of hybrid schemes, there will be a greater need for clear communication to members.

Mr Ritchie discussed an example where a hybrid scheme was rolled out to a major international firm of accountants. One might expect that such a workforce would have a greater capacity than most to understand complex financial arrangements. However, when the employees became disappointed with the scheme benefits, they mounted a legal challenge against the employer and won – on the basis that the terms of the new hybrid scheme had not been adequately explained/understood. If a court will find in favour of such a financially sophisticated group of employees, then it is clear that any modification of risks/benefits to members of all levels will need to be carefully communicated to ensure that the client is best protected should any dispute subsequently arise.

Conclusion

Mr Ritchie concluded his address by suggesting that such emerging difficulties be treated as opportunities for the Actuarial Profession rather than as threats to it.

The evening finished with a healthy questions and answers session.

Conor King

Invitation to all Members!

Would you like to be more closely involved in the Society's work and help shape the future of your profession?

Would you like to be at the forefront of developments in your practice area? Or would you like to apply your knowledge and skills to advance thinking in another practice area and learn more about that practice area in the process?

Do you have ideas about how the Society can improve its communications with members and other stakeholders, its public relations activities, and its education and CPD activities?
We are currently working on a re-design of our website – do you have ideas to contribute?

If so, come and join a Committee! And if you are recently qualified, don't worry about whether you have enough experience yet – we want to hear from you. You will find it an excellent way to network and build experience.

The Practice Committees – Life, Pensions, General Insurance, and Finance & Investments – interpret and provide guidance on regulatory requirements. They also carry out research and organise CPD events to support members in developing their skills. They explore emerging developments, sometimes through sub-committees such as the **Enterprise Risk Management Sub-Committee** of the Finance & Investment Committee.

The Health Care & Social Policy Committee offers opportunities to make a contribution outside the usual areas of actuarial practice, as the Committee's remit includes considering social policy issues from an actuarial perspective. Specific health care experience is not required.

The Demography Committee is a new Committee established to co-ordinate research into mortality and morbidity across the practice areas and advance the application of research findings.

The International Committee co-ordinates the Society's input to actuarial developments in Europe (through the Groupe Consultatif) and worldwide (through the IAA).

The PRSA Committee provides a forum for PRSA Actuaries to discuss and address actuarial issues relating to PRSA's.

The Education Committee develops local education services for members and is examining ways in which the Society can expand these services.

The PR and Communications Committee seeks to maximise the effectiveness of our external and internal communications.

Many of the Committees also have sub-committees and/or temporary working parties who focus on specific topics. If you would like to join a Committee, a sub-committee or a working party - or if you would like to organise or present at a CPD event please contact us (info@actuaries.ie) and let us know your area(s) of interest. We will then try to find an interesting role for you as soon as possible.

Actuaries in Wider Fields

Tom Collins

Tom Collins, FSAI, retired from his role as a Director at Bank of Ireland Life late in 2006. Now he is taking the idea of actuaries in wider fields truly to heart – on 1st March, Tom will travel to Cameroon to take on a 13 month placement organised by the international development charity Voluntary Services Overseas.

Tom's role as an Institutional Development Advisor will involve advising a local council on how to take on extra responsibilities which are being devolved from central government under the country's Poverty Reduction Strategic Plan. He will be based in a small town called Maga whose council serves 77,000 people. Maga is in a remote part of Cameroon's poorest region, the Far North, near the border with Chad. Tom is taking on a very challenging assignment, as Maga lacks infrastructure, has very high unemployment, low literacy rates, high prevalence of disease and low life expectancy. Even the weather will be challenging - the Far North is near the Sahara and is very hot and arid, except in the vicinity of some lakes.

Tom says that even he sometimes thinks he is mad to take on this challenge, but he is following the advice of a seanfhocal in Fulfulde (a local language which he will need to learn), "si mawdo wi'ii modan jammbere ni nannganaa dum leggai" (if a man says he will swallow an axe, hold the handle for him)!

