

## Recent Media Comments 2008

### **CIMA warns against 'apocalyptic demography', Investment Pensions Europe (Web), Thursday 1, May 2008**

UK A life expectancy increase of two years could add 45bn (57bn) to the liabilities of UK defined benefit (DB) pension funds, according to a report produced by the Chartered Institute of Management Accountants (CIMA). The report, entitled 'Apocalyptic demography? Putting longevity risk in perspective', and published in association with the Pensions Institute at Cass Business School, warns unprecedented increases in life expectancy could undermine the financial viability of DB funds. Defined benefit pension schemes promise specific levels of payouts to retired members, putting the investment risk on the shoulders of the companies which run them, reads the report. The Pensions Regulator estimates that two years of extra life could add up to 5% to a defined benefit pension liability with liabilities across UK pension schemes adding up to around 900bn - a move of 5% would equal 45bn. Authors **David Blake**, director of the **Pensions Institute** at Cass Business School, and research fellow **John Pickles**, argue UK life expectancy has nearly doubled over the past 150 years increasing by 2 to 2.5 years a decade on average, exceeding official projections. Commenting on the report, David Blake said interest rate or inflation risk are generally perceived as bigger risks in the pension scheme, but can be hedged these using Liability Driven Investment (LDI) strategies such as duration and inflation swaps. If finance directors do nothing to hedge this risk [of longevity], they leave themselves exposed to cures for cancer and other medical advances extending the lives of plan members in a way that was not anticipated or reserved for when those members retired, said Blake. Charles Tilley, chief executive at CIMA, said: While multinationals and other larger FTSE100 companies are alive to the risks posed by longevity issues, it is typically smaller to medium organisations that may not realise quite how seriously life expectancy assumptions can impact upon their balance sheets. If you have any comments you would like to add to this or any other story, contact Carolyn Bandel on +44 (0)20 7261 4622 or email [carolyn.bandel@ipe.com](mailto:carolyn.bandel@ipe.com)

### **CIMA warns on pension risk, Director of Finance Online, Wednesday 30, April 2008**

Longevity risk can have a serious impact on firms' defined benefit pension liabilities.

The report 'Apocalyptic demography? Putting longevity risk in perspective', published by the Chartered Institute of Management Accountants (CIMA) in association with the **Pensions Institute** at Cass Business School, provides a checklist to finance directors who may not fully understand how seriously even small changes in mortality assumptions can affect them.

Defined benefit pension schemes promise specific levels of payouts to retired members, putting the investment risk on the shoulders of the companies which run them.

CIMA believes that longevity risk is one of the most challenging risks around today for finance directors. UK life expectancy has nearly doubled over the past 150 years, with a trend of 2.5 years per decade.

This has consistently exceeded official projections. There is currently no commonly accepted forecasting model when it comes to predicting longevity risk and substantial, unprecedented increases in life expectancy could potentially undermine the financial viability of defined benefit pension schemes across the UK.

Charles Tilley, chief executive at CIMA, says that multinationals and other larger FTSE100 companies are alive to the risks posed by longevity issues, but adds that it is typically smaller to medium organisations that may not realise quite how seriously life expectancy assumptions can impact upon their balance sheets.

The Pensions Regulator estimates that two years of extra life could add up to 5 per cent to a defined benefit pension liability with liabilities across UK pension schemes adding up to around 900bn, a move of 5 per cent would equal 45bn.

Tilley says that it is therefore imperative that these risks are understood.

CIMA has created its pensions guidance and accompanying checklist to help finance teams manage their pension schemes and put longevity risk into perspective, by encouraging them to question their actuaries more rigorously on the mortality assumptions used in estimating their scheme liabilities.

**CIMA warns increases in life expectancy could ‘undermine’ viability of schemes, by Steven Dignall, Professional Pensions, 30 April 2008**

INCREASES in life expectancy could undermine the financial viability of defined benefit pension schemes, a Chartered Institute of Management Accountants report warns.

The professional body's report – *Apocalyptic Demography* published in association with the Pensions Institute at Cass Business School – warned companies of the impact longevity risk could have on their finances if they had defined benefit risks on their balance sheets.

And it provided a checklist to finance directors who might not understand how seriously even small changes in mortality assumptions could affect them.

CIMA chief executive Charles Tilley explained: "While multinationals and other larger FTSE100 companies are alive to the risks posed by longevity issues, it is typically smaller to medium organisations that may not realise quite how seriously life expectancy assumptions can impact upon their balance sheets.

"The Pensions Regulator estimates that two years of extra life could add up to 5pc to a defined benefit pension liability – with liabilities across UK pension schemes adding up to around £900bn, a move of 5pc would equal £45bn. It is therefore imperative that these risks are understood."

He added: "CIMA has created its pension guidance and accompanying checklist to help finance teams manage their pension schemes and put longevity risk into perspective, by encouraging them to question their actuaries more rigorously on the mortality assumptions used in estimating their scheme liabilities."

Cass Business School Pensions Institute director David Blake added: "Longevity risk in pension schemes might not be as significant as say, interest rate or inflation rate risk, but having hedged these last two risks using liability driven investment strategies such as duration and inflation swaps the relative importance of longevity risk increases substantially.

"If finance directors do nothing to hedge this risk, they leave themselves exposed to cures for cancer and other medical advances extending the lives of plan members in a way that was not anticipated or reserved for when those members retired."

### **CIMA warns against 'apocalyptic demography', IPE.com, 30 April 2008**

UK – A life expectancy increase of two years could add £45bn (€57bn) to the liabilities of UK defined benefit (DB) pension funds, according to a report produced by the Chartered Institute of Management Accountants (CIMA).

The report, entitled *Apocalyptic demography? – Putting longevity risk in perspective*, and published in association with the Pensions Institute at Cass Business School, warns unprecedented increases in life expectancy could undermine the financial viability of DB funds.

“Defined benefit pension schemes promise specific levels of payouts to retired members, putting the investment risk on the shoulders of the companies which run them,” reads the report.

The Pensions Regulator estimates that two years of extra life could add up to 5% to a defined benefit pension liability – with liabilities across UK pension schemes adding up to around £900bn - a move of 5% would equal £45bn.

