

## Recent Media Comments 2007

**Should you swap your pension for an Isa?, by Sam Dunn, The Guardian, December 1 2007**

**Saving for retirement: With life expectancy climbing steadily, people are having to make tough choices about their old age. Sam Dunn looks at the options**

A longer life, it seems, is a short cut to greater financial difficulty. This week, a new report on longevity from the **Pensions Institute** at the **Cass Business School** underlined the financial dangers associated with us living longer.

The research from Professor **David Blake** puts an extra 12 years on the average lifespan of a man reaching 65 in 2050. This means that anyone retiring at that age should expect to live on average to the age of 91 - or 97 at the upper end of expectations. The research will soon cover women.

Last month, Paternoster, a pensions company that buys annuities, estimated that today's 30-year-olds are likely to reach 100 years of age. And according to recent estimates from the Office of National Statistics, centenarians are the fastest-growing section of the population.

For most of us, extra years on the planet are to be welcomed, but our improving longevity poses a tricky question for savers: how best to pay for even longer in retirement?

While the Pensions Institute report calculates the bill to government and life companies for a man's extra dozen years (based on a pensioner earning £13,364 annually from private and state pensions) to be £160,368 per person, the more pressing cost for individuals is that of building a pot in the first place that can generate a comfortable sum in retirement.

For decades, the pension, whether occupational or personal, has been championed for most workers as the crux of their financial planning for old age, with generous tax relief on contributions and up to 25% allowed to be taken out free of tax before drawing an income. Although many working Britons have begged to differ and ploughed their money into buy-to-let property instead, the pension's tax benefits wedded to a guaranteed payout (in the shape of either a final salary or annuity, a monthly income for life) until death have long ensured that it remains embedded in our psyche as the main tool to fund our old age.

However, that pre-eminence has recently been subject to a bout of criticism by financial advisers who suggest that drawing an income from an individual savings account (Isa) is, in fact, a better choice, since it has similar tax breaks but doesn't lock away your money for years, and can be more easily passed to your family when you die.

"The Isa is the most flexible and cheap savings and investment scheme there has ever been. Most people will be better-off with money in Isas because it'll be tax-free forever," says Chris Gilchrist, director of independent financial adviser Churchill Investments, and head of the [everyinvestor.co.uk](http://everyinvestor.co.uk) financial advice website.

Hefty tax penalties of up to 82% for passing a pension on to heirs, the potential hit on qualification for means-testing, and monthly tax on your eventual pension payments are poor incentives to save, he adds, dismissing concerns that savers may be tempted to dip into their pension savings before they retire.

He recommends savers consider a "self-select" Isa that lets you spread your investments across a mix of funds and shares to balance different types of attitude to risk.

Concern at this sentiment has prompted fellow IFA firm Hargreaves Lansdown to leap to the defence of the humble pension. It has produced new calculations that highlight growing longevity to stress the benefits of pensions compared to drawing income in retirement from an Isa.

"In the context of financial planning, living too long is a very real possibility with potentially catastrophic consequences," warns Tom McPhail, head of pensions at Hargreaves Lansdown. "For most people, the risk of their income stopping is unacceptable. The question that investors need to ask themselves is: how much additional income will an Isa pay me, compared to a pension, as compensation for the possibility that I could run out of money?"

His firm's figures - which take into account the new 20% (instead of 22%) tax relief on pension contributions from April 2008 for basic rate taxpayers - use the example of £1,000 left in an Isa and a personal pension for ten years, and compare the money paid out (in the shape of income and an annuity, respectively) until death in 20 years' time. In most scenarios a pension clearly beats an Isa, the research found. For higher and middle earners, a pension - even allowing for the 25% taken tax-free at retirement - beats an Isa by up to 25.5%.

But the research highlights how for lower earners, the benefits are much less pronounced and, in one scenario, favour an Isa over a pension where savers earn 20% tax relief on their contributions and end up paying 20% tax in retirement. That could mean that workers who fit this bill could do better by choosing an Isa and managing it carefully.

However, it remains the risky option, argues McPhail, because rising longevity could see your Isa income wiped out if you live "just one extra year of life" longer than the standard life expectancy.

You can only invest £7,000 in an Isa each year, adds Patrick Connolly at IFA Towry Law, whereas you can currently invest up to £225,000 (rising by £10,000 next year) into a pension in a year. However, he says: "The choice between products should not be seen as a contest."

**U.K. Male Life Expectancy To Strain Pensions, Global Money Management, Institutional Investor.com, 28 November 2007**

A new model developed by three business school professors indicates that British men could live up to 12 years longer than expected, *Professional Pensions* reports.

The new model, which is based on an analysis of mortality data for 65-year-old men, shows that life expectancy is increasing quickly. British men that will turn 65 in 2050 could live six years longer than current predictions by Office for National Statistics data, with a life expectancy of another 26 years, with the upper end of a possible life expectancy of 32 years, 12 years more than the present number. If the projections are correct, the government and pension funds will have to come up with another £160,000 per person, collectively.

“We know that people are living for longer but this model demonstrates that longevity is accelerating far beyond what is currently predicted and that there is considerable uncertainty surrounding future life expectancy,” Pensions Institute Director and **Cass Business School** professor **David Blake** said. “This will present a huge challenge for long-term health care providers and intensifies the problems faced by both the government and the UK pensions industry. Providers need to urgently update the projection models they use before the pensions deficits reach catastrophic proportions.”

The model was formulated by Cass Business School professor **David Blake**, **Heriot-Watt University** professor **Andrew Cairns** and **Nottingham University Business School** professor **Kevin Dowd**. The model was applied to data from men in England and Wales and will be tested on female data soon.

### **Researchers Predict Pensions Catastrophe, ScienceDaily, 30 November 2007**

Recent increases in our longevity could have disturbing implications for the government, pension companies and life insurance industries.

A group of academics are warning that increases in longevity translate into bad news for those with obligations to pay our pensions or look after us when we are old; to make matters worse, projections of future longevity are also very uncertain.

**Kevin Dowd**, Professor of Financial Risk Management at The University of Nottingham, together with Professor **David Blake** from Cass Business School in London and Professor **Andrew Cairns** of Heriot-Watt University in Edinburgh have calculated that men reaching the age of 65 in 2050 could expect to live until a little over 90.

The researchers say their findings are bad news for those with obligations to pay pensions or otherwise provide for the elderly as it forces them to anticipate large numbers of people living to very old ages. Their projections also suggest that future longevity is highly uncertain. This finding, they say, makes the bad news even worse, and will force many pension funds to seek ways in which they can manage their exposure to longevity risk.

Professor Dowd said: “This is a major problem, not least because the financial instruments needed to manage this risk do not currently exist.”

The group investigated longevity risk with the use of fan charts calibrated on mortality data for English and Welsh males over the period of 1962 to 2002. However, they believe there's every reason to expect that similar findings would be obtained for both males and females for any comparable countries.

### **Pensions warning over longevity prediction: Men could live longer than expected**

**<http://www.which.co.uk/news/2007/11/pensions-warning-over-longevity-prediction-126299>**

27 November 2007

### **Men could live for up to 12 years longer by 2050 than is currently predicted, dramatically increasing the cost of pension provision, new research claims.**

Analysis of current mortality data for 65-year-old men indicates that people are living for longer and that longevity is increasing far more rapidly than previously predicted, according to experts at Cass Business School.

The research found that men reaching 65 in 2050 would on average live to be 91, six years more than is currently predicted.

But it added that the upper end of life expectancy for this group of men was 97, 12 years older than the current age they are expected to reach.

#### *Pension implications*

The model, which was formulated by Professor David Blake of Cass Business School and colleagues at Heriot-Watt University and the Nottingham University Business School, warned that the increased life expectancy had big implications for the cost of pension provision.

It said, based on government figures that showed a single male pensioner received an average income of £257 a week in 2005/2006 through state and private pensions, each year of increased life expectancy would cost the Government and companies around £13,364 in today's money or £160,368 over 12 years.

Professor David Blake, director of the Pensions Institute at Cass Business School, said: 'We know that people are living for longer but this model demonstrates that longevity is accelerating far beyond what is currently predicted and that there is considerable uncertainty surrounding future life expectancy.'

'This will present a huge challenge for long-term health care providers and intensifies the problems faced by both government and the UK pensions industry.'

'Providers need to urgently update the projection models they use before the pensions deficits reach catastrophic proportions.'

### *Women's life expectancy*

The new model for life expectancy has so far only been applied to male mortality data for England and Wales but it will be extended to take into account data on women.

The model has already been widely taken up by actuaries in Germany and is currently with the Continuous Mortality Investigation Bureau for approval to be used in the UK.

A DWP spokesman said: 'People are living longer, but about seven million are not saving enough for retirement. The Government's package of pension reforms is designed to tackle these challenges.

'The Basic State Pension will become simpler, more generous and fairer - providing a solid platform for private saving. The forthcoming Pensions Bill will make it easier for people to save through automatic enrolment into workplace pensions or personal accounts.

'But it's also important that future generations aren't left footing the bill for increasing longevity. That's why State Pension Age will rise gradually to 68 by 2046 for men and women.'

### **Life expectancy 'underestimated', By Elaine Moore, Financial Times, November 26 2007**

Government forecasts for life expectancy could be underestimating longevity by up to 12 years, according to new research.

Professor **David Blake**, director of the **Pensions Institute** at Cass Business School, has formulated a new model to forecast mortality rates in England and Wales and has concluded that people are living longer than previously expected.

According to his calculations, a man who reaches 65 in 2050 would be expected to live for another 26 years on average.

"Mortality rate changes over time do not occur in a smooth way," said Prof Blake. "The data we used is the same as that of the ONS but we have come up with a range of outcomes."

The idea for the range came from the Bank of England's inflation forecast "fan charts" which produce a central projection but also a range of outcomes, said Prof Blake.

Life expectancy has been climbing at a rapid rate for the past five years and there are fears actuaries have not kept pace with the rate of change. Insurance company Paternoster said that half of all 30-year-olds may now live to 100.

The potential problems of underestimating life expectancy were raised by the actuarial profession and its regulator this summer, who said the cost of providing pensions could rise by billions of pounds.

**Today's young men will live to 91, by Rosemary Bennett, Social Affairs Correspondent, The Times, 26 November 2007**

Men born in 1985 can expect to live to an average age of 91, according to a new forecast of life expectancy which concludes that all existing projections are too low.

Researchers at the Cass Business School say that the Government's key forecast for longevity, which is also used in the pensions and life insurance industry, has seriously miscalculated how long men will live in the future.

Life expectancy is currently 76.6 years for men and 81 for women. The new research suggests that life expectancy for men born in 1985, who turn 65 in 2050, could be as high as 97 under the most optimistic scenario, although 91 is its central forecast. That is six years higher than the Office for National Statistics' projection. The new Cass model has been applied only to men so far, but the next phase of the research will cover women.

The new calculation has serious implications for the Government and the pensions industry, who face having to pay an extra £160,368 per person in state benefits and occupational pensions, Cass calculates. **David Blake**, director of the **Pensions Institute** at Cass Business School, said: "Our calculations demonstrate that longevity is accelerating far beyond what is currently predicted, and there is considerable uncertainty surrounding future life expectancy. This will present a huge challenge for long-term healthcare providers and intensifies the problems faced by both government and the pensions industry. They need to update the projections they use before the pensions deficits reach catastrophic proportions."

Professor Blake said that the Office for National Statistics had a history of underestimating new trends: "It completely underestimated the scale of the postwar baby boom, which had serious implications for the provision of schools and hospitals, and it has continually underestimated longevity of elderly people."

The Government has voiced concerns about the ageing population and has taken some steps to make provision for more older people. The retirement age is rising from 65 to 68 by 2044. Those actions were promoted by the ONS forecast that the proportion of over65s will go from 15 per cent now to 25 per cent by 2050. However, less provision for the older population has been made in healthcare.

*The new centurions*

- There are about 9,000 men and women over the age of 100, but the numbers are rising by 7 per cent a year
- By 2050, more than 150,000 people will be centenarians
- The costs of treating dementia and caring for sufferers have been calculated at £17 billion (and rising) per year

**Men living longer will be 'catastrophic', By Ian Cowie, Personal Finance Editor, Daily Telegraph, 26/11/2007**

Pension funds and the Government could be hit by a "catastrophic" increase in costs caused by men living an average of 12 years longer than expected.

A group of senior actuaries have warned that pension providers and taxpayers will have to pay out a total of £160,000 per man more than current official estimates.

Improvements in healthcare, diet and reduced smoking have already caused official estimates of life expectancy for 60-year-old men to rise by five years from 81 to 86 during the last quarter of a century.

The Association of British Insurers (ABI) said the new research underlined the need for increased saving to fund retirement. But the insurer Standard Life questioned some of the assumptions.

John Lawson, head of pensions policy at Standard Life said: "I think their £160,000 figure is incorrect as the state pension age will be 68 by then - so the multiple is nine years and not 12 years.

Professor **David Blake** from Cass Business School, Professor **Andrew Cairns** of Heriot-Watt University and Professor **Kevin Dowd** of Nottingham University Business School calculated that men reaching 65 in 2050 would, on average, live for another 26 years, six years longer predicted on the basis of current Office for National Statistics data.

However, the academics say they have "90pc statistical confidence" that by 2050 the average 65-year-old could have life expectancy of 92 - or 27 years more than now - and so could live to 97.

Professor Blake said women in this age group typically lived five years longer than men but the gap may narrow to four years because more women are smoking. He added: "People are living for longer and this will present a huge challenge for health care providers and intensifies the problems faced by both government and the pensions industry. "

**Today's men of 23 can expect to live until they are 91, By LIZ HULL, Dail Mail, 26th November 2007**

By the middle of this century, men who give up work at 65 can expect to enjoy more than 25 years of retirement.

They will be likely to live to the age of 91 on average, while many can expect to reach 97 or more, say researchers.

While these figures are good news for today's 23-year-olds intending to spend more time on the golf course in later life, they are deeply worrying for pension experts.

They warn that the improved mortality rate could cost the Government and private companies an extra £160,300 per person.

It would also have worrying cost implications for the Health Service, which is already struggling to cope with increasing numbers of elderly patients.

Although the research so far applies only to men, it seems certain that women, who already live around five years longer on average, will also have more time on their hands.

At present, the average predicted mortality age for men by 2050 is 85. But that, according to the survey, could be a gross underestimate.

The predictions have been formulated by Professor **David Blake**, of Cass Business School, City University, London, and colleagues at Heriot- Watt University, Edinburgh, and the Nottingham University Business School.

