

Recent Media Comments 2009

20-year study finds pension funds rational, By David Blake, Talking Head, FTfm, Financial Times, 7 December 2009

Decentralised investment management is widespread throughout the institutional investment industry and, in particular, the pension fund industry.

Yet, despite the huge economic importance of this practice, very little is known about the economic motivation for decentralising or about how fund performance and risk-taking behaviour are affected by it.

We, at the Pensions Institute, used a proprietary dataset to make a [study](#) into decentralisation in investment management in the UK pension fund industry from 1984 to 2004. Over this period, most pension fund sponsors shifted: a) from employing a single balanced manager, who invested across all asset classes, to specialist managers, who specialise mostly within a single asset class, and b) from a single manager (either balanced or specialist) to competing multiple managers (balanced, specialist, multi-asset or combinations thereof) within each asset class.

This shift from single balanced managers to multiple specialist managers carries significant decentralisation costs.

Decentralisation involves suboptimal risk-taking at the portfolio level, due to the problem of co-ordinating different managers through incentive contracts. The hiring of multiple managers also increases total fund management fees. We examined whether these shifts have been rational; that is, whether fund sponsors have experienced increased performance to compensate for the suboptimal diversification.

We found that specialist managers did generate superior performance, particularly in respect of stock selection or alpha. By contrast, balanced fund managers failed to display any significant stock-selection or market-timing skills, either in the form of strategic or tactical asset allocation skills. There was also evidence of persistence in performance over time by specialists, especially in UK equities.

We then examined the effects on performance and risk-taking from employing multiple managers. We found mild evidence to support the conjectures that competition between multiple managers produces better performance – but this held only in the case of competing specialist managers in UK equities – and that pension fund sponsors react to the co-ordination problem by controlling risk levels: total pension fund risk (and, in particular, alpha risk) is lower under decentralised investment management.

We found that the switches from balanced to specialist mandates and from single to multiple managers were preceded by poor performance. In the latter case, part of the poor performance was due to the fund becoming too large for a single manager to manage: sponsors properly anticipated diseconomies of scale as funds grew larger and

added managers with different strategies before performance deteriorated significantly.

We also studied changes in risk-taking when moving to decentralised management. Here, we found that sponsors appeared to rationally anticipate the difficulty of co-ordinating multiple managers by allocating reduced risk budgets to each manager, which helped to compensate for the suboptimal diversification that results from decentralisation.

Overall, our findings help to explain both the shift from balanced to specialist managers over the sample period – pension funds benefited from superior performance as a result of the shift – and the shift from single to multiple managers – pension funds benefited from risk reduction and from avoiding fund-level diseconomies of scale by employing multiple managers. We interpret these shifts as being rational by pension fund sponsors, despite the greater co-ordination problems and diversification loss.

Finally, we note that, following the end of our sample period in 2004, further specialisation of skills in pension fund management has occurred. For example, there has been the emergence of diversified growth funds which offer investments in such “alternatives” as private equity, hedge funds, commodities, infrastructure, currencies and emerging market debt.

<http://pensions-institute.org/workingpapers/wp0914.pdf>

David Blake is director of the Pensions Institute at Cass Business School, London

Le système de retraite de British Airways, clef de la fusion, by Nicolas Madeleine, Les Echos, 16 November 2009

Le système est en déficit de 2,6 milliards de livres selon les derniers calculs. Ses administrateurs et la direction de British Airways doivent renégocier les engagements dans des conditions qui satisfassent Iberia.

Le système de retraite complémentaire pour les salariés de British Airways (BA) est dans une situation financière suffisamment délicate - un déficit pour l'instant évalué à 2,6 milliards de livres, soit un peu plus que la capitalisation boursière du groupe aérien- pour faire échouer la fusion entre les compagnies aériennes Iberia et British Airways.

La compagnie aérienne espagnole a d'ailleurs fait cette double mise en garde : Iberia ou TopCo, la société fusionnée, n'aideront pas financièrement le système de retraite du britannique. Et surtout, Iberia peut choisir de renoncer à la fusion si les résultats des discussions entre les administrateurs du système de retraite et la direction de British Airways modifient l'intérêt économique de l'opération, et ce « selon l'opinion raisonnable d'Iberia ».

Un porte-parole de British Airways indiquait cependant vendredi que la société « a confiance qu'elle satisfera les conditions demandées ».

Négocier avec les salariés

British Airways indiquait également que le nouveau calcul actuariel de son déficit serait révélé « en temps voulu ». La société a quasiment exclu d'injecter des liquidités, après avoir contribué à hauteur de 1,8 milliard de livres au cours des trois dernières années, explique-t-elle. Il s'agit donc pour la direction du groupe de négocier avec les salariés ou ex-salariés de BA.

Selon un analyste du secteur, le directeur financier de la compagnie avait conseillé aux administrateurs du fonds de retraite de réduire son exposition aux actions en 2007, un conseil qu'ils n'avaient pas suivi et qui leur a coûté cher. Pour **David Blake**, spécialiste des retraites à la **Cass Business School**, les déficits des systèmes de retraites des entreprises britanniques sont difficiles à quantifier et souvent en mauvaise santé : « D'un côté, l'espérance de vie s'accroît, donc l'actualisation sous-évalue leurs charges, et, de l'autre, les actifs des fonds censés payer les retraites ont subi une forte baisse suite à la crise », explique-t-il.

Il y a dix ans, en tout cas pour les nouveaux bénéficiaires, les systèmes avaient été modifiés pour être soulagés. Ils étaient passés d'un système de prestations garanties à un système de contributions définies (versement sur un compte épargne retraite). Mais cela n'a pas suffi. Or, en moyenne, les Britanniques touchent 40 % de leur retraite grâce à leurs employeurs. La proportion augmente pour les plus riches, comme les pilotes d'avions.

Britain should issue longevity-linked bonds - Pension Corp, By Sarah Hills, Oct 22, 2009, Reuters

The government should issue bonds linked to the longevity of the population to help pension schemes and insurers manage the financial pressure of increased life expectancy, Pension Corporation said Tuesday.

Dramatic increases in life expectancy have left private sector pension funds and annuity providers with massive exposure to longevity, and there are few options currently available to hedge this risk on any significant scale within the private sector.

Similar to the introduction of inflation-linked gilts first issued for pension funds in 1981, the government could issue a longevity-linked government bond, creating a hedge against the financial risks posed by increase life expectancy, according to specialist British pension manager Pension Corp.

Such a move would help start a trading market for longevity risk, just as how index-linked gilts led to the creation of an inflation term structure and the development of inflation swaps.

"The government developed a much larger market where various parties traded to their optimal positions in regards to inflation," John Fitzpatrick, a partner at Pension Corp, told Reuters.

"That market is many multiples larger than the index-linked gilt market today. The same thing needs to happen to longevity," he said.

With the creation of a private sector longevity derivative market, price points along a mortality terms structure could be created.

As there would be a pure price for longevity risk, institutions such as pension funds and pension insurers could trade these derivatives on the Insurance Linked Securities (ILS) market.