Authors David Blake, director of the Pensions Institute at Cass Business School, and research fellow John Pickles, argue UK life expectancy has nearly doubled over the past 150 years increasing by 2 to 2.5 years a decade on average, exceeding official projections.

Commenting on the report, David Blake said interest rate or inflation risk are generally perceived as bigger risks in the pension scheme, but can be hedged these using Liability Driven Investment (LDI) strategies such as duration and inflation swaps.

“If finance directors do nothing to hedge this risk [of longevity], they leave themselves exposed to cures for cancer and other medical advances extending the lives of plan members in a way that was not anticipated or reserved for when those members retired,” said Blake.

Charles Tilley, chief executive at CIMA, said: “While multinationals and other larger

FTSE100 companies are alive to the risks posed by longevity issues, it is typically smaller to medium organisations that may not realise quite how seriously life expectancy assumptions can impact upon their balance sheets.”

*If you have any comments you would like to add to this or any other story, contact Carolyn Bandel on +44 (0)20 7261 4622 or email [carolyn.bandel@ipe.com](mailto:carolyn.bandel@ipe.com)*

**'Apocalypse' warning to company pension funds as life expectancy rises, By Margareta Pagano and Kate Hughes, *Independent on Sunday*, 27 April 2008**

Defined benefit schemes will risk shortfalls totalling £45bn, claims a new report, if they fail to factor in the effects of medical advances

Pension funds for defined benefit company schemes are facing huge shortfalls because members are living far longer than expected, according to a report seen exclusively by The Independent on Sunday.

An investigation by the Chartered Institute of Management Accountants (Cima) and the Pensions Institute at Cass Business School has revealed that the future of defined benefit pension schemes could be hanging in the balance because the life expectancy of members is often underestimated by more than two years. This can leave funds short by as much as £45bn, or 5 per cent of their total value.

The report, called *Apocalyptic Demography?*, is aimed at finance directors of companies with significant defined benefit pension liabilities. It warns that companies could be in line for unexpected pension scheme bills of millions of pounds, which could undermine the financial viability of schemes across the UK, particularly those of small and medium-sized businesses.

Life expectancy has almost doubled in the past 150 years, increasing by around 2.5 years a decade and consistently exceeding projections that many schemes base their forecasts on. There is no commonly accepted forecasting model for the financial impact of longer-than-average lives on pension schemes, and payouts to increasingly older members could create huge deficits in funding, the authors of the report warn.

There are, the institute believes, a number of organisations with significant defined benefit pension liabilities that may not realise how seriously longevity can affect their balance sheets. This applies particularly to those that have closed their schemes to new employees, and may therefore appear to be a safe bet to potential investors.

"Defined benefit schemes are worth around £900bn at the moment, so they could be missing some £45bn," said Charles Tilley of Cima. "This is a long-term debt: these debts should be paid over time and many larger companies will have longevity risk built into their figures. But some smaller organisations will be unable to meet their contributions, and there are instances of people losing their pensions."

David Blake, director of the Pensions Institute at Cass, urged bosses to review their longevity assessments, saying: "If companies do nothing to hedge this risk, they leave themselves exposed to medical advances extending the lives of plan members in a way that was not anticipated or reserved for when those members retired. Companies

will not want to deal with this in the years ahead when the world becomes a much more competitive place to do business."

Cima's report presents a checklist of questions for finance directors, focusing on three key areas where they can gain a better understanding of the mortality assumptions used in their defined benefit schemes.

As the report highlights, current life expectancy owes much to demographic factors – for example, blue-collar workers have a shorter life expectancy than white-collar ones – but there will also be specific issues affecting different schemes: "This means organisations must understand where their scheme sits as far as life expectancy is concerned."

If mortality rates stay the same as in 2004-06, then a 65-year-old man could expect to live another 16.9 years and a 65-year-old woman another 19.7. But there are big regional differences. In Scotland the average age of death is 74.6 for a man and 79.6 for a woman, while in Wales it is 76.6 and 80.9 respectively. In the UK as a whole, the male and female equivalents are 76.9 and 81.3.

The Cass report goes further, showing just how big the regional differences are in mortality. In the North-east, for example, the average male age is 75.8 years old and the woman 80.1 while in the richer South-west and South-east the averages rise to 78.5 and 82.4. respectively. Taking it down to local authority level, men in London's Kensington and Chelsea live on average 8.2 years longer than in Glasgow while the women live an extra 7.7 years.

On top of this finance directors have to build in socioeconomic status into their models – professionals can add 18.3 years to the average 65-year-old while an unskilled manual worker can only expect another 14 years once they get to 65.

**Longevity rise of 2 years adds 45 billion pounds to pension liabilities – study, By Raji Menon, Thomson Investment Management News, 29 April 2008**

Cass school pensions specialist warns finance directors are exposed to impact of medical advances.

LONDON (Thomson IM) - An increase of two years in average life expectancy will add 45 billion pounds to the liabilities of UK defined benefit pension schemes, according to a new report by the Chartered Institute of Management Accountants (CIMA).

The study published in association with Cass Business School noted that the Pensions Regulator estimates that two years of extra life could add up to 5 percent to a DB pension liability, and with UK pension schemes' liabilities amounting to 900 billion pounds currently, a 5 percent move would equal 45 billion pounds.

David Blake, director of Pensions Institute at Cass Business School, said that with other risks like interest rate and inflation risks being hedged by pension schemes using duration and inflation swaps, the relative importance of longevity risk has increased substantially.

'If finance directors do nothing to hedge this risk, they leave themselves exposed to cures for cancer and other medical advances extending the lives of plan members in a way that was not anticipated or reserved for when those members retired,' he said.

Blake, who has co-founded the LifeMetrics Index with JP Morgan, also expects a new capital market to develop that will trade financial instruments that can be used to hedge aggregate longevity.

'These kinds of instruments are uncorrelated to anything else available in the market and investor groups like hedge funds and endowments who are looking at alternative investment options can act as counterparties to these transactions.

'We are at very beginning of the life market and I am confident that London is the centre of this new capital market.'

According to CIMA, UK life expectancy has nearly doubled over the past 150 years, with a trend of 2-2.5 years per decade.

