

Breathing life into longevity

Longer life may be seen as a blessing, but it comes at a cost and ensuring that your scheme has made sufficient provision for increasing life span is essential. Professor **David Blake** of Cass Business School explains some of the planning options

For the vast majority of individuals in the UK, retirement used to be a short period at the end of their working lives to relax and prepare for the inevitable endgame.

While the sentiment of the young seems to have changed over the past couple of generations from 'hope I die before I get old' to one of 'hope I'm old before I die', most people anticipate a long retirement of boundless leisure. The truth is somewhat more prosaic.

It may seem self-evident that retirement can only be enjoyed if there is sufficient income for the individual to exist beyond subsistence level, but there is more to this than simply making the pension go a bit further. There is a structural need in the pensions industry to find a new way of dealing with an old, yet increasingly influential enemy: longevity.

People are now living considerably longer than their predecessors and this is a global trend. Government policy has

attempted – without success to date – to encourage individuals to save more for their retirement and thereby reduce the burden on the state, which increasingly has to provide assistance to an ageing population without the means to support themselves in old age.

For instance, in the UK, a man of 65 might expect to live for a further 13 years in 1981, yet by 2004 this had increased to nearly 17, or by 1.1 per cent per annum.

By comparison, the situation of women has improved at a slightly lower rate, yet across the same time frame, a 65 year old woman's life expectancy increased from 17 years to 19.5.

The government is not the only provider of pensions that has had to tackle the issue of increased longevity. On an individual basis, consumers who retire and seek to purchase an annuity have seen rates fall over the past decade. While some of this decline in rates is due to economic and financial markets factors, the fact that people are living longer is influencing the

calculations of insurance companies that provide these products.

However, it is the sponsors of occupational defined benefit (DB) pension schemes in the private sector that have been hit most by increases in longevity. This is because members' benefits are not paid for a fixed duration, or up to the point that someone is expected to live, but like many annuities, is a commitment to pay them income for the rest of their lives.

But it is not increases in life expectancy per se that is the real problem. If the increases were perfectly predictable, then scheme sponsors could take this into account in their scheme funding plans. Rather it is uncertainty surrounding the increases in life expectancy that is the real problem – and this is what is meant by longevity risk. Longevity risk can result in unplanned shortfalls in the funding of a scheme which, apart from triggering certain regulatory measures, can lead to a painful redirection of a company's resources away from its investment

or dividend programme, for example. There are three primary elements to longevity risk:

- uncertainty surrounding the rate at which the whole population might experience improved life expectancy
- uncertainty over the differences between the improvements between different populations in different geographical locations
- scheme specific risk, so that for some reason the members of a particular plan experience different life expectancy from others in similar schemes.

RESPONSES TO RISK

There are a number of potential responses to longevity risk. One is to transfer the problem to scheme members by closing down the DB scheme and replacing it with a defined contribution (DC) scheme. Members now bear their own longevity risk at the point of retirement (or by age 75 at the latest) when they come to buy a life annuity. At each stage of the life of a DC scheme, the scheme sponsor

TAKING IT FURTHER: EXPLAINING SWAPS

In itself, a swap is not a complex concept – it is simply a legally binding agreement between two parties to exchange cashflows at predetermined times during the life of that contract. They are widely used by mortgage providers, insurance companies and banks to hedge against specific risks in their businesses.

For example, although increasing longevity can be disastrous to those organisations that provide an income in retirement – e.g., pension schemes and annuity providers – the same is not true for life assurers. As life assurance policies are paid on the death of a policyholder, if longevity improves, the provider has longer to make a profit from the initial premium.

Although there can be differences in contract, in a swap the pension scheme or annuity provider agrees to pay a fixed sum (based upon the sum – or principal – that the scheme is seeking to protect from erosion by a specific risk) at certain

times to the other party, usually an investment bank.

In return, at certain times, the scheme will receive a payment that is calculated upon a floating basis. This is the difference between the assumptions used when determining the scheme's payments, and the actual position of that risk.

So in an inflation swap, if inflation has increased against the initial position in the contract, the payments to the scheme may increase. In the case of a longevity swap, the fixed leg is based on projected mortality rates, while the floating leg is based on subsequently realised mortality rates. If realised mortality rates are lower than projected, the swap involves a net payment to the buyer (i.e., the pension scheme) and, if the swap has been appropriately designed, this will be approximately sufficient to compensate the pension scheme for the additional pension payments it has to make on account of the mortality of its members being lower than anticipated.



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GOVERNANCE CLINIC: LONGEVITY RISK

will know exactly what the potential liabilities are and these will simply equal the employer's contribution multiplied by the number of members.

However, this does nothing to resolve potential funding issues in a closed scheme, so some schemes – and increasing numbers have sought to do this in the past year – are approaching an insurance company to undertake a bulk buyout of members' benefits.

Since 2003, any scheme looking to buy out benefits must do so on a fully funded basis, meaning that all the members' future benefits must be secured – including any indexing or uplifts – as if the scheme had not ceased to exist. This is a permanent and one-way arrangement that secures benefits and removes any future liabilities from the employer. Of course, it doesn't come cheap, and despite competition increasing with the arrival of new players such as Paternoster and Pensions Corporation, costs won't drop significantly as it is a high volume, low margin business.

