Longevity 7: Seventh International Longevity Risk and Capital Markets Solutions Conference

Thursday 8 and Friday 9 September 2011
Goethe University Frankfurt

Hosted by the House of Finance, Goethe University, and the Pensions Institute

Conference Summary

The International Longevity Risk and Capital Markets Solutions Conference is the major annual international conference bringing together leading international industry and academic minds as well as policy makers to meet and discuss not only the assessment of longevity risk, but also the market and government developments and responses needed by pension funds, insurance companies and others to manage this risk.

The Seventh International Longevity Risk and Capital Markets Solutions Conference (Longevity 7) was held on 8 and 9 September 2011 in Frankfurt. The conference followed the highly successful events over the last six years in London, Chicago, Taipei, Amsterdam, New York and Sydney. The key theme of Longevity 7 was how to make longevity an accessible asset class for investors. The conference attracted 160 participants from 20 countries across all continents.

David Blake (Pensions Institute) opened the conference with a review of developments over the last year which included: the issue of the Swiss Re Kortis Longevity Bond in December 2010, the first buy-in deal outside UK also in December 2010 between the Dutch food manufacturer Hero and the Dutch insurer Aegon, the world's first longevity swap for non-pensioners in February 2011 between J. P. Morgan and the Pall (UK) pension fund, the first buy-in deal in the US in May 2011 between Hickory Springs Manufacturing Company and Prudential Retirement, the first international longevity reinsurance transaction in June 2011 between Rothesay Life (UK) and Prudential Retirement (US), and the first life book reinsurance swap since the Global Financial Crisis between Atlanticlux and institutional investors in June 2011.

There were seven plenary sessions with nine international plenary speakers and twelve workshop sessions with 40 academic papers presented at the conference. At the opening plenary session, Prof. Jim Vaupel (Max Planck Institute for Demographic Research, Rostock) in a presentation entitled 'Longer and longer lives' pointed out that in recent decades remaining life expectancy at age 65 has been steadily rising—at about 4-5 hours per day in the countries doing best. As life expectancy increases, the healthy span of life is increasing at about the same pace. If improvements continue—and there is no sign of any looming limit—then most children born since the turn of the century in countries with high life expectancy will celebrate their 100th birthday. Clearly, this will have significant implications for global pension systems.

At the second plenary session, Ivan Zelenko (World Bank) described the World Bank's attempt to issue a longevity bond in Chile in 2009 in a talk entitled 'Longevity bonds and the financial stability of retirement systems'. Despite the fact that the proposed longevity bond not only hedged systematic longevity risk, but also provided a return over government bonds, Chilean annuity providers refused to buy the bond and so the bond failed to get launched. Their explanation for this was that they did not need to buy the bond because they knew the government —in effect younger tax payers— would be forced to bail them out if they became insolvent. This presents a huge global moral hazard for the World Bank which has introduced defined contribution pension plans throughout the developing world and mandates the purchase of a life annuity at retirement. If annuity providers in Chile, where the World Bank programme started in 1980, can game against the Chilean government in this way, imagine the potential for intergenerational conflict that this could lead to if annuity providers in the rest of the world took the same attitude and later became insolvent. We should not underestimate the potential for this happening, given that annuities are commoditized products that sell on the basis of price and that an annuity provider, to gain market share, has an incentive to underestimate longevity improvements and hence underprice the annuities they sell.

The third and fourth plenary sessions looked at role of reinsurers and the capital markets, respectively, in longevity risk transfers. Cord-Roland Rinke (Hannover Re) spoke on 'The role of reinsurers in longevity risk transfer' and argued that the risks in pension plans needed to be separated into their separate components (such as mortality risk, investment risk and regulatory risk) since this would help to structure the longevity hedge more effectively. Hendrik Rogge and Stefan Sachsenweger (Deutsche Börse) described recent developments in Deutsche Börse's Xpect longevity indices in 'Index-based longevity risk transfer to capital markets'. The new sociodemographic indices are based on the actual mortality

experience of pension funds and this will help to reduce the basis risk in the Xpect-based longevity swaps that are provided by TullettPrebon.