The development of a pricing index would reflect market developments that impact longevity, such as medical advances and behavioural changes -- for example, fewer smokers.

"A number of pension insurers and annuity issuing insurers would buy these bonds" said Fitzpatrick.

"Pension funds want to hedge out all their longevity risk in a cost effective manner through insurance. The pension insurers want to get the risk out to the capital markets.

"In the long run, such a system would reduce the amount of longevity risk that the government is likely to have in the future," he said.

Another reason for the government's involvement would be to minimise the credit risk in such a security.

If private institutions issued the security, there would be elements of interest rate risk, credit risk and longevity risk in the bond, making it difficult to tell from the price alone which is related to credit risk and to longevity risk.

"If the government issued a longevity linked bond, investors would be able to compare the yield of the government longevity bond to that of a standard government bond and the resulting yield spread would show the yield premium for straight longevity risk," said Fitzpatrick.

Pension Corporation is not the first to urge government help with longevity hedging.

In May, the **Pensions Institute** appealed to the government to issue up to 35 billion pounds of longevity bonds by 2010, stating it would provide a fresh source of finance for the state.

However, the UK Debt Management Office (DMO) said in its Annual Review 2008/09 in August that the government has no plans to issue longevity bonds.

"The issuance of longevity bonds raises significant policy questions, in particular around the transfer of longevity risk onto the government's balance sheet," it said.

"In addition, the depth of the market for, and the potential liquidity of, this type of product are unclear," the report said.

A spokesperson for the DMO said the government's stance had not changed.

Pension Corporation said it would continue to lobby the DMO.

The best way to invest Personal Accounts, by Alistair Byrne and David Blake, FTfm, August 24 2009

The UK government plans a new system of Personal Accounts to provide pensions for employees who do not have access to a good quality work-based scheme. The scheme is due in 2012 and the Personal Accounts Delivery Authority is working hard on the details. Getting the investment arrangements right is a major challenge and an issue Pada is currently consulting on.

It is clear that the target market for Personal Accounts comprises lower income individuals with little prior investment experience ("reluctant investors"). They are likely to be disinterested in pension planning and investments, easily confused, easily put off and more than averagely risk averse. This has implications for the investment arrangements. In particular, most members will end up in the default fund rather than making an active fund choice.

The trustee corporation can never be sure it knows what members want. It therefore has to take a view on what will be the best investment solution for the majority of members. However, it is impossible to do this without having a target in mind, such as a particular type of annuity on the retirement date. We believe that the objectives of Personal Accounts should be a) to deliver a pension in retirement rather than a lump sum and b) to deliver a pension that is stable in relation to the pattern of contributions made during the course of the member's career. If two people have the same pattern of contributions, they should end up with a similar pension. These objectives are similar to those in a conventional defined benefit scheme.

Given these objectives for Personal Accounts, the overarching objectives for the default fund should be to a) maximise the income replacement ratio for a given contribution stream, and b) to minimise the variability of pension outcomes for the same contribution stream. This involves a classic risk-return trade-off, but expressed in terms of pension outcomes, rather than rates of return.

The ideal default investment strategy would be a lifestyle strategy. In the early stages of the strategy, contributions would be invested in a highly diversified portfolio with a significant equity weighting to benefit from the equity risk premium. As the selected retirement date approaches, the risk of the fund would be reduced by a systematic switch into deferred life annuities. This would help to hedge interest rate and longevity risks in the period leading up to retirement. The use of deferred annuities is a key difference from the typical lifestyle fund where the glide path involves a switch into bonds. What type of deferred annuities should they be? Given that state benefits in retirement are index-linked, there is a case for allowing the member to choose a

level annuity. This would maximise income at the start of retirement when the pensioner is most active.

The lifestyle strategy could be delivered using target date funds. These are funds managed to meet the risk/return objectives of members retiring in a particular year (eg 2030). Target date funds offer benefits in terms of ease of communication to members, who should be able to relate to the concept of a fund being managed with their retirement date in mind. Target date funds also provide a degree of future proofing as it will be relatively easy for the trustee corporation to make adjustments, for example to the derisking glide path, if market developments require.

In terms of managing the default fund, it would seem unlikely that the trustee corporation would have the skills and flexibility to add value in short-term market timing. However, the strategic asset allocation could be adjusted through time to take account of changing market conditions. It would also make sense to use a wide range of asset classes to achieve maximum diversification, including so-called alternatives assets. The need for low costs and the difficulty of choosing active managers with consistent superior performance would suggest the use of passive approaches where possible.

Beyond the default fund, Personal Accounts should offer a narrow range of funds suitable for investors who want a bit more choice. There might be scope for multi-asset funds that have higher and lower levels of investment risk than the default, ie, risk-graded managed funds. Probably only two additional funds are needed, one with higher and one with lower risk than the default. The variation in risk level could be achieved by having a different overall asset mix, or by varying the length of the glide path, or by some combination of the two.

There should also be funds that cater for commonly-held religious and ethical preferences, again ideally in the form of diversified, managed funds. There is no need for asset class funds to act as building blocks for DIY asset allocation. Branded funds would also seem likely to create an unwarranted distraction from the key risk allocation issues.

Alistair Byrne is senior lecturer in finance at the University of Edinburgh Business School. David Blake is professor of pension economics at the Cass Business School



Interview



David Blake
Professeur en Economie des systèmes de
retraite de Cass Business School

**«Les gouvernements doivent
aider les assureurs à
s'assurer»**

*(Easybourse.com) Nous vivons tous plus
longtemps, c'est une réalité. David Blake,
professeur en Economie des systèmes de
retraite de Cass Business School, explique
que le marché a besoin d'obligations indexées
sur la longévité pour couvrir ce risque et
poser les bases pour l'avenir.*

L'augmentation de l'espérance de vie, associée à l'arrivée à l'âge de la retraite de la génération du baby-boom, implique que les fonds de pension et les organismes de retraite par capitalisation ont besoin d'une protection financière contre la longévité accrue de leurs membres ou de leurs clients. Ces fonds et ces organismes n'ont jamais été autant exposés aux conséquences financières d'une telle longévité et le secteur privé propose peu de solutions pour les protéger contre ce risque.

Le Pensions Institute de Cass Business School appelle les gouvernements des pays dont les marchés de la retraite et des fonds de pension sont arrivés à maturité à émettre des obligations indexées sur la longévité, afin d'aider le secteur privé à anticiper ce risque.

En émettant des obligations indexées sur la longévité, les gouvernements auront accès à une nouvelle source de financement à long terme qui abaissera le coût de l'opération par l'élargissement de la base d'investisseurs. De plus, la prime d'émission réduira le coût de la dette nationale à long terme.

Les gouvernements européens font parties des rares institutions à même d'aider le secteur privé à couvrir le risque de longévité à une grande échelle. En effet, ils peuvent étaler le risque sur les générations successives et mettre en oeuvre des « contrats » intergénérationnels, ce que le secteur privé n'a pas les moyens de faire. Et c'est un critère important, étant donné que le risque de longévité s'étend sur plusieurs générations.