Chief executive Charles Tilley said: 'While multinationals and other large FTSE 100 companies are alive to the risks posed by longevity issues, it is typically smaller to medium organisations that may not realise quite how seriously life expectancy assumptions can impact upon their balance sheets.'

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**Deutsche Börse is latest player in longevity market, by Mark Cobley, [efinancialnews.com](http://efinancialnews.com), 12 Mar 2008**

Deutsche Börse has become the first major stock exchange group to enter the nascent market for longevity risk, by launching a range of indices tracking population trends. So far only some investment banks, such as JP Morgan and Goldman Sachs, have comparable products.

The exchange has its German index up and running, and is planning equivalents for other European countries, including the UK. They will be known as Xpect Indices.

The exchange hopes its data will encourage over-the-counter deals to swap longevity risk, such as those JP Morgan signed with reinsurance group Scor and pensions buyout firm Lucida in the last few weeks.

Eventually, pension schemes may be able to insure themselves against the risk of their members living longer than expected through this kind of transaction, just as they are currently able to use derivatives to hedge against rises in interest rates and inflation.

Hartmut Graf, head of issuer data and analytics at Deutsche Börse, said: "The first step is to enable the risk transfers to take place, and for over-the-counter transactions to happen we need transparent data. That is what we are aiming for."

In the long run, Graf said, the exchange hopes to foster a market in standardised, tradeable longevity risk products.

**David Blake**, director of the **Pensions Institute** at **Cass Business School** and a specialist in the field, said: "When one of the world's major stock exchanges introduces a set of indices designed to facilitate trading in longevity-linked assets, you know that the life market has at long last arrived.

"I have been predicting this since 2001, but it looks as though 2008 will be the year this market really takes off."

Deutsche Börse's Xpect project took a year to get off the ground. Graf said a major difficulty was that German central public authorities only collect life expectancy data on a three-to-five-year basis. The exchange has sourced its own figures from local municipalities and will update its indices monthly.

Other longevity index products include JP Morgan's LifeMetrics index, which covers population data in England and Wales as well as the US, Credit Suisse's, which covers the US, and Goldman Sachs', which is based on a database of those selling life assurance policies

### **Retirement hopes take a battering, by Sylvia Morris, Daily Mail, 12 March 2008**

SAVERS using with-profits personal pension plans have seen their chances of a comfortable retirement wrecked by a combination of poor investment returns and falling interest rates.

This desperate situation has been caused by two factors. First returns on with-profit pensions have fallen dramatically, with many paying less than half the sum they'd have given ten years ago.

Then on retirement most of the pension money saved must be used to buy an annuity, which pays your income for life. The rates paid on these have also tumbled.

The result is that someone who had saved £200 a month for 20 years can expect around £23,000 a year less pension than an equivalent person retiring ten years ago.

This year the average £200 a month, 20 year with-profits pension plan will pay out £112,942 according to figures from industry specialist Money Management, against £263,718 ten years ago

Men retiring today at age 65 could expect to buy a pension of just £7,000 a year compared with £30,000 if they retired ten years ago with a similar policy, figures from specialist adviser Annuity Direct show.

With-profits investing was supposed to smooth out the ups and downs in the stock market. Instead returns have crashed in recent years because life insurance companies paid out too much in the past.

Regulators also allowed them to pay for the compensation costs on the mis-selling of personal pensions from their with-profits funds and they failed to take into account

that people were living longer. Some offices have to hold back money to cover the high guarantees built into the policies to encourage savers to sign on.

Among the worst so far this year is Standard Life paying just £92,735, down £9,630 on two years ago. In 1997 it paid out £269,365 on a similar policy. Scottish Widows is also poor at £97,328 against an average £106,664 for this year to date.

Policyholders with weaker life insurance companies whose funds are no longer open to new customers can expect poor results too.

They have a huge £140 billion invested in these funds either as endowments or pensions, research from the **Pensions Institute** at **Cass Business School** shows. But these insurers have not bothered to publish their results. Last year they paid out below average.

For example at Guardian it was £91,578, London Life £75,612 and Pearl Assurance £92,170. On average the closed funds have only 36 pc of your money invested in shares and property with the remainder in fixed interest, while for funds still open to new savers the figure is 59 pc, says the Pensions Institute.

Shares usually do better than fixed interest over the long term. Research from Barclays Capital reveals that shares grew by 8.8 pc a year over the past 25 years against 5.5 pc for government bonds.

You don't need to use the money from your policy to buy an annuity with the company which built up your fund. You can buy from another source using the 'open market option'.

Stuart Bayliss, managing director of Annuity Direct, an adviser which scours the market looking for the best deals, says: 'On average you can improve your pension by 12 pc by buying elsewhere and in some cases by as much as 30 pc.'

### **Is the pensions industry burying its head in the sand? Economics Intelligence Unit, February 4th 2008**

*New models present a graphic picture of a future where many more people will live longer than expected. Will pension companies pull their heads out of the sand to act?*

The pensions industry is usually rather sluggish to respond to change, even if change threatens the industry's financial well being.

The pension industry's response to the impact that increasing life expectancy has on retirement plans is no exception. Despite a gradual acceptance that rising longevity is hazardous for pensions, there has been an alarming lack of urgency in taking action to address this.

One of the major obstacles to dealing with increasing life expectancy has been the lack of a reliable and transparent method for predicting just how long we are going to live. Actuaries were saddled with measuring the immeasurable, often relying on simple deterministic projections.

However, this is set to change with the publication of a series of fan charts which show future survivorship and life expectancy. Developed by Professors **David Blake** (**Pensions Institute**, Cass Business School), Kevin Dowd (Nottingham University Business School) and Andrew Cairns (Heriot-Watt University), the fan charts present a much more accurate picture of the likelihood of people living well into their nineties. The charts highlight just how serious this prospect is for the retirement industry.

“The idea was to find a visual way to explain longevity risk to people and to quantify it accurately,” Professor Blake explains. Inspired by the inflation fan charts used by the Bank of England to project the increasing funnel of uncertainty in inflation rates, the professors applied the same principles to longevity and survivorship.

[Download the full report.](#)

**FT REPORT - FUND MANAGEMENT: Time to get real on pensions, By Pauline Skypala, Financial Times, Feb 04, 2008**

The UK's Accounting Standards Board dropped a bombshell into the world of pension accounting last week, proposing changes to the way pension liabilities are calculated that could send deficits soaring.