In the final plenary session on day 1 of the conference, Amy Kessler (Prudential Retirement) and Tim Gordon (Aon Hewitt) jointly presented "Crossing the pond: UK risk transfer techniques have reached the US". They recognized that the UK is the most vibrant market in the world for pension plan de-risking and this has been driven by regulation, accounting transparency and increasing risk awareness among pension plans that has led to dramatic changes in risk management and governance. Many of the same catalysts for change are arriving in the US today. As US pension plan sponsors face these changes, there is broad recognition that their current risk position is unsustainable. While affordability remains an issue, techniques used in the UK for reducing and transferring risk have crossed the pond. Pension buy-in transactions have just arrived and longevity insurance will follow, but demand will likely be modest until there is greater awareness of pension longevity risk in the US. Fortunately, this increased awareness is on its way as US longevity risk analysis tools and research are developed.

The afternoon of the first day of the conference was devoted to workshop sessions. These had an emphasis on mortality modelling and risk management. Longevity risk in households, pension plans, and annuities also featured. The second day of the conference also began with workshops, again with an emphasis on modelling. The pricing of longevity related securities was also covered. Previous conferences concentrated on the macro-longevity risk in large pension plans and annuity pools. In this conference, for the first time, a number of papers that were presented dealt with micro-longevity risk in the form of life settlements.

The conference ended with two plenary sessions and a panel concentrating on the main theme this year, namely how to turn longevity into an accessible asset class for investors. Guy D. Coughlan (Pacific Global Advisors) in "Longevity as the new asset class" argued that longevity is an asset class that delivers to investors a risk premium and diversification benefits, providing a very attractive risk-return profile. However its popularity among investors has not taken off a quickly as anticipated owing to well-known challenges in terms of its long duration characteristics, its (current) lack of liquidity and its complexity. Coughlan believed that the key to unlocking this market comes down to taking a fresh look at the entire longevity supply chain, from the defined benefit pension plans and annuity portfolios through insurers and reinsurers and the range of potential end investors. Jeff Mulholland (Société Générale) in the final plenary session called "Micro vs. macro longevity indices" argued that both the micro-longevity and macro-longevity markets provide investors with the opportunity to earn attractive risk-adjusted returns on a buy and hold basis. Currently, the micro-longevity market can be accessed via a market index (in a manner that shields investors from the legal and reputational risks of the cash life settlements market) that provides an unleveraged expected return in US dollars that is higher than that achievable through the macro-longevity market. Additionally, Mulholland believed that spreads may tighten in the micro-longevity market due to market forces, providing the opportunity for potential mark-to-market gains through time. Separately, the macro-longevity market currently provides lower unleveraged returns, and the amount of pension risk that needs to be hedged globally suggests that spreads may need to widen through time to clear the market. The opportunity to relative value trade these markets may prove attractive as liquidity develops over time.

The panel was chaired by Guy D. Coughlan (Pacific Global Advisors) and consisted of Axel Gerling (Commerzbank), Ivan Zelenko (World Bank), Terry Simmons (Ernst & Young), Jeff Mulholland (Société Générale), Klaus Mössle (Fidelity), and Marcus Mecklenburg (BVI). The panel considered whether longevity could be treated as a market like any other, with a supply side and a demand side and manufacturers in between. In this framework, longevity risk could be treated as a raw material that was sourced from pension plans and annuity providers: they constituted the supply side of the market. In the centre of the market sit (re)insurers and investment banks who can thought of as manufacturers whose job is to turn the raw materials into a product that investors on the demand side of the market wish to purchase. The panellists considered what was needed to make this 'product' attractive to investors. It was clear that longevity risk could be made attractive to investors if it could be packaged into a standardized form with a short maturity. But therein lies the fundamental problem with longevity risk as an asset class. It is by nature long term and we are left with the question: 'If investors only want the short end, who is left holding the tail risk?'

The conference was made possible with the support of the excellent range of international speakers as well as financial support from the sponsors: BVI Bundesverband Investment und Asset Management, Commerzbank Corporates & Markets, Deutsche Börse – Market Data & Analytics, Ernst & Young, Fidelity International, and Hannover Re. Support from the Pensions Institute at Cass Business School and the House of Finance, Goethe University in Frankfurt resulted in a highly efficient administration of the event.

Future Longevity conferences are scheduled for Toronto in 2012 and Beijing in 2013.

The *Journal of Risk and Insurance* will publish a Special Issue of selected papers presented at the conference. All papers will be subject to the journal review process.

Conference proceedings including presentation and papers are available from the web site

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