Tom is full of praise for Voluntary Services Overseas (VSO), who have 1,500 volunteers worldwide, including 44 Irish volunteers working in 21 countries. He believes that good selection, placement, training, induction and support are vital if volunteers are to make effective contributions in developing countries, and he speaks very highly of the VSO's work in these areas.

If you would like to make a donation to the VSO and support Tom's work, you can do so electronically through Tom's personal web page,

http://www.mycharity.ie/event/tom_collinss_event/.

VSO is registered as a charity in Ireland and can recover tax relief on donations.

It will be difficult for Tom to keep in touch while he is away, because Maga is so remote. However, Tom, we expect a full report when you return! In the meantime, the best of luck to you and have a safe and rewarding trip.

Bank of Ireland's Securitisation

In October 2007 Bank of Ireland successfully completed a €400 million securitisation of a block of unit linked business from its life assurance subsidiary New Ireland Assurance plc, which resulted in the enhancement of the Bank's regulatory capital. This was an innovative and ground-breaking deal.

On Tuesday 11th December, at the final evening meeting of the Society of Actuaries in 2007, David Roberts shared the details of this deal with a packed room of intrigued actuaries.

Securitisation in Life Insurance

A securitisation converts an illiquid or inadmissible asset (e.g. an asset that cannot be taken into account in assessing regulatory solvency) into a liquid or admissible asset. Almost any assets that generate a reasonably predictable income stream can, in theory, be used as the basis of a securitisation.

When a life company sells a policy it creates an asset called the Value of In Force (VIF). This is the present value of future profits from that policy. VIF securitisation is a relatively new phenomenon and marks a significant development in the convergence of capital markets and insurance. On 16th December 2004 Friends Provident Life and Pensions Limited raised capital through an issue of £380m of floating rate notes. This was the first public VIF securitisation by a proprietary life insurance group and followed the Gracechurch Life Finance deal which securitised the VIF in the Barclays Life insurance business at the end of 2003.

Bank of Ireland's deal was the first to do several things:

- It was the first public Euro denominated VIF securitisation
- It was the first index based VIF securitisation
- It was the first deal to automatically add in new business which generated a longer term for investors

Background and Objective

For IFRS accounting New Ireland Assurance can recognise the VIF for its "insurance" contracts (as defined in IFRS4) of approximately €525 million. However because there is a risk of non emergence of the future profit, this insurance VIF asset is excluded from Bank of Ireland's Tier 1 capital, the core measure of regulatory capital for banks. (Note that there is also a VIF on New Ireland's "investment" contracts of approximately €375 million but this cannot be recognised under IFRS or Tier 1 capital).

The objective of the project was to allow this capital to be included in the Tier 1 capital of the Bank.

The Deal

The Bank issued notes linked to a defined block of unit linked policies up to the value of the insurance VIF. Non-linked policies were excluded mainly for reasons of simplicity. The unit-linked insurance VIF amounted to €400 million.

The initial structure for the deal seemed quite straightforward. Investors paid €400 million to the Bank in purchasing notes. The Bank will repay this capital as surplus emerges in the life company. If insufficient surplus emerges then the Bank will not repay the note.

Index Based

Since the emerged surplus in the life company qualifies as capital for the Bank, no commitment to pay the surplus from the life company to the Bank is required. Because of this, the life company will be able to retain the future cashflows. This is important to enable the life company to continue to finance new business growth. Therefore the emerging surplus is not expected to be the actual source of the funds that will be used to repay the note but acts as an index to trigger the repayments. Since the Bank had cashflow but wanted capital and the life company had capital but wanted the cashflows, this was an ideal way to structure the deal.

