Newsletter
May 2008
The Society of Actuaries in Ireland

New Qualifiers' Reception

Philip Shier, SAI President, with new qualifiers at the Society's New Qualifiers' Reception in Dublin Castle on Thursday 21st February 2008.

Back row left to right: Siobhan Quill, Michael Sharpe, Dermot Flanagan, Brian O'Malley, Philip Shier (SAI President), Sarah Teehan, David MacCurtain, Peter Byrne and Grainne Newman.
Front row left to right: Ross Mitchell, Michelle Neary, Niamh Crowley and Conor Crowley (absent from photo: Ashley Mangan and Billy Shannon)

The President, Philip Shier, warmly welcomed the new qualifiers together with their families and guests as well as representatives from UCD and DCU and Council Members of the Society. While congratulating the new qualifiers on their great achievement, he warned them that this was just the beginning! The President mentioned that he was aware that most of them would be attending the Society's Professionalism Course the following week, giving him the opportunity to meet them again on that occasion.

As part of the Professionalism Course, he pointed out that there would be a session on the Society's Continuing Professional Development Scheme, outlining the need to attend Society meetings and an incentive also to join Society committees and working parties to fulfil CPD requirements. However, he pointed out that apart from the fact that CPD ensures that members keep up to date with professional issues, it is also a great opportunity, especially for new qualifiers, to do some networking and to help them in developing their careers.

Finally, he congratulated them again and hoped they were enjoying their success and wished them well in their future careers.

Contents:

Pricing and Risk Capital in

Ged Hosty of In Retirement Services and Colin Murray of Watson Wyatt gave a presentation to the Society of Actuaries in Ireland on March 27th 2008 entitled “Pricing and Risk Capital in the Equity Release Market”. This talk was based on their paper which was presented to the Institute of Actuaries in October 2007 and is available on the Institute’s website.

Background

Ged opened the talk with some background on the UK equity release market. The talk focussed on the UK equity release market as this market is one of the more mature markets in Europe. Over the last number of years while equity release sales have levelled off in the UK, margins have become tighter and it is increasingly difficult for providers to reach target returns on capital and this is deterring new entrants. The presentation showed the trend in the difference between the rate offered to equity release customers and a 20 year swap rate over a period of 8 years. The late 1990’s showed a margin of the order of 2.5%; this margin has decreased steadily to just less than 1% today. The recent "credit crunch" has exacerbated this.

There has been a significant shift in the market for equity release in the UK since 2003. Ged pointed out that while you would expect increased guarantees to lead to an increase in price, competitive pressures have actually led to margins falling. The squeeze on margins is putting unnecessary pressure on product providers. Ged posed the question “Has the squeeze on margins pushed providers too far?”.

The remainder of the presentation focussed on the following key areas:

- Investigating a suitable "average" pricing basis for this product.
- Determining a methodology for pricing this product.
- Estimating the level of profitability of these products in the market.

The aim of the presentation was to assist providers in the market (whether they be banks, reinsurers, life insurers or mortgage providers) in assessing their own risk and returns in the marketplace both now and in the future.

Assumptions

Colin explained the assumptions used and the validity of these assumptions. Some of the key or ‘interesting risks’ covered were Mortality, move to Long Term Care (LTC), Early Redemptions and House Price Inflation (HPI).

Mortality: Given that the market is still young, there was little past experience to use so rather than reinventing the wheel, CMI data was used. Colin and Ged found that the mortality for equity release was heavily dependent on factors such as sales channel, marketing and product features. For example, broker channels experienced lighter mortality than direct sales channels. They chose the latest mortality tables produced by the CMI with an early selection adjustment (65%/85% of standard tables in the first two years). They felt that there was no real incentive to select against providers with this type of product as, on death, the provider gives back the loan plus accrued interest. Mortality was also adjusted for social class, using property value as an indication of social class. Finally, they used p-spline ac improvement factors produced by the CMI to project future improvements in mortality.

Move to LTC: For most product providers, a move to LTC triggers a repayment of the mortgage plus the accrued interest. Significant work was carried out on trying to determine “move to LTC rates” as part of the last Equity Release Working Party report. The report suggested that the move to LTC rates resulted in some small addition to the mortality rates which results in levelling up male and female mortality. Rates of movement to LTC were found to vary significantly between countries. Subsequent to the paper being published in fact, an Australian study has shown rates of movement to LTC in Australia to be much higher than in the UK which was thought to be attributable to the fact that Australians have good state sponsored LTC.

Early Redemptions: These are a big threat to lifetime mortgages, especially fixed rate mortgages, because if the early redemption penalties are not ‘marked to market’, it could lead to a one way bet against the provider. Early in the life of the product, redemptions are mainly going to be as a result of brokers moving mortgages or people moving to avail of better rates. There was again very little past experience to review in this area. Where experience existed, it was based on very inflexible products which may have led to over stating the experience. The assumed rates were, 1%-2% in years 1 to 2, rising to 2.5% in years 4-5, reducing to 0.5% by year 11, and to 0.25% by year 20. As the term increases and the loan is rolled up with interest, the total is likely to become too big for someone to pay back voluntarily, which may lead to a reduction in the redemptions observed.

Modelling "House Price Inflation (HPI)": The presenters put a lot of time and effort into determining this assumption. They initially looked at OECD data along with Irish and regional UK data. They used a de-smoothing process, as some HPI indices are unintentionally smoothed through standardised indices and valuer estimations . In recent turbulent markets, there has been a reluctance to see house prices falling. Thus, the valuer indices tend to disguise house price falls to some extent as they do not take account of offers such as free kitchen, one year’s free mortgage and so on. The presenters used an existing de-smoothing process and tried to strip out the volatility and smooth the results, subject to the warning that they are not predicting house prices!