They say that the increased life expectancy would have "catastrophic" implications for retirement in the future if the Government and private firms delay in tackling the already worrying pension deficit crisis.

Using Government figures, which estimate that a single male pensioner receives an allowance for long-term health care providers and intensifies the problems faced by both the Government and the pensions industry.

"Providers need urgently to update the projection models they use before the pensions deficits reach catastrophic proportions."

The new model for life expectancy has so far been applied only to male mortality data for England and Wales, but will soon be extended to take into account data on women.

Millions of Britons are already suffering poverty in old age because of shortcomings in the state pension and a lack of confidence in private schemes.

The present basic state pension of £87.30 per week is the lowest in the EU and is equivalent to a mere 17 per cent of the average wage.

This, coupled with a lack of trust in private schemes following a spate of banking scandals and crises, has already forced many to cut back on essentials and retire later.

The research also revealed that some 57 per cent of Britons aged between 55 and 64 are still in paid employment, while the average age of retirement in Britain – 62.6 – is also above the EU average of 61.

**New mortality model predicts massive increase in male longevity, by Nicole Farrell, professionalpensions.com, 26-11-2007**

BRITISH men could live up to 12 years longer than expected, a new model for forecasting mortality analysis reveals



The new model, based on an analysis of mortality data for 65 year old males, indicates that longevity is increasing rapidly.

Males reaching 65 in 2050 could live six years longer than currently predicted by Office for National Statistics data, with a life expectancy of a further 26 years – with the upper bound of likely life expectancy of 32 years, 12 years more than now.

If the forecast proves correct, it could cost government and pension funds as much as £160,000 per person between them.

Pensions Institute director, Professor **David Blake** said: “We know that people are living for longer but this model demonstrates that longevity is accelerating far beyond what is currently predicted and that there is considerable uncertainty surrounding future life expectancy.

“This will present a huge challenge for long term health care providers and intensifies the problems faced by both the government and the UK pensions industry.

“Providers need to urgently update the projection models they use before the pensions deficits reach catastrophic proportions.”

The new model was formulated by Cass Business School professor David Blake, Heriot-Watt University professor **Andrew Cairns** and Nottingham University Business School professor **Kevin Dowd**.

The Cairns-Blake-Dowd (CBD) model has so far only been applied to male mortality data from England and Wales but will be extended to consider female data.

The model has already been taken up widely by actuaries in Germany and is currently being investigated by the UK’s Continuous Mortality Investigation Bureau.

**Fan chart data reveals extended male longevity, by Julie Henderson, IPE.com, 26 November 2007**

UK – Academic research by the **Pensions Institute** into forecasted mortality assumptions reveals men could live to the age of 91 by the year 2050 – 12 years longer than currently predicted on average.

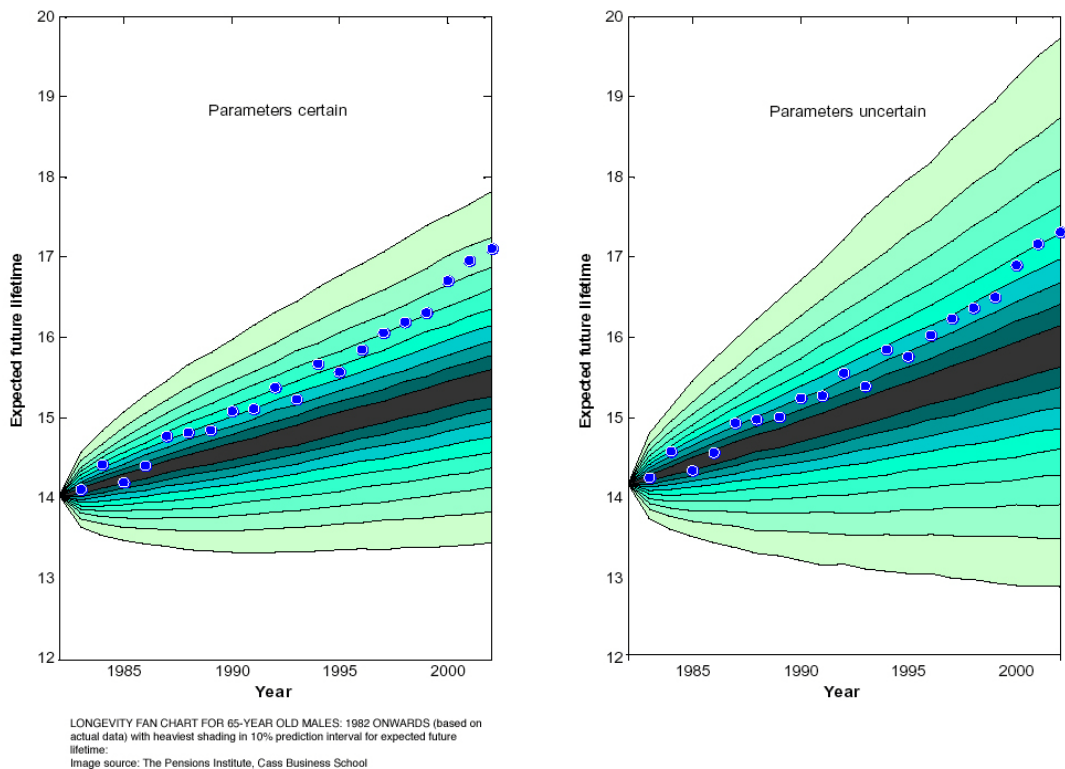
A new study conducted by the Pensions Institute suggests UK pension funds and the government may have to pay out around £160,368 per person between them, as men could live a further 12 years than currently predicted.

The report is produced by Professor **David Blake** from Cass Business School, alongside fellow academics Professor **Andrew Cairns** from Heriot-Watt University in Edinburgh and Professor **Kevin Dowd** of Nottingham University Business School.

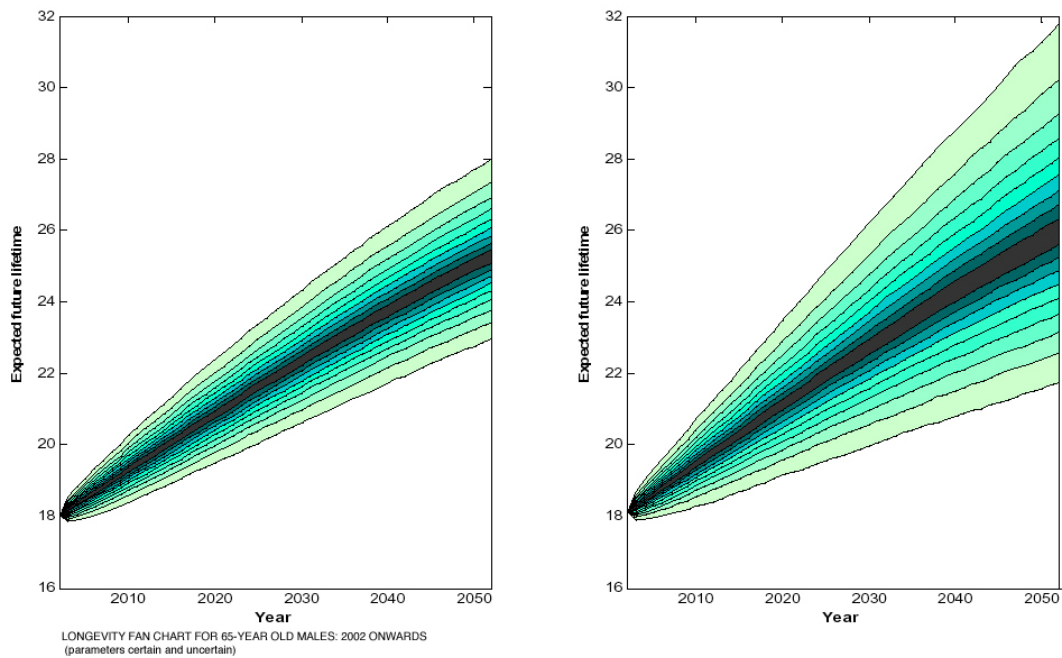
More specifically, the study analyses existing mortality data for men in England and Wales, focused primarily on the Government Actuary’s Department, the Pensions Commission and the Office for National Statistics, and finds by applying a ‘fan chart’

to the Cairns-Blake-Dowd model – which charts certain and uncertain parameters affecting true statistics – males reaching the age 65 in 2050 would on average live for another 26 years, which is six years more than currently predicted while the upper limit of potential life expectancy being a further 32 years or 12 years more than currently predicted in existing mortality assumptions.

Reaching the calculations applied to these charts is somewhat complex, but ‘fan chart’ tables presented within the study indicates true mortality assumptions for 65-year old males in 1982 were slightly higher than the 10% ‘prediction interval’ initially applied in early modelling but then widened significantly from the predicted models of that time.



Based on these findings, the Pensions Institute has produced data suggesting expected future lifetime limits will significantly increase, projections become even more uncertain as timelines lengthen, and longevity can therefore be as much as 12 years out in its true versus predicted modeling.



Conclusions of the report state: “We would stress although our results are based on a model calibrated on UK male mortality experience, we have every reason to expect that similar findings would be obtained for both males and females for any comparable countries. Thus, our findings have disturbing implications for the health, pensions and life insurance industry in many countries, and for public policy generally.”

### **Solvency II "will kill DB plans" – Blake, IPE.com 14 November 2007**

EUROPE – Applying Solvency II requirements to pension funding could be the “final nail in the coffin” for final salary schemes, director of the **Pensions Institute** Professor **David Blake** has told IPE.

Blake - who is one of the 10 nominees for this year's Outstanding Industry Contribution award at the IPE European Pension Fund Awards in Vienna tomorrow (Nov 15) – said the diverse nature of how pensions operate in the UK and elsewhere in continental Europe means proposals designed to fit countries with insurance-driven pension plans will seriously damage the funding position of defined benefit plans.

“The Solvency II issue could be the final nail in the coffin of DB plans,” said Blake.

“Whereas the continental view of this is pension promises are really insurance guarantees, and they should therefore come under solvency regulations, we don't have solvency criteria [in the UK], we have funding criteria. A solvency requirement requires [funds] to post reserves,” he added.

He believes one of the difficulties with the current view of DB pension schemes in the UK, and potential funding issues, is in part the unwillingness of younger generations to consider a retirement income as a privilege they should be willing to support.

“The view in the UK is the pensions long-term commitment, you can have periods of underfunding. That is all very well if you have the commitment of the company, but the company will only make the commitment if they think workers value their pension, and young people do not,” said Blake.

“In the earlier generation, a mother might have said [to an adult child seeking a job] ‘make sure it has a good pension’ because they knew of the experience of living with poverty. But this generation has had it so good for so long, they don’t realise you do have to save a lot for your retirement.

He continued: “People have got to save more for their pensions, unless they are willing to work much longer before they retire. But that is not so likely. As the France transport workers have shown, there is less willingness to do so than hoped.”

One of the additional complexities to dealing with what Blake considers to be serious pensions crisis in Europe is the lack of willingness among most nations, with the exception of the Netherlands, to recognise the need to finance pensions.

“The UK has had one of the most mature [pensions] debates in Europe, the rest of Europe has their heads buried in the sand with the exception of the Dutch as there is a sense of solidarity in the Netherlands about such agreements. Where there were protests [in the Netherlands] about moving away from final salary, there has been very mature debate and they didn’t abandon final salary, they moved to average salary.

“In the UK, we have had the mature debate but no-one has had the guts to stand up and be brave about the solutions needed. Introducing personal accounts is all very worthy but it should be mandatory, and this is a voluntary approach because [government officials] fear it is seen as another form of tax,” he continued.

Blake has now turned his attention at the Cass Business School and the Pensions Institute to longevity risk and says he has particular concerns about the viability of pensions in countries, such as Italy, where longevity and fertility rates are moving in opposite directions.

“How you can try to deal with longevity risk is through the new class of instruments, through what I would call the life of the birth market – albeit it has been a slow and painful birth – through the design of products suitable for hedging this risk.

Blake, who is Professor of Pension Economics at the City of London’s Cass Business School, was nominated by IPE readers for an Outstanding Industry Contribution award, for establishing a “prominent Pensions Institute which publishes papers on pension issues” and “writing two excellent books” which have initiated a series of academic textbooks on pensions science.

The winner of the Outstanding Industry Contribution Award will be announced at the IPE Awards in Vienna tomorrow evening.

**JP Morgan to tap into \$20trln longevity risk market with new derivative, By Cecilia Valente, Thomson Investment Management New, 28 September 2007**

LONDON (Thomson IM) - US firm's 'q-forward contract' aims to slash costs for clients worldwide - including pension buyout firms as well as pension schemes and insurers.

JP Morgan said it is preparing to tap into the 20 trln usd longevity risk market with a derivative instrument aimed at helping clients hedge the risks posed by the difference between actuarial expectations and actual life-spans.

Guy Coughlan, managing director of JP Morgan's pension solutions team, told Thomson Investment Management News the bank is close to its first mandates for a newly-developed ten-year 'q-forward contract' - Q in actuarial terminology stands for mortality.

The firm has been targetting pension schemes, insurers and buy-out firms worldwide.

The forward contract is based on mortality calculations for the UK population made by JP Morgan through its LifeMetrics longevity index.

'We are already in discussions with pension schemes and insurers in the UK and other countries about executing q-forward contracts as hedges of pension longevity risk,' he said.

The q-forward covers the possibility of improvement in mortality but also a decrease due to unexpected factors such as a flu pandemic.

The pay out is based on the difference between what is expected and what happens.

The deals that are currently in the pipeline would see JP Morgan acting as a counter-party.

Coughlan was reluctant to give a detailed timetable for the first mandate but said that it should be awarded within the next 12 months.

He said the costs of a q-forward would be 'a fraction of the cost' of a pension buy-out or buying an annuity, because when entering a buy-out agreement a pension fund transfers its assets as well as its liabilities to an insurer. A q-forward transfers just the longevity risks of the liabilities.

JP Morgan's claims for the new product's cost advantages have not met with universal agreement; and Mercer's actuary Gordon Fletcher plays down the benefits.

He said Mercer had compared the costs of a q-forward with similar solutions already offered by investment banks and other market players, and the preliminary

comparison had indicated that q-forwards would not necessarily be significantly cheaper.

'The price depends on the market view and the market is not giving such products away, it is not selling these things cheaply,' he added.

Fletcher however noted that because q-forwards would be based on the LifeMetrics index, it would track the life expectancy of the whole UK population, while the existing products are mainly tailor-made and therefore only refer to a specific institutional investor's membership.

Professor **David Blake** of **Cass Business School**, who was involved with the development of the LifeMetrics longevity index, said: 'A buy out transfers longevity, inflation, investment and interest rates risks and the insurer will have to take over these risks.'