Dividend Stopper

In the event of insufficient surplus emerging from the unit-linked insurance contracts, there is no obligation to repay. However in this situation the Bank has undertaken an "intention" to repay from the surplus on unit-linked investment contracts provided sufficient unit linked investment surplus emerges. The key enforcer of this intention is that it ranks ahead of dividends. So the Bank can decide not to pay out the investment surplus but it is then prevented from paying a dividend to its shareholders. This use of the investment VIF as collateral enabled the Bank to issue notes up to 100% of the insurance VIF and so achieve full capital recognition of the insurance VIF. Without the innovative use of the investment VIF as collateral, the Bank is unlikely to have been able to issue notes of much more than 50% of the insurance VIF.

Surplus

Previous securitisation deals are typically based on closed books of business. Emerging surplus can then be calculated as the actual surplus emerging from a full set of accounts.

Since this deal is based on an open book, the assets, liabilities and cashflows relating to the defined book would have to be separately identified and audited. In order to avoid this extra administrative work, the life company proposed calculating projected surplus and adjusting this back to actual experience. There was some resistance to this approach initially but the life company succeeded in convincing the parties involved that it was a valid method of determining the surplus.

New Business

The projected surplus emerging from the defined block of policies is high in early years and decreases over time. This meant that the notes would be repaid quite quickly. An expected term of less than five years reduced the attractiveness of the note to potential investors.

So the Bank decided to allow the block to be topped up with new business as surplus emerged from the existing business. In effect they are asking note holders to accept the surplus from policies which have not yet been written as a replacement for surplus which has already emerged, thus deferring the emergence of the surplus. The €400 million VIF will be maintained for up to five years by adding in new business. After five years, the Bank will begin to repay the capital. This is referred to as "dynamic defined block (DDB)" methodology.

It was necessary to build in a number of criteria to ensure that the quality and quantity of the newly added VIF would be satisfactory to investors.

Complications

Rating

In order to launch the notes it was necessary to have them rated by a rating agency. This required a thorough examination of data and systems which involved running several stress tests on the VIF. The highest risks to note holders were identified as lapse risk followed by market volatility.

The initial intention was to achieve a single A rating for the note and to sell it "unwrapped". In June this seemed like a sensible idea as the difference in price between a BBB rated note and an AAA rated note was small. However times changed over the summer and the credit crisis resulted in a significant differentiation between ratings by September.

As a result it was decided that the note would in fact be "wrapped". This meant that a "monoline" insurer would take on the risk of default for the investor and thus wrap the single A note up to AAA. Ambac were chosen as the monoline insurer. A further due diligence exercise was then required with Ambac and its actuarial advisors. The key mitigating factor for Ambac was the intention to repay from investment surplus with the "dividend stopper", as discussed above.

Final Structure

The final structure involved 27 different legal agreements, interestingly only 1 of which related to the life insurance company. This was the calculation agreement whereby the life insurance company agreed to carry out the calculations.

The key drivers of the final structure were:

- Segregation of the asset and liabilities relating to the deal for both the Bank and the investors.
- Ensuring the deal didn't give rise to unintended tax consequences for either the Bank or the note holders.

Economics

Ambac could only wrap 95% of the note (to keep it off its own balance sheet) so in the end €380 million was issued as AAA and €20 million as A. The cost of the AAA note was 0.75% (meaning it was issued at a margin of 0.75% above Euribor) and the cost of the A note was 3.09%, giving an overall cost of 0.87% on the €400 million.

Ambac charged 0.33% for wrapping the note and other costs were estimated at around 0.1%, giving a total cost in the region of 1.3%.

At the time the idea for the project was created, this would have been a relatively expensive transaction. However by the time the deal was closed it is unlikely that it would have been possible to raise capital for the Bank by alternative means, so in fact the deal was relatively cheap.

The Bank retained the funds raised on deposit earning Euribor. This means that the surplus is only required to meet the spread over Euribor (and ultimately the capital).