The presentation highlighted that for some countries having house price inflation in excess of consumer price

the Equity Release Market

inflation is not necessarily a given result. For example, in Switzerland, house prices have hardly grown in real terms over the last 30 years. In a number of countries in the OECD data, there are strong incentives for people to rent leading to large rental populations which results in the balance of political power shifting to the renters. As a result, HPI is heavily influenced by government policy. The assumption for HPI was derived based on a minimum of CPI and a maximum of RPI plus economic growth, resulting in an assumption of 4.5%. Smoothed volatility was 5% and de-smoothed volatility was 11%. The presenters highlighted that it was difficult to know how much de-smoothing was appropriate. The final assumption determined for volatility was 8% plus 3% for binary risk which is the risk, that individual houses under-perform.

Cost of Funds

Colin highlighted that the size of the portfolio may not be a true reflection of the number of lives as, in the early years, there may be no or very low redemptions. A lot of providers take out a type of redemption insurance (tramline insurance) to protect them from variations in their redemption profile. The tramline insurance allows the provider to swap their redemption payments for an agreed smooth redemption profile. The presenters looked at the cost of funds based on a redemption profile with a DMT (discounted mean team) of 15 years and based the cost on the average swap rate margin over LIBOR, which was assumed to be in the region of 40 bps plus 25 bps for tramline insurance (probably on the low side given current market conditions) plus the providers cost for hedging residual risks and no negative equity guarantee. They assumed a cost of capital of the order of 2%.

Expenses

Distribution and marketing expenses were assumed to be 3.5% payable in advance. This was found to be typical of UK providers where expenses such as valuation costs are typically passed to the customer.

Cost of "No Negative Equity Guarantee (NNEG)"

NNEG is where the mortgage plus rolled up interest exceeds the value of the house. If a person lives too long and interest builds up beyond the value of the house, the return is capped at the maximum value of the house.

The presenters looked at two approaches to pricing the NNEG:

- Quasi market consistent/risk neutral approach: This is how the presenters would envisage this risk being priced if there was a deep and liquid market in options. The presenters were not ruling out this method of pricing the NNEG; however, the lack of a deep and liquid market made it difficult to calibrate this approach. The presenters were aware of some prices available in the property derivatives market and they calibrated their model against these prices and extrapolated out for various different ages and durations.
- Real world approach: With the 'insurance pricing approach' they looked at probabilities, real world assumptions and the cost of capital similar to pricing catastrophe insurance.

Both approaches provided very different results.

The quasi market consistent approach, assuming a risk free rate of 4.75% p.a. and current rental yields of 3.3% p.a., forward HPI of 1.5% and volatility of 11% p.a. gave an option price for a male aged 65 of 18% of the initial mortgage, which when spread over the lifetime of the mortgage equated to 0.73% p.a. Looking at assumption sensitivities gave interesting results. The most sensitive assumption is the forward rate. If a 0% forward rate is used, it increases the option price to 29% thus pushing the cost over the life of the mortgage to over 1% p.a. Similarly, increasing volatility by 3% to 14% also pushed the cost over the lifetime of the mortgage to over 1% p.a.

Looking at the real world pricing approach gave substantial differences in results, assuming a log normal distribution and HPI of 4.5% p.a. and volatility of 11% p.a. Using the same example as above, the option price as a percentage of the initial mortgage was of the order of 2.5% using real world pricing. Colin highlighted that this range of pricing exists in the markets.

So the question is - which methodology gives the right answer? The presenters felt that, until a market exists in property derivatives, it will be difficult for the two prices to converge. Two schools of thought exist. It was suggested that perhaps the real price is somewhere in the middle.

In summary, Colin concluded that margins are getting tighter but there is little experience to go on. The market is getting more competitive but on what basis? A lot of the risks are still unknown and if the NNEG moves to a full market consistent basis, then virtually no profits will be made.

Many questions and comments from a diverse audience followed the talk, with a high level of participation and discussion. The slides from the event are available on the Society's website.

Anna Fitzgerald

Results:

Assumption	Rate
Average swap rate	5.10%
Funder's margin	0.40%
Tramline insurance	0.25%
Cost of solvency	0.07%
Cost of NNEG	0.12%*
Expenses	0.30%
Profit (?)	0.45%
Cost to borrower	6.70%

*0.12% for cost of NNEG on a real world basis; this could be magnified if the market consistent basis used.

Default Investment Strategies & Life-Styling

On February 26th 2008, Brendan Johnston, David Kavanagh, Dervla Tomlin and Brian Woods gave excellent presentations to a well attended evening meeting in the Radisson SAS Royal Hotel. The President of the Society, Philip Shier, opened the meeting by introducing the four speakers who presented their Paper on the subject of "Default Investment Strategies and Life-Styling".

Background

Dervla Tomlin began the presentation by summarising the background to the Paper. The purpose of the Paper is to provide views and ideas that actuaries might find useful when:

- designing a Default Investment Strategy (DIS);
- assessing the appropriateness of a particular DIS; or
- comparing DISs.

As the 'managed fund with life-styling' is the most common DIS available in the market the Paper also considers whether the inclusion of life-styling is appropriate for DISs and the value added by life-styling in DISs.