Another option has been to keep a DB arrangement, but change the benefit structure, e.g., to career average, or to increase the retirement age in line with increases in life expectancy, thereby keeping total pension payments approximately constant. Two highly successful examples of these approaches were implemented by the Co-op and the BAE Systems schemes within the past two years.

Nevertheless, while all of these approaches reduce the uncertainty about future liabilities, none of them eliminate the problem of longevity risk.

SURVIVOR SWAPS

Yet over the last few months, a new financial contract has been introduced to help pension schemes protect – or hedge – against longevity risk. This new contract is called a longevity or survivor swap. It is based on the same risk management solution that has been used to hedge the other two key risks that pension schemes face, namely inflation and interest rate risk. Inflation and interest rates are two significant factors that pension schemes must deal with as both impact upon investment performance as well as the value of the pension liabilities. Inflation and interest rate swaps have been developed to hedge against inflation

or interest rates moving in a direction that would be detrimental to the scheme. Longevity swaps can hedge the risk that scheme members live longer than the scheme actuary has accounted for. As in all swap arrangements (see Taking it Further for more on swaps), a pension scheme will agree to swap a series of predetermined fixed payments for a set period of time for a set of longevity related payments.

In general, swaps tend to be highly tailored agreements, but if longevity swaps are to offer greater benefits to pension schemes, a degree of standardisation will need to be introduced. This would have the big advantage of bringing liquidity to this potential market, thereby making it easy to exit from a swap arrangement if circumstances changed. A liquid longevity swaps market would also help attract the kind of investors – such as hedge funds – who need to be on the other side of the deal for the longevity swap market to work.

Some banks are said to be interested in offering longevity swaps based upon specific scheme experience. While this would be highly desirable for schemes as they would be able to hedge longevity risk based upon their own membership, such arrangements are likely to be very expensive, since they will not be very liquid (i.e., easily reversed).

SWAPS IN PRACTICE

A useful development would be for the swaps to be standardised and then sold on as securitised instruments by the issuing banks to generate liquidity, and create a secondary market for longevity instruments.

The establishment of the JPMorgan LifeMetrics Index (in association with the Pensions Institute at Cass Business School and the consultant Watson Wyatt) is a step on the road to standardisation, as it is an index based upon whole population mortality statistics for England and Wales. JPMorgan have also introduced a very simple type of longevity swap called a q-Forward that is traded against the LifeMetrics Index. Of course, a q-Forward will not remove geographical and scheme specific longevity risks completely, but JPMorgan's analysis shows that it can eliminate 86 per cent of the risk for a fraction of the cost that a full

buy-out of pension liabilities would cost.

The UK is not the only country facing longevity risk and LifeMetrics indices have been introduced in other countries with significant occupational pension schemes, such as the US, Holland and Germany. This will greatly help a multinational company with multiple sites get a handle on the longevity risk across its workforce.

But without a secondary market and the liquidity this would bring, pricing will not only incorporate a longevity risk premium (needed to compensate investors for assuming this risk), but also a liquidity premium (needed to compensate investors for the poor liquidity of their investments). As a consequence, the contracts will be

more expensive to buy than they need to be.

The development of the longevity swap market is only in its infancy, but it has the potential to meet the needs of pension schemes which want to hedge against their members living longer than the fund can sustain their benefit payments.

It's not a silver bullet, it cannot be done in isolation and so will not replace the need for other risk controls or indeed prudent investment strategies.

And it is unlikely to prevent the move away from DB schemes in favour of the more manageable DC option.

However, it does offer a potential – and very positive – response to a question that has been until now unanswerable. ■

EXPERT VIEW

RISK MANAGEMENT TICKING BOXES OR CREATING VALUE?

Rachel Brougham, Principal at Mercer

Pension schemes are complex entities – much can and sometimes does go wrong. We can all, therefore, accept the need for having some controls in place. But how often is an internal controls list compiled and then left on a shelf to gather dust once that particular regulatory box has been ticked? Indeed, what is the value in spending time and resource on risk management if the Regulator doesn't check up on it?

If done properly, risk management not only provides the trustees with vital assurance that their risks are being managed; it is key to the effective running of the scheme.

There will always be operational risks to be managed (financial and administration controls) and these are an essential part of the system of assurance required by trustees. However, successful risk management goes much further than this. It requires the trustees to have set strategic objectives; what it is they are here to do, and how, in the context of their particular scheme's circumstances. The next

step is to identify the risks that will get in the way of achieving those objectives. Ensuring this vision and assessment of related risks is agreed across the whole trustee board is essential if limited time and resource are to be used effectively. The direct link back to objectives will make sure that trustees are managing the risks that are most important to them.

The actions needed to achieve the agreed objectives and managing associated risks should feed directly into the trustees' business plan which then becomes more than simply a calendar of events. It doesn't take too big a leap of imagination to recognise that a business plan with a strategic focus should then heavily influence board and committee meeting agendas.

Embedding risk management into the strategic business of the trustees in the current environment is, in my view, not only desirable but essential to the success of the scheme. ■

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