Key Learning Points

The timeline for the project was as follows:

- March: Investment banks were invited to pitch
- May: Two investment banks were chosen
- June: The concept was developed and the initial structure was outlined
- July/ August: Modelling and calculations for Rating Agencies and monoline insurer
- August - October: Legal work

David presented a slide listing the many different parties involved in the project. These were:

- The issuers (Bank of Ireland Group, New Ireland Assurance, Bank of Ireland UK)
- The investment bankers (Goldman Sachs, Lehman Brothers)
- The guarantors (Ambac)
- The regulators (insurance and banking regulators)
- The rating agencies (Moodys, S&P)
- The lawyers (A&L Goodbody, Freshfields, Lovells, Linklaters, Maples)
- The actuaries (Tillinghast, Watson Wyatt)
- The auditors (PwC)

Continued...

Bank of Ireland's Securitisation *continued...*

The involvement of so many parties with differing goals could have led to a potentially limitless process. Project management skills were crucial. David mentioned that having the knowledge and ability to see potential solutions was important but even more important was having the credibility and confidence to convince others to accept these solutions.

David commented that having actuaries working with both investment banks helped a great deal in discussions with them. He also remarked that the relationship with the Financial Regulator was very helpful and that the regulator was very open and constructive which was of enormous value.

In the end what I got from David's presentation was an insight into project management as well as financial markets.

Jargon

Tier 1 Capital: This is the core measure of a bank's financial strength from a regulator's point of view as defined in Basel I and Basel II, which are recommendations on banking laws and regulations issued by the Basel Committee on Banking Supervision.

Monoline insurers: These insurance companies have sole focus on capital markets. Monolines leverage their credit ratings to guarantee the timely repayment of bond principal and interest when an issuer defaults.

DDB: Dynamic Defined Block. This refers to the methodology by which emerged surplus will be replaced with the surplus on policies that have yet to be written.

EV: Embedded Value = Shareholder net worth (Required Capital + Free surplus) + VIF

VIF: Value of In Force = Present Value of Future Profits (PVFP) from in force policies - the cost of holding the capital required to support these policies.

IFRS: International Financial Reporting Standards issued by the International Accounting Standards Board.

Aisling Lovett

Student Society News

The winter evenings brought the students of the Society of Actuaries together on three separate occasions.

Annual Pool Competition

The annual pool competition kicked off early, on the evening of November 7th, in the Palace on Camden Street. As is normally the case, the pool tables attracted more young men off their couches for the evening than ladies! Congratulations to all six groups that battled it out in the men's competition and most especially to Fergus Collis from Hibernian who emerged a worthy victor. The ladies competition was a much smaller battle between entrants, Caithriona Callan from Irish Life, Pamela Doran from Aegon and Sinéad Carty from Hibernian. Sinéad won in what was a very close black ball game with Caithriona.

Annual Student Quiz

The Annual Student Quiz produced a larger turnout two weeks later as students descended on Dicey Reilly's, Harcourt Street. Twenty teams tackled ten rounds of questions on topics including Literature, History, Current Affairs and a much disputed "all ladies" Sports round. Quiz Master, Frank O'Regan from Hibernian, kept a keen eye and a loud mike on proceedings that got increasingly intense as the evening went on.

Daragh Burns, John Joyce, Eoin King and Gavin Maguire from Irish Life took an early lead and maintained top position for much of the evening. "The Gerry Mc Dermott Foundation" consisting of Simon McLoughlin, Alan O'Donnell, Cathal Fehily and Cian O'Reilly soon gained ground achieving a full ten points in a tough history round. "Cupid Stunts", an Irish Life/ Hibernian mix of "students", inched their way into second place entering the final round. Team members James Treacy, Brian O'Donoghue, John Groarke and Mick O'Byrne kept their ground and took second prize for the evening.