Avec 150 ans d'histoire dans les fonds de pension, le Royaume-Uni fait partie des premiers pays d'Europe à devoir faire face au risque de longévité dans les plans de retraite d'entreprise du secteur privé. Le choc est rude, mais les autres pays européens peuvent tirer des leçons de cette expérience. Pour se couvrir contre le risque de longévité, le Royaume-Uni a utilisé des swaps de longévité, mais ce marché ne fonctionnera efficacement que si le prix établi pour le risque de longévité est fiable.

Pour ce faire, les gouvernements des pays européens doivent émettre des obligations indexées sur la longévité.

En effet, lorsque les régimes de retraite par capitalisation du reste de l'Europe commenceront à arriver à maturité, ils seront confrontés aux mêmes problèmes que ceux que rencontre le Royaume-Uni depuis des décennies. Les régimes de retraite des pays du nord-ouest de l'Europe (Pays-Bas, Irlande, Suède, Norvège, Danemark) et de la Suisse seront les prochains à arriver à maturité et à subir l'impact du risque de longévité. Ils peuvent donc tirer les leçons du cas britannique et éviter une crise similaire.

Ce risque est également présent en Allemagne, en raison de son système de provisionnement des montants à verser au titre des retraites au bilan des entreprises. Les entreprises allemandes s'assurent pour protéger ces montants, mais le coût de ces assurances va inévitablement augmenter pour refléter un risque de longévité accru.

Les pays du reste de l'Europe, y compris la France et l'Italie, n'ont pas de régimes de retraite d'entreprise à « prestations définies » financés par capitalisation car ils dépendent de systèmes financés par l'État ; ils n'ont lancé que très récemment des régimes de retraite à « cotisations déterminées ». Quoi qu'il en soit, ils finiront inévitablement par être confrontés, eux aussi, au problème du vieillissement de la population et à la nécessité de trouver des instruments de protection contre le risque de longévité.

De nouvelles règles

Le Pensions Institute recommande l'émission d'obligations indexées sur la longévité dès que possible. Un objectif idéal de mise en place serait l'année 2010, ce qui laisserait au marché quelques années pour se stabiliser avant la réforme Solvabilité II, une série de nouvelles réglementations pour les compagnies d'assurances intervenant dans l'Union Européenne qui entrera en vigueur en 2012. Cette réforme introduira un changement fondamental dans les règles d'adéquation des fonds propres, c'est-à-dire, dans le calcul du capital qu'une compagnie d'assurances doit détenir en fonction des risques auxquels elle est exposée. La réforme Solvabilité II imposera dans toute l'UE de nouvelles exigences en termes de fonds propres et de normes de suivi du risque.

Dans ce contexte, les assureurs tireraient des avantages de ces obligations indexées sur la longévité car elles leur permettraient de réduire le niveau de capital consacré à la gestion du risque de longévité conformément aux exigences de cette réforme. Les consommateurs bénéficieraient de leur côté de prestations de retraite plus élevées. Les obligations indexées sur la longévité aideraient aussi des assureurs à développer leurs activités dans le domaine de la retraite, à continuer à racheter de petites caisses de retraite et à mettre en commun le risque de longévité en reportant une partie sur les marchés de capitaux, à l'aide de swaps de longévité et autres produits dérivés. Les compagnies d'assurance réduiraient ainsi la concentration de leur propre risque et le distribueraient sur les marchés de capitaux internationaux.

En parallèle, les instances réglementaires pourraient utiliser la structure de la mortalité établie par l'émission des obligations indexées sur la longévité pour différents groupes

d'âge afin d'aider à valider le capital économique des assureurs, et ainsi consolider la réglementation.

Quel type d'obligations indexées sur la longévité les gouvernements devraient-ils émettre ? Les études du Pensions Institute sur l'incertitude de la probabilité de survie des hommes qui auront 65 ans en 2010 en Angleterre et au Pays de Galles identifient la zone où le risque de longévité se concentre : l'incertitude culmine à l'âge de 90 ans et, bien que la meilleure estimation indique que 25 % des hommes de 65 ans atteindront 90 ans, le chiffre réel pourrait se situer entre 16 % et 33 %, ce qui constitue une fourchette très large.

Les niveaux de prix

Le plus intéressant pour le secteur privé serait que les gouvernements fournissent une protection contre le risque lié au vieillissement au delà de 90 ans. En parallèle, ils pourraient apporter un support initial aux solutions des marchés de capitaux, comme les swaps de longévité, qui sont en train de se mettre en place et qui transfèrent le risque de longévité liée à la tranche d'âge 75-90 ans. Cela permettrait de faire démarrer un marché liquide et d'établir un prix du marché pour le risque de longévité avant la réforme Solvabilité II.

Quatre obligations (femmes de 65 ans, hommes de 65 ans, femmes de 75 ans, hommes de 75 ans) seraient nécessaires pour établir et maintenir des niveaux de prix définis par le marché pour le risque de longévité aux âges clés et au delà. Chaque obligation serait caractérisée par quatre dates : l'année de naissance (par ex., 1945), la date d'émission (par ex., 2010), la date du premier paiement (par ex., 2020) et la date du dernier paiement (par ex., 2045).

En d'autres termes, ces obligations aideraient à établir une structure sans risque des taux de mortalité au delà de 65 ans.

Quand le marché des obligations indexées sur la longévité sera arrivé à maturité, c'est à dire, quand il engendrera des niveaux de prix stables et fiables pour la tranche d'âge 65-90, les marchés de capitaux pourront se charger de fournir la capacité de couverture nécessaire à cette tranche d'âge par des dérivés basés sur la longévité. Ils ont déjà commencé à le faire, mais le développement de ce marché pourrait être nettement accéléré si les gouvernements européens émettaient lesdites obligations.

Publié le 21 juil 2009, easybourse.com

Endowment meltdown: Just one in 100 will pay off the mortgages they were meant to cover, By Sylvia Morris, Daily Mail, 15 July 2009

More than three million home-buyers have been warned that their endowment policies are unlikely to pay off their mortgages.

Some insurers have just one in 100 mortgage endowments on target, a Money Mail investigation has revealed.

They include Standard Life, whose endowments were sold in huge numbers to homebuyers who borrowed from the Halifax in the Nineties.

In all, 735,000 policies, 98 per cent of its total, are likely to fail, while 1 per cent are in a perilous position, leaving just 7,500 on target.

With-profits endowments were supposed to build up a pot of money for investors over 25 years by adding 'bonuses' each year to the money saved, plus an extra big bonus at the end.

Homebuyers were told that this would smooth out any erratic stock market movements, ensuring their investment would meet its aim of repaying the mortgage and giving a lump sum on top.

Despite this, more than nine out of ten endowment policies run by Clerical Medical, Co-op, London Life, Friends Provident, National Provident Life, Aviva (formerly Norwich Union) and Scottish Widows are predicted to pay out too little to cover the mortgage they were supposed to repay.

