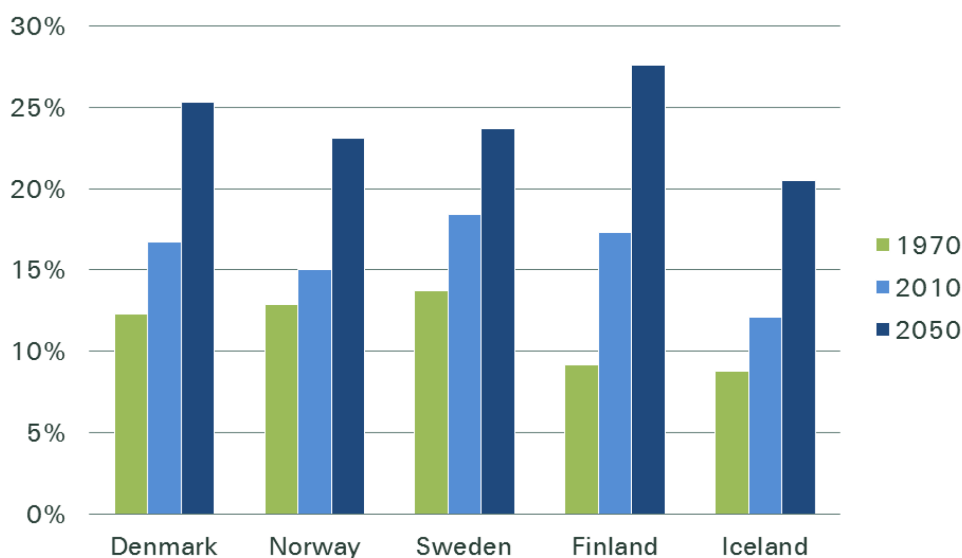
Working together to tackle longevity risk

Life insurers are embracing the debate associated with the financial challenges of people living longer and societies' declining fertility rates. The Organisation for Economic Cooperation and Development (OECD) estimates the ratio of people aged over 65 to the total population.

In below graph, these numbers are shown for the Nordic countries. In Denmark, as an example, the ratio of people aged over 65 was 12.3% in 1970, rose to 16.7% in 2010 and will reach a staggering 25.3% by 2050. The picture is the same for the other Nordic countries.



Longevity risk stems from the fact that improvements to medicine and lifestyles mean that there is a growing financial dependence from people living longer and spending a greater amount of time in retirement. This will create challenges for societies in funding retirement income provision – along with increases in healthcare requirements – in the face of a declining working population.

More and more European governments are starting to take action through raising retirement ages and looking at ways to transfer the burden of pension provision from the state to the individual. What's more, there are many examples of European employers who once provided defined-benefit pension schemes are now looking at ways they can transfer the risk of funding a retirement income to the individual through defined-contribution plans.

> People are living longer, governments raise retirement age and the individual is increasingly carrying the longevity risk.

These trends will, over time, increase the demand for private solutions such as annuities, which promise to pay an income for life in return for a lump-sum payment at the beginning of the contract. Life insurers will welcome the opportunity to offer these products to both individuals – through traditional annuities – and employers – through bulk annuities – as their expertise in providing longevity risk mitigation strategies becomes increasingly sought after.

The natural holders of longevity risk

Swiss Re's report, A short guide to longer lives: longevity funding issues and potential solutions, analyses what action can be taken to solve the financing of ageing societies and, in particular, highlights the role of the insurance industry in doing so. The report stresses how insurers and reinsurers are the 'natural holders of longevity risk' due to their ability to diversify their offering and offset risks. They can help governments, employers and individuals pass on some, or all, of their longevity risk to a third party with an appetite for such business.

> Due to diversification natural holders of longevity risk are insurance and reinsurance companies.

However, with a significant increase in demand, it is certain that the capacity to provide solutions such as annuities is finite. Insurers will only have a limited capacity for these risks and the introduction of Solvency II requirements will put additional strain on insurers' balance sheets.

Because longevity risk is systematic – i.e. it's affected by mortality improvements within a population as a whole, rather than one-off events – the scale and the diversification of a portfolio will only have a limited impact. There are some who argue that the new Solvency II regime is more focused on mortality 'one-off shock' scenarios than those inherent to longevity risk. The standard formula under Solvency II suggests risk capital is based on a permanent 20% reduction in mortality rates and this would seem over-cautious for an annuity book with a bias towards older individuals. Similarly, for books with more people in a much younger category, this might seem insufficient. The onus may be on the insurance industry to develop more sophisticated risk models that recognise this imbalance.

> Longevity risk is systematic and the mortality schock in Solvency II may seem too cautious.