Congratulations to the Irish Life, Vivas and Hewitt collaboration – "The Gerry Mc Dermott Foundation" – who walked away with the top prize and all the glory. A tough tie-breaker question, "How many new cars were registered in Ireland in 2006?", decided third place. Congratulations to Daragh Burns, John Joyce, Eoin King and Gavin Maguire who got very close to the answer of 173,000. Commiserations go to the team "Ginger men are dreamy", comprising Connor Staunton, Aoife Beirne, James Davidson and David Boland, who put up a brave fight but finished bottom of the table.

Thanks to all who attended a very enjoyable evening. Special thanks to Frank O'Regan, Liam Dempsey and Darina Holleran whose help on the night and dedicated quiz question creation made the evening possible.

Proposed Changes to CA3 and Work Based Skills Requirements

The final Students' Meeting of 2007 took place in the Atrium of the Irish Life Building on December 3rd 2007. Trevor Watkins, Secretary of the Education & CPD Board of the Institute of Actuaries, spoke to the gathered students about the proposed changes to the CA3 course due to come into effect in 2009 and also about changes to the Work Based Skills requirements. In addition, Trevor answered a range of questions on educational issues.

Many thanks go to all who attended the meeting and, in particular, to Trevor for a very informative evening.

Students' Christmas Quiz

1st place
Cathal Fehily, Alan O' Donnell, Simon McLoughlin and Cian O' Reilly

2nd place; James Treacy, Mick O'Byrne, John Groarke and Brian O'Donoghue

Last Place;
Aoife Beirne, David Boland, Connor Staunton and James Davidson

3rd place;
Daragh Burns, John Joyce, Eoin King and Gavin Maguire

SAI Dinner for Retired Members and

During Colm Fagan's presidency of the Society, he introduced a dinner for retired members and following the success of the event, it was agreed to hold a similar dinner every two years.

For the 2008 event, on 8th February, Philip Shier, President of the Society of Actuaries in Ireland, decided to extend the invitation list to include Past Presidents, Honorary Fellow Members as well as Retired Members, with Professor Philip Boland as special guest.

Following a very enjoyable reception and dinner, Philip Shier addressed the guests as follows:

I now turn to the official business of the evening which is to make a presentation to Professor Philip Boland, Hon FSAI.

Phil Boland joined the Maths Department in UCD in 1971, and became Professor of Statistics in 1986, when he established the Department of Statistics. His first contribution to the Society was in 1987 when he was asked by Bill Hannan, then head of the Society's Education Committee, to provide some additional help to Society Students who were struggling with the Statistics examination which had recently been introduced by the Institute (a pass rate was 2 out of 28!). Bill tells me that he was greatly impressed by Phil when he discussed the proposal with him, and the evening classes were a great success, leading Phil to set up the first ever degree course in actuarial science when the Bachelor of Actuarial and Financial Studies course commenced in UCD in 1991. Phil has been Director of this course for 17 years until he retired from this post in August, although he continues to lecture in Statistics (and undertake research) and indeed I understand he has been in his office every working day since his so-called retirement. Indeed, you may be aware that Phil published a book "Statistical & Probabilistic Methods in Actuarial Science" last year which will be a major textbook in this area.

As we all know, over the years this course became one of the most prestigious for Leaving Certificate students to aim for, with a CAO points requirement among the highest in the country, and in 2002 UCD was ranked among the top 10 universities in the UK and Ireland for new entrants to the actuarial profession. Many of the graduates from the BAFS course have become Fellows of the Society over recent years, and having had the pleasure this year of attending both the breakfast for new undergraduates at the start of the academic year, and the presentation of prizes recently to current and graduating students, I am confident that the flow of bright, articulate and well trained graduates will continue.

The Society's Articles permit Council to elect as an Honorary Fellow an individual "by reason of their position or experience or by reason of their eminence in the actuarial profession or otherwise".
In 1997, Council exercised this power for the first time to honour Philip Boland, who clearly met the criteria laid down, and I know that Phil was very proud to have received this recognition from the Society.