More than 4.3 million mortgage endowments are still in force. The final figure for shortfalls might be higher than we suggest because some major endowment sellers such as Scottish Mutual and RSA (the former Royal & Sun Alliance) refused to disclose figures.

Insurers blame falling stock markets last year, but investors are asking what happened to promises to smooth out falls.

Many also want to know how endowments that were previously on target can suddenly fall far adrift only a few years before maturing.

Last year, for instance, only 19 per cent of Prudential's 164,000 endowments were at high risk of falling short. Now, that figure has jumped to 74 per cent.

At Co-op, the figure has leapt from 25 per cent to 95 per cent. The bad news comes in a year when a massive number of endowments are due to come to the end of their term.

Tax changes brought in 25 years ago abolished tax relief on monthly payments, and there was a 'buy while stocks last' sale by companies to encourage homebuyers to take out policies.

Aviva alone has 59,000 maturing this year and Standard Life 55,000. Prudential has 15,073 policies maturing, of which 4,025 are not expected to meet their repayment target. The expected average deficit is £1,130, while the expected average surplus is £3,000.

'The fall in the fund, down 15.8 per cent last year, has resulted in many policies turning red,' says a spokesman for Prudential. 'But the figures quoted are projections, and the final value won't be determined until an individual policy actually matures.'

Another reason for the rise in failing policies is that insurance companies devised a new way to lure homebuyers in the late Eighties and early Nineties by selling 'low-cost' endowments.

These demanded lower monthly payments from homebuyers, but needed greater investment growth to hit their targets. Nearly all of these endowments show a shortfall.

'There are three main problems with with-profits endowments,' says Professor **David Blake** of **Cass Business School**.

'The policies sold years ago promised returns of 9 per cent a year, but they have actually delivered much less than that.

'Second, policyholders who are still in the fund could well have subsidised the payouts of those whose policies matured years ago.

'Finally, the bonus policy of a typical with-profits fund has all the clarity of an actuary peering into a black box in a dark room.

'Investors have no idea how the bonus relates to the underlying performance of the fund.'

A Standard Life spokesman says: 'Many policies that were on target have matured, but the major factor has been the turbulent market conditions we have experienced in the past 18 months or so, for example, a drop of over 30 per cent in the FTSE All share Index in 2008 alone.

'These have had an impact on plan values and, in turn, on the number of policies not on target.'

WHY WE'RE SEEING RED

Under a traffic light system set up by the Financial Services Authority (FSA), life insurance companies must tell policyholders on a regular basis where they stand with their endowments.

Red means there is a high risk that your policy is not on track. The investment fund in which your monthly premiums are invested must rise by at least 8 per cent a year for the rest of the term to cover your mortgage.

Amber means there is a significant risk it's not on track and must grow between 6 per cent and 8 per cent a year. Green means your policy is on track, as long as it grows by 6 per cent a year.

CASE STUDY

Just a year ago, Terry and Mary Noel from Greenford, West London, received a letter from Prudential telling them their endowment was due to pay out £76,400 - more than enough to cover their £74,000 mortgage.

But then in March, Prudential wrote to them again, predicting the endowment - which is due to mature in September next year - will pay out only £63,700.

'How can we lose nearly £13,000 in just seven months?' says Mary, a retired City computer analyst. 'Why were Prudential's predictions so far out? We have been through bad times in the stock market before, but I can't believe this has fallen so quickly.'

Mary, 59, and Terry, 69, a retired youth worker, were still paying £144 a month towards their endowment. They were told they could surrender the policy now and take £56,695. They did this, paid a lump sum off their mortgage and are now overpaying in the hope of clearing the debt quickly.

'We feel badly let down by the way they have managed this situation,' says Mary. 'It has left us about £21,000 short on our mortgage when just a few months ago we were told we could have paid off the whole thing.'

'There was no telling if the market would pick up again before the endowment matured. For all we knew it could fall again, so we decided to take what we had.'

Everyone wins if UK issues longevity bond, By David Blake, Tom Boardman, Andrew Cairns and Kevin Dowd, FTfm, June 29 2009

Given the size of the UK government's borrowing requirement – £703bn (~~£~~20bn, \$1,142bn) over the next five years – and also the growing need for pension funds and annuity providers to hedge against people living longer, there is an urgent need for the government to issue longevity bonds. These would have payments linked to the future survival rate of a specified cohort of the population, say 65-year-old males in 2010.

Dramatic increases in life expectancy have left private sector pension funds and annuity providers with a massive longevity exposure, and unlike other risks such as credit or interest rate risk, there are few options available to hedge this risk on any significant scale within the private sector. In addition, annuity demand is increasing as a consequence of the growth in defined contribution plans. There is also an increased demand from defined benefit schemes to use annuities to back pensions in payment and scheme buy-outs.

There are four main reasons why the government should agree to share longevity risk with the private sector.

First, the expected cost of government funding could be reduced by issuing longevity bonds. The government would gain access to a new source of long-term funding that, by widening the investor base, should lower the cost of government issuance. The longevity risk premium attached to such issues will further reduce the expected cost of the long-term national debt.

Second, the government has an interest in ensuring an orderly transfer of DB pension promises to the insurance and capital markets. Insurance companies will need to play a big role in aggregating longevity risk and providing DB pension schemes with indemnity solutions. To counter danger of an unhealthy concentration of risk among a

small number of insurance companies and insufficient capital in the insurance industry to deal with total private sector longevity risk, some risk must be passed on to capital markets.

By issuing longevity bonds, the government can help establish price points along a mortality term structure to facilitate the growth of a private-sector longevity derivatives market in a similar way to the role that it played by issuing inflation-linked bonds.

Third, the government has an interest in ensuring there is an efficient annuity market, given its desire to encourage retirement savings in DC pension plans that rely on annuities to turn savings into guaranteed lifetime retirement income. Helping to establish a mortality term structure will help ensure that insurers can hold optimal capital under new regulations (known as Solvency II) under which they would not have to treat longevity as an unhedgeable risk.

Fourth, the government is one of the few agencies in society that can engage in intergenerational risk sharing on a large scale and enforce intergenerational contracts.

There will be an ongoing role for government to provide longevity bonds to allow insurance companies and pension schemes to hedge aggregate longevity risk that can arise from unanticipated increases in longevity due to, say, medical advances.

What type of longevity bonds should the government issue? Pensions Institute research on longevity risk shows that the risk exposure peaks at the age of 90, and while the best estimate is that 25 per cent of 65-year-old males will survive to 90, the actual figure could lie anywhere between 16 per cent and 33 per cent. This is a very wide range.

What would be most beneficial to the private sector would be for the government to provide protection on an ongoing basis for the risk attached to those who live beyond the age of 90. It would also be helpful if initially the government could issue bonds with payments starting at an earlier age to help establish key price points along the mortality term structure. This would help the capital markets establish a liquid market in longevity swaps.

