

The challenges of living longer

Martin Bird, head of Hewitt's Longevity Solutions Group answers trustees' frequently asked questions about longevity

Why is longevity such a challenge for pension trustees?

Longevity is one of the biggest risks that pension schemes face. Trustees may face risk elsewhere as well – notably in their investment portfolios – but longevity seems to have been uniquely one-way; for pension schemes it only seems to get worse.

In a very low real interest rate environment, adding an extra year to life expectancy assumptions can make a big difference in cost. For a typical scheme, adding an extra year of life expectancy increases overall liabilities by 4 per cent. In the last 15 years alone, life expectancy assumptions have typically increased by around 10 years, adding around 30 per cent to scheme liabilities.

Given the predicament that pension schemes find themselves in, it is easy to see why longevity is so high on the agenda for trustees. But the good news is that longevity risk is much better understood than it used to be. For instance, trustees and sponsors are now very familiar with the 'cohorts' of life assurance mortality tables often used by actuaries to estimate the life expectancy of a scheme's membership. The cohort effects relate to the generations of people born between the World Wars, who are showing much greater rates of improvement in life expectancy than had previously been anticipated. It is only now that this generation is starting to die that we are getting a clearer picture of their mortality; and this allows us to estimate better the rate of improvement going forward. The latest data suggests that the annual rates of improvement being measured are not as high as the cohorts anticipated, but also that they are not dropping off as quickly either.

What are the key risks that longevity poses?

The UK pensions industry has really tuned into risk management recently and that coincided with a flood of entrants into the buyout

market. The latter helped focus attention on the ability to eliminate both investment and longevity risk, and this seemed very attractive when schemes could afford to do so. However, over the last 12 months, scheme finances have in general deteriorated considerably and full risk reduction is no longer affordable. At the same time, the challenges in the buyout market (both in terms of pricing and capacity) have made it even more challenging. So, at a time when the desire to tackle this risk is higher than ever, the financial crisis has put buyout solutions even further away from trustees.

An alternative has recently asserted itself in the form of longevity swaps, with a number of transactions in the pipeline. The idea of a longevity swap is that it allows a scheme to eliminate its exposure to continued improvements in longevity, but retain control of the scheme assets, and so be able to retain some form of investment risk as part of the longer term scheme financing plan. Removing longevity risks with a swap is complex – as is the task of assessing its suitability and cost efficiency for the scheme. But, through the use of modelling techniques, it is possible to stress test all the scenarios – what would happen, for instance, were there to be a cure for cancer? – and build up an accurate picture which allows trustees and sponsors to make an informed decision.

Why has the longevity swap market evolved now?

Many pension schemes have been aware of the longevity swap market for some time, but were worried about being the 'first movers' because the products were so new. Longevity risk is routinely traded in capital markets and the reinsurance world; the difficulty has been translating it into a format suitable for pension schemes, which typically come with complex structures and benefits which increase in line with inflation in a complex way. But there are

a number of ways of structuring swaps. Heavily tailored bespoke solutions can marry up precisely with the pension scheme in question. Index solutions following the national population provide a more directional hedge against improvements in longevity (but which are not so heavily customised to the individuals in the scheme). The theory is that if the swap is based on an index it is more tradable and more cost efficient. However, at the moment, most interest from pension schemes is focused on exploring the bespoke model and this is where an element of competition and price efficiency is evolving, particularly for pensioner liabilities where longevity risk is more defined.

In a new market, there is inevitably concern about being a first mover. Some people are worried about getting it wrong and do not want to buy a product only to find out that the market standardises in a different way. However, products are now starting to standardise and a consensus is growing over how these products are structured for pension schemes.

Schemes also need to think carefully about the longer term strategy. In particular, for schemes thinking about a buy-in or buyout solution later down the line, it is important to consider how a longevity swap could be either transferred to an insurer, or unwound if insurers are unwilling to accept the swap. It is therefore important to address all of these issues at the time of the transaction, and not at the time of exit! ■



Martin Bird, Head of Hewitt's Longevity Solutions Group

Hewitt



How long is life?

Predicting how long their members will live is an ongoing problem for trustees and their advisers. New methods of estimating lifespans will help schemes overcome this challenge, finds **Alastair O'Dell**

How many years of retirement will a new scheme member enjoy after they reach their 65th birthday? What will happen to their life expectancy if they swap mid-career the construction site for a comfortable office chair?

The answers to such questions will always be unpredictable but as defined benefit (DB) schemes become increasingly unaffordable, accurately predicting mortality is becoming ever more important. Mortality, or longevity as it is often termed, attempts to predict how long us humans will live for – and therefore how long pension schemes will have to pay them after retirement.

Life expectancy previously improved slowly and predictably. However, it is now increasing by as much as two years every decade. How long can we assume that such

progress will be maintained?