The professor said that a successful q-forward contract market would encourage the buy-out market as well as relieving pension schemes of longevity risk.

'A buy-out firm also has longevity risk, so it would be a potential client, as would anyone else with annuity books. These players are much more aware of this issue (mortality) than trustees.

'The new market could help the buy-out market and the buy-out market could reinforce this market; potentially everyone wins,' the academic said. 'This is the start of the biggest global capital market in the last 100 years. This is a huge market,' Blake said.

JP Morgan's Coughlan said the defined benefit longevity market was worth about 20 trln usd globally but needed players to take off.

'Liquidity requires many participants. This is beneficial to the market and this market could be very large even if it was opened to any competitor who wants the challenge,' he said.

In order to encourage competition, Coughlan said JP Morgan is open to share information about LifeMetrics, the methodology and the technology behind it. This would allow competitors to develop products to tackle longevity-risk.

But aside from creating liquidity, Blake said the financial community needs to educate investors to understand the product.

'There are psychological barriers, simply because this is a new concept and they do not know much about it and have not heard much about it. The consultants do not know much about the market either, it will be a process of education for all those who bring the product to the market,' the academic said.

Coughlan added: 'It is taking time even for financial professionals to understand longevity risk and get comfortable with this new solution. So a lay-person who is a pension trustee faces an even greater challenge,' he said.

He accentuated the simplicity of the product though: 'A pension scheme that used a q-forward would not have to account for its liabilities any differently, because the q-forward hedge is accounted for in the fund's asset portfolio and its payoff would offset the increase in liabilities due to increasing longevity.'

Blake said that once the market takes off a second generation of these products would likely focus on the specific risk posed by 'cohort effect' - where groups share a common experience which affects their longevity.

### **Betting on the time of death is set, by Philip Thornton, The Business, 15/08/2007**

“In this world nothing can be said to be certain, except death and taxes,” Benjamin Franklin wrote in 1789. But two centuries on it has become clear there is in fact great uncertainty about death, or at least its timing, and the tax revenues required to fund pensions.

People are enjoying increasingly longer lives. While that is cause for celebration, governments and pension funds are fretting about the higher costs they will bear from pensioners' lengthening lifespans.

Financial markets are adept at trading almost all kinds of risk, from a rise in US interest rates to the possibility of a devastating hurricane in the Gulf of Mexico. But until now death has been a risk too far for traders to take on.

This may be about to change: there is growing optimism that this year could see the creation of a market in securities and derivatives linked to longevity risk.

At the heart of the problem is the gap between forecast years of life after retirement and actual longevity. In 1902 a 60-year-old woman would have expected to live for another 14.5 years. By 2002 that had increased to 23.5 years. This expansion could become even faster, as the rate of development of new medical technologies accelerates.

This has led to a growing desire by institutions that bear longevity risk to sell that into the capital markets. So far market response has been limited. In 2004 the European Investment Bank and BNP Paribas offered a 25-year bond targeted at pension and life insurers; this failed to take off. Investors were unfamiliar with the concepts and lacked the datasets needed to analyse longevity risk.

Earlier this year JPMorgan, together with Watson Wyatt, the pension consultants, and the **Pensions Institute** at Cass Business School, dealt with the second problem by launching a series of international public indices for measuring death rates in different countries.

The challenge now is to find investors willing to buy this risk by betting against rising longevity. **David Blake**, professor of pension economics at Cass and director of the Pensions Institute, says the natural counterparties are pharmaceutical companies and carehome providers, which are structured around prolonging life.

Admittedly, they have not shown much interest so far and Blake believes the financial industry must embark on a major education exercise to engage the interest of another potential group of investors, namely hedge funds. "Hedge funds recognise that longevity is a new asset class uncorrelated with financial markets, at least in the short term," Blake says.

JPMorgan has a desk to trade longevity in either bonds or derivatives and says it is in discussion with a "number of counterparties".

Of course, longevity is not a one-way risk. Rising obesity and alcohol consumption could reverse the long-term longevity trend.

But it is the diversity of views about the future that helps to create markets – and once there is a market, the one genuine certainty is that it will be London's financial innovators who will come up with the solution first.

### **Life expectancy issue, by Ruth Sullivan, FTfm, 20 July 2007**

Concerns about the problem of underestimating the lifespan of pensioners in the western world are increasing. Recent warnings from the Pensions Regulator and the actuarial professional body in the UK over the uncertainty of mortality projections, which fall short of actual experience, have added to fears of the rising cost of providing pensions and annuities.

"It's not that evidence [of increased life expectancy] has been ignored but rather it has been observed over a period of time by actuaries. We did not want to make a knee-jerk reaction to increase expectancy in life schemes," says Paul McGlone, an actuary at Aon Consulting.

If anything, the profession is guilty of not being able to predict the future, he says.

However, not everyone agrees. "The actuaries have systematically underestimated increases in life expectancy over the last 25 years," says **Professor David Blake**, director of the **Pensions Institute** at Cass Business School. "Actuaries use data for their life tables supplied by life assurers and the quality of this data is questionable."

New research from KPMG's pensions team also highlights the problem of the wide ranges that persist in the mortality assumptions used to calculate pension fund liabilities. Analysis reveals life expectancies vary by up to seven years across almost 200 companies in a range of sectors, based on current and future pensioners.

Even in the financial services sector, where a high consistency of projections might be expected in a single well-defined group of employees, the range is five years.

Relatively small variations in life expectancy assumptions can have a significant effect on a company's overall pension liability.

In an attempt to bring more consistency to lifespan forecasts, the actuarial profession earlier this month published a draft library of mortality projections. The profession's



Continuous Mortality Investigation research body projections contain 42 different mortality forecasts, each containing a possible scenario for mortality rates from the ages of 20-120 to the year 2100.

The issue of longevity is triggering the need for innovation from the financial industry in an attempt to spread the risk through new products. Until now the pensions industry has had relatively few ways of hedging longevity risk. "Traditionally fund managers have been selling investment strategies for the accumulation phase of pension plans, but little effort has gone into the design of investments relevant for the retirement period," says Professor Blake.

Investors are now moving towards bonds, liability driven investment, pooled funds and emerging derivative products, says Patrick McCoy, head of investment advisory at KPMG.

"There is no escape from mortality risk but you can hedge inflation risk by using swaps," he says.

It is early days for longevity swaps, where two counterparties agree to make a payment depending on whether actual longevity exceeds or underperforms an index. Prof Blake points out that the longevity swap deal between Swiss Re and Friends Provident in April should encourage investors to enter the longevity market and could be one way forward. Until now, market activity has been held back by unreliable longevity predictions and the lack of an established pricing system.

Mr McCoy forecasts that investors will be switching asset classes in an increased move out of equities and into bonds. So far longevity/mortality bonds have not been a success and the failure of the European Investment Bank/ BNP Paribas longevity bond and an earlier Swiss Re mortality bond have led investors towards derivatives, futures and swaps contracts.

One observer says the bond offering failed because of a lack of clear longevity data. Buyers did not know what they were buying and were unable to price the product for clients.

There is a need for a recognised index to forecast mortality for a longevity market to develop, says Prof Blake. He hopes the recent JPMorgan index, designed in association with Watson Wyatt and the Pensions Institute to measure and project mortality, will be the key to issuing longevity bonds and related derivatives, such as longevity swaps.

He is optimistic that longevity will emerge as the biggest asset class of the century. "Once traders and investors are interested, you start getting the basis of a liquid market", he says. He hopes this will happen in the next 12 months.

JPMorgan already has a trading desk to trade longevity in either bonds or derivatives. "We're in discussion with a number of counterparties at the moment," says Guy Coughlan, global head of pension asset liability management at JPMorgan.

It is possible that some of these products could be rolled out by the end of the year.

**Archive trust launches educational outreach programme, by Jonathan Stapleton, Professional Pensions, 28-06-2007**

THE PENSIONS Archive Trust will launch an educational outreach programme in a bid to put its collection to practical use.

The cross-industry group – which was formed to collate and preserve historical documents relating to the UK pensions industry – said its aim would be to use the archive to help with the financial education of 14-16 year-olds and further its links with the **Cass Business School**.

The archive – which is being established within the London Metropolitan Archives facilities – will also be used to help adults develop their knowledge and understanding of pensions.

TPAT chairman Alan Herbert explained: “Archives are always put to a practical use – that is certainly what the LMA do – and we will be working with them, hopefully in those areas, in due course.”

But Herbert said the initial priority would be to get the archive up and running and noted a project archivist would hopefully begin working with TPAT in the next few weeks.

TPAT has been in planning since January 2003 when Herbert, a former head of pensions at BP, launched a steering group through PP. It was formerly incorporated as a company limited by guarantee in September 2005.

- AP Information Services marked the 30th anniversary of the first publication of its Pension Funds and their Advisers by donating a complete set of its pension directories to TPAT.

And earlier this year the National Association of Pension Funds announced it was set to transfer its historical records to TPAT (Professional Pensions, January 10).

**Pensions: DC schemes now most common for private sector, by Alistair Byrne, fellow of the Pensions Institute, and Debbie Harrison, senior visiting fellow of the Pensions Institute, Investment Week, 18 June 2007**

A new study from the **Pensions Institute** at **Cass Business School** presents a thorough examination of the strategies currently in use in both trust- and contract-based schemes

For economic reasons that have been well documented, in the 21st century many finance directors no longer consider Defined Benefit (DB) pension schemes a rational investment.

As a result, defined contribution (DC) is now the most common arrangement for employees in the private sector.

In the late 1990s, DC schemes saw little in the way of innovation in suitable investment strategies for members. That is changing with the advent of better asset

allocations and improved delivery mechanisms, particularly for the majority of members who opt for the default fund.

A new study from the Pensions Institute at Cass Business School presents for the first time a thorough examination of the strategies currently in use in both trust- and contract-based schemes and also examines new strategies that could be adopted for the default fund in particular.

In our research we found that typically in excess of 80% of DC scheme members opt for the default fund. The Institute's fourth report, *Dealing with the reluctant investor*, argues the parties responsible for the investment choice and communications - trustees, employers, consultants, advisers, asset managers and life offices - should consider adopting recent innovations in DC investment strategies to ensure the default fund is appropriate in terms of asset allocation and risk, as well as simple to understand.

The report examines the range of DC investment strategies currently available for default funds and finds certain models lacking, for example the traditional life office balanced managed fund, which typically has an equity weighting of over 80%.

Common default funds today include UK and global index trackers, as well as balanced managed vehicles. In most cases the fund will incorporate a lifestyle overlay, which switches the investor into less volatile asset classes such as bonds and cash in the run up to retirement. There is no consensus on the optimal switching period and the switch period in practice varies from three to ten years before the planned retirement date.

Looking at more recent developments, we believe there are better structures for the default fund both in term of the delivery mechanism and also the underlying asset allocation.

In terms of presentation, we were particularly impressed with the concept of the target date fund. Importantly, the model helps to focus the member on the outcome rather than on annual growth.

Members do not have to make complex fund choices and therefore do not require detailed knowledge of asset class characteristics. Instead the member simply selects the fund nearest to the planned retirement date - for example the 2030 fund. If the expected retirement date changes the member can switch to a longer dated fund or phase retirement by dividing contributions between, say, the 2030 and 2035 funds.

The asset manager adjusts the asset allocation of the fund with the target date in mind (either on a mechanistic or discretionary basis), so that the lifestyle takes place within the fund itself, requiring no switching of the member's unit holdings.

While extremely simple from the member perspective, target dating is merely a form of packaging and delivery. The underlying funds used to create the asset mix can be as sophisticated as the provider wishes, although cost will be an important consideration.

A second innovation of merit relates to asset allocation strategies. The diversified growth fund, a more sophisticated version of the traditional balanced managed fund, incorporate a wider range of asset classes than the traditional equity/bond mix, including alternatives such as commodities, hedge funds, private equity and high-yield bonds.

The lower correlations between these asset classes mean that the diversified growth fund should produce a better trade-off between risk and return. The main downside at present is the high charges associated with alternative asset classes, but it is likely in future that synthetic structures could be used to access these asset classes at lower cost.

In terms of the investment choice beyond the default fund, evidence suggests a wide range of funds is unsuitable for most members in group DC schemes and that too much choice can be counterproductive, increasing complexity for members.

One attractive approach is to provide a narrow range of, say, three or five risk-graded funds, each of which contains multiple asset classes. Members can choose the fund that fits their attitude to risk, for example, adventurous, balanced or cautious (the ABC structure).

This approach may mean fewer members end up in the default fund because the investment choice is simpler. Risk profiling tools can be provided to help members with this choice, although if members do not engage with the tools they may still end up in the default fund.

Where trustees and scheme sponsors feel that some members would like a wide range of funds, it would seem sensible to put in place a filter so that the majority of members can make their choice from a small number of funds and only members who indicate they want a wider choice go on to see the full range.

Finally, in order to facilitate advice for workplace schemes, we recommend that regulators encourage employers, trustees and advisers to take a greater fiduciary role and protect them through safe harbour rules that restrict liability, provided due diligence has been done. Due diligence in this context would need to be defined carefully but clearly.

Key areas of application include selection of the default fund, the extent of investment choice offered to members, and in determining the nature of the information and advice that is provided to members. Safe harbour rules are used to good effect in the US - both from the fiduciary and members' perspective. We believe the UK can learn from this experience.

**FT REPORT - FT FUND MANAGEMENT: Drastic surgery call for public pensions, By Steve Johnson, Financial Times, June 11, 2007**

The UK government should fully fund the nation's vast unfunded public sector pension schemes by issuing a massive wave of debt when the liabilities are brought on to its balance sheet next year, it is argued.

Such a move would create a series of powerful standalone pension funds able to afford high quality investment professionals - the National Health Service and Teachers schemes would both be among the three largest pension schemes in the world, outstripping high-profile players such as Calpers, the California state scheme, and ABP of the Netherlands.

The wave of debt issuance might also push up long-term bond yields and end the inversion of the UK yield curve, bolstering private sector schemes by raising the discount rate they can use to discount their liabilities, although long-term rates need not rise if the surge in supply of debt was fully balanced by higher demand.

The far-reaching proposal has been tabled by Toby Nangle, director of fixed income at Baring Asset Management, who claimed to have received some political support.

"It's quite a dramatic proposal, but the feedback I have had has been quite positive," he said. "I have spoken to people on think-tanks who are reasonably close to the government and they have been quite enthused."