Everyone benefits from the optimal sharing of longevity risk and insurers in particular will be able to hold optimal levels of capital under Solvency II rules, thereby maximising the value of annuities to individuals in both DC and DB pension plans.

David Blake, Tom Boardman, Andrew Cairns and Kevin Dowd are from the Pensions Institute at Cass Business School

UK's first longevity swap draws a crowd, By Ruth Sullivan, FTfm, May 24 2009

The risk of people living longer than expected is a big one for pension funds. UK funds put it second only to investment risk in a survey conducted last year by Aberdeen Asset Management. Each extra year a scheme assumes its members will live adds 3-4 per cent to its liabilities, according to the Pensions Regulator.

So it is not surprising there is much interest in the UK's first longevity swap, agreed between Babcock International and Credit Suisse although not yet completed. The hedge covers only liabilities associated with current pensioners, who account for about £750m (€856m, \$1.2bn) of current liabilities, about 45 per cent of the total.

Watson Wyatt, the investment consultant that advised Babcock on its counterparty choice, says it is advising 10 other organisations on longevity swaps. "We expect some of these to use mortality swaps this year," says Nick Horsfall, senior investment consultant at Watson Wyatt. "This particular swaps market has potential to grow to between £2.5 and £5bn in the next 12 months," he says.

Ritesh Bamanian, head of asset liability investment solutions, UK at UBS Global Asset Management, says the longevity swap is a welcome new tool for pension scheme trustees. "In an environment where cash resources are constrained, the swap provides an ability to reduce a key risk of people living longer, without the need for making any upfront contributions," he says.

This contrasts with the buy-out route, where an insurer takes pension fund liabilities onto its own balance sheet.

The upfront costs of buying out can be large, and have risen in recent months as gilt yields have fallen.

With a longevity swap, a scheme makes regular payments based on agreed mortality assumptions to an investment bank or insurer and, in return, the bank or insurer pays out amounts based on the scheme's actual mortality rates.

In spite of a demand for such solutions experts say they should be treated with caution. "Trustees should be aware of the risks involved," says Mr Bamanian. These include price, counterparty risk, and impact on running of the scheme in the future – in particular whether insurers would be willing to accept a swap as part of a future buy-out.

Pricing will reflect the return requirements of the counterparty, he says. These are likely to be high because of the limited number of counterparties willing to do a longevity swap due to the 50-60 year term and the uncertainty involved. Trustees and sponsors need to consider the value added from paying the price demanded, says Mr Bamanian. They should also look at some form of protection [collateral or other] in case of counterparty default, he adds.

Clive Wellsted, head of buy-out practice at Lane, Clark & Peacock, says schemes that agree a longevity swap with an insurance company may not require collateral "because insurers have a greater amount of capital in place [than investment banks]".

Where a swap is collateralised, the collateral should be held by an independent custodian, he adds.

On the question of the type of collateral requested, Mr Horsfall says: "Most of our clients would be advised to accept only high-grade bonds." That avoids the risks associated with reinvesting cash collateral. "But if a pension fund wishes or needs to

use cash we ensure the documentation does not require high levels of returns to be paid on the cash, so that the cash does not need to be managed in an aggressive or risky manner,” he adds.

Although experts say longevity swaps can be attractive for pension funds, they also believe they will not suit all. Large schemes such as Babcock have enough data on which to base mortality assumptions. Smaller, less sophisticated schemes may not. The Babcock contract also only covers retirees, so if a swap were extended to all scheme members it would be more expensive. Consultants say it is important each pension scheme tailors its own customised deal. Mr Wellsted of Lane, Clark & Peacock, which is advising half a dozen schemes on swaps, says customised hedges fully transfer the underlying longevity risk. But they tend to be available “for schemes with over £150m of pensioner liabilities”, and are “viable only for about 20 per cent of the largest funds”.

He says a buy-out is a better option for smaller schemes “as it is possible to transfer the total liability to the insurer”.

Apart from customised longevity swaps or buy-outs, schemes could take an index-based hedge where the pay-out is linked to an index of UK population longevity. Leading providers of these are JPMorgan and Swiss Re.

“These should be more attractive to smaller schemes as they are standardised and more flexible but there is little appetite from trustees,” says Mr Wellsted. Trustees see the residual risk of schemes remaining exposed to any difference in longevity between their members and the wider UK population as a stumbling block, he adds.

Government longevity bonds could be another option for trustees but experts agree the UK government has shown little interest so far. **David Blake**, director of the **Pensions Institute** at Cass Business School, believes the longevity swap market in the UK will not really take off until the government provides a firm foundation for this market to flourish by issuing longevity bonds.

Longevity bonds could help funds meet liabilities, Pensions Week, 4 May 2009

The **Pensions Institute** at Cass Business School has called on the government to issue longevity bonds.

Such bonds would make payments linked to the future survival rate of a specified cohort of the population, such as 65-year-old males in 2010.

The institute believes longevity bonds would not only help pension funds better meet their liabilities, but also help annuity providers and ultimately help meet the UK government's £703bn borrowing requirement.

Professor David Blake, director of the Pensions Institute at Cass, said: "We strongly recommend that the government issues longevity bonds as soon as is practically feasible. An ideal introduction date would be 2010, as this would give the market a couple of years to settle before Solvency 11 comes into effect in 2012."

If the government acts on this recommendation, capital markets would be able to create a liquid longevity derivatives market, once the longevity bonds had established key price points along the mortality term structure.

Blake added: "Everyone benefits from the sharing of longevity risk, and insurers in particular will be able to hold optimal levels of capital in a Solvency II world, thereby maximising the value of annuities to individuals in both defined contribution and defined benefit pension plans." **DR**

Government urged to issue longevity bonds, by Emma Dunkley, Professional Pensions, 1 May 2009

The government should issue longevity bonds for pension funds and annuity providers in a bid to help them hedge against longer life expectancy, the **Pensions Institute** at Cass Business School urges.

The institute said sharp increases in life expectancy had left private sector pension funds and annuity providers with massive longevity exposure - but noted there were few options available to significantly hedge this risk within the private sector.

And it highlighted that demand for annuities was rising as defined contribution plans continue to grow, as well as further demand from defined benefit schemes to use annuities to back pensions in payment.

It said the issuance would also help DB schemes transfer pension promises to the insurance and capital markets

It said the issuance of longevity bonds would also mitigate its borrowing requirement - which, it said, amounted to £703bn over the next five years - and noted the longevity risk premium would further reduce the cost of long-term national debt.

It said the government is also one of the few agencies that can engage in intergenerational risk sharing on a large scale and by providing deferred longevity bonds, pension schemes can hedge aggregate longevity risk.

Pensions Institute director Professor David Blake commented: "The government is one of the few agencies in society that can help the private sector hedge longevity risk on any significant scale.

He added: ""Everyone benefits from the optimal sharing of longevity risk and insurers in particular will be able to hold optimal levels of capital in a Solvency II world thereby maximising the value of annuities to individuals in both DC and DB pension plans."