“It is difficult to quantify,” says Mike Butterfield senior consultant, Watson Wyatt. “But trustees need to understand the risks about how sensitive valuations are to changes in life expectancy.”

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LIVE AND LET LIVE

Mortality models which support longevity predictions are necessary for trustees to complete valuations and determine whether risk-reduction exercises such as the newly-created longevity swaps (see box) are worthwhile.

The most widely used data on which these predictions are based comes from The Actuarial Profession's Continuous Mortality Investigation (CMI), a research body that produces freely available mortality tables. These tables, originally based on life assurance data in UK and Ireland, were only intended for use on an interim basis but have become the pensions industry standard.

The CMI tables that trustees will be most familiar with were

accompanied by short, medium and long ‘cohort’ predictions with this data, setting out three views about how long mortality improvements will increase. These tables have become out of date, having been released in 2002 and based on data ending in 1999.

In October 2008 the CMI created its first ever analysis based on Self Administered Pension Scheme (SAPS) data. Schemes approaching valuation now will use this suite of tables instead.

Further change is due this year. CMI SAPS tables will soon be enhanced by the CMI Mortality Projections Model. The prototype model was published in a working paper on 19 June and is the subject of a consultation process that →

LONGEVITY SWAPS – A NEW SOLUTION?

The first ever UK longevity swap deal was completed in May by engineering firm Babcock International, covering £500m of its £800m liabilities.

A longevity swap comprises an agreement between a pension scheme and an insurance company to ‘swap’ a premium now, paid by the pension scheme, for unanticipated costs in the future caused by the scheme’s pensioners living longer than expected.

The pensions community is split on whether it is the beginning of a revolution. “The birth of the longevity protection market is well timed,” says Charlie Finch, partner in Lane Clark & Peacock’s buyout practice. “Six FTSE 100 companies have

already obtained longevity quotations.” He says competition means larger schemes can purchase protection at low cost.

However, not everyone is convinced. Says Andrew Gaches of Club Vita: “There will be no overnight revolution. The vast majority will continue to bear their longevity risk for many years to come.”

Consultants Mercer suggests the market could only support 5 per cent of the UK’s collective £1trn liabilities over the next five years. Consultant Andrew Ward says: “It remains to be seen whether the supply will rise to meet the demand or whether we move to a position where high prices mean that very few schemes purchase these types of product.”

TRUSTEE PERSPECTIVE

A trustee of a Scottish energy company says:

“Our trustees were under pressure to recognise quite substantially increasing longevity and the employer was under pressure to increase funding.

The actuary wanted to add 5 per cent to liabilities at every valuation. The calculation is a black art based on unrepresentative CMI tables. The CMI has talked a lot over the years but very little had improved.

Everyone has a different opinion. Our members have above average salaries, are fitter and work in fresh air, which points to long lives. However, they are also in Scotland and do manual work, which suggests the opposite.

We chose to use Club Vita’s data to support our calculations. Club Vita replaces anecdotes with science. It will take years to build up but we already have access to statistics from one million people. We have signed up for three years. It is not costing us a great deal compared to adding 5 per cent to liabilities but we did not enter it lightly.

It is not just the base tables that change. Longevity increased 1.25 years per decade over the last 40 years but 2.3 years over the last ten. Are we going to continue to see current improvement or is this going to tail off?

The answer will always be wrong – pensions cost what they cost – but with Club Vita there is a certain amount of science.”

will end on 31 August. The final model is expected to be published during October 2009.

Hewitt Longevity Solutions head Martin Bird said: “We are impressed with the way the new model can be adapted to cater for different views of the future. It has the advantage that its inputs are intuitive, unlike the opaque adjustments that are needed for the Interim Cohort Projections currently in use.”

ONE SIZE DOES NOT FIT ALL

Large consultancies can supplement the CMI tables with data collected from their clients. For example, Watson Wyatt breaks data down across industry sectors but this analysis is not published.

“SAPS tables are a good starting point, but it might not pick up the specifics of your individual scheme. There are a variety of reasons why mortality can vary,” says Butterfield. He cites the following as the three main measurable factors:

- Pension income
- Industry sector
- Postcode

Pension income is used to approximate lifetime earnings, the real driver of life expectancy. The flaw is that it embodies both earnings level and length of service. “It is a reasonable proxy using the data that you have got,” says Butterfield.

EDUCATING VITA

Consultants and actuaries Hymans Robertson last year launched its own longevity modelling project, Club Vita, offering an alternative to the CMI data. It is based on up-to-date pension scheme data that is diversified across industries and geographic regions. The pilot phase is now over and enough data has been collected to be used for valuations.