Above all, Phil clearly enjoys working with students and helping them to achieve their full potential. I could not help but notice at gatherings such as the new qualifiers reception and the "current issues" paper presented by recent qualifiers how Phil was there to support his former students and how delighted they were to chat to him. Indeed, Phil has been a great supporter of Society events, particularly in the last couple of years and I hope we will see even more of him in his retirement!

So I am delighted on behalf of the Society to make this presentation to Phil to mark his retirement from leading the BAFS programme and to thank him for all he has done (so far – I'm sure he isn't finished yet!) for the actuarial profession in Ireland.

Professor Philip Boland's retirement from UCD

L to R; Professor Philip Boland accepting a presentation from Philip Shier, President, Society of Actuaries in Ireland

L to R; Tom Collins, Colm Fagan, Piers Segrave-Daly, Philip Boland, Philip Shier, Pat Healy, Garret FitzGerald, Bob Willis and Emmanuel Buffet

L to R; John Gibson, Brian Duncan, Jimmy Joyce, Brendan Walsh, Colm Fagan, Adrian Daly, Pat Ryan, Michael Robinson & Paddy Maher

L to R; Peter Delany, David Kingston, Brian Woods, Michael Brennan, Bill Hannan, Chand Kohli, John White, Brian Farrell and Michael O'Mahony

Congratulations to members who qualified from the September 2007 exams. The Society's New Qualifiers' Reception, to recognise their success and to present FSAI parchments, took place on 21 February 2008 in Dublin Castle.

Peter Byrne	Joseph G. Byrne & Sons
Conor Crowley	Irish Life
Niamh Crowley	Irish Life
Dermot Flanagan	Hibernian Life and Pensions
David MacCurtain	Eagle Star Life Assurance
Ashley Mangan	
Ross Mitchell	Watson Wyatt (Ireland) Limited
Michelle Neary	Friends First
Grainne Newman	Mercer HR
Brian J. O'Malley	Irish Life
Brian O'Sullivan	Irish Life
Siobhan Quill	Strategic Actuarial Services
Billy Shannon	Hibernian Insurance
Michael Sharpe	Hibernian Insurance
Sarah Teehan	Transamerica International Reinsurance

Important Diary Date, SAI's inaugural Luncheon,

Thursday 24 April 2008 1.30 p.m. for 2.00 p.m., Westin Hotel, Cost: €65 per person

The Society's Annual Ball will be replaced by a Society Luncheon this year and will be for members only. This will be an ideal opportunity to socialise with members - your own colleagues, other members of the profession and perhaps even members you have never met. Further details to follow, but meanwhile, please diary this date and you can now reserve a place online:

http://www.actuaries.ie/Events%20and%20Papers/Upcoming%20Events/Upcoming_Events.htm

SAI Christmas Quiz

L to R: Quizmaster, Kevin Manning, with the winning team:
John Groarke, Adrienne McNamara, Patrick McDonald and Eoghan Barry.

As is the norm, the quizmaster insisted on the winning team singing before they were presented with their Christmas Hampers! All proceeds from the evening were donated to the Society of St. Vincent de Paul.

On the Move

Fellows:

Eamonn Phelan has moved from Hartford Life to join **Life Strategies**

Niall Dillon has joined **Anglo Irish Assurance Company** from Transamerica International Reinsurance

Paula Iencean has moved to **Eagle Star** from Canada Life

Eoin Murphy joined **The Hartford** from Ernst & Young

Declan Moore has moved from QBE in Sydney to **Tillinghast**

Aisling Kennedy has rejoined **Mercer HR**

Bryan Madden has moved from Canada Life to join **Standard Life**

Student:

James Bradley has moved from Irish Life to **AIG Life (Ireland)**

Society of Actuaries in Ireland
102 Pembroke Road, Dublin 4. Telephone: +353 1 660 3064 Fax: +353 1 660 3074 E-mail: info@actuaries.ie Web site: www.actuaries.ie