Prudential UK Director of Retirement Strategy and Innovation and Pensions Institute visiting professor Tom Boardman added: "Longevity bonds will help insurers to meet the increasing demand for annuities from defined contribution and defined benefit pension schemes through being able to pass on a proportion of the longevity risk to the government and the capital markets.

"This would reduce insurers' longevity concentration risk by distributing it around global capital markets."

Nottingham University Business School professor and Pensions Institute fellow Kevin Dowd added: "In the UK, despite the recent rapid expansion in the number of pension buyout companies, the buy-out market still only has a turnover of around £5bn per annum - well short of the £1trn of pension plan liabilities in the country."

"As individuals and companies switch to defined contribution plans, an efficient annuity market backed by longevity bonds becomes more important than ever", argues. "At the same time, governments are looking to broaden their sources of funding in a time of economic uncertainty and large fiscal deficits."

UK urged to issue £30-35bn longevity bonds, By Cecilia Valente, Reuters, 1 May 2009

A UK business school on Friday urged the government to issue up to 35 billion pounds of longevity bonds to help pension schemes and insurers manage the financial implications of people living longer.

"If the government issues these bonds, then they will sell (them)," said David Blake, director of the **Pensions Institute** at the London-based Cass Business School.

Cass based its projections for demand for longevity bonds -- which create a hedge against the financial risks posed by increased life expectancy -- on talks with the Association of British Insurers (ABI) and the National Association of Pension Funds (NAPF), who it said had shown "a lot of interest."

"The government is one of the few agencies in society that can help the private sector hedge longevity risk on any significant scale," Blake said.

"We strongly recommend that the government issues longevity bonds as soon as is practically feasible. An ideal introduction date would be 2010."

The move would also bring in a fresh source of fundraising at a time of tight government finances, the school said in a statement.

The UK Treasury declined to comment.

A longevity bond pays coupons proportional to the survival rate of a group, for example the number of individuals turning sixty-five in the year the bond is issued. The pay-off matches the liability of annuity providers.

'ONE CHANCE ONLY'

The Pensions Institute is not the first to urge the government's help with longevity hedging.

Last week ahead of the budget announcement, Joanne Livingstone of pension actuary Punter Southall called for sovereign longevity bonds to be issued.

The finance industry has developed its own tools to hedge longevity, but issuing its own instruments the government would broaden a market limited to over-the-counter deals, while also helping set a market price.

Blake's based his estimate on the size of bond issuance on predicted demand of about 12.5 billion pounds for longevity bonds to hedge risk on people over 90 years of age.

A further four bonds amounting to about 20 billion pounds would cover exposure to retirees between 65 and 90.

Were it to consider a longevity bond, the government should think carefully about its structure, said Jerome Melcer, partner at consultancy Lane Clark & Peacock.

"These things are always more complex than they seem. The government will probably get one chance and one chance only. If something goes wrong and the bond flops, I doubt it would have the appetite to (try) again," he said.

School Urges U.K. To Issue Longevity Bonds, Euromoney, April 28, 2009

A team from the **Pensions Institute at Cass Business School** is urging the U.K. government to issue longevity bonds. This is due to the growing need for pension funds and annuity providers to hedge against people living longer and the size of the U.K. Government's borrowing requirement-GBP703 billion over the next five years, as announced in the recent budget.

David Blake, director at the Pensions Institute, said that dramatic increases in life expectancy have left private sector pension funds and annuity providers with a huge longevity exposure. He added that there are few options currently available to hedge this risk. Defined contribution plans are growing in both number and size and the members reaching retirement are beginning to increase dramatically as the baby boomers retire. There is also an increased demand from defined benefit schemes to use annuities to back pensions in payment and for total scheme buyouts, he explained

There are several reasons as to why the Government should agree to issue longevity bonds. Blake said that by doing so, the U.K. government would gain access to a new source of long-term funding, which by widening the investor base should lower the cost of government issuance.

Secondly, some of the risk must be passed onto capital markets, Blake noted. The government can help establish price points along a mortality term structure to facilitate the growth of a private-sector longevity derivatives market.

Blake recommends that the government issues longevity bonds as soon as is practically feasible. "An ideal introduction date would be 2010, as this would give the market a couple of years to settle before *Solvency II* comes into effect in 2012.

Inflation fears to hit more debt auctions, by Steve Johnson, Financial Times FTfm, 30 March 2009

Rising inflationary fears could spark the failure of an increasing number of government bond auctions this year, some in the pension fund industry believe.

Last week saw the [first failure of a UK conventional bond auction](#) since 1995, with demand for £1.75bn (€1.8bn, \$2.5bn) of 40-year bonds falling short. A 30-year UK auction earlier this month also attracted weak demand and two German bond auctions have failed this year, at a time when governments are gearing up to issue unprecedented quantities of debt.

However a £1.1bn auction of UK index-linked gilts last week attracted £3bn of bids, a much higher bid-to-cover ratio than at the previous such auction in October.

Although wary of extrapolating from a handful of auctions, many investment industry figures believe this may be a sign of things to come. “We are seeing a pick up in demand for inflation-linked bonds from institutions and retail investors, and if you want them you do not particularly want gilts.

“I think the government will struggle to get rid of some of that issuance, quite frankly,” said David Scammell, head of UK interest rate strategies at Schroders.

David Blake, professor of pension economics at London’s **Cass Business School**, added: “I hope this is a wake-up call for the government. There is demand but not in the form that is being supplied by the Debt Management Office.”

According to some industry figures, investors are growing increasingly concerned that the vast quantitative easing and fiscal stimulus packages being rolled out worldwide could result in significant inflationary pressures, eroding the value of nominal assets.

“Since the middle of February almost every client meeting has included a discussion about inflation protection,” said Robin Creswell, managing principal of Payden & Rygel Global, which will launch an inflation-linked bond fund next month to meet demand from clients.

“The calculation people are making is that governments generally would rather that economies stop shrinking and start to grow, and if the price of that policy is some inflation that is a price they are willing to pay.”

Goldman Sachs said last week it had seen “substantial interest” among its clients in hedging long-run inflation risks.

Ken Willis, investment partner at pension consultants Lane Clark & Peacock, said his clients were increasingly coming to the view they should hold a combination of investment-grade corporate bonds – where the yield spread over gilts is at its highest since the 1930s – and inflation-linked bonds, rather than gilts. Some believe the UK may need to stimulate demand by offering debt in a form more tailored to the needs of pension funds, such as limited price inflation bonds, replicating the capped form of

inflation pension schemes are subject to, or longevity bonds, which would allow funds to pass their exposure to rising life expectancy to the state.

Pension funds and life insurers “would be willing to pay the government the longevity risk premium. I think this is a great opportunity,” said Prof Blake.

Mr Willis added: “Longevity bonds are a market that is waiting to take off. The demand would be huge. Pension funds would be prepared to give up something on the yield in order to get the longevity protection.”

However, Robert Stheeman, chief executive of the Debt Management Office, said he was wary of fragmenting the market for inflation-linked debt by introducing new variants, and doubted the wisdom of the government increasing its exposure to longevity risk.