This is not just a local matter. The ASB states clearly that it aims to influence the International Accounting Standards Board in its review of the international standard (IAS 19) governing pensions. With international convergence of pension accounting standards on the agenda, the Federal Accounting Standards Board in the US may move in the same direction as the IASB. In the last 18 months the FASB has made changes that put pension deficits on US company balance sheets in a similar way to IAS 19.

The ASB proposals would see pension liabilities discounted at the risk-free rate, rather than at the AA corporate bond rate that applies at present; substitute actual returns on assets for expected returns; and remove future salary increases from the calculation. The first would increase the size of the liabilities significantly, the second would make them more volatile, while the third would reduce liabilities, but not by as much as the lower discount rate would raise them.

There have been predictable shrieks of anguish from some quarters of the pension industry. Aon Consulting describes the proposals as "another dagger in the side of final salary pensions schemes", while BDO Stoy Hayward Investment Management calls them "a real kick in the teeth for DB scheme sponsors, just when they thought they had their schemes under control".

Aon adds that the changes would add £120bn (€160bn, \$239bn) to the combined deficit of the UK's largest 200 pension schemes and knock down the proportion of schemes in surplus from 40 per cent to 2 per cent.

This is all rather hysterical. It would take three or more years for any changes to be implemented, and it is not as if discounting liabilities at the risk-free rate is a complete novelty. It is the measure used to work out the liabilities on a buy-out basis, or in

other words, what it would cost to offload a scheme to an insurer. It is the realistic position if the scheme stopped now.

Other measures take account of expected returns on assets, says Ros Altmann, a specialist in pensions economics. "If you assume you can earn more than gilts by taking investment risk, you don't have to put so much money upfront today. If you don't, you have to put the money in now or show a bigger deficit." Scheme members and company shareholders ought to know that company accounts showing a pension surplus measured on a FRS 17 basis are not reflecting reality. "FRS 17 is way short of what is required to pay pensions," says Ms Altmann.

There is little doubt that forcing pension scheme sponsors to reflect the real cost of running a DB pension in their accounts is likely to lead to more scheme closures, and a further move away from equities. Finance directors are likely to come under pressure from shareholders to lower both the risk and the volatility a pension scheme represents to a company's balance sheet.

It may also lead to more business for the pension buy-out specialists. As John Hawkins, principal at Mercer, points out, if companies have to use the same assumptions as buy-out firms, the buy-out option looks a lot less expensive.

The cost of buy-out, relative to an FRS 17 position, has grown significantly since last summer as a result of the credit squeeze. The ASB proposals may have met with less opposition if they had come out before spreads widened considerably.

Redington Partners, an independent adviser on pension scheme investment strategy, says calculating the aggregate FTSE 100 deficit on the proposed ASB basis would only have added £8bn relative to the FRS 17 basis last July, but now adds £84bn.

Trustees should not be surprised by these numbers, according to Redington, as they are in the habit of looking at their schemes on an economic basis, which means discounting liabilities at the risk-free rate.

However, moving the pension accounting basis from an AA corporate bond rate to a risk-free rate is not enough for some pension experts. On the same day the ASB proposals came out, the **Pensions Institute** at **Cass Business School** in London published a paper\* that takes issue with using a single number to discount liabilities and recommends the development of tools such as fan charts that would show a range of possible outcomes. Professor **David Blake**, director of the Pensions Institute, says reducing measures to a single number leads to a false sense of certainty. "Forecasts are only helpful if we understand the uncertainty around them: a single number cannot convey useful information about the distribution of future outcomes."

Interest rates, inflation and longevity are the three areas of uncertainty for pension schemes. It would be possible to combine forecasts and produce a distribution of liabilities on a 90 per cent confidence level, says Prof Blake.

You might be 90 per cent confident, for example, that scheme liabilities lie between £150m and £250m.

The focus on describing company pension liabilities more accurately is welcome. Perhaps it is also time to shine the spotlight on public sector schemes, most of which are unfunded. Taxpayers are just as entitled to know the true cost of providing this employee benefit as company shareholders.

*\* An unreal number: How company pension accounting fosters an illusion of certainty*

**Pensions - Rising To The Pensions Challenge - Investment Banks Have Been Sitting Up And Taking Notice Of The Pensions Industry In Recent Years -an Industry With Global Benefit Liabilities Of Nearly \$20,000bn., By Edward Russell-Walling, The Banker, 1 February 2008**

Whoever accused big companies of not being entrepreneurial has obviously never seen a large investment bank beavering away at a business opportunity. One of their richer seams in recent years has been the pensions industry - and the capital markets' most tantalising challenge right now is finding an affordable way to manage longevity risk.

Pension fund assets and liabilities are vast - \$19,600bn in defined benefit liabilities worldwide, by some measures - so it is not surprising that investment banks want to be involved. An early way in was through so-called 'transition management' - helping pension funds to rebalance their investment portfolios away from the heavy equity bias that characterised the 1980s and much of the 1990s.

That business became less profitable as it grew more competitive and as the clients realised that 'best execution' was not always top of the agenda. So, the smarter banks turned to the next great pensions theme - derisking. New regulatory and accounting standards highlighted alarming deficits between what pension funds were going to have to pay their members over time - their liabilities - and how much they were likely to retain in the pot.

*Wider impact*

Pension fund status began to effect corporate valuations and even mergers and acquisitions strategy - first negatively and now, on occasion, positively. Edmund Truell's Pension Corporation has bought UK companies such as Thresher, Thorn and Telent (the rump of GEC Marconi) purely to get its hands on their pension funds - which it believes it can run more efficiently.

So managing, reducing and even transferring pensions risk is now as important to the boardroom as it is to the trustees. The most popular approach that has evolved to deal with these concerns is 'liability-driven investing', which highlights the importance of minimising and managing risk. It identifies three main liability risks - inflation, interest rates and longevity.

"You ask yourself 'am I adequately rewarded for assuming that risk?'," says **David Blake**, director of the **Pensions Institute** at London's **Cass Business School**. "If so, you retain it. If not, you insure it or sell it to someone else."