“The Regulator is very keen that an objective approach is used for mortality assumptions and schemes allow for the specific nature of their workforce,” says Andrew Gaches of Club Vita. “Club Vita does exactly that.”

Club Vita research found that actual improvements in lifespan do not follow any of the CMI’s three interim cohort projections. Gaches says that this is “perhaps no great surprise” as the data is not from pension schemes and is out of date.

The data has also uncovered the extent to which salary affects life expectancy: an individual between 60 and 65 years old earning less than £15,000 is more than three times as likely to die in the following year than someone earning more than £35,000.

“We have seen a rapid rate of improvement of two years per decade,” says Gaches. “It is significant but not as rapid as predicted by CMI cohort projections.”

He says governance processes should include continuous monitoring of the scheme’s mortality improvement allowance, so trustees are in a position to consider risk-reducing opportunities. “Before taking action trustees need to understand their own position,” he adds.

External analytics can help where there has been a significant workforce transition – for example from manual to office-based – that makes pensioners’ mortality misleading.

Scheme maturity also plays a role. Longevity is very real and current for mature schemes; young schemes have insufficient data and can change the benefit structure.

EVEN THE BEST LAID PLANS...

It is important to realise that the best models can still be blown apart by unexpected events, medical breakthroughs or simply changes in lifestyle.

Says Butterfield: “On the one hand a cure for cancer may be around the corner and on the other swine flu may be devastating. How can anyone model for that?”

Even on the potential porcine problem there is a matter of opinion. Gaches says: “Even if swine flu is much worse than anticipated it would not have a ‘beneficial’ impact on funding – the economic turmoil would outweigh any effect.”

Trustees must adopt some measure

of future liabilities and this should be based in reality as much as possible. However, as the answer is essentially unknowable, trustees need to think carefully about how much of their resources to dedicate to the task. Modelling longevity is still as much of an art as it is a science. ■

- **Balancing up the risk**
- **Funding your scheme (TKU)**

The future of defined benefit pension schemes

Mark Austin, head of relationship management for Northern Trust's institutional investor group and senior member of Northern Trust's Retirement Solutions Practice, considers the solutions available to defined benefit schemes

Many commentators describe defined benefit (DB) pensions as an 'end game' – and I don't think they're wrong. The existing DB market is now firmly heading towards its end, but there will be a long run off; it will take decades to reach a final conclusion. The best analogy is that DB schemes are entering their own phase of retirement. Just like reaching old age, there is a slow, creeping realisation that the DB industry is not as strong, or healthy, as it used to be. But there will still be an important role for trustees and providers to manage these schemes for decades to come.

The challenge for trustees is that they now find themselves in a position where the asset levels and future liabilities are not where they should be – there is not enough money to support the liabilities in the majority of cases so trustees are going to have to find ways to change that equation. The solution to that is going to be multifaceted; one size does not fit all.

For some, the solution could be buyout, or a cash injection or LDI – or even a mixture of all of these. For DB schemes you can break down plans by their constituent communities; broadly you have three constituencies, deferreds, retirees and actives. Over time we will see that trustees will look to find ways of minimising future risks or shock for each constituency.

The retirees are the constituency which has the clearest route ahead of them. We will see an increasing use of vehicles that take the liabilities away completely by buyout or buy-in or where returns are locked down and liabilities are matched.



“ The solution is going to be multifaceted; one size does not fit all ”

Given the added flexibility that will be afforded to plan sponsors with the introduction of auto-enrolment and personal accounts in 2012, sponsors will have an opportunity to change contribution levels. Many will take up the option of levelling down contribution levels to 2012 levels (3 per cent employer contribution, 1 per cent tax saving) and using the difference to provide additional benefits.

Something like this has happened in the Dutch market, where some pension schemes put in place extra Additional Voluntary Contribution (AVC) or DC schemes agreed by their Government to make up the difference. By reducing contributions to 2012 levels, companies gain a degree of flexibility and could

potentially find it easier to eradicate deficits, while finding other ways of maintaining benefits for valued staff.

Another innovation we have seen during the economic downturn is the growing interest in the use of contingent assets to secure debts where the parent has serious problems; these could be cash, property or even equipment leases.

And many pension schemes are now looking to tackle their problems by breaking up the deficits into manageable portions – usually deferreds, actives and pensioners – and looking to reduce risk with LDI structures or buy outs/ins. The idea is that you break up the pension scheme in order to deal with the net effect of the deficit piece by piece.

This is how we like to think in the Retirement Solutions Practice – as our clients start to think more broadly about the future of the traditional DB plan

model in order to provide retirement provisions for their workforce. We want to open up a much broader range of solutions and answers to the challenges of creating the occupational pensions for tomorrow. ■



Mark Austin, head of relationship management for Northern Trust's institutional investor group