“Fundamentally I believe that the underlying demand for longs and linkers from the pension fund industry remains strong, but . . . it’s what we would describe as lumpy,” he added. “There are signs that pension funds are more hesitant.”

A role for the state, IPE.com, 12 February 2009

David Blake explained his views on longevity bonds to Brendan Maton

It seems strange for anyone familiar with pension economics to want national treasuries to take on more longevity risk. The whole point of greater funded occupational pension coverage is to alleviate the taxpayer’s burden.

Everyone from the OECD to the European Federation for Retirement Provision has banged the drum for more funding since the early 1990s. And everyone knows that as people are living longer and longer, it is still more imperative for people to save for old age rather than rely on state benefits.

Professor **David Blake**, director of the **Pensions Institute** at London’s Cass Business School, nonetheless, has spent the past seven years on and off trying to persuade the UK Treasury in Whitehall to issue longevity bonds.

Is he mad? Judging by the absence of any such sovereign longevity bonds, one might think yes. A glance at the risk already on government books only seems to confirm the point. Of the pension liabilities already in payment at the end of 2003, the British state was liable for £460bn (€550bn). On top of this, add £190bn for unfunded civil servants’ pensions. Now look to the retirement costs of those currently working for the government, plus state pensions for all current workers; the sum is a further £960bn. Given the recent revision of UK longevity (these figures are based on end-2003 projections), it is thus safe to assume the UK government has in excess of £1.7trn to pay out.

Few other European governments are better off. So why would any of them issue a type of bond that exposed it to even more pension risk?

Blake's argument – and it is one shared by influential insurance experts such as Tom Boardman, director of policy development at the UK's largest annuity provider, Prudential – is that were governments to issue longevity bonds covering those aged over 90, then a reference point would be established for commercial players to mark out a longevity curve for lower ages, eg 65-89. In this respect, the bonds' principal function would be similar to that of nominal and index-linked state paper, namely offering accepted risk-free benchmarks from which commercial players could price their own issuances and gauge risk. Once risk can be measured satisfactorily, then investment banks would galvanise their clients, liquidity appears and trading ensues. Beautiful – if either party still exists after the credit crunch.

It is worth pointing out Blake's credentials: he proposed the original design for a longevity bond that the European Investment Bank (EIB) and BNP Paribas attempted to bring to market in late 2004; he is co-founder with JP Morgan of the LifeMetrics longevity indices; and he is a co-inventor of the Cairns-Blake-Dowd stochastic mortality model.

But this does not answer the question of what benefit governments receive from nurturing such a market. Blake replies that longevity bonds could be a real answer to a pressing predicament. "The UK government needs to issue about £90bn in debt this year [having injected extraordinary amounts into saving the British banking system]. Longevity bonds could form an attractive part of that deal, since there would be high demand for such bonds from annuity providers and pension funds and the government could command an attractive risk premium," he says.

In fact, trading longevity does not need government participation. Blake's seven-year dialogue with the UK Treasury is evidence of his enthusiasm. But there have already been at least three major private-sector longevity transactions. In April 2007, Swiss Re acquired the longevity risk of 78,000 pension annuity contracts written by Friends Provident between 2001 and 2006. This was the first ever longevity swap (although written under an insurance contract, rather than a capital market transaction). Since then, Canada Life acquired the £4bn closed annuity book of troubled pension provider Equitable Life; and JP Morgan in January last year engineered a derivative solution – using a q-forward contract – for the longevity risk held by Lucida.

Lucida, one of the new breed of buy-out providers in the UK market, is perhaps the most interesting for pension funds because, in Blake's eyes, it shows up where the unwanted risk of longevity is being tackled most keenly. Buy-out providers have successfully entered the British defined benefit market. Based on estimates from Aon Consulting, about £9bn in DB assets have been transferred.

Blake's elegant contention, however, is that these buy-out providers cannot carry on winning new business without inevitably hitting a shareholder capacity constraint. He sees them reducing that imbalance by offloading unwanted risk. And given that their clients tend to be mature schemes, longevity is their greatest unwanted risk.

"The way these insurers think about it is that they can take on £8-12 in assets for every £1 of capital, according to their individual capital adequacy agreement with

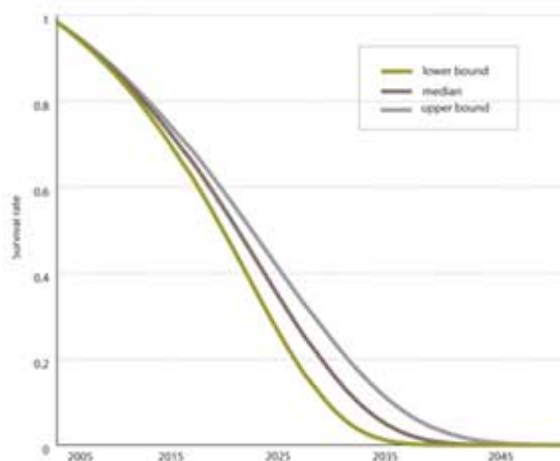
the regulator. It's probably nearer £8 in current markets. They are coming up against their own equity capacity," he says.

So Lucida offloaded longevity risk, at a price. But in spite of the trio of deals highlighted here, Blake admits the nascent market requires more communication and understanding; not just with would-be sellers such as pension funds and buy-out insurers, but also would-be buyers, such as hedge funds, insurance-linked securities investors, sovereign wealth funds and endowments.

He is willing to listen, after the failure of the EIB bond to generate sufficient investor demand back in 2004. "No one feels this more keenly than I do," he admits. For a man whose doctorate was gained in modelling pension fund investment behaviour, the professional embarrassment is understandable. Lack of consultation was one cause of failure; the support of neither target pension funds themselves nor influential advisers was secured prior to launch. Another flaw was that the fund was offering protection on the lives of UK males starting from age 65. As Blake writes in a new paper on the topic: "While this might provide a reasonable hedge for male plan members in their 60s, plans also have male members in their 70s and 80s as well as female members."

Face-to-face he is even more direct: pension funds don't really need a hedge at age 65. Greater uncertainty comes with older members, which takes us back towards the 'toxic tail' of over-90s for which Blake et al. would like to see the government play some role (see survivor fan chart for 65-year old English and Welsh men below). The actuarial maxim might be: the longer you live, the longer you can expect to live.

Survivor fan chart for 65-year-old English and Welsh men



Source: Blake et al (2008)

How will the market grow?

Blake is confident that pension funds and insurance companies will eventually become involved, just as they have become familiar with interest and inflation-rate swaps which were hitherto part of a foreign language. Guy Coughlan of JP Morgan believes that a liquid, hedge-effective market could be built around just eight age-

bucketed derivative contracts, which resemble the 'buckets' offered to pension funds in popular LDI products designed to lower interest rate risk.

Nevertheless, as sellers of longevity risk, pension funds still prefer the risk bundled up in an insurance contract with the buy-out specialists. So it will likely be these authorised insurers who follow Lucida's lead in offloading risk and so increase demand on that side of the market.