### *Inflation and interest*

Increasing numbers of pension schemes see no reward in retaining inflation or interest rate risk, and investment banks have been happy to take it off them with inflation and interest rate swaps. This was lucrative business to begin with, but it too has become commoditised and less profitable as more banks compete to offer it.

Longevity risk has been consistently underestimated and, on its own at least, is difficult to lay off. Professor Blake says that longevity improvements are a stochastic process rather than a deterministic one, and actuaries' assertions that they 'must tail off' have always got it wrong.

He and two academic associates, Andrew Cairns and Kevin Dowd, developed a series of fan charts - much like the Bank of England's inflation forecasting charts - to predict a range of possible longevity outcomes. They showed, for example, that while the best estimate of life expectancy for a 65-year-old male in 2050 (ie, someone born in 1985) was another 26 years, this could range from 21 to 32 years.

"Every additional year of life expectancy adds 3% or 4% to the present value of pension liabilities," says Professor Blake. "So if this person has just entered the job market and joined a pension plan, the plan could end up between 18% and 24% short."

That could represent an awful lot of money. The insurance market offers one way to offload this longevity risk, along with all other risk, through a bulk annuity. This is long-established practice, although new entrants to the market have given it an air of novelty. In the UK, for example, Legal & General and Prudential traditionally dominated the bulk annuity market for closed schemes.

### *Buyout competition*

Competition is increasing here, in both full and partial buyouts. Paternoster, formed by a former Prudential executive with Deutsche Bank as a backer, has taken on mature pension assets worth GBP1.5bn (\$2.94bn), it says. These buyout solutions are regulated by the insurance regime of the Financial Services Authority and must be fully funded. They are also expensive, costing between 20% and 30% more than the balance sheet value of the pension scheme

Only insurers can sell annuities. An alternative UK buyout route is to keep the scheme alive and regulated by the Pensions Regulator, which permits deficits under certain circumstances and allows a broader range of investments.

Citigroup opted for this approach when it proposed to acquire the \$392m Thomson Regional Newspapers pension scheme. Its idea is to create value by managing the scheme more efficiently.

Many now believe that there is a better way to manage longevity risk. "Buyouts and bulk annuities are both costly and inflexible," says Guy Coughlan, head of pension asset liability management, JPMorgan. "And an insurance-based solution will never

get you to a liquid market. Capital markets products are more liquid and have lower transaction costs."

JPMorgan has, with the help of the Pensions Institute and consultants Watson Wyatt, developed the LifeMetrics index to measure longevity and provide a tool for trading it. It has also created instruments to transfer longevity risk, called q-forwards ('q' is the actuarial symbol for mortality rates).

BNP Paribas, EIB and Partner Re tried to tackle the longevity problem with a 25-year longevity bond, announced in 2004. The coupon was adjusted in line with actual mortality rates. It never took off for various reasons, not least that it did not hedge the 'toxic tail' - the years after the age of 90 when longevity risk is highest - and there was a lack of capital efficiency. Given the up-front cost of the bond, there was very limited risk reduction.

### *Bad timing*

"The timing was wrong," says Mr Coughlan. "It was too early and the market wasn't receptive enough." There have been three historical barriers to a capital market solution for longevity risk, he says. The first was a lack of recognition and measurement of it as a problem - now largely addressed by regulatory and accounting changes.

Next was a lack of education. "The issue was obscured by jargon and actuarial complexity," says Mr Coughlan. "Even for financial market professionals, longevity risk is unfamiliar - and most of the expertise lies with insurance actuaries, not pensions actuaries." However, the subject is now raised more often in research papers and seminars, and is a more familiar sight in the press.

### *Need for standardisation*

The third obstacle, says Mr Coughlan, has been a lack of standardisation - in risk measurement, language and concepts. "Actuaries, financial professionals, consultants, all need to talk to each other in the same vocabulary. We have been trying to promote a common way of looking at this, through our index and through use of language."

Since all of these issues are being addressed, the time is right for a market in longevity risk to develop, he says. A portfolio of q-forwards swaps, with the LifeMetrics index as the fixed leg, can be used to provide an effective hedge of the longevity risk of a pension plan or annuity book, adds Mr Coughlan.

As such, it could be an alternative to a buyout, part of a do-it-yourself hedging of all risks. "Or it could act as the lubricant for a buyout, for those who can't afford it but might be able to in five or 10 years' time. They would use it to lock in the value of liabilities with respect to longevity changes at a future date - so it wouldn't be a moving target."

### *Measuring longevity*

Mr Coughlin argues that measuring longevity risk is easier than most people think, and that you do not have to transfer 100% of it for a successful hedging strategy. "As long as the cost is commensurate with the risk reduction, you're in a better position," he says. The basis risk between a standardised hedge and a scheme's actual longevity experience can be minimised, he adds, "by constructing the hedge appropriately".

JPMorgan has yet to close any such contracts with a pension fund, although Mr Coughlin is confident that it will do so this year. Some consultants believe that these swaps do not yet offer value. "Longevity swaps are extremely expensive," says Gavin Orpin, investment partner at consultants Lane Clark & Peacock. "We say they are not good value and that schemes should rather self-insure or do a buyout."

Others are convinced that there will be a market, however. Secondary trading in life insurance policies - the life settlements market - has introduced investment banks to the idea of mortality and how to repackage and redistribute the risks. Credit Suisse, for one, is sure that this market will develop and has been staffing for structuring as well as trading this type of risk. "The market is in its infancy but interest is growing fast," says head of insurance and pensions solutions at Credit Suisse, David Prioul. "Growing demand will drive prices down to levels where it becomes attractive for players - like pension funds - to consider offloading the risk."

#### *New entrants*

Deutsche Bank agrees that longevity risk will become more important in 2008. Rather than using a swap approach, it is looking for new players to take on these risks via its trading and structuring arms. It already places some older-age longevity risk using structured notes, and believes it can also repackage longevity for the asset-backed securities market.

In December, Goldman Sachs launched the first index that will allow pension funds, insurance companies, hedge funds and money managers to trade exposure to longevity risk in a transparent and real-time manner. It is called QxX.LS, and the firm expects it to encourage a more liquid secondary market. Its competitors would like that too.