Dervla stressed that the Paper does not attempt to design the 'best' DIS, nor does it suggest one definitive approach to assessing the suitability of a DIS. Instead the group considered issues and developed views and ideas using three different approaches. Dervla also noted that the Paper does not examine the advantages of asset diversification as this issue has been addressed in other papers to the Society.

The Society of Actuaries provides guidance to actuaries on proposed DISs under Personal Retirement Savings Accounts (PRSAs). Dervla explained that the PRSA Actuary has a regulatory role in assessing the appropriateness of the PRSA DIS. Guidance on this issue is provided under 'ASP PRSA-4: PRSA Actuaries and Personal Retirement Savings Accounts Investment'.

Dervla explained that the intention of the Guidance is to reduce problems that can be encountered as a result of the financial inexperience of the contributor. However, the Guidance also states that it is important that the contributor is informed that the DIS is not intended to be free from risk or volatility. In addition, the PRSA Actuary must provide sufficient information to the contributor to ensure that they understand the main features of the DIS.

Dervla continued to explain the three approaches the group had used to compare DISs:

1. A long-term prospective view: This approach sets out a typical target, an unacceptable outcome and an acceptable level of the possibility of failure. Different strategies are then tested to see which provides the optimal solution.
2. The Value at Risk (VaR) approach: This approach is based on the assumption that the contributor takes the VaR approach to decisions regarding asset allocation.
3. The third approach is based on Modern-Finance-Theory.

How to Compare DISs

Dervla then handed over to Brendan Johnston who presented the next section on how to compare DISs using the long-term prospective view. Brendan first outlined what the aims of a DIS should be. He defined these as:

- to reduce the possibility of unacceptable outcomes; and
- to allow appropriate exposure to higher return assets.

Example 1:

Brendan's first example was that of a contributor with 30 years to retirement who is targeting a fund of 10 times salary at the end of the 30 year period. A log-normal distribution was used to simulate investment return and it was assumed that equities will outperform the risk free investment by a mean of 4% and a standard deviation of 15%. In addition, it was assumed that salary inflation exceeds the return on the risk free asset by 2% per annum.

Four DISs were compared using the above assumptions, and alternating contribution structures and investment scenarios. Under the first of the two contribution arrangements the contributor paid a fixed contribution of 24.17% of salary each year. Under the second, the contributor paid a contribution rate of 15% for the first 10 years, 25% for the next ten years and 40% for the last 10 years.

In addition, two investment strategies were used. Under the first the contributor used a DIS that moves to risk free investments over a ten year period prior to retirement. Under the second the contributor invested 100% in equities throughout the period to retirement.

These four strategies were then tested to determine which provided the lowest average cost over the contribution period and which gave the highest expected return. The cost was defined as the total contribution paid as a percentage of salary, giving the same weight to each year. The expected return was defined as the multiple of salary achieved at retirement under each of the strategies. For example, the first strategy tested was that of a fixed contribution of 24.17% of salary and 100% investment in equities throughout the period. This strategy had a cost of 7.25 times salary and an expected return of 10 times salary.

The next strategy tested was that of a fixed contribution of 24.17% of salary and an investment strategy which moves to risk free investments over the ten year period prior to retirement. This strategy had a cost of 7.25 (as the contribution remained fixed at 24.17% of salary) and an expected return of 8.5 times salary. So the strategy of switching led to the same cost but a lower return at retirement.

Default Investment Strategies & Life-Styling...contd

When the results of the next two strategies were added to the comparison, the overall results illustrated that that there is no uniquely correct strategy. Much of the outcome depends on how the contributor would value the possibility of upside excess returns against the downside of financial ruin.

Example 2

Brendan's next example compared two strategies. Both were based on the same constant contribution per annum. The investment strategy of the first being initially 100% equity investment with a gradual switch to risk free over the ten years to retirement. The second had a constant proportion of 70% invested in equities throughout. The results of this comparison showed that that there was no real distinction between the two strategies.

Example 3

Brendan's final example also compared two scenarios. For this example, the contributions were allowed to vary (as described in Example 1). The first of the investment strategies used invested 100% in equities and switched to the risk free rate over the ten years prior to retirement. The second investment strategy invested a constant proportion of 85% in equities throughout the period. The results of this comparison highlighted that there are substantially different outcomes produced using a late switching strategy and an average strategy if the investor adjusts contributions in light of ongoing experience. Time to retirement is an important factor for the investment strategy if the contributor is willing to act on changing investment conditions by changing their contributions.

Brendan concluded by saying that the results of the tests show that DISs that make switches to risk free assets prior to retirement are superior if the contributor is prepared to change their contributions as experience changes. Brendan also mentioned that the variable that was not measured in any of the tests performed was the contributor's emotional position throughout the period and that this may be an implicit driver for design. He gave the example of three clients who had achieved a fund of 10 times salary at retirement. However, the emotional response of the three would be quite different at retirement if a year before retirement they had an expected return at retirement of 15, 10 and 5 times salary respectively.

A Value at Risk Approach to Life-Styling

The third presentation, given by Brian Woods, approached the topic using the VaR methodology. Brian started by explaining that most DISs incorporate a swift switch of assets from equities to bonds as the individual approaches retirement. An appropriate investment strategy should take account of numerous factors that effect the individual such as their attitude to risk, existence of other assets/income, whether they will invest in an annuity or ARF at retirement, the age at which they wish to retire, etc. Brian noted the importance of individuals regularly reviewing their contributions and strategy as their circumstances change.