All of the central government's defined benefit pension schemes are currently unfunded, with the exception of that for members of parliament. These schemes have combined liabilities of at least £600bn, although some analysts argue the true figure is more than £1,000bn if the liabilities are discounted at market discount rates.

These off-balance sheet liabilities are due to be transferred to the government's balance sheet in 2008/09 as part of the "whole of government accounts" project initiated by Gordon Brown, the Chancellor, to improve transparency.

With on-balance sheet national debt currently standing at £572bn, the move will more than double the published debt/GDP ratio of 43.5 per cent.

Given that UK government debt issuance is running at about £60bn a year, it would need a massive one-off leap in issuance, ideally in index-linked debt, to fully fund these 15 schemes. However, Mr Nangle argued this would allow public sector pension schemes to diversify into potentially higher returning asset classes, reducing the cost of pension provision to taxpayers.

"The schemes would own assets and would therefore have the option to change the investment profile of them. They may wish to stay asset/liability matched or they may want to diversify," he said.

The effect on interest rates would depend on the extent to which pension schemes chose to diversify, selling their government debt into the market in the process.

Pension experts contacted by the FT gave a mixed response to the proposal. Professor **David Blake**, director of the **Pensions Institute** at London's Cass Business School, said: "This is quite a neat idea that is definitely worth discussing."

Prof Blake drew comparisons with the recognition bonds issued by Chile as it moved from a pay-as-you-go to a fully funded pension system. However, he warned that the concept would capitalise the value of the pension promises made to public sector workers, making it harder for these generous benefits to be diluted in the future.

John Nugée, head of the official institutions group at State Street Global Advisors, argued the government's debt management office would not want to find itself competing with pension schemes to sell gilts into the market. "This would threaten to disrupt government funding," he said.

The Treasury said there were no plans for public sector pension schemes to be supported by their own funds of investments.

**Scottish Life urges schemes to look at default offering, by Jonathan Stapleton, Professional Pensions, 01-06-2007**

PENSION schemes should take more responsibility for defined contribution investment strategy, Scottish Life calls.

The pension provider said that a properly governed default fund – with appropriate investment choice and clear communication for members – were often missing in private sector pension schemes.

Scottish Life head of communications Alasdair Buchanan said: "The reality is that many members put their trust in the default investment strategy, and rely on it to be appropriate throughout their lifetime."

Buchanan added he was surprised that it is only recently that default funds have started to be looked at by The Pensions Regulator.

He said: "Given the number of people invested in default funds, perhaps the biggest surprise is that it is only now receiving this degree of scrutiny."

Scottish Life has itself launched, at the end of 2004, a range of nine benchmark asset allocation strategies in a bid to reflect a member's own circumstances more closely.

But it said that one of the key features of its offering was that the funds were subject to regular reviews by an investment management committee in order to make sure they continued to meet the need of scheme members – oversight it said was lacking for many default funds.

Scottish Life investment marketing manager Nick Leitch explained: "This governance process offers advisers and their clients a considerable degree of comfort, as these reviews are intended to keep the funds on track.

"Performance, as we know, can go down as well as up, and while we can't control market fluctuations, we can monitor whether more (or less) risk is being taken than the adviser or their client was expecting, and we can take action if appropriate."

These comments follows research by the Cass Business School's **Pensions Institute** which found that 69pc of pension professionals believed default funds – used by 90pc of DC scheme members – fell short of most members' needs. [ITAL](PP, April 26).

**Talking Head: Light-touch regulation for pensions, please, By Jane Marshall, Financial Times FTfm, May 21 2007**

The report\* on investment choices in defined contribution plans, published on April 23 by the **Pensions Institute** at Cass Business School, is timely. These schemes are becoming an ever more important source of pension provision as defined benefit plans are closed to new entrants and future accrual. Although they have closed mainly on account of financial risk, regulation has played its part as well.

So the report's call for greater regulation of DC plans, and for employers and advisers to assume greater fiduciary responsibilities, is balanced by a plea for a UK equivalent of US "safe harbour" rules. These enable sponsors who can show that they have followed statutory requirements to insulate themselves from the consequences of poor investment decisions. There are in fact a number of different "safe harbours". One of them, for example, gives protection against the consequences of poor active investment choices; another relates to the sponsor's choice of default fund.

Safe harbour provisions are essential to any change in DC regulation, but they are not a panacea, as US experience shows. Because of the need to show that the statutory framework has been followed, a box-ticking culture can develop. Nor do safe harbour provisions mean the end of risk or uncertainty where DC investment is concerned. Law suits have been filed in the US against at least 10 large companies and their third-party administrators for breach of US statutory requirements alleging that members were charged excess fees and expenses that reduced their investments. It is argued "safe harbour" does not provide a defence, because the full nature and amount of fees was not disclosed.

But the Cass Report is right to identify the need for clarity in regulation. Unless we get that, so that sponsors and administrators know where they stand on educating and helping members, the worrying prospect of most DC members remaining in a default fund will persist.

DC Choices Annual Survey 2007, published in April by pension administrators DC Link, highlights member apathy and suggests that investment choice is being reduced as a result. The Cass authors would probably welcome that trend, since they recommend choices that are fewer in number but easier for members to understand. They also want some new thinking around the way in which investments are packaged. A life styling option, for example, may not be as beneficial as target-date designs.

But the pressing reason for the debate is the proposed introduction of DC personal accounts in 2012, along with a system of automatic enrolment to boost take-up rates. The new requirements are targeted at people who traditionally have not had pensions and who are unlikely to have much idea about investment, in common with most existing DC members. The same issues will arise on the new accounts as for current ones - but on a huge scale.

Light-touch regulation is essential for an industry battered by excessive and often counterproductive government intervention. The problem is that many members are building up DC pots that will fall short of what they expect, let alone what they need, and change is inevitable. Currently, occupational DC schemes are regulated by the

Pensions Regulator and contract-based schemes by the Financial Services Authority. Neither organisation wishes to merge with the other, and it looks as if the Thornton review currently under way will conclude that this is not a sensible solution. However, there is a need for clarity. The Pensions Regulator, for example, has just issued guidance with regard to the investment of DC schemes. Does this just relate to occupational schemes, or will the principles be applied to contract-based schemes as well?

It is vital that there is certainty about who regulates what, that there is no duplication and, critically, that there is no unnecessary or inappropriate regulation. Deregulation, rather than more regulation, is the thrust of the Lewin and Sweeney report sponsored by the Department for Work and Pensions.

Employers, particularly, have been battered by the quantity of new rules on pensions over the past few years, and past mistakes must not be repeated. If pension provision is worthwhile, say so. If employers have a key part to pay in delivery, incentivise and encourage them. Stop making pensions a burden for business. Encourage excellence with light-touch regulation. Try - for once - to keep it simple.

And finally, do not let us fool ourselves that "safe harbour" provisions are the complete answer. Storms can still blow up if you are in port.

*Jane Marshall is a partner at City law firm Macfarlanes*

*\*Dealing with the Reluctant Investor: Innovation and Governance in DC Pension Investment*

**Face to face with David Blake of the Pensions Institute, By: Edward Lander, New Model Adviser News Reporter, Citywire Financial Publishers Ltd/ Reuters, Thursday 17 May 2007**

Poor annuity returns have given those on the verge of retirement little cause for celebration recently, with annuity rates halving in the last 10 years.

But pensions expert **David Blake** feels that better value annuities could be just around the corner once a market for longevity risk has been established.

The director and founder of the **Pensions Institute** at Cass Business School in 1996 has been telling people for years that longevity risk would emerge as the biggest asset class of the 21st century. And based on recent evidence, his prediction appears to be coming true, albeit very gradually.

The first rumblings of longevity risk being used as market instruments were seen in 2003, with the launch of the Swiss Re Mortality bond in 2003. Then in 2004 came the failed launch of the EIB/BNP/Partner Re longevity bond, after which the market went quiet for a couple of years.

Blake, who is also chairman of Square Mile Consultants, a training and research consultancy, said that the start of pension buyouts in early 2006 and the launch of JP Morgan's index to benchmark and trade longevity risk in March 2007 should boost



activity in longevity trades and could create a full-scale capital market for longevity risk within a year.

He added that the recent longevity trade between Swiss Re and Friends Provident (reported in last week's issue) should encourage serious investors to enter the longevity market.

According to Blake, the creation of a capital market for longevity could ultimately boost annuity returns by freeing up funds that would otherwise have to be held in reserve to hedge against longevity risk.

'If annuity providers can off lay the longevity risk using swaps this will allow annuity providers to offer a better deal for consumers.'

The concept of longevity trading is nothing new, but up to now market activity has been stifled by unreliable longevity predictions and the absence of an established pricing system. Until recently, actuaries used deterministic models to predict longevity rather than the more up-to-date stochastic model.

Blake believes the stochastic model is more accurate as it takes into account random factors and movements that might affect longevity, rather than just focusing on the most likely outcome. But despite the obvious flaws of the deterministic model, it has taken more than 10 years for the industry to adopt the stochastic model.

Blake, who has done consultancy work for the likes of the Financial Services Authority and the National Audit Office, said: 'Actuaries deal with the past – they are backwards looking and it's hard to change this practice.'

'It took some extreme events like the collapse of Equitable Life for actuaries to start questioning the validity of their longevity models. If something has gone wrong, you try and fix it. You have to change old practices and skill sets and make sure your actuaries are better trained.'

In recent weeks there have been reports that companies such as Alliance Boots have vastly underestimated their pensions liabilities by relying on out-of-date longevity models and not adjusting their estimates accordingly.

Blake expects to see many more cases as companies start to update the model that they use to calculate longevity.

He said: 'There's going to be a lot more realisation that the true longevity expectations of companies with pension funds is much, much greater than was previously believed.'

In December, Blake and his colleagues at Cass Business School launched their own stochastic model for longevity, which they hope will be adopted by insurers, reinsurers and investors in the longevity business.

As well as allowing longevity to be traded more freely, greater accuracy in the modelling of longevity risk could also directly improve the value of pension annuities.

Blake said: 'The point is that people regard annuities as poor value for money, but what all the studies show is that they are good value for money if you factor in the right mortality projections.'

But while baby-boomers are faced with poor returns on their annuities, the next generation will have a really tough time, according to Blake, who says that for the foreseeable future pensions are still the best way to save for retirement.

He concluded: 'There's no alternative to sacrificing consumption when you're young. If you want to retire early and live a long time, there's no magic bullet here.'

'The alternative is abandoning retirement as something to expect, which effectively takes us back 150 years when you worked until you dropped.'

**Longevity risk market could transform annuities, By Edward Lander, Citywire Financial Publishers Ltd/ Reuters, Wed May 9, 2007 8:58 AM BST**

LONDON (Citywire) - The annuity market is on the cusp of a revolution that could dramatically boost the income of those in retirement.

The imminent creation of a market for longevity risk could significantly improve the value of annuities by reducing the capital buffer that insurance companies are required to hold to cover the prospect of rising life expectancy, according to pensions expert **David Blake**.

Blake, head of the **Pensions Institute** at City University's Cass Business School, said that advances in the pricing of longevity mean there could be a capital market for longevity risk within the next year.

Life firms will be able to 'swap' the longevity risk on their annuities and pass on savings to annuitants. Friends Provident recently did such a deal with Swiss Re.

Blake said: "If annuity providers can off lay the longevity risk using swaps this will allow annuity providers to offer a better deal for consumers."

He added that the recent longevity swap deal between Swiss Re and Friends Provident should give 'serious investors' more confidence to trade in longevity risk, which will in turn boost liquidity in the market.

He said: "Investment banks can see that longevity is going to be the asset class of the 21st Century."

"But these companies are wondering why there isn't more reinsurance of this risk going on already because the reinsurers are supposed to be experts in this - this is their business."

"What this deal does is that it shows reinsurance companies being involved in this risk which is good news."

Blake added: "The longevity space is in as primitive a stage in its development as the market for interest rate instrument and loans was 40 years ago and we're now seeing a revolution."

**Sharia-compliant bonds succeed, but longevity-linked products fail, By David Blake, Letter to the Editor, Financial Times, May 2 2007**

From Prof David Blake.

Sir, Ed Balls, economic secretary to the Treasury, was asked on *Business Daily* on the BBC World Service this week why the government was planning to issue Sharia-compliant bonds. He responded by saying: "London is a global centre for expertise and activity in Islamic finance and we want to be ahead of the game . . . It is incumbent on us to try and make sure these products are available if people want to take them up". He announced that experts were advising the government and that the Treasury and Debt Management Office were studying the situation.

It is a great pity that this desire to be ahead of the game in Islamic finance does not extend to the equally important matter of the security of British workers' pensions. For some time, I and a number of other experts including the Pensions Commission have been trying to persuade the government to issue longevity bonds to help pension funds and annuity providers to hedge the aggregate longevity risk they face.

London is also a global centre for expertise and activity in longevity-linked products. Nevertheless the government has consistently turned down our request to issue these bonds on the grounds that this would not be consistent with the objective of "minimising over the long term the costs of meeting the government's financing needs". As someone who is very keen on financial innovations of all kinds, I would be interested to know how Sharia-compliant bonds satisfy this objective but longevity bonds do not.

**Don't risk your pension by default, by Liam Halligan, Economics Editor, Sunday Telegraph, 29 April 2007**

AN INTERESTING report has landed in my in-box. Produced by the **Pensions Institute** at City University's **Cass Business School**, it is a detailed examination of our money purchase - or defined contribution - occupational pension schemes.

Over the past decade, thousands of final-salary schemes have closed. So, more and more of us will have to rely on DC schemes - which transfer investment risks away from firms, and on to workers.

The Cass research shows that a staggering 90 per cent of DC members shy away from making investment decisions and accept the default fund option.

And, as Professor **David Blake**, Director of the Pensions Institute and one of the report's co-authors, says: "Having analysed traditional default fund investment strategies, we often found them wanting."

As the study makes clear, "most traditional default funds don't match members' needs adequately". So 3m UK workers are now channelling money into funds which may be risking their retirement security.

One reason is that the fund-management industry often displays a cavalier attitude to the interests of scheme members. Employers, too, tend not to advise reluctant investors "as they are afraid of legal liability if the outcome is unsatisfactory".

In 2012, the Government's "pension revolution" will see the auto-enrolment of 8m more workers into DC schemes - many of whom will choose the default option too.

We are creating an occupational pension system which serves the City and employers nicely, while getting politicians off the hook. But it could well fail to deliver for millions of workers - those who are paying in, and for whom the system represents the difference between dignity and squalor in retirement.

### **DC schemes must be responsible, by Heather Dale, Global Pensions, 24-04-2007**

UK - Private sector defined contribution (DC) pension schemes must take more responsibility for investment strategy, warned the **Pensions Institute** at Cass Business School.