#### **'Unreal' figures 'mislead' accounting standards – Cass, IPE.com, 31 January 2008**

UK – Existing pension accounting rules can be 'misleading' about the funded status of a defined benefit scheme, research from the Pensions Institute has suggested.

The report *'An Unreal Number: How Company Pension Accounting Fosters an Illusion of Certainty'* highlighted that while accounting standards have improved, the requirement of reporting a single number to value a deficit or liability can mislead investment analysts and shareholders.

Findings from the research, funded by the Institute of Chartered Accountants in England and Wales (ICAEW) charitable trusts, revealed existing reporting requirements mean companies have to forecast the stream of future payments required

to fund the scheme; discount these payments to a present value and then subtract that from the value of the pension assets.

Professor David Blake, co-author of the report and director of the [Pensions Institute](#) at Cass Business School, argues this methodology does not allow for the potentially-wide range of possible future outcomes and is an "unreal" figure.

"The single number which is required on balance sheets is a hypothetical construct reliant on forecasting and discounting. It creates an aura of precision but, in reality, the ability of the assets to fund the future payments is highly uncertain," he added.

Instead, the report urged standard setters for pensions accounting give priority to developing new tools, such as fan charts used by the Bank of England for inflation, and actuaries for longevity assumptions, which can "measure and communicate the uncertainties inherent in the pension promise".

In addition, [the report](#) noted pension forecasting is made more difficult by a "lack of consensus" over the discount rate that should be used, including the yield from 'risk-free' government bonds, the yield from high-quality AA corporate bonds, or the expected return on pension fund assets.

Blake said: "Given this range of views, we should not be surprised to learn from the Pensions Regulator that an overwhelming majority of its respondents think that a single-figure measure of DB pension liabilities is meaningless."

Research findings did reveal standard setters have started to recommend the disclosure of the risks and rewards of pension plans, implicitly acknowledging the limitations of a single number, with the Accounting Standards Board ([ASB](#)) suggesting the use of 'sensitivity analysis'.

But Blake warned while the use of sensitivity analysis will display how much a number will change if the underlying assumptions are changes, he pointed out it does not reveal how much confidence analysts can have in the single number.

"The current pension accounting standards are better than their predecessors because they seek to provide information about the amounts and timing of the projected pension payments and the value of the pension fund assets," said Blake.

But he warned: "As our research shows, they over-reach themselves by allowing this useful information to be reduced to a single number."

The report from the Pensions Institute has been published at the same time as a discussion paper by the ASB, in which it calls for a "fundamental review" of pension accounting standards, including changes to the discount rates, and the time frame over which surpluses and deficits are recorded.

**Pension Accounting Rules “Meaningless”, *AccountingWEB.co.uk*, 31-Jan-2008**

Current pension accounting rules are misleading users, according to a report published by the **Pensions Institute** at Cass Business School.

The research, funded by the ICAEW Charitable Trusts, suggests the single number used to represent the pension deficit (or surplus) does not allow for key variables such as future life expectancy.

“Forecasts are only helpful if we understand the uncertainty around them,” said Professor David Blake, director of the Pensions Institute at Cass. “A single number cannot convey useful information about the distribution of future outcomes.”

Companies currently account for their defined benefit pension plans by forecasting the stream of future payments required, discounting those future payments back to a present value, and then netting that off against pension fund assets. The single number produced – as required by balance sheets – is described by Blake as being “unreal... a hypothetical construct. It creates an aura of precision, but in reality... is highly uncertain.”

The Pensions Institute points out that many authorities have shy away from drawing single numbers out of key variables. The Bank of England doesn't put a single number on inflation forecasts, for example, “because a forecast is inherently probabilistic”, as governor Mervyn King put it. Similarly, the UK actuarial profession now considers it impossible to rely on a single projection of life expectancy, recommending instead that actuaries should consider the full range of variables.

The unreliability of a single number is compounded by the absence of consensus about how future payments should be discounted back. Some companies use the yield on government securities, others are happy with risk and yields reflected in blue-chip bonds; some use the expected return on pension fund assets, others the cost of the firm's capital.

While Professor Blake says that the current standards are better than their predecessors, he also says he wouldn't be surprised if the “overwhelming majority” of respondents to the Pensions Regulator branded the single-figure measure “meaningless”.

A spokesperson from the Pensions Regulator told AccountingWeb the present arrangements “did introduce a degree of transparency to financial reporting, which has not always been the case.” The regulator said it would also welcome the introduction of the Reporting Statement, “which... if adopted would enhance disclosure in relation to the volatility of the pension obligation, through for example the use of sensitivity analysis.”

### **Hedging longevity risks in U.K: Pension funds seek more precise data to help contain costs, by Mark Cobley, Wall Street Journal, 10 Jan 2008**

U.K. PENSION SPECIALISTS are struggling to come to grips with [mortality](#)-rate figures because the majority of them are using imprecise historical data.

According to data from the U.K.'s Pensions Regulator, 97% of pension schemes are using outdated figures -- the 1992 tables -- to calculate [mortality](#) rates. Some schemes have started to use the updated 2000 tables. But even these are out of date and aren't pension-scheme specific as they are drawn from insurance-company data.

In recent years, U.K. life expectancy has tended to rise. Pension funds using [mortality](#) data from 15 years ago are likely to eventually see their bills grow far larger as they will need to pay out pensions longer than they had bargained for.

Aware of the need for more precise data, the Institute of Actuaries' Continuous [Mortality](#) Investigation has been collecting data based on a sample of self-administered company U.K. pension schemes since 2002.

With only a few years of accumulated data, these new tables, known as Saps, are vague. But they are attracting interest, as they cover twice as many people and incorporate factors such as income into the variability of death rates. Saps references data from 350 self-administered pension schemes each with at least 500 current pensioner members. The data span 2000-2006 and contain more than 10 million life-years of exposure and nearly 400,000 deaths.

The levy that schemes pay to the Pension Protection Fund, the U.K. government's safety net for collapsed pension schemes, is based on the size of their unfunded liabilities, and the PPF may be about to incorporate the Saps tables into its longevity calculations.