Brian continued to outline how the VaR approach could be applied to DISs. He assumed that an individual is prepared to take a 10% chance that the outcome will not be Y% worse than cash in pursuit of an average R% risk premium/reward. Next Brian's focus turned to Y and what it might be for a typical contributor and how it might change with time.

Brian considered two scenarios in his analysis. The first assumed a constant Y and the second had Y varying with $\sqrt{t}$.

Brian concluded that a DIS which incorporates life-styling and intends to finish 100% in cash/bonds when the individual retires has implicitly chosen the retirement age for the individual at the outset. By defining the retirement age at the outset, this establishes the time frame for devising an investment strategy, which aims to maximised the fund value at retirement without taking unnecessary risks.

A Modern-Finance-Theory Approach to Designing a Default Investment Strategy

The final approach used was Modern Finance Theory and this was presented by David Kavanagh. Instead of exploring a small number of discrete events David's approach applies a continuous utility function to the entire range of possible outcomes. For the purpose of his examples, David assumed that all assets fall into one of two classes, namely risk-free assets which achieve a return of zero in any period and risky assets, which have an uncertain return. All risky assets are assumed to have the same return.

After completing a number of simulations, David concluded that it is possible to determine the optimal investment strategy for a pension plan given enough parameters. However, the strategy is very sensitive to the parameters used and it is not feasible to determine these parameters to the required degree of accuracy.

He also described how, as a contributor approaches retirement, their pension assets make up an increasing proportion of their total assets. They then become less willing to take risks with their pension fund and adopt a more conservative investment strategy.

The best investment strategy for a contributor will take into account both his risk appetite and also the risks associated with each asset. However, it is not possible at present to establish with certainty what the expectations of a typical contributor are. Consequently, it is not possible to design an investment strategy that is consistent with satisfying expectations.

Default Investment Strategies & Life-Styling...contd

David finished his presentation by stating that the current focus in designing DISs needs to change from trying to shape the DIS according to unknown expectations to influencing the expectations of the contributor according to the known DIS. Hence, the actuary should ensure that the workings of and risks associated with a particular DIS are clearly communicated to and understood by the contributor. A situation where the contributor takes out a DIS and thinks that there is no need to worry about it again until retirement should be avoided.

Conclusions & Recommendations

At the end of the presentation Dervla highlighted the key points and went through the recommendations of the Paper. Three different frameworks were used to assess DISs. Dervla explained that similar conclusions could be drawn from the three separate approaches to the problem.

- The broad shape of 'managed fund with life-styling' DISs can be justified as suitable based on plausible assumptions about the investment markets and the contributor;
- It is not possible to 'accurately' set parameters for the typical contributor (e.g. his/her term, attitude to risk, utility, financial circumstances). As a result it is not possible to accurately determine the ideal DIS. Judgement must therefore be used when setting the assumptions underlying a given DIS;
  - There is no guarantee that a contributor's expectations will be met:
  - a contributor's circumstances and attitude to risk may change and hence their expectations may change;
- there is only one set of actual investment outcomes. There is wide variability in the outcomes for a typical 'managed fund with life-styling';
- The extent of variability in potential returns is probably not appreciated by contributors.

Dervla then outlined the recommendations of the Paper:

- Actuaries should set an investment strategy which they believe to be reasonable to meet what the actuary believes are the expectations and objectives of a typical contributor;
- As the expectations of contributors are influenced by the communications they receive, descriptions of a DIS should:
  - explain the strategy and the working of the DIS, and
  - highlight its limitations and risks.
- As the extent of the potential variability in outcomes is probably not appreciated by clients and financial planners, this variability should be communicated to both;
- Contributors should be encouraged to regularly review contribution rates and investment strategy;
- Contributors approaching planned retirement age should be given the option to defer or accelerate switching.

A lively questions and answers session followed. Philip Shier thanked all the speakers for the informative presentation and closed the meeting by presenting each with a small memento from the Society of Actuaries. The Paper and the slides from the meeting are available on the Society's website.

Grainne Kelly

Private Equity Investment for Pension Funds

On 12th February 2008 John Hannon of Key Capital gave a presentation to the Society of Actuaries on Private Equity Investment for Pension Funds. John is a member of the Society's Finance and Investment Committee.

Private Equity Defined

John began the presentation with a brief description of Private Equity. The objective of Private Equity is to take control of unlisted companies and restructure the company with the aim of providing superior risk-adjusted returns over a long-term investment horizon (typically 4 to 6 years). The restructuring of the company involves establishing efficient capital structures, creating long-term operational investment strategies and recruiting world class management teams. John emphasised in particular the importance of the management team to the returns from Private Equity investment relative to other public asset classes.

The growth in Private Equity was emphasised by the proportion Private Equity makes up of "alternative assets". In the US in 2006 Private Equity made up 43% or $0.8 trillion of alternative assets with the remainder split between Real Estate (19%) and Hedge Funds (38%).

Private Equity Performance

John then examined Private Equity returns relative to other asset classes. He showed that over the past 10 years Private Equity has outperformed Public Equity in the UK, Europe and the US although he noted that there could be large exceptions. John also examined Private Equity returns

Private Equity Investment for Pension Funds...contd

relative to Commodity, Bond and Real Estate indices and showed that Private Equity had outperformed all of these asset classes over the period 1986 to 2006.

John suggested that part of the reason Private Equity has demonstrated an ability to outperform Public Equity is because Private Equity management teams are incentivised to target longer term returns whereas managers of public companies often focus on short term returns due to pressure from shareholders to keep the share price up. He also observed that Private Equity has performed consistently well through multiple economic cycles and through global events such as the dotcom crash and the gulf war.