Risk mitigation techniques

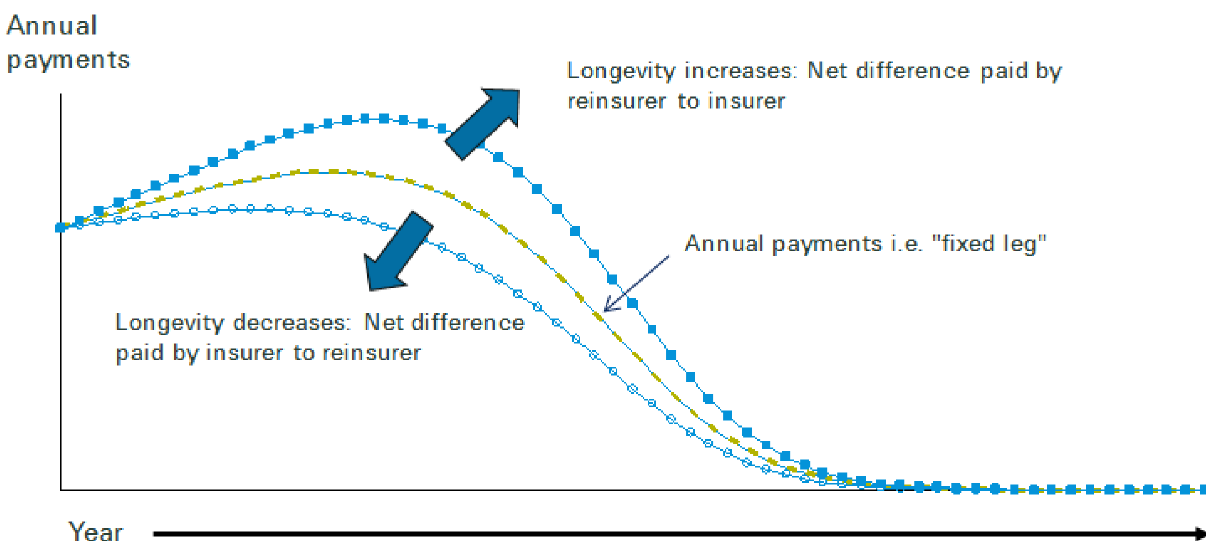
A key benefit of Solvency II is that it fully recognises risk mitigation techniques and many insurers are starting to review how they manage the longevity risk they currently hold – and intend to hold in the future. Reinsurers have offered solutions to support annuity providers for a long time and new initiatives to remove longevity risk specifically have been developed that are quickly gaining popularity.

A well-diversified reinsurer will have a combination of mortality risk, longevity risk and non-correlated insurance perils from numerous markets throughout the world. It's this type of diversification which enables a reinsurer's appetite for taking longevity risk and provides the backing required by life insurers looking to fulfil the increasing demand for annuities. Reinsurance solutions could enable annuity providers to free up capital and keep prices affordable for the end consumer over the medium term.

> Insurance companies having low diversification and being exposed to longevity can mitigate their risks and achieve benefits under Solvency II through reinsurance.

Rather than surrender substantial assets, many life insurers are now considering the 'pure' hedge of longevity reinsurance – sometimes referred to as an indemnity-based longevity swap.

Longevity reinsurance is similar in structure to a bulk annuity, but regular premiums are payable by the insurer over, say, a 60-year period instead of a single up-front payment. This enables the provider to maintain its assets and, in return, the reinsurer covers the annuity payments until the last annuitant dies. For more information, please see the diagram.



How a longevity reinsurance risk-transfer solution works

While there is substantial longevity capacity available from reinsurers, it is finite, it is dwarfed by accrued global exposures, and it will not be sufficient in the long term. As more and more longevity exposure holders seek to hedge their risks, current capacity will come under further stress. This increased pressure on capacity will push prices

upwards in the medium term unless a suitable alternative home for the risk can be found.

The capital markets offer potential capacity because they may be able to bring investors, who want to access longevity as an asset class, together with the holders of longevity exposures. For this to happen, a non-financial risk must be transformed into a financial asset; a process which has been adopted for insurance-linked security products such as catastrophe bonds.

> Reinsurers offer capacity, however, the overall capacity is finite, so it is desirable to develop solutions in the capital market.

The development of such a market depends on a reference price being established and sufficient demand would have to exist to provide significant longevity capacity. To this end, the Life and Longevity Market Association (LLMA) has been established to bring together insurers, reinsurers and banks with an interest in promoting a liquid traded market in longevity and mortality-related risk.

But this market will only develop over time. The challenge is to create sufficient momentum through the current infrastructure so that capital market capacity can be established by the time insurance capacity starts becoming scarce.

Working in partnership

It is only through governments, employers, the insurance industry and other interested parties working together that the issue of longevity funding will be solved.

Insurers and reinsurers must continue to work together in providing innovative solutions for addressing longevity risk, as well as ensuring that the capacity is available to cover the increasing demand for annuities. With more emphasis on the individual to provide for their retirement, this will be paramount in tackling the problems posed by ageing societies.

Solvency II will drive the need to develop more sophisticated risk models that recognise potential future longevity. Because reinsurance and other risk transfer measures will be recognised in the new regime, the active management of longevity risk is encouraged.

The insurance industry has a major role to play in creating investor demand and educating a potential capital market to ensure continued capacity for longevity risk.

Only by insurers working with reinsurers – and, in the wider world, with pension plans and governments – can the trend for increasing life expectancy be addressed financially; thereby remaining a positive aspect for society as a whole.

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