Ironically, however, some pension funds are already buyers of longevity risk, ie, they sit on the other side of trade. The Dutch metalworkers fund, PME, is among this number. At the end of 2007 it held \$400m (€300m) in life settlements, a mostly US-sourced market that sees life policies bundled into special purpose vehicles and sold in the capital markets. The original sellers tend to be the wealthy elderly who trade in unwanted life assurance policies; the ultimate buyers, like PME, look to profit from buying at a lower price than the policy is actually worth. Bluntly speaking, buyers are betting that the individuals will die sooner rather than later. (Note that this kind of actuarial computation is conducted by third-party experts on behalf of pension funds. Investment banks and asset managers have rapidly moved into providing the service.) While such packages might not be expected to sell well in the current, fearful climate, Blake counters that longevity risk is uncorrelated with financial market risk and hence forms the basis of a potentially important new diversifying asset class.

London-based boutique MPL, for example, announced a net return of 10.22% on its Traded Policies fund for 2008 to 15 October 2008. Such returns illustrate why it is not nonsensical for retirement schemes carrying longevity risk to acquire more. Longevity varies not merely from country to country but within countries themselves: it is not a like a noble element that remains immutable in society. Blake points to the regional differences in the US as a prime example of variation.

And so, the capital market in longevity is already born. Retirement funds play on both sides of this market. But in terms of liquidity, there is still some years to go before significant trading flows materialise.

Indexation must end to save firms, by Tom Willetts, Pensions Week, 9 February 2009

Business and pension groups are calling for action to abolish the indexation of defined benefit (DB) pensions to help companies avoid insolvency during the recession.

The National Association of Pension Funds (NAPF) is calling for the abolition of the indexation rule, which links the value of a pension to the retail price index (RPI).

"We propose that schemes will not be required to provide indexed pensions," said Joanne Segars, chief executive of the NAPF.

She argued this would put DB schemes on a similar footing to defined contribution schemes where members can opt to link the value of their pension to RPI.

The Association of Consulting Actuaries (ACA) warned that urgent action was required to avoid schemes forcing companies into insolvency.

“Critical times need new solutions and abolishing indexation would be a help,” said Keith Barton, chairman of the ACA.

“Indexation would be better than having a scheme where benefits are at a material risk of not being provided,” he said, adding that the situation had become so acute that in some situations pension schemes could “bring companies down”.

The recession will depress corporate profits at the same time as DB schemes require additional contributions from companies to reduce their deficits.

Experts argue that abolishing indexation would make DB schemes cheaper to operate.

John Lawson, head of pensions policy at Standard Life, said: “The move is necessary because the argument has moved on from keeping schemes open to keeping companies solvent. Abolishing indexation would help companies manage their pension scheme and cut their liabilities by 30 to 40%.”

The NAPF move was supported by Chris Hannant, head of policy at the British Chambers of Commerce, who said: “A temporary suspension of the rules for DB schemes should be considered. In turbulent markets, rigid rules can have unintended consequences.

“Flexibility is needed, and it is in an employee’s interest that a sponsor company survives, rather than be forced into insolvency by unthinking application of rules.

However, some experts cautioned against the complete removal of inflation indexing. Professor **David Blake**, director of the **Pensions Institute** at Cass Business School, said: “There will be some danger that we return to the 1970s, with inflation rates of 25% having the effect of reducing the real value of pensioners’ incomes to trifling amounts.

“There still needs to be some form of risk-sharing between pensioner, employer and the state, possibly with conditional indexing up to a cap, and with the state providing the inflation uprating above the cap.”

Reinet Quinn, group pensions manager at the £1.4bn Coats Pension Plan, said: “We have to make a distinction between past and future accrual, and if we protect the accrued benefits, as I believe we must, those with mature schemes will see little benefit from this proposal.”

The NAPF move follows the announcement that Corus intends to close the £9.4bn British Steel Pension Scheme to new employees.

The company said the closure is “in line with market practice” and that the contribution to future service for existing members would remain at 12%.

TRW Automotive, the US-owned motor industry components manufacturer, is also proposing to close its £3.5bn pension scheme from April 1 this year.

Mortality-linked derivatives open the way to longevity swaps, bfinance.co.uk, 23 January 2009

The risk associated with longevity risk has been systematically under-estimated, making balance sheets vulnerable to unexpected increases in liabilities. Longevity has been traditionally transferred through insurance and re-insurance markets. Both of these markets, however, lack the capacity and liquidity to support an estimated global exposure in excess of \$20tr, according to the **Pension Institute**.

Enter mortality-linked securities. Despite growing enthusiasm in such securities, longevity risk transfers have been materialising only slowly. One reason is the large imbalance between existing exposures and willing hedge suppliers. In addition, a mortality-linked security has to meet the different needs of hedgers and investors in the context of trying to correctly quantify longevity risk. Longevity risk exposure is mostly represented by the liabilities of defined benefit pension funds and annuity providers. In 2007, these institutions' exposure to improvements in life expectancy amounted to \$400bn in the UK and US, according to the Pension Institute.

“Increases in life expectancy are not a problem in themselves,” say **Enrico Bifis** and **David Blake**, who co-authored a report on the recent trends in mortality-linked derivatives for UK's Pension Institute. “The real problem is that increases in life expectancy are surrounded by considerable uncertainty and changes in mortality rates are often unanticipated. Since every additional year of life expectancy at age 65 is estimated to add at least 3% to the present value of UK pension liabilities, it is not difficult to see the economic implications of such a huge range of uncertainty.”

Index shortcomings

The most recent mortality-linked derivatives to appear on the market have tried to address a number of the shortcomings of earlier longevity bonds. The first attempt to design a reliable set of mortality indices for contracts to be written on was designed by Credit Suisse in 2005. It was based on US population expectancy; however, the index suffered from transparency issues regarding methodology. A more successful attempt was made by JP Morgan with the launch of Life Metrics in 2007. “The indices comprise publicly available mortality data at population level, broken down by age and gender, for different key countries such as UK, Holland and Germany,” note Bifis and Blake.

In March 2008, Deutsche Börse launched Xpect-Indices which provide monthly estimates for life expectancy of a reference group of individuals in a defined cohort group for Germany and the Netherlands. Derivatives products that are currently attracting attention from insurers and investment banks are mortality and longevity swaps. They involve counterparties swapping fixed payments for payments linked to the number of deaths (mortality swaps) or survivors (longevity swaps) in a reference population group during a given period.

“Longevity swaps can diversify the exposure to longevity risk of a pension plan by providing exposure to the mortality experience of different populations, note Bifis and Blake. “For example, a US annuity provider could swap cashflows indexed on a US mortality index from a UK annuity provider counterparty. The first such publicly

announced longevity swap took place in April 2007: Swiss Re agreed to assume the longevity risk of £1.7bn pension annuity contracts written by Friends' Provident, a UK life insurer, in exchange for an undisclosed premium."