The importance of manager selection was highlighted by observing the large spreads in performance between top quartile managers over bottom quartile managers for Private Equity funds (16.5%) relative to US Small Cap Public Equity (4.89%), US Large Cap Public Equity (2.10%) and Global Bonds (1.32%).

John showed how a portfolio including Private Equity could improve the risk-reward profile when compared to a conventional portfolio that just includes equities and bonds. This is because of a low correlation between Private Equity and equities or bonds.

Investing in Private Equity

Investors may only be able to invest through Private Equity Funds and the smallest investors would only be able to invest through Private Equity Fund of Funds.

Both the Private Equity Fund of Funds and the Private Equity Funds will take charges from the returns they pass on so that the smallest investors will be hit by two extra layers of charges when compared to the largest investors. However the smallest investors will benefit from the expertise of the fund managers.

Private Equity funds are generally structured as general partnerships for taxation reasons with investors committing funds as limited partners and the fund manager as the general partner for the partnership. The manager typically draws down funds during the investment period of 4 to 5 years. This is one of the possible advantages of Private Equity investment and allows investment to be spread over the economic cycle so that all of the funds are not being invested at the top of the cycle. There is typically a 4 to 6 year holding period with redemptions beginning to occur in years 3 to 5.

John recommended a 3-level approach to the Private Equity investment process to ensure that the whole market is surveyed before making manager and fund selections. The first stage is the screening process, followed by a diligence process which includes the commercial and legal due diligence and negotiation of terms and finally the management stage, where performance is monitored on an ongoing basis.

Private Equity Risks

The presentation also focused on some of the risks of Private Equity investment including:

- Passive investment – the investor has no control over the investment strategy.
- Investments in companies that are highly leveraged.
- Illiquidity and long term nature of investments.
- Distributions in kind – investors may get shares instead of dividends.
- Restrictions on disposals/transfers.
- Failure to meet capital calls can result in penalties.
- Reliance on key individuals.

Some of these are usually described in detail in each Limited Partnership Agreement which emphasises the importance of carrying out legal due diligence.

European Private Equity Investors

The final part of the presentation focused on the extent of Private Equity investment by pension funds. Although US pension funds are significant investors in Private Equity, European pension funds and Irish pension funds in particular are lagging behind. European pension funds made up 23% of all European Private Equity Investors over the period 2002 to 2006.

John focused on the National Pension Reserve Fund's (NPRF) Private Equity portfolio. The NPRF has been making significant efforts to increase its Private Equity investment and has dedicated specific resources to manage its program targeting an allocation of 9% to Private Equity investment by 2009.

Conclusions

John finished the presentation with his main conclusions:

- As an asset class Private Equity allows exposure to non-quoted companies and helps diversification. Fund managers have an active role in company management.
- Private Equity has performed well historically and through economic cycles.
- US pension funds are significant investors in Private Equity and Irish pension funds can benefit from exploring increased allocation to the Private Equity asset class with the NPRF leading the way.

A lively discussion followed the presentation where the importance of a strong management team to returns, performance fees, Private Equity as an asset class versus hedge funds and geared equity and the suitability of Private Equity investments for life offices were discussed.

The slides from the presentation are available on the Society's website.

Eamon Loughnane

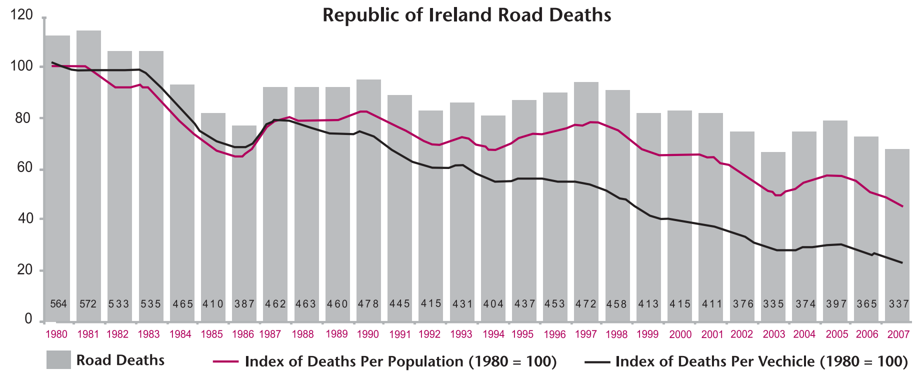
Irish Road Deaths, an update

In the October 2006 Newsletter, we examined the historic trends in Ireland's road death statistics and looked at the comparative experience versus our European neighbours. In this update, we examine how the experience has developed since that time.

One of the major road safety initiatives since the last analysis was the introduction of random breath testing in August 2006. We will examine what effect this has had on road fatalities. Finally we will look briefly at how motor insurance premiums have moved in the last ten years.