"What the PPF is using for the levy calculation at the moment looks a little out of date," said Jane Beverley, a principal at actuarial consultancy Punter Southall in London. "For its own funds it is using the latest tables with ratings to reflect the different [mortality](#) likely to be experienced by members with different pension amounts. In terms of the change in longevity assumptions, the likely effect would be to increase liabilities. The PPF estimates that changing its internal [mortality](#) assumption reduced its funding level from 92% to 88%."

The bigger PPF bills are likely to make companies think twice, if they haven't done so already, about the risk their pensioners will live longer than expected. This development will be good for pensions-buyout ventures, including Mark Wood's Paternoster and Edmund Truell's Pension Corp.

Credit Suisse Group and J.P. Morgan Chase & Co. have established indexes that track current rates of longevity and [mortality](#), and Goldman Sachs Group Inc. put the finishing touches to its version last month. PensionsFirst, the venture headed by former Morgan Stanley International co-president Amelia Fawcett, also introduced its first [mortality](#) products last month.

All three are understood to have set up desks and hired traders to deal in longevity swaps and derivatives. The banks declined to comment further on the matter.

Jan Loeys, an analyst at J.P. Morgan, said he believes the U.K. is at the forefront of the market in managing longevity risk. "Its pension funds are most aware and most under pressure to hedge longevity risk," he said. "It will be followed closely by the U.S. and the Netherlands as both have large and sophisticated pension funds and high-quality [mortality](#) data."

The first deals have been done. In April 2007, U.K. insurer Friends Provident entered

into a longevity swap with Swiss Re, to insure the [mortality](#) and investment risks of its GBP 1.7 billion (\$3.35 billion) book of in-force pension annuities. However, the deal was a reinsurance transaction as opposed to a capital-markets deal.

Other providers are lining up to do similar deals. PensionsFirst formally started in November with equity backing from Japan's Shinsei Bank and Bill Reeves, co-founder of hedge fund BlueCrest Capital Management. PensionsFirst offers a range of bonds to pension schemes that will match their future liabilities with a stream of steady income.

Timothy Lyons, a partner at the venture, said the method depended on in-depth proprietary analysis of how long each scheme's members are likely to live. The models are then updated regularly, so emerging differences between PensionsFirst's projections and the reality can be corrected.

PensionsFirst said hedging all pension-scheme risks, including interest-rate exposure and inflation sensitivity as well as longevity risk, with its products would cost about the same as the cheaper insurance buyouts. The difference is that the schemes remain under companies' control, and hedges for individual risks will cost correspondingly less.

PensionsFirst plans to repackage most of the longevity risk and sell it, believing it will be able to find investors interested in fixed income-type assets that provide a diversifier from those markets. Candidates include hedge funds and endowment-type investment funds.

"There is appetite for longevity risk already in the equity markets," Mr. Lyons said. "People buy insurance companies' shares, which are exposed to it. We will offer participation in longevity in tranches -- exposures for 10, 15 and 20 years. In that time, horizon longevity is fairly predictable and trend-driven."

"We think it will be fairly easy to persuade investors in the fixed-income markets that this is something they can reasonably expect to manage. But longer-term longevity is more difficult to predict. . . . We will have to manage that risk ourselves with equity," he said.

Others are keen on setting up a fully operating derivatives market, arguing that one-off, scheme-specific deals won't promote transparency of prices and terms. **David Blake**, a professor and specialist on longevity and pensions at the **Pensions Institute** at Cass Business School, predicts progress will be made this year. "The main reason why anyone keeps the terms secret is that they are making a lot of profit out of it," he said. "The terms must be favorable to the acquirer of the longevity risk. The party on the other side of the swap has no way of knowing if they are paying a fair price. The costs of the transaction are not in the public domain."

**Longevity hedging attracts interest from trustees, by Mark Cobley, efinancial news, 7 Jan 2008**

*Schemes are using outdated figures to calculate mortality rates*

Jacobean poet John Donne may not have been an actuary or pension fund trustee but it seems he had the right idea – it does not matter for whom the bell tolls because mortality rates affect everyone. Yet pension specialists are struggling to get to grips with these figures because the majority of them are using imprecise historical data.

According to data from the UK's [Pensions Regulator](#), 97% of schemes are using outdated figures – the 92 Tables (the name relates to the year up to which the data runs) – to calculate mortality rates. Some schemes have started to use the updated 00 Tables. But even these are out of date and are not pension scheme specific as they are drawn from insurance company data.

Aware of the need for more precise data, the [Institute of Actuaries'](#) Continuous Mortality Investigation has been collecting data based on a sample of self-administered company pension schemes since 2002.

With only a few years of accumulated data, these new tables, known as Saps, are vague. But they are attracting interest, as they cover twice as many people and incorporate factors such as income into the variability of death rates.

The levy that schemes pay to the [Pension Protection Fund](#), the Government's safety net for collapsed schemes, is based on the size of their unfunded liabilities and the [PPF](#) may be about to incorporate the Saps tables into its longevity calculations.

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"In terms of the change in longevity assumptions the likely effect would be to increase liabilities. The PPF estimates that changing its internal mortality assumption reduced its funding level from 92% to 88%."

The bigger PPF bills are likely to make companies think twice, if they have not done so already, about the risk their pensioners will live longer than expected. This development will be music to the ears of pensions buyout ventures, including [Mark Wood's Paternoster](#) and [Edmund Truell's Pension Corporation](#).

But companies might soon have an alternative to a full buyout – a developing market in financial tools that can hedge against the risk of longevity rising. Investment banks and some smaller participants are moving in.

[Credit Suisse](#) and [JP Morgan](#) have established indices that track current rates of longevity and mortality and [Goldman Sachs](#) put the finishing touches to its version last month. [PensionsFirst](#), the venture chaired by former [Morgan Stanley International](#) co-president [Amelia Fawcett](#), also launched its first mortality products last month.

All three are understood to have set up desks and hired traders to deal in longevity swaps and derivatives.

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in managing longevity risk. He said: “Its pension funds are most aware and most under pressure to hedge longevity risk. It will be followed closely by the US and the Netherlands as both have large and sophisticated pension funds and high-quality mortality data.”

The first deals have been done. In April last year, UK insurer [Friends Provident](#) entered into a longevity swap with [Swiss Re](#), to insure the mortality and investment risks of its £1.7bn (€2.3bn) book of in-force pension annuities. However, the deal was a reinsurance transaction as opposed to a capital markets deal.