'Dealing with the reluctant investor: Innovation and governance in DC pension investment', the Pensions Institute's fourth report, analysed the DC investment options currently available and found that most traditional default funds did not match members' needs adequately in terms of asset allocation and risk profile.

The report said private sector employers offering investment-based DC pension scheme would put their members' pensions at risk unless they introduced a more innovative 'default' fund, as DC schemes transfer investment risk onto individual members and the success of producing adequate pensions depends very heavily on the success of the investment strategy.

According to the National Association of Pension Funds (NAPF) annual survey 2006, typically over 90% of DC scheme members accept the default fund option because they do not feel sufficiently knowledgeable or confident to make active investment choices.

The Pensions Institute report said the very people best equipped to help reluctant investors to make suitable investment decisions were not doing so because they were afraid of legal liability if the outcome was unsatisfactory.

University of Strathclyde academic **Alistair Byrne** said a fiduciary duty was an important concept in law and implied the highest standard of care. Such individuals or entities are expected to look after the best interests of the individuals to whom they owe their allegiance.

Byrne said: "We recommend that regulators encourage employers, trustees and advisers to take a greater fiduciary role and protect them through 'safe harbour' rules that restrict liability, provided due diligence has been done. Clearly 'due diligence' in this context would need to be defined carefully but clearly."

**NPSS default fund should be 'target-date', By Nyree Stewart, IFAonline.co.uk, Tuesday 24th April 2007**

The personal accounts delivery authority should consider using 'target date' funds instead of a 'life-styling' approach, for the default fund of the new system, claims a new report.

In the 58-page document: 'Dealing with the reluctant investor: Innovation and governance in DC pension investment', the **Pensions Institute** at Cass Business School, suggests default funds in defined contribution (DC) schemes need to become more 'innovative'.

The authors - **Alastair Byrne, David Blake and Debbie Harrison** – argue employers, scheme providers and advisers must take a greater responsibility for the design and communication of the default fund as this is where around 90% of members invest their contributions.

But the report says while typically 90% of DC members accept the default option because they do not feel "sufficiently knowledgeable or confident" to make active investment choices it warns analysis of the current investment options reveals most traditional default funds "do not match members' needs adequately in terms of asset allocation and risk profile".

In addition, the report suggests there is a 'responsibility gap' where employers and pension professionals are failing to help investors make suitable decisions because of a fear of legal liability if the outcome is unsatisfactory.

And it says this 'responsibility gap' is particularly acute in contract-based DC schemes where the member has a direct contract with the provider, or life company, and there is no board of trustees to look after the members' interests.

Byrne, an academic at the University of Strathclyde, says while employers and insurance companies are usually keen to do the best they can for scheme members, their good intentions stop well short of taking a fiduciary responsibility for the outcome.

He adds: "We recommend regulators encourage employers, trustees and advisers to take a greater fiduciary role and protect them through 'safe harbour' rules which restrict liability, provided due diligence has been done."

Harrison, a senior visiting fellow of the Pensions Institute, adds: "While it is true that the action of offering a default does not constitute individual advice under the very precise regulatory meaning set out by the Financial Services Authority, it is equally evident that 'reluctant investors' assume the default fund has been chosen to meet their specific needs."

As a result, the authors warn the design of the investment component of the government's proposed personal accounts, scheduled for implementation in 2012, raises most of the same issues as private sector DC schemes, particularly with the use of auto-enrolment.

That said, the Pensions Institute points out in some cases the “issues are made more acute by the nature of the target market for personal accounts” as the proposed high proportion of lower earners and first-time investors “implies very heavy use of the default fund”.

The report warns key issues for the government to take into account include the extent and delivery of investment choice, as well as the nature of the default fund and the ability of the scheme to accommodate religious and ethical investment preferences.

It states: “We recommend that the Delivery Authority for Personal Accounts and the Personal Accounts Board that emerges as the fiduciary for this national scheme, consider target-date funds as a feasible default mechanism.”

“Out of the current models available (and others which will be developed over the next five years) target-date funds appear to deliver an easy selection mechanism for members, while conferring maximum flexibility on the Board in terms of the decisions that surround the selection of the underlying asset allocation and investment style.”

Blake, director of the Pensions Institute, says: “This is the first thorough review of DC investment strategies in the private sector. We analysed traditional default fund structures and found them often wanting.”

However, he points out the research – consisting of a survey and interviews with 110 pension experts – has identified “important investment initiatives” such as the target-date fund, the diversified-growth fund and the risk-graded funds, which Blake says could provide a much better deal for the reluctant investor, if they are adopted.

Harrison adds: “Employers and pensions professionals must be encouraged to take a clearer role in selecting the default fund investment strategy and the range of investment funds on offer in the scheme. For the sake of the reluctant investor’s welfare in retirement, common sense, we feel, should not be thwarted by regulatory semantics.”

#### **UK: GAD’s Young reviews pension compensation, IPE.com, 24 April 2007**

UK – The government has named Andrew Young, directing actuary at the Government Actuary's Department, as head of the review of compensation for people in bankrupt pension schemes.

Last month chancellor Gordon Brown promised to quadruple the money in the Financial Assistance Scheme (FAS) to £8bn (€12bn). This means that "affected people's pensions will be topped up to 80% of their core pension expectation", said pensions reform minister James Purnell.

The reviewers of the FAS are to look at how best to use assets in schemes that are being wound up and what additional sources of non-public funding could be used for compensation, the minister said.

An initial report is expected in the summer and a full report at the end of the year.

Meanwhile, the government might be facing another wave of insufficient pension provision under the new Personal Accounts scheme to be introduced from 2012 the **Pensions Institute** warns.

In a recent report the team at the Cass Business School found that default options in DC schemes are not necessarily the best option for employees although – according to NAPF data almost 90% of DC scheme members stay in the default option.

"We analysed traditional default fund structures and found them often wanting," David Blake, director of the Pensions Institute, said.

"It is evident that 'reluctant investors' in DC schemes assume that the default fund has been chosen to meet their specific needs," **Debbie Harrison**, co-author of the report, pointed out.

The institute urges regulators to encourage employers, trustees and advisers "to take a greater fiduciary role and protect them through 'safe harbour' rules that restrict liability, provided due diligence has been done". A key duty for these players should be the selection of the default fund, the Pensions Institute states.

Under the new pension scheme which includes auto-enrolment it is estimated that another eight million employees will get a DC pension provision. "These people will be particularly vulnerable to investment risk as they will be largely lower- to median-earners and will have little or no investment experience," Harrison commented.

The report can be found on [www.pensions-institute.org/](http://www.pensions-institute.org/)

### **Department for Work and Pensions: Press Release, Monday 23 April 2007**

#### *Purnell announces review panel and issues call for evidence*

The Government today announced details of a funding review with the aim of giving further help to people who lost money when their pension schemes wound up under-funded.

Minister for Pensions Reform James Purnell announced that Andrew Young, Directing Actuary of the Government Actuary's Department, would lead the review. The review will be advised by panel of leading experts with experience in key areas, including prominent industry figure Alan Higham.

Reviewers will provide an initial view in the summer and a full report by the end of the year.

James Purnell said: "The extension of the Financial Assistance Scheme announced in the Budget means that affected people's pensions will be topped up to 80 per cent of their core pension expectation.

"We believe this is the right amount for the taxpayer to fund - but we are committed to looking at other sources of non-public funding.

"So I'm pleased to announce that the funding review, led by Andrew Young, is now underway.

"It will look at whether better use can be made of assets in winding-up pension schemes, and whether other sources of non-public funding, which have not already been allocated, could boost assistance levels further.

"The review team has already started meeting key stakeholders and will contact others shortly to invite their contributions."

The Government is to extend the Financial Assistance Scheme (FAS) to cover members of schemes that began winding up between 1st January 1997 and 5th April 2005, where a compromise agreement is in place - and where it would have forced the sponsoring employer into insolvency if trustees had demanded that the company honour its pension promises in full. This will help an estimated 8,000 people.

Mr Purnell added: "The team undertaking the assets review has been asked to establish whether there are schemes with a solvent employer in different circumstances that should be considered for eligibility."

The extension to the Financial Assistance Scheme announced in the Budget increases the funding commitment from £2.3bn in cumulative cash terms, to £8bn. This equates to more than doubling the scheme in net present value terms, from £830m to £1.9bn.

The increase means that all 125,000 people who lost money when their schemes started winding up will receive support equivalent to 80 per cent of their core pension rights, up to £26,000 per year.

#### Notes To Editors

1. External experts advising the review are Alan Higham, non-executive director of Higham Dunnett Shaw; Ashok Gupta, a director on the board of Pearl Group Limited; Jane Samsworth, a partner at law firm Lovells; Chris Martin, managing director of Independent Trustee Services Limited; Dr **David Blake**, Professor of Pension Economics at Cass Business School, and Director of the **Pensions Institute**; Angela Hills, an administrator for Mercers Human Resource Consulting Limited; and Martin Clarke, executive director of financial risk at the Pension Protection Fund.

2. The 80 per cent level of support is from the taxpayer, and it is not contingent on the release of any other funding source identified by the review.

3. A Government amendment to the Pensions Bill 2006, which passed the Commons stage last week, would increase levels of FAS initial payments to 80 per cent of core expected pension - the same level as FAS final payments to members of wound up schemes. Initial payments, currently set at 60 per cent of core expected pension, are available where schemes have not yet completed the winding up process. The Government urges trustees of winding up schemes to apply for these payments on behalf of their members.

**Cheap pensions inadequate, bosses admit, by Phillip Inman, The Guardian, Tuesday April 24, 2007**



Company executives say they expect the switch to cheaper, stock market-linked occupational pensions to leave their staff without an adequate retirement income, according to a survey published yesterday.

A third of executives surveyed lacked confidence in the defined-contribution schemes that now make up the bulk of UK workplace pensions.

Most of Britain's big employers have told new workers they can no longer have a pension based on their final salary and length of service. Instead they offer a fixed contribution with investment growth of the fund. Some companies, including support services firm Rentokil Initial, have forced existing employees and new staff into the cheaper pension arrangements.

Pensions experts have said cheaper schemes will leave many staff on low incomes when they retire. Until now employers have been reluctant to admit they might be inadequate.

The pensions consultancy that commissioned the survey, SEI, said: "Talk of a UK pensions crisis has focused on final salary provision, with funding shortfalls and closure of schemes in the headlines. However, the research raises the question of whether defined contribution provision in its current guise is really the panacea."

Employers also said they found it difficult recruiting trustees to sit on pension scheme boards after a raft of rule changes and an increased risk of legal action if trustees made a mistake.

Contract pension schemes, more commonly known as group personal pensions, which are popular among small and medium-sized companies, are also criticised by 40% of employers for presenting staff with a bewildering number of investment choices.

Research by the **Cass business school** also published yesterday suggested more than 90% of scheme members choose the default option because they do not feel sufficiently knowledgeable to make active investment choices.

"We estimate there are over three million people enrolled with the default option in defined contribution schemes," the Cass report said.

"Most traditional default funds in these schemes do not match members' needs adequately in terms of asset allocation and risk profile."

It continued: "The move to defined contribution is likely to continue at pace and despite a realisation that contract-based schemes do not provide enough support for their employees, many companies are opting for this approach simply to reduce the responsibility on their shoulders."

**Companies jeopardising pensions of millions, By Jennifer Hill, Personal Finance Correspondent, The Scotsman, 24 April 2007**

LONDON (Reuters) - Company pension fund trustees will jeopardise the retirement prospects of millions of workers unless they take a more innovative approach, a report

says. The Pensions Institute at Cass Business School warns that defined contribution (DC) pension schemes will put their employees' retirement prospects at risk unless they introduce more innovative default funds.

Typically, more than 90 percent of DC fund members select the default option, because they do not feel sufficiently knowledgeable or confident to make active investment choices, according to the National Association of Pension Funds' annual survey 2006.

However, the Pensions Institute found that most traditional default funds do not match members' needs in terms of asset allocation and risk profile.

**David Blake**, director of the **Pensions Institute**, said: "This is the first thorough review of DC investment strategies in the private sector.

"We analysed traditional default fund structures and found them often wanting."

The report comes at a time when the government plans to introduce a national DC scheme -- "personal accounts" -- in 2012, into which all employees not currently in a scheme will be automatically enrolled.

This is expected to bring a further eight million employees into the DC investment environment.

**Debbie Harrison**, a senior visiting fellow of the Pensions Institute and co-author of the report, said: "These people will be particularly vulnerable to investment risk as they will be largely lower to median-earners and will have little or no investment experience."

In contrast to defined benefit pension funds, which are based on final salary, DC schemes transfer investment risk on to individual members and resultant pension pots depend heavily on the success of the investment strategy.

The Pensions Institute also identified various investment initiatives, such as the "target date" fund, "diversified growth" fund, and "risk-graded" funds, which, if adopted, could provide a "much better deal", according to Blake.

The report, "Dealing with the reluctant investor: Innovation and governance in DC pension investment", said more also had to be done to encourage those best equipped to help investors make suitable investment decisions -- namely employers and pensions professionals -- to do so.

This is currently not the case, according to **Alistair Byrne**, an academic at Strathclyde University and also co-author of the report, because employers and advisers are afraid of legal liability if the outcome is unsatisfactory.

"While employers and insurance companies usually are keen to do the best they can for scheme members, their good intentions stop well short of taking a fiduciary responsibility for the outcome," he said.

Regulators should encourage employers, trustees and advisers to take a greater fiduciary role and protect them through "safe harbour" rules that restrict liability, provided due diligence has been done, he said.

"Key areas of application include selection of the default fund, the extent of investment choice offered to members, and in determining the nature of the information and advice that is provided to members," said Byrne.

The Pensions Regulator is currently examining pension providers' and advisers' reluctance to accept a fiduciary responsibility -- which implies the highest standard of care.

**Longevity: Old age, the threat no one thought to predict, By Steve Johnson, FTfm Report: Liability-Driven Investment, April 23 2007**

The emergence of liability-driven investment has offered pension funds the tools to hedge their interest rate and inflation risks, while techniques to protect against downside risk in asset prices are commonplace.

But these developments have simply shone more light on the one risk that, as yet, cannot be hedged out: that of rising longevity.

Given the brainpower now being put to work on this subject, the oversight may not last for much longer.

"Pension funds are increasingly aware of the risk they are running, and as other risks are hedged out this creates demand for ways to hedge more esoteric risk such as longevity," says Stuart Jarvis, a senior strategist at Barclays Global Investors.