Recent Trends in Road Deaths

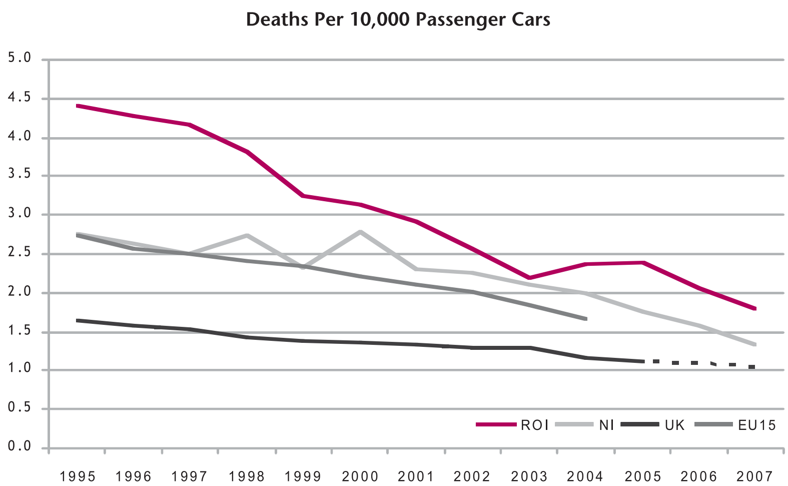
Road deaths fell to their lowest point in over 40 years in 2003, following the introduction of penalty points in late 2002. However, at the time of writing the 2006 article, we had seen road deaths on the rise for two successive years.



The upward trend in 2004/2005 persisted even when we allowed for the very strong growth in both population and car ownership. The years 2006 and 2007 have seen a return to an improving trend in fatalities. In fact, the rate of deaths per car in 2007 was almost 77% lower than in 1980 – there were 337 deaths in 2007 compared with the 1,460 deaths that would have occurred if the 1980 rate had persisted - and almost 18% below the previous record-low level of 2003. In the period 2003 - 2007, 370 lives were saved on Irish roads, based on a comparison with the 2002 pre-penalty points death rate.

Comparisons versus European Experience

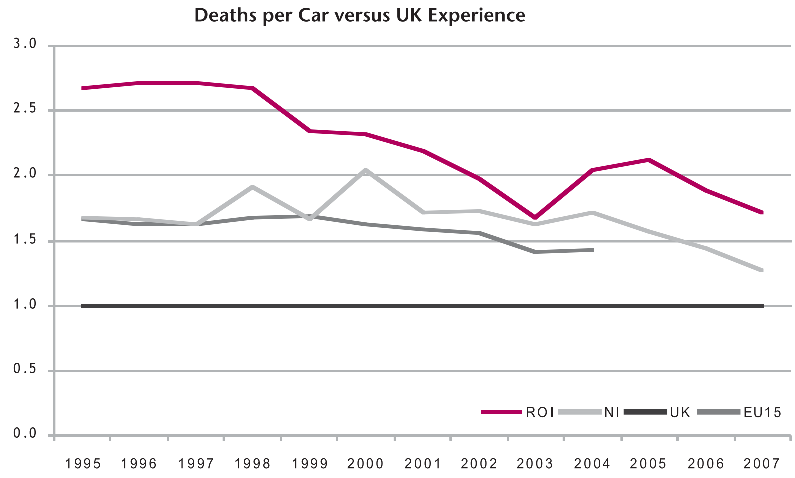
By 2003, road deaths rates in the Republic of Ireland (ROI) had almost converged on Northern Ireland (NI) rates, and were rapidly approaching the average levels for the old "EU 15". The UK was on several measures the best performer in the EU, and was significantly ahead of Ireland in road safety.



In the following two years, the NI fatality rate continued to improve every year and by 2007 almost matched the total UK rate. On the other hand, the ROI death rate rose for two years, wiping out recent gains relative to NI. Since 2005, both ROI and NI death rates have moved in parallel.

Irish Road Deaths, an update...contd

By 2007 the ROI death rate was still about 70% above the UK rate, almost exactly where it had been four years earlier, indicating no overall progress versus EU best practice. The number of lives that would have been saved in 2007, had the ROI matched UK experience, would be 140, almost 12 per month, or 1 every 2½ days.



There are two risk factors for road deaths which are not allowed for in the above discussion. The first is the fact that Irish drivers typically drive more per year than their UK counterparts. This can be factored in by looking at fatality rates per vehicle-km. Secondly the make-up of the Irish road network is very different, having a much lower proportion of motorways and dual carriageways, and a much higher proportion of single carriageway roads.

Detailed data on these factors is not readily publicly available. However, EuroRAP (the European Roads Assessment Programme), an international not-for-profit organisation, has produced a risk map of Irish roads, north and south, which allows for these factors. The report is available on the Road Safety Authority's website.[1] Three of its findings are:

- UK fatal collision rates (per billion vehicle-km) are 1.9 on motorways, 5.0 on dual carriageways, and 12.4 on single carriageway roads.
- The average fatal collision rates per vehicle-km on Ireland's motorways show that they are about as safe as those in Britain.
- On single and dual carriageways, fatal collision rates per vehicle-km in Ireland and Britain are similar.

Based on this, it is possible to infer that a significant cause of the higher death rates in Ireland is the quality of the road network. Such results underpin the importance of ongoing improvements in the Irish road infrastructure.

What Effect has the Introduction of Random Breath Testing Had?

While advances in the road network may be necessary to maintain an ongoing trend of improvements, step-changes in road deaths can also be made by other means.