Other providers are queuing to do similar deals. PensionsFirst formally launched in November with equity backing from Japan’s [Shinsei Bank](#) and [Bill Reeves](#), co-founder of hedge fund [BlueCrest Capital Management](#). It offers a range of bonds to pension schemes that will match their future liabilities with a stream of steady income.

[Timothy Lyons](#), a partner at the venture, said the method depended on in-depth proprietary analysis of how long each scheme’s members are likely to live. The models are then updated regularly, so emerging differences between PensionsFirst’s projections and the reality can be corrected.

PensionsFirst said hedging all pension scheme risks, including interest rate exposure and inflation sensitivity as well as longevity risk, with its products would cost about the same as the cheaper insurance buyouts – roughly 120% to 125% of the FRS17 liabilities. The difference is that the schemes remain under companies’ control, and hedges for individual risks will cost correspondingly less.

Lyons said: “It is true people are living longer in general, but the actual experience of a specific population is variable. It really does go down to postcode level. So we wanted to offer a scheme-specific solution.”

PensionsFirst plans to repackage most of the longevity risk and sell it, believing it will be able to find investors interested in fixed income-type assets that provide a diversifier from those markets. Candidates include hedge funds and endowment-type investment funds.

Lyons said: “There is appetite for longevity risk already in the equity markets. People buy insurance companies’ shares, which are exposed to it. We will offer participation in longevity in tranches – exposures for 10, 15 and 20 years. In that time, horizon longevity is fairly predictable and trend-driven. Even if there are medical advances they take a long time to feed through.

“We think it will be fairly easy to persuade investors in the fixed income markets that this is something they can reasonably expect to manage. But longer-term longevity is more difficult to predict. If you consider the life expectancy of a 20-year-old, for example, then you are talking about an exposure of potentially 60 years or more. We will have to manage that risk ourselves with equity.”

Others are keen on setting up a fully operating derivatives market, arguing that one-off, scheme-specific deals will not promote transparency of prices and terms. [David](#)

[Blake](#), a professor and specialist on longevity and pensions at the Pensions Institute at [Cass Business School](#), predicts progress will be made this year.

He said: “The main reason why anyone keeps the terms secret is that they are making a lot of profit out of it. The terms must be favourable to the acquirer of the longevity risk. The party on the other side of the swap has no way of knowing if they are paying a fair price. The costs of the transaction are not in the public domain.

“Because of this, the capital markets will eventually produce a solution. The other reason is that there is not enough capacity in the reinsurance industry to absorb the roughly \$20 trillion worth of longevity-linked liabilities there are worldwide. The banks have set up the desks. They have taken stakes in the pensions buyout companies. They are willing to warehouse a lot of longevity risk to get the market started, as they are confident they will be able to sell it.”

Blake, together with colleagues [Andrew Cairns](#) of Edinburgh’s Heriot-Watt University and [Kevin Dowd](#) of the [Nottingham University Business School](#), have put together their own model of expected longevity trends and are hoping it will be used by traders. Their data is based on the total population of England and Wales.

He said the importance of scheme-specific analysis of mortality was exaggerated: “If you can get a 90% effective mortality hedge through the capital markets for a third the cost of an insurance transaction, then it is better than nothing.”

However, [Phil Page](#), a client manager at [Cardano](#), had a different view: “When [BNP Paribas](#) tried to launch a longevity bond in 2004 nobody bought it, and that was not because it was not priced sensibly, but because it was based on generic mortality data. The difference in mortality experience around the country is quite large. Any big pension fund will want to do scheme-specific calculations.”

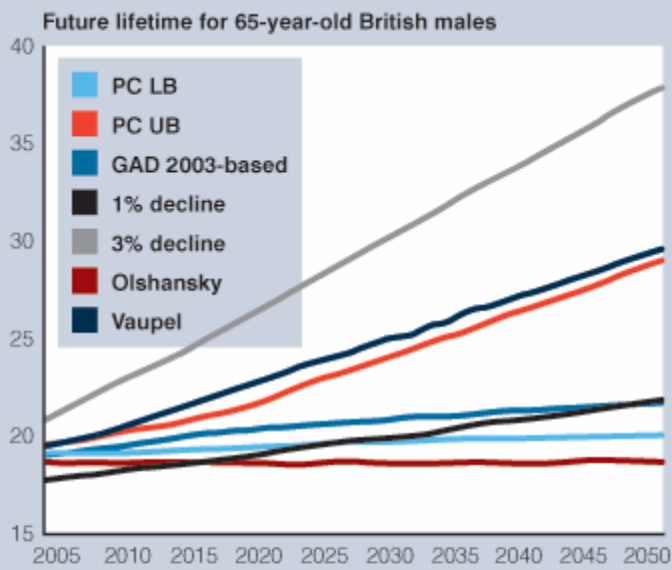
If banks and other providers want to get their swaps and derivatives in front of pension schemes they will need to get past the investment consultants, who hold the keys to the trustee boardroom doors. PensionsFirst is one provider that has concentrated its marketing squarely at them.

Most consultants remain to be convinced on longevity swaps. Page, whose company specialises in advising on and implementing derivatives transactions, said the biggest difficulty was still identifying counterparties.

He said: “The fundamental problem is that there is an imbalance of supply and demand. Unless someone is willing to be the protector of longevity risk and put their balance sheet at risk, it will not happen.”

JP Morgan believes it has identified certain potential investors in longevity, including hedge funds, endowments, certain insurers and even pension buyout companies, confident of enough of their actuarial expertise to leverage their exposure.

## Projections of life expectancy



**Notes:** 'PC LB' and 'PC UB' refer to the bounds of the putative 90% prediction interval taken from the Pensions Commission Report, 'GAD 2003-based' refers to the GAD principal projection based on 2003 data obtained from the same source, '1% decline' and '3% decline' refer to the Pension Commission projections based on 1% and 3% declines in mortality, and is taken from the Pensions Commission Report, 'Olshansky' and 'Vaupel' refer to the putative Olshansky and Vaupel projections given in the Pensions Commission Report.

Source: Kevin Dowd, David Blake and A.J.G. Cairns  
of The Pensions Institute; Cass Business School