At present the only option open to a pension fund desperate to protect itself against its members living to an unexpectedly ripe old age is rudimentary, and costly: purchase of a bulk annuity, typically at a cost 30-35 per cent above the accounting liabilities of the scheme.

But change is afoot. "Longevity pools are going to be the asset class for this century," argues Professor **David Blake**, director of the **Pensions Institute** at London's **Cass Business School**.

Together with JPMorgan and Watson Wyatt, the consultancy, Prof Blake has helped develop a transparent international index of life expectancy, initially covering England, Wales and the US, but with more countries to come. The hope is that a broad-based industry index for measuring death rates will spur the development of a derivatives market, allowing participants to go either long or short longevity risk.

A previous stab at this approach, by Credit Suisse, failed only because it kept the data on which its index was based private for proprietary reasons, strangling the market at birth, proponents of the JPMorgan approach argue. Not everyone agrees.

"The financial markets do not create anything; they are just a mechanism for bringing two parties together with different and opposing views, interests or positions," says John Ralfe, an independent pension consultant.

In other words, the pension industry may be estimated to hold \$7,000bn of assets exposed to longevity risk, but who are the natural hedgers of these positions?

Life assurers are a commonly mentioned answer: if life expectancy continues to rise they can look forward to more years of premiums before payouts become due.

Yet there is an age mismatch here, with most life policies held by those of working age. Life expectancy changes here may not mirror those of an older cohort, particularly if rising obesity begins to drag life expectancy levels lower.

Many insurers also operate pensions as well as insurance arms, so are already hedged.

Prof Blake cites pharmaceutical companies and long-term care providers as others that will benefit from ever-greater longevity, making them natural counterparties to the pension industry.

Yet Mr Ralfe argues that care homes in countries such as the UK tend to have long waiting lists, cushioning them from any downturn in longevity, while drug companies may view this as a small operating risk.

This, of course, leaves hedge funds and other speculative traders. Professor Blake believes hedge funds are starting to be attracted by the notion that longevity is uncorrelated with other asset classes, but this premise could be tested in the event of a catastrophe.

Mr Ralfe accepts that the likes of hedge funds may be keen, but fears a market dominated by speculative traders could prove unattractive to pension funds if it meant prices were only struck at levels distant from the central forecasts of the underlying index.

A further complication is that the age and life expectancy profile of a given pension scheme's members will inevitably not exactly match any of the eight projection models derived from the JPMorgan index.

However, schemes can buy tranches of different exposures in the same manner as they would with an interest rate swap, or simply match their median exposure to the relevant benchmark.

Prof Blake points out that it took three attempts before index-linking took root in the US. But change is in the air. Mortality catastrophe bonds produced by Swiss Re and Axa, hedging the insurers against a sudden rise in the death rate, have found willing buyers, and even Mr Ralfe concludes: "I'm sure it will happen, although it may be a long slog."

**FT REPORT - FT FUND MANAGEMENT: Call for 'safe harbour' fund rules, By Pauline Skypala, Financial Times, Apr 23, 2007**

The funds most members of defined contribution schemes use to save for their pensions are inadequate. But employers are reluctant to adopt more innovative solutions because of fears they will be legally liable if things go wrong.

This warning, sounded by the **Pensions Institute** at Cass Business School in a report\* published today, comes as expectations grow that DC schemes will come under greater scrutiny as increasing numbers of defined benefit schemes close not only to new members but also to future accruals by existing members.

Steve Rumbles, director at investment manager BlackRock, said closure to future accruals was "happening faster than people think". It would lead to bigger membership and more senior people in DC schemes, with employers spending more time on DC.

However, without a change in regulation, offering employers, trustees and advisers protection via US-style "safe harbour" rules restricting liability, there was little incentive for them to take the risk of introducing new ideas and offering better guidance, the Pensions Institute said.

"While employers and insurance companies usually are keen to do the best they can for scheme members, their good intentions stop well short of taking a fiduciary responsibility for the outcome," said **Alistair Byrne**, an academic at the University of Strathclyde and co-author of the report.

This applies to both trust-based DC schemes and those based on contract. Trust-based schemes are generally viewed as providing better governance, as trustees have to act in the members' best interests. There is no similar body in contract-based schemes. But trustees "err on the side of caution", said the Institute.

"We are suggesting a change in regulation that requires the parties responsible for setting up a scheme to ensure members make appropriate decisions," said **Debbie Harrison**, senior visiting fellow of the Pensions Institute and co-author.

The regulators should be clear what they expect from employers, trustees and advisers, and provide safe harbour rules that remove liability where due diligence has been done, she said.

Pension providers welcomed the calls for safe harbour rules, but said regulation should be light touch.

"While I understand the desire to improve governance [of DC schemes], there is a danger that regulation may scare off employers," said Richard Parkin, director of defined contribution development at Fidelity. "The UK pension system has already suffered from increasing regulation on the defined benefit side."

The Institute said that 69 per cent of the experts interviewed for the report said DC investment arrangements failed to meet most members' needs.

The vast majority of people in DC schemes invest in the default fund provided by most schemes. In contract-based schemes, this fund is commonly the one put forward by the provider, rather than one selected by the employer. Selection is therefore driven by sell-side expediency, rather than buy-side needs, said the report.

"About 3m private sector employees are in default funds that may be inappropriate in terms of asset allocation and risk profile," said Ms Harrison. The report said the

common default option of traditional lifestyle funds, which switch into bonds before retirement, was "a blunt instrument" that failed to take account of flexible retirement needs.

Target date funds, which offer a similar derisking service but geared to a particular year, may be a better option. Diversified growth funds that invest across a range of asset classes may also be sensible defaults for some schemes.

\*Dealing with the reluctant investor: Innovation and governance in DC pension investment.

**FT REPORT - FT FUND MANAGEMENT: The reluctant investor can be better served, By Alistair Byrne and Debbie Harrison, Financial Times, Apr 23, 2007**

Most members of UK defined contribution pension schemes put their contributions into the default fund. The typical proportion is more than 80 per cent, according to research by the **Pensions Institute**, while the National Association of Pension Funds put the figure at 94 per cent in its 2006 survey.

This makes it important to ensure that the default fund is appropriate in terms of asset allocation and risk, as well as simple to understand. To make that happen, those responsible for the investment choice offered in a DC scheme should consider adopting recent innovations in DC investment strategies, the Pensions Institute argues in its report published today.

This will be particularly important in the context of Personal Accounts, a national DC scheme that the UK government plans to introduce in 2012. Personal Account members - predominantly lower-to-median earners with little or no previous investment experience - will be especially vulnerable to investment risk, as they will be automatically enrolled without having made a positive decision to join.

The report examines the range of DC investment strategies currently available for default funds and finds certain models lacking, for example the traditional life office "balanced managed" fund, which typically has an equity weighting of more than 80 per cent.

Common default funds today include UK or global index trackers, as well as balanced managed funds. In most cases the fund will incorporate a lifestyle overlay, which switches the investor into less volatile asset classes such as bonds and cash in the run-up to retirement. There is no consensus on the optimal switching period and the switch period in practice varies from three to 10 years before the planned retirement date.

There are better structures for the default fund. In particular, the "target date" fund appears to be attractive for the reluctant investor. Importantly, the model helps to focus the member on the outcome rather than on annual growth. Members do not have to make complex fund choices and therefore do not require detailed knowledge of asset class characteristics. Instead the member simply selects the fund nearest to the planned retirement date - for example, the 2030 fund. If the expected retirement date changes, the member can switch to a longer-dated fund or phase retirement by dividing contributions between, say, the 2030 and 2035 funds.

The asset manager adjusts the asset allocation of the fund with the target date in mind (on either a mechanistic or a discretionary basis), so that the lifestyling takes place within the fund itself, requiring no switching of the member's unit holdings. While extremely simple from the member's perspective, target dating is merely a form of packaging and delivery. The underlying funds used to create the asset mix can be as sophisticated as the provider wishes, although cost will be an important consideration.

A second innovation of merit is the "diversified growth" fund, a more sophisticated version of the traditional balanced managed fund incorporating a wider range of asset classes, including "alternatives" such as commodities, hedge funds, private equity and high yield bonds.

The lower correlations between these asset classes mean that the diversified growth fund should produce a better trade-off between risk and return. The main downside at present is the high charges associated with the alternative asset classes used in the fund, but it is likely in future that synthetic or derivative structures could be used to access these asset classes at lower cost.

In terms of investment choice, the evidence suggests that a wide range of funds is unsuitable for most members in group DC schemes and can be counterproductive, increasing complexity and confusion. One attractive approach is to provide a narrow range of - three or five - risk-graded funds, each of which contains multiple asset classes. Members can choose the fund that best fits their attitude to risk, for example, adventurous, balanced or cautious (the "ABC" structure). This approach may mean fewer members end up in the default fund because the investment choice is simpler. Risk-profiling tools can be provided to help members with this choice, although if members do not engage with the tools they may still end up in the default fund on a passive basis.

Where schemes do feel the need to provide a wide range of funds for active investors, it would seem sensible to put into place some kind of filter so that most members can make their choice from a small number of funds - perhaps the risk-graded funds discussed above - and only members who indicate that they want a wider choice go on to see the full range.

Communications remains a problematic issue in DC schemes. Targeted information is useful - for example to prompt member engagement at different life stages, or when the account balance passes certain thresholds - and may be more likely to get a response than blanket approaches. Well-designed stochastic models can help members understand their investment and contribution choices but there is still a challenge in getting them to use these.

Finally, trustees and employers should be cautious in offering structured and guaranteed funds in DC schemes. While they appeal to members who are concerned about volatility, there is a risk that those signing up for them will misunderstand the nature of the guarantee. The report states that there is no place for conditional guarantees in a DC default fund.

*\*Dealing with the reluctant investor: Innovation and governance in DC pension investment.*

*Alistair Byrne is an academic at the University of Strathclyde and a fellow of the Pensions Institute. Debbie Harrison is a senior visiting fellow of the Pensions Institute. The report is available from [www.pensions-institute.org](http://www.pensions-institute.org)*

**FT REPORT - FT FUND MANAGEMENT: Savers central to default fund issue, By Pauline Skypala, Financial Times, Apr 23, 2007**

There is so much brainpower being put to work to find the best combination of risk and return that, in theory, we should all soon find our investment problems solved.

Just this week I met a maths genius running a business claiming to extract the equity risk premium from markets much more effectively than any approach currently on the market, and heard from BlackRock about a new idea for building up pension savings.

But the question is whether these, or any of the other innovative ideas coming to market, can answer the need for a pension fund investment to deliver the certainty of outcome people want and the returns to provide a decent retirement income.

It is clear from the report published today by the **Pensions Institute** that there is a long way to go before defined contribution pension schemes in the UK meet either requirement. The report finds that the default funds currently offered under most schemes are not answering the needs of scheme members, and that those responsible for setting up and looking after DC schemes are too worried about being sued to offer more effective approaches.

Individuals are left to look after themselves without the guidance they need to make sensible choices, or the fund options to achieve a good outcome.

Providers acknowledge that the design of default funds is often dictated by market demands for a low risk product - that is, low risk from a business rather than an investment perspective.

In the US, concerns about the risks of litigation in the event of unsatisfactory outcomes led to the common use of cash funds as the default in 401k plans, or the failure to offer a default at all. Although safe harbour rules provided relief from liability for investment outcomes where scheme members made their own investment choice, there was a concern that default funds were not chosen by members.

That was addressed in the Pensions Protection Act of 2006, which creates a safe harbour where assets are invested in a qualified default investment alternative and describes how that alternative should be offered. Target date funds are quickly gaining ground as default funds as a result.

The Pensions Institute recommends similar safe harbour provisions be adopted in the UK and suggests target date funds would be preferable as the default in UK DC schemes to the typical balanced managed or passive equity default provided, often with a lifestyle overlay where assets are moved to a mix of bonds and cash over the five or 10 years before retirement.

The Institute also likes diversified growth funds, which invest in a range of asset classes and use tactical asset allocation to control risk. These are becoming common



as the growth offering in liability driven investment packages for defined benefit schemes. They may translate well to DC, but are relatively new and unproven, which could prove a barrier to their early adoption.

The debate about what constitutes a suitable default fund is hugely important, not only for those already in DC schemes, but also in relation to the government's planned personal accounts, due to be introduced in 2012.

Lifestyling, the dominant approach in the UK, deals with the risk of a market fall reducing the value of a pension pot in the years leading up to retirement, and of falling interest rates increasing the cost of buying an annuity. But it assumes a pension pot will be used to buy an annuity at retirement and does not recognise the increasing flexibility around retirement options.

It is also inefficient in that the switch from equities to bonds and cash is typically from one fund to another. Target date funds carry out the switch in the same fund, lowering costs and allowing more sophisticated approaches than the blunt one of annual switches regardless of market conditions.

Possibly even more effective is a new technique from BlackRock that banks profits from equity holdings once a set target is reached. Under the default option this is set at index linked gilts plus 2 per cent. Once a contribution has made that target, it is moved to index linked gilts and stays there.

This approach answers the failure of lifestyle funds to offer protection against inflation risks post retirement, says Steve Rumbles, a director at BlackRock. It also does what savers expect investment managers to do for them - bank money once profits are made rather than see them disappear in a market downturn. However, it does not guarantee against losses and limits gains - features that need to be clearly communicated to scheme members.

Other providers are investigating whether structured products offering capital protection might be suitable as default funds. They would address the issue of abandonment by savers when markets fall, according to Peter Cox, head of DC services at HSBC Investments.

This is not a favoured option for the Pensions Institute, which suggests employers probably should not use structured products in schemes.

There is a lot to be said for keeping things simple. The financial services industry has a history of inventing products that serve its own interests rather than those of its customers. This is one area where savers' interests must be made paramount.

*Pauline Skypala is the editor of FTfm*

### **A step towards a market in longevity, Financial Times, Mar 19, 2007**

Pension funds can hedge against interest rate and inflation risks to their liabilities, and buy protection against market falls for their risky assets. The one risk they just have to live with is paying out to pensioners for longer than expected if their longevity

assumptions turn out to be too low. The only way out of that is to give up the game and let one of the buy-out specialists take the strain.

But coming over the hill is the investment bank cavalry, as always bringing financial innovation that adds to complexity but potentially offers solutions. Their attempts on the longevity front have not been successful so far, but the JPMorgan initiative, announced last week, may break that record.

JPMorgan has launched the LifeMetrics toolkit for measuring and managing longevity and mortality risk, designed in association with Watson Wyatt and Cass Business School. It is made up of an international index, tools to measure and manage the risk, and software for forecasting longevity. The index will initially cover the US, England and Wales, but will be extended to other countries.