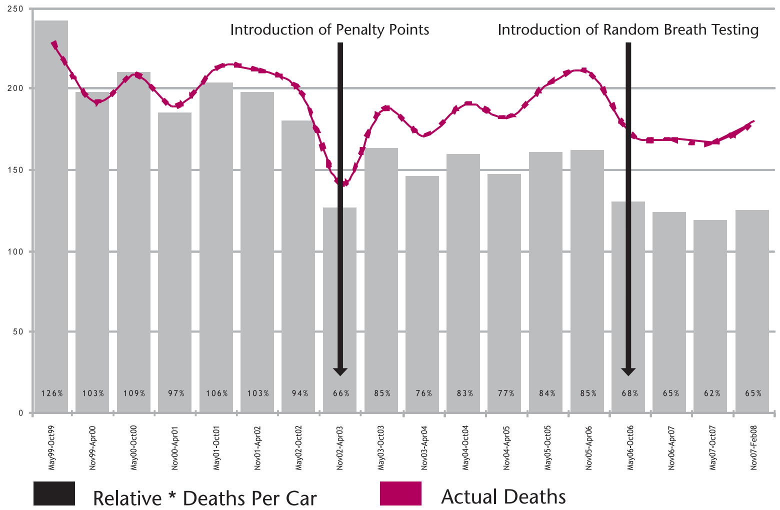
We saw in the 2006 article that penalty points contributed to a sharp reduction in road deaths in late 2002 and early 2003, roughly half of which was sustained thereafter. Random breath testing was introduced in August 2006 and has also contributed to a significant reduction in road deaths. In this case, the improvement appears to have been sustained for almost two full years.

[1] http://www.nra.ie/Publications/DownloadableDocumentation/RoadSafety/file,3630,en.PDF

Irish Road Deaths, an update...contd

The graph below shows the rate of deaths per car relative to the experience in the two years immediately prior to the introduction of penalty points in late 2002. Road deaths during the last two years have returned to, and been maintained at, the low level first seen in the immediate aftermath of the introduction of penalty points. There is some early indication of a reversal of this trend in early 2008, but it is too soon to know if this is just a statistical fluctuation.

Effect of Penalty Points and Random Breeath Testing



Relative to the average in the 2 years leading up to introduction of Penalty Points

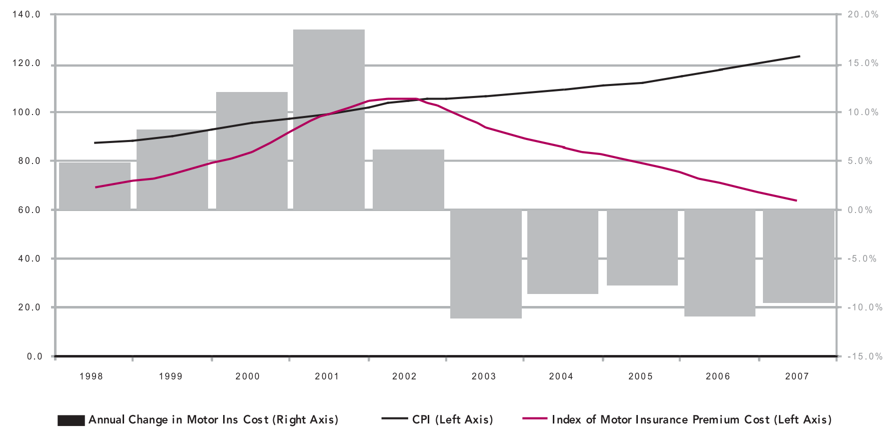
Motor Insurance Premiums

There have been many positive changes in the motor insurance environment in recent years. The launch of the Personal Injuries Assessment Board and the crackdown on insurance fraud were two major factors behind the sea-change in insurance claims costs.

While by no means the main factor driving down insurance costs, advances in road safety have undoubtedly contributed to some degree. In this context, it is worth looking briefly at just how much progress has been made.

The Central Statistics Office publishes information on the sub-indices of the consumer price index (CPI) each month. One of the components of the "Miscellaneous Goods and Services" sub-index is motor car insurance.

Motor Insurance Premium Cost: CSO Indices Based at 100 Mid December 2001



In the years leading up to December 2002, motor insurance inflation continually outstripped consumer price inflation. There has been a dramatic reversal of this trend since 2002. By December 2007 motor insurance premiums had reduced by almost 40% since December 2002, while the CPI had increased by almost 18%. This implies a real reduction of almost 50% in motor insurance premiums over the five year period!

Declan Lavelle

Data Sources:
ROI Statistics www.garda.ie, www.environ.ie, www.cso.ie
NI Statistics www.psni.police.uk, www.nisra.gov.uk, www.drdni.gov.uk
EU Statistics http://w3.unece.org/

What it takes to be a Professional

On 6th March 2008, I headed off to the Marriott Hotel, Druids Glen, Wicklow, for a Professionalism Course run by the Society of Actuaries in Ireland for newly-qualified actuaries. I made good time on the road, getting to the hotel just after 8.15a.m.. People were just starting to arrive and breakfast was arranged for us in the restaurant at the hotel. I recognised a few of the faces there from over the years.

A few statistics on the attendance – there were 40 newly-qualified actuaries on the course, split equally between boys and girls. There were 26 with a life background, 10 with pensions, 3 general insurance and 1 investment. There are now 475 qualified actuaries in Ireland and a further 320 students. In fact, did you know that Ireland has the highest actuary-per-head-of–population ratio in the world?!

Maria Quinlan from Watson Wyatt got things underway at 9.45a.m. on the dot. Indeed, a characteristic of the next two days was the rigidness with which we stuck to the schedule.

At 10.30a.m., we did some professionalism case studies. We considered what gifts/events we, as actuaries and professionals, could consider accepting in various scenarios, e.g. would it be appropriate for a pensions scheme actuary negotiating the funding rate for a scheme to accept a weekend away to a holiday home in Killarney from the employer of the company? I couldn't help reflecting on poor old Bertie and thinking that he could have benefited if politicians had such a course back in his day!

In the next part of the course, we discussed Professional Conduct Standards or PCS and there was a 15 question multi-choice quiz examining the content of the document. To my shame, I had not read PCS before 8.15a.m. that morning. However I felt a lot better when I heard that I was not the only one! Apparently, quite a large percentage of students have not read it (even though it applies to students as well as to qualified actuaries). The PCS is an 11 page document and covers such topics as conflicts of interest, confidentiality, breaches of standards and discipline, etc. It was only after reading it that I realised how relevant the material is to my day-to-day work. I think that it is something that employers and the Society should put a higher emphasis on reading.

Lunch was at 12.45p.m. and after lunch we were split up into two groups. Approximately half of the attendees went to a general insurance module presented by Jimmy Doyle, Imagine International Reinsurance Co., and the remainder, including me, went to a pensions module presented by Keith Burns from Watson Wyatt. Keith went through the PCS again briefly and then we went on to consider some case studies specific to the pensions actuary. Keith proved himself to be as sharp in the lecture hall as on the soccer pitch (I used to play soccer with the Watson Wyatt guys in Ringsend). After coffee Linda Kerrigan from Canada Life hosted a life assurance module while Jimmy hosted another general insurance module.

At 4.15p.m., we again congregated as a group and a questions and answers session was hosted by Philip Shier, President of the Society, as well as the speakers, Keith, Jimmy and Yvonne. This was the chance for the newly-qualified actuaries present to raise any concerns and issues, which would be passed on to Council. A variety of issues were raised with the panel and I found this to be one of the more interesting and relevant parts of the course.

The afternoon session finished up at 5.15p.m. and we congregated back at the bar at 7.30p.m. before going to dinner. The tables had place names which was good as it meant that friends were split up and therefore it was a good opportunity to mix with new people. Philip gave a speech congratulating us on qualifying and proved himself to be bit of a Take That fan by quoting lines from some of their songs during his speech. After dinner, we retired to the bar. New qualifiers told hair-raising tales of the number of exams they sat, safe in the knowledge that this part of their career was behind them (there were three among those present who had not failed one exam en route!). It was a good time to catch up with old friends and make new ones. I think it is fair to say that a good night was had by all.

The second day started at 9.30a.m. There were two modules in the morning. Mike Claffey of Life Strategies hosted the two life assurance sessions which I attended and Keith Burns did the two pensions modules. I confess that I was not in the mood for a life assurance lecture first thing in the morning but Mike's enthusiasm was infectious and I soon tuned into the session.

In the afternoon, Yvonne took us through the structure of the profession, at home and abroad, and then onto the work of the Society in Ireland, the various committees and sub-committees and the disciplinary scheme. We then split up into groups and each group discussed a current challenge facing the profession. Themes ranged from peer review to the definition of the *public interest* to the single biggest threat facing the profession.

Yvonne finished off the day by talking us through our CPD obligations and how we can satisfy them. That brought us to 5p.m. and finally, Maria and Yvonne presented everyone with a certificate for attending the course.

I bid farewell to my compatriots and hit the road after what were a very enjoyable two days. What I most enjoyed about it was not the content of the course, which was nevertheless very informative and educational, but the opportunity it gave me to meet other newly-qualified actuaries from other companies in an informal setting (while the Society presentation at Dublin Castle was good, I felt that it did not provide much opportunity to mix with other actuaries because partners and family were present). It was nice to be pampered in a good hotel for a couple of days, which put a kind of closure to the whole exam period. It was also good to meet Yvonne and Mary - though I had corresponded with them before, we had never had the opportunity to meet.

Finally, on behalf of all those present, I would like to thank Mary, Maria, Yvonne, Keith, Jimmy, Linda, Mike and Philip for all the work they put into the course. They tell me that we need to attend a professionalism course every ten years – I am already looking forward to the next one.

Michael Sharpe, Hibernian

Is this a first for the actuarial profession - a father and 3 sons as qualified actuaries?

John Byrne, Joseph G. Byrne, Peter Byrne and Joseph V. Byrne. Joseph G. Byrne was one of the 17 founder members of the Society of Actuaries in Ireland. Peter qualified from the December 2007 exams.

GOLF

Piers Segrave-Daly Matchplay Competition

The matchplay competition has now commenced. There are new rules this year to ensure that the competition is run off before Captain's Day. We had a great number of entrants this year. Best of luck to all 30 players!!

Insurance vs Pensions Actuaries "Ryder Cup"

Venue: Rathsallagh Golf Club, Dunlavin, Co Wicklow
Date: Thursday 26th June 2008 from 2.30pm
Format: Fourball matchplay
Cost: €90 including dinner

The competition between the finest golfers in Europe and the United States is about to be relegated to the second most eagerly awaited event in the golfing calendar. The friendly rivalry between Insurance and Pensions actuaries is about to be tested, with boasting rights up for grabs. An afternoon of fourball matchplay will test whether those client "meetings" on the golf course have paid off.

As this is the first time we have tried this event, we really need the support of all golfing actuaries. If you are unsure which group you belong to, we can choose for you! No handicap is too large or too small.

Captain's Day

Venue: Killeen Golf Club, Kill, Co Kildare
Format: Singles Stableford
Date: Thursday 28th August 2008 from 1.00pm
Cost: €110 including dinner

If you wish to enter for the Insurance v Pensions Actuaries competition and/or Captain's Day, please contact the Society or book online via the Society's website. The updated matchplay draw is also on the website.

On the Move

Fellows:

Tracy Gilbert has joined Partner Re.

Students

Michael Liston has moved from Hewitt Associates to Coyle Hamilton Willis

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