The bank is expected to start issuing longevity bonds and related derivatives over the next year. The separate elements of the package and the transparent nature of the index are a crucial distinction from earlier attempts to offer an index as a benchmark.

Credit Suisse, for example, developed a longevity index but kept the information private for proprietary products and built in its own longevity forecast. That proved a barrier to its adoption as a benchmark for trading purposes.

BNP Paribas also failed to get a longevity bond off the ground when it made the attempt over two years ago. Nice idea - poor design, was the general verdict. Those in the know say another attempt soft marketed on behalf of one of the insurers about a year ago also floundered.

JPMorgan believes the market has moved on since the BNP Paribas effort. There is an appetite among investors and counter parties that was not there in the past, says Guy Coughlan, global head of pension asset liability management at JPMorgan.

But there are doubts among competitors and commentators that JPMorgan's index will be able to bridge the price gap between potential buyers and sellers of longevity risk. "The price buyers want to pay and sellers are willing to charge doesn't match up," says one investment banker. Greater confidence in the longevity and mortality data might be the factor that closes the gap. "But I don't see the appearance of a new index as being likely to change the pace at which that happens."

That could just be professional envy talking, but he is not alone in being sceptical. John Ralfe, an independent pension consultant, questions whether the index will become a benchmark against which transactions could be done. "If people start pricing against it, I think the bid offer spread would be huge. I doubt if there would be market-makers in it."

He likens it to a house price index, which covers so many geographical areas and types of property that it is not much use for anyone looking to hedge the value of their own house. "The differences between pension schemes [in terms of their longevity risk] are so big that coming up with an index that does anything for anyone is difficult," says Mr Ralfe.

Professor **David Blake**, director of the **Pensions Institute** at **Cass Business School**, acknowledges there is a problem with the basis risk between the index and a pension fund's own longevity exposure, but says there are mechanisms to deal with that. A fund will have to compile its own mortality history for different age groups, so it knows the correlation between its own position and the index. Then if swaps based on the index are developed, it can use the contract or mix of contracts that offer the best match, just as it would when hedging interest rate risk.

Mr Coughlan comments that the challenge in building a market in longevity is to create instruments that can be customised to hedge pension fund exposure yet are standardised enough to provide liquidity.

He attributes the price differences between buyers and sellers mainly to the lack of an accurate benchmark and data on where the market is. Providing that will remove the uncertainty, and prices will narrow as a result. It is already happening in the bulk annuity market, he says, where there is more focus on getting the pricing right as competition intensifies.

There is general agreement that a market in longevity and mortality risk will develop. Prof Blake points to Swiss Re and Axa, which have successfully sold mortality catastrophe bonds, as evidence that the right structure will appeal to investors.

JPMorgan has taken an important step forward. The rest is up to the market.

### **JPMorgan launches longevity index in bid to create traded market in mortality risk, by Jason Douglas, Professional Pensions 13-03-2007**

SCHEMES could soon be able to hedge their longevity risks following the launch of the world's first longevity index by JPMorgan.

The bank teamed up with the **Pensions Institute** at **Cass Business School** and Watson Wyatt to develop the LifeMetrics index, which has been designed to benchmark and trade longevity and is part of a larger LifeMetrics platform created to measure and manage pension funds' longevity exposure.

It is hoped the index will be used to create securities, derivatives and structured products that schemes, life insurers and buy-out firms can use to hedge the risk their members live longer than expected.

The index uses historical and current statistics on mortality rates and life expectancy across genders, ages and nationalities. The index is initially available for the United States and England and Wales but the bank intends to introduce similar products for other countries in the coming months.

The index is calculated by an independent agent and will be governed by an international advisory committee.

Global head of rates, securitised products, proprietary positioning and principal investment business Patrik Edsparr said the potential for a traded market rests on the standardisation of the measurement of longevity risk associated with pension funds and the mortality risk faced by life insurers.

Watson Wyatt actuary Robert Hall said: "A tradable market in longevity and mortality risk will assist financial institutions, pension plans and their sponsors in product pricing, capital allocation and financial reporting. A recognised set of indices is necessary to start that process."

The LifeMetrics platform will also give users access to software to forecast future exposure.

Global head of pension asset liability management Guy Coughlan added users will also get access to cutting edge software to model their future exposure. "Relative to other approaches, we wanted to offer pension plans, insurance companies and investors a comprehensive set of tools and capabilities aimed at managing longevity risk strategically," he said.

"The LifeMetrics Index and LifeMetrics platform are designed to provide clients with practical tools to measure longevity risk and manage it with effective hedging solutions involving derivatives and structured products."

*Professional Pensions* revealed that investment banks were planning to launch a longevity risk market in November last year ([PP, November 1 2006](#)).

### **Death and the salesmen, By Gillian Tett and Joanna Chung, Financial Times, February 24 2007**

In a frosted-glass cubicle in the **Cass Business School** on the edge of the City of London, **David Blake**, an earnest, greying professor of pensions economics, is waving a chart. It looks similar to the graphs that economists often use to estimate asset prices or currency movements: a fan of colours depicts probabilities of events occurring until 2050. "We modelled this on the Bank of England's inflation graphs," explains Blake, with pride.

But these statistics do not relate to anything as mundane as prices. Rather, they are about the more gruesome topic of death. Specifically, Blake is predicting how long our children, and children's children, will live - and his conclusions are striking: over the past century, life expectancy in the western world has not only risen, but the rate of increase has accelerated. While someone in the 1840s lived, on average, to 40, today's generation can expect to hit 80, "and for our grandchildren, it could be 160," says Blake, stabbing a pale green corner of his fan chart.

Until recently, such morbid number-crunching was of interest only to actuaries, the pensions industry, scientists and doctors. After all, death is not a topic that many of us want to discuss - except in the most abstract terms. And the pensions world was such a slow-moving, sleepy backwater that it rarely attracted the interest of high-flying bankers.

But behind the scenes in the City of London - or, more accurately, deep within its computers - something is afoot. A couple of months ago, one of the world's biggest financial groups quietly hired Blake to conduct some brainstorming on death rates and their economic impact.

Blake says he cannot reveal the name of his employer: the financiers he is advising are apparently so worried about trade secrets they have placed a gagging order on him. Still, what is clear is that the City's financial titans have every reason to look at what men like Blake are doing. While the idea of lengthening life spans might sound wonderful to individuals, it creates a problem for society. Who is going to pay for our upkeep when we get old? In centuries past, the answer was clear: you either worked until you dropped, or relied on children. As this model began to fray, company pension funds or the state stepped into the void - both of which essentially relied on income produced by younger workers, or a form of inter-generational transfer. These days, responsibility for old age is shifting to the ageing individual, with governments encouraging citizens to save money to protect themselves.

In theory, that might sound fairer than forcing the younger generation to support the old, but there is a catch: before anyone can save effectively, they need to guess how long they might live. People tend to underestimate how long they will survive. After all, if you expect to live to 70, but then reach 110, even the most fastidious saver might run out of funds.

And this is where Blake - and his fan charts - comes in. In recent decades, bankers have become adept at using the financial markets to trade all manner of risks, such as the oil price, inflation or currency swings. Now companies such as Goldman Sachs, Deutsche Bank and ABN Amro are trying to devise ways of making money from the new "risk" facing modern humanity - that of living too long.

The uncertainty about life span has existed since the start of modern finance. The very first time that the British state issued a bond - back in the 17th century to fund a war against France - it did so using a longevity gamble. Tucked in a glass case in the corridors of the Debt Management Office, the branch of the British government that sells national bonds, stacks of old leather files detail these bonds, known as "tontines" after a Lorenzo Tonti, a Neapolitan economist who first devised the scheme. "These were the first government bonds issued anywhere in the world," says a senior DMO official, who has spent hours reading these dusty files, with all the passion of an amateur historian.

By modern standards, the structure of these tontines was macabre. The government raised money by selling a bond, and then paid bondholders a lump sum each year, divided among the investor pool. So far, this looks similar to how modern bonds work. However, there was a crucial catch: tontines had to be held by a single, named investor - and these instruments expired when that person died. So bond payments were divided each year among the remaining tontine holders, ceasing when the last tontine holder died.

Whoever lived longest collected most money - subsidised by the dead.

The government issued the first tontine in 1693, and it proved so popular that they were soon being sold across Europe. Geneva had a particularly lively tontine market. However, as the tontines piled up, they became more controversial. One problem was that they provided an incentive for murder or fraud. And while historians have not found any tangible cases of this happening, the theme permeated 18th- and 19th-century literature and lore - even providing the plot for Robert Louis Stevenson's *The Wrong Box*.

A second, more important, problem was that the government kept getting its estimates of longevity wrong. When it sold the first issue of tontines in 1693, it apparently expected tontine holders to live just a few decades.

That seemed a reasonable bet at the time, and the dusty leather-bound files show that the early tontine holders included men and women of all ages. But by the middle of the 18th century, investors had become more canny, with the record showing most tontines being bought in the name of girls, usually around five years old. That was because girls lived longer than boys, and because there was a high level of infant mortality until about age four.

This produced great results for the tontine holders, some of whom kept collecting money until their nineties. But it was disastrous for government finances. And eventually, the tontine scheme became so costly that the government abandoned it.

In the 19th century, the word tontine vanished from popular use. But the issue of longevity and mortality risk did not die away. Nor did some of the principles behind the first tontines. They resurfaced in the new concept of life insurance, which paid out a lump sum when policyholders died.

From the 1850s onwards, "mutual assurance" companies started offering "penny policies" to working adults, sold by a network of door-to-door agents. These were subsequently extended to children under 10, which proved wildly popular (a move not driven by sentimentality alone, since at the time your "pension" effectively came from having children to support you in your old age). In the early-20th century, new schemes such as pensions, saving plans and annuities appeared. By the 1960s, the sales of these products had become a multi-billion-pound business.

As the life assurance business expanded in the 20th century, the principle was that if somebody died young, activating a policy, the payout would be met by drawing on the income from premiums paid by living policyholders.

Conversely, if an annuity holder, who was receiving an annual fixed income for life, survived for a long time, this was balanced out by other pensioner deaths. Any company running these schemes presumed that early and late deaths would subsidise each other - just as the issuers of the tontines had.

While this pattern worked well for the life insurance world during most of the 20th century, in the late 1990s something started to go wrong. One of the first to spot the problem was Thomas Boardman, a policy development director for Prudential, one of the largest UK pensions and life assurance groups. Boardman spent the early part of his career working as an actuary, which made him an expert at understanding death rates. ("I don't think my friends think I am ghoulish," he explains. "More that I am a geek.")

This analysis has left him with an intriguing tale to tell. Back in the 1950s and 1960s, as he tells the story, the life assurance and annuity sector was a great business to be in. "You had a lot of people with a culture of thrift saving back then. These people, who saved hard for their retirement in the 1960s, often assisted by good company pension schemes, are now reaching retirement, and insurance companies and pension schemes

are seeing a significant rise in annuity and pension payments." Companies such as Prudential had prepared for that change because actuaries knew the population was ageing. But just before 2000, they noticed something odd: not only was longevity rising, it was doing so at an accelerating pace.

"What we are seeing is that anyone born between 1925 and 1940, for example, is experiencing a much lighter mortality rate," says Boardman, who - like almost everybody else in this business - can discuss his research at length without ever enunciating the distasteful word "death".

Baffled, actuaries looked for explanations. When tontines had first been issued in the 17th century, there had initially been little data available on death trends, partly because parts of the Church considered counting bodies to be a religious affront. However, these days, Prudential, like its rivals, has turned death analysis into a highly scientific game, with a small team in Stirling and Reading now employed to crunch the data. "We used to just look back at historical trends and project them forward - but in the past five years we have started to look more at the medical profession, and the trends behind why people die," explains Boardman.

This is throwing up several possible explanations for the rising life-expectancy rate. One theory is that the 1918 influenza epidemic raised longevity rates for people born a few years later; another is that the austere food rations imposed during the second world war reduced obesity rates. "But this is also the first generation to understand that smoking is not good, and they have also benefited from medical developments in the cardiovascular area, which affects the figures, too," says Boardman.

The really crucial question, however, is whether this acceleration of longevity will continue - and how this might affect our financial futures.

The life assurance and annuity sector has until now assumed that risks can be shared within a single generation, but this only works if the overall death rate is relatively stable; if any entire generation lives longer, then "early" and "late" deaths no longer balance out.

For a company such as Prudential, this problem can be partly solved by the fact that it runs both life assurance operations and pension plans. If people live longer, they pay more into their life assurance policies, and their families do not need to be paid out; if they die young, their pensions no longer need to be paid. It's a natural "hedge". But most pension funds are in a far worse position since they do not run life assurance schemes. "The big question now is how to handle this risk," says Boardman. "That is what we are all trying to work out."

Earlier this decade, the British government demanded that pensions companies start measuring the value of their investment pools more accurately - and, above all, come clean about whether they had enough funds to pay pensions in the future. This change has made the UK a pioneer in rethinking pensions - and made the City of London the natural innovator in devising new ways of handling the associated risk.

Because this new government rule was introduced at a time when equity markets were falling and bond yields were low - thus lowering the value of investments - the changes left many pension schemes looking short of funds.

Some companies are trying to fix the problem by paying more money into their pension funds, or buying financial instruments that might protect them from future inflation rises. Meanwhile, behind the scenes, many pension schemes are anxiously turning to investment banks asking if they can help them "handle" longevity risk.

Financial theory suggests there should be plenty of scope for bankers to help. Financiers have succeeded in slicing and dicing numerous other risks: in the capital markets today you can buy derivatives that allow you to place bets on the future of inflation, commodity prices, exchange rates or interest rates. Investors are able to bet on the chance of natural catastrophes. Can these techniques be applied to death rates?

One avenue for thinking about the problem might come from seeing how bankers handle catastrophe risk. A few years ago, financiers at banks such as Goldman Sachs invented an instrument known as a "catastrophe bond" - or "cat bond", where an insurance company writes out policies to customers wanting to protect themselves against a catastrophe - for example, farmers worried about hurricanes destroying their crops - and then issues a bond.

The money collected from policyholders is then used to pay the bondholders' income. But if a hurricane hits, and the farmers claim their insurance, the bondholders stop receiving payments. Thus, by issuing the bonds, the insurance company is sharing hurricane risk - and the value of the bonds depends on how many hurricanes occur.

In the past year, some financiers have taken the idea further, creating derivatives of cat bonds. Insurance companies have followed suit, launching "mortality bonds" that bet on whether death rates will rise - usually due to something such as bird flu. Axa, the French insurance group, issued one of these last year where investors purchased bonds, and received a cash flow with a value that fell if the level of deaths among Axa policy holders rose. The price of a mortality bond is thus tied into the chance of a pandemic.

Now people in the capital markets are wondering whether this idea can be applied further. If bond purchasers are willing to bet against catastrophe or mortality, why not longevity? A couple of years ago, the European Investment Bank and BNP Paribas made one attempt to do just that. The EIB marketed a 25-year bond, worth £540m, which produced cashflows that were designed to be a mirror image of a pension fund's liabilities for a hypothetical pool of 65-year-olds. The details of the scheme were complex, but the essential idea was that the payout to bondholders would fall each year, according to the rate of deaths. In other words, the higher the death rate, the less money the bondholders would receive. The investors were expected to be pension funds looking for a way to balance their risks.

However, unlike Axa's mortality bond, the scheme withered and died. One reason was that the instruments were so novel that baffled pension funds did not know what to make of them. And another problem was data: the scheme was based on mortality rates of a group of 65 year olds, which some potential investors thought unrepresentative because it did not capture a broad enough section of the population. But arguably the biggest problem dogging the BNP Paribas experiment was a mismatch of buyers and sellers.



Markets only flourish when there are investors willing to stand on both sides of a trade, betting whether prices will go up and down. Most people believed longevity would carry on rising. There weren't enough prepared to bet on the trend slowing or going into reverse.

Back in the City, in the Swiss Re building, known as the Gherkin, two men are going against the trend. Rob Procter and Espen Nordhus used to work at Morgan Stanley as insurance analysts. Eighteen months ago, they became so convinced that the questions of insurance, annuity and longevity were on the verge of big changes that they left the investment bank to launch a hedge fund to benefit from them.

"We think there are inefficiencies here, that funds like us can invest in," says Nordhus, whose office walls are hung with a striking array of maps - to help him and his colleagues locate disasters around the world, he says.

With about \$250m under management, the fund, Securis, spends most of its time trading established insurance instruments, such "cat" bonds. It also dabbles in the new-look mortality bonds. "We think there are probably \$1bn-\$2bn of mortality bonds in the market now, and another \$20bn of [similar instruments]," says Nordhus.

However, Nordhus and Procter suspect that if longevity bonds ever appear, this will be the real game in town. And their existence - and that of other funds - might help to bring this about. After all, one factor that tripped up the BNP Paribas bond in 2004 was a lack of sophisticated investors willing to hold these new-fangled instruments.

With the hedge fund sector holding some \$1,300bn of cash that needs to be invested by traders accustomed to handling risks nobody else wants to touch, why not persuade hedge funds to jump in and breathe life into this market? One problem is that the attention span of the average hedge funds runs to days or months - not decades. Another is price. As Nordhus points out, hedge funds will only start to trade longevity "if we feel that we are being properly compensated for all the uncertainties". In plain English, that means pension companies could pay dearly to "insure" against longevity risk.

The government could also step in and take some of the risk. Back in the 1980s, the UK government helped to develop the market for trading inflation risk, and some economists think it could now help again, perhaps by buying the most extreme types of risk (such as the chance that a cure for cancer is found that enables us all to live even longer). However, the DMO is wary of this idea.

One of the problems worrying Securis and other potential investors is the poor quality of data on death. At present, the UK's Office for National Statistics issues annual figures on death rates, but these are calculated only in a relatively rudimentary form. Separately, an institute known as Continuous Mortality Investigation compiles detailed data from insurance companies about mortality rates for different age groups. This second set of statistics is precisely what a banker needs to create the sophisticated financial instruments, such as derivatives, to enable the longevity market to take off. But unfortunately it only emerges publicly every four years - and with a long time lag.

Investment banks are pushing the CMI to improve this data. Dave Grimshaw, the secretary of the CMI, says that this is not easy to do, since it collects the figures from the insurance industry (and these figures may not be representative, as they cover only people rich enough to buy life assurance in the first place). "There is not reliable, frequently updated data which could be used for the basis of such trades in the market. People think that we have better and more up-to-date data than everyone else, but that is not necessarily correct."

Moreover, British pensioners are increasingly retiring to countries such as Spain, which makes it harder to track them when they die. "I wouldn't even attempt to collect 2005 data until the middle of 2006," says Grimshaw. "We want to miss as few deaths as possible."

In other words, the biggest impediment for the financial whiz-kids who are now so eager to create esoteric new longevity instruments may revolve around the grubby, real-world issue of how to count dead bodies.

Given these obstacles, some are cynical about whether the longevity market will ever come to life - or at least on a meaningful scale. Prudential's Boardman argues that it is likely to happen in stages. He foresees pension providers asking insurance companies to take on some of the risks arising from increased longevity. Insurance companies will then find ways of passing on some of the risk to the wider capital markets.

Indeed some banks are already testing schemes: Deutsche Bank is considering creating bonds using the cash flows from life insurance portfolios. It believes that it will receive a credit rating for these instruments soon, which should allow trading to start this year. Several other banks are experimenting with bonds and derivatives linked to longevity risk.

As Professor Blake perfects his mortality models, he remains convinced that we are on the verge of a financial revolution. Sooner or later, the City of London will find a better way to count deaths: the financial incentives to get this right are huge. And once a timely death index emerges, the first fully-fledged longevity bond will appear, "almost certainly over the next year", Blake predicts.

That should trigger a wave of copycat products. And while the pattern of buyers and sellers looks imbalanced right now, this will change. One reason is that not everybody expects longevity to keep rising indefinitely. "There is a camp of pessimists who say that there is a limit to how long the human frame can support life. And things like poor diet or global warming could limit longevity, too," Blake points out. In 2005, the New England Journal of Medicine carried a report saying that the increase in obesity could end two centuries of rising life spans.

Moreover, some will benefit if pensioners live longer: companies running care homes or producing drugs, for example. These businesses may be prepared to pay to protect themselves against the risk of longevity slowing or reversing, and could form the counter- parties to pension providers, which suffer financially when life expectancy rises.

"People like this have not yet been approached... but you show them what is possible, they should be natural [investors]," Blake says. If so, that should enable a proper

market to appear. In a few years, it could be as easy for individuals to invest in a longevity bond as it is now to buy shares.

**Funds reject standardised longevity, by Jenny Blinch, Global Pensions, 11-01-2007**

GLOBAL - A conclusive majority of some of the world's largest pension funds would not accept a standardised measure of longevity, exclusive research by Global Pensions has revealed.

Some 64% of the Global Pensions 100 Panel voted no when asked whether they would be prepared to accept the use of indices constructed around broad population cohorts in the new crop of “mortality derivatives” being developed in the UK.

Mortality derivatives are instruments that would enable pension funds to hedge the longevity risk out of their portfolio.

BNP Paribas recently announced it had developed a number of indices which it believed could “easily” be used as the standard index for “mortality derivatives”, and Deutsche Bank and JPMorgan Chase in the UK are also developing such products.

Only 36% of the pension funds surveyed by Global Pensions said they would accept a standardised measure of longevity.

Commenting on the results, **David Blake**, director of the **Pensions Institute at Cass Business School** said: “I am delighted to hear that 64% of respondents said they wouldn’t be prepared to accept a standardised measure of longevity.

“It is such a diversity of view that will help to create a market in longevity risk transference, with some participants believing that longevity will continue to improve significantly, while others believe the opposite. There would be no market if everyone took the same view.”

**Mortality derivatives – Death risk innovation, by Kristen Paech, Global Pensions, 14 January 2007**

Investment banks have long profited from pension funds’ desire to manage the risks inherent in their investments, such as interest rate and inflation risk, however, arguably the most serious risk they face – that their pensioners will live much longer than anticipated – has thus far gone unmanaged. This may be set to change. Deutsche Bank and JPMorgan Chase in the UK are developing derivative instruments which would act as a tool for pension funds to hedge out their longevity risk.

The so-called “mortality derivatives” would see a pension fund pay a fixed rate in return for protection against changes in mortality, and would be based on an index constructed around broad population cohorts.

BNP Paribas, on the other hand, has said it is ready to capitalise on this market, having already developed a number of indices which it believes could “easily” be used as the standard index for “mortality derivatives”. Mark Azzopardi, head of

insurance and pensions at BNP Paribas, said it is simply a matter of waiting until the market is ready for trading and assessing the business case at that time.

“There are two clear stages to trading,” he said. “First you need to provide an environment in which trading is possible, which includes the development of indices on which you can trade. We have done as much as is physically possible at that stage.

“But [trading] is absolutely not a given. My personal view is that even though we and a whole host of other banks may be ready to trade, the conditions which would make trading possible are quite possibly still a long way away. Until the time comes when there is more of a balance between people who want to sell longevity risk and those who want to buy it, it doesn’t matter how prepared we at the banks are, it’s unlikely that there’ll be much trading.”

Azzopardi’s scepticism is not unwarranted. Attempts in the past to launch similar products, such as the £540m longevity bond issued by the European Investment Bank and arranged by BNP Paribas in 2004, failed spectacularly. However the successful sale in November of €1bn of mortality bonds by French insurer AXA suggests investor appetite exists. Some put the failure of the EIB/BNP bond – which was pulled last year – down to its expense and the fact that it did not cover ultra-long mortality (risk cover was capped at age 90, due to a lack of statistics on mortality beyond that age). But Azzopardi said the expense was not the issue (the cost of hedging was about 15% of that of a buy-out) but more that people found it difficult to accept that they were buying a product which contained some basis risk – the risk of two indices not moving in the same direction – due to it being based on an index, rather than their own portfolio.

### **The buy-out catalyst**

Clearly, the willingness of pension funds to accept a standardised measure of longevity, in other words, indices that won’t perfectly match their scheme’s liabilities, is crucial for the development of a market for mortality derivatives. But this is where the newly formed buy-out vehicles could come into play and serve to kick-start the market.

Whereas trustees are generally conservative and may look unfavourably on basis risk, buy-out firms tend to take a more creative approach to risk management, and could serve as writers of swaps.

**David Blake**, director of the **Pensions Institute at Cass Business School**, said the ability to hedge the aggregate mortality risk of the pension liabilities they take on was the “missing link” for buyout firms.

“Buy-out firms are very skillful at hedging most of the risks embedded in pension liabilities: they are good at hedging investment risk, interest rate and inflation risk, which they do using swaps,” he explained. “The one thing they can’t yet do is hedge the aggregate mortality risk and that’s why they are looking forward to the development of a longevity swaps market or a survivor swaps market.”

Without such instruments, firms such as Paternoster and Synesis Life will be forced to hold a capital buffer or reserve to be able to absorb losses and remain solvent in the event of unexpected improvements in life expectancy. Blake argued this would

consequently drive up the price of the buy-out, but added there was a danger that in order to secure business in a competitive market, firms could underestimate what that buffer should be.

Azzopardi at BNP Paribas said buy-out firms could use their capital and capacity to write a scheme-specific longevity hedge, and then hedge their position in the capital markets with a standardised contract, accepting the risk that the contract didn't exactly match the portfolio risk of the pension funds they bought out.

Mark Wood, CEO of Paternoster, which recently took on the pension assets of the Cuthbert Heath Family Plan, admitted mortality derivatives would allow the firm to use its capital "more efficiently".

However, he said pricing would be key: "If it's an effective product – if it's cost-effective, well structured, well engineered and provides us with relief for capital at the right rate of return – then it will be a benefit. So far I don't think we've seen anything that has managed to achieve that."

Another pre-condition for this market's development is a green light from the UK's Financial Services Authority to allow insurance companies to release regulatory capital.

As Blake explained: "If you can release regulatory capital from a risk-bearing activity, because you've put in place a hedge and therefore you're not in such a risky position as before, and this is accepted by the regulator, then the regulatory capital released could well be worth more than the cost of the swaps, in which case insurers will be rushing into this market."

Wood said provided the protection was adequate for the beneficiaries of any scheme that entered into a mortality swap, he believed the regulator would be inclined to be favourable.

"[The regulator's] pre-occupied with the security of the pension that is being promised, so he would be pre-occupied by the security inherent in any such arrangement," he added.

The market in longevity risk is not unique to the UK, however, according to experts, it is likely to develop first in London, partly due to the regulatory climate. In the US, for example, plans are stifled by prescriptive pensions legislation and the threat of class action lawsuits.

However Blake and Azzopardi still saw future potential in the US, alongside Canada, the Netherlands, Ireland and Japan.

Nick Horsfall, senior investment consultant at Watson Wyatt, agreed the market would boom in the UK, but said the difficulty was finding a natural receiver of the longevity risk.

"The market will develop, I've no doubt about that – the big issue is who takes the risk on and how much they charge for it," he said.

Azzopardi agreed this was a major stumbling block.

“There are plenty of sellers of risk – all the pension funds and a number of insurance companies – but precious few buyers,” he said. “It’s only when buyers come out of the woodwork that this market will really develop. Certainly, by analogy with other markets, it’s clear that for that to happen, some sort of consensus has to develop around the expected future trend and volatility of longevity and that’s singularly absent today.”

### **Not a one-way bet**

Many in the market are surprisingly optimistic given the limited success of past products based on longevity risk.

However, Blake believes people are starting to recognise that although longevity is upward trending, there is still a large margin of error in predicting future longevity, and implies that it’s not a oneway bet against one side of the swap.

“If you look at what longevity risk means, yes some people could live longer than anticipated, however with things like flu pandemics, terrorist attacks and global warming, a lot more people could die out than expected,” he said. “It is that uncertainty that will shape the market and bring in traders willing to trade these different views.”

In creating a liquid market, investment banks are caught between a rock and a hard place. On the one hand, the products they design must be bespoke enough to be applicable to a particular fund, yet they must also be adequately standardised to generate liquidity. Not to mention the price – pension schemes with deficits are particularly cost-conscious, and will not take a decision on whether or not to hedge their longevity risk lightly, despite the obvious benefits.

Horsfall at Watson Wyatt commented: “The possible issue we would note is that given the dynamics of the market where there appears to be a very large level of demand for protection, and we’re struggling to see where the supply is, it could lead to pricing which looks unattractive to pension funds.”

One senior corporate trustee, who asked not to be named, added: “If it’s cheap and it takes risk off the table and I get credit [on my PPF levy] for it, I’d be interested. But pricing will be the key factor.”

A spokesperson for the Pension Protection Fund (PPF) said the fund supported any innovation in risk management.

The advantage these products do have, over and above previous securities, is that they sit within the synthetic market. One of the issues with a bond-type longevity product is that you have to pay money up front, and lock in your capital until maturity.

“The key [to success in this market] is making it a non-cash product and making sure it gives you the cover where you need it, which is the ultralong mortality issue,” said Horsfall.