



Cass Business School
CITY UNIVERSITY LONDON

π Pensions
Institute

A HEALTHIER WAY TO DE-RISK

The introduction of medical underwriting to the defined
benefit de-risking market

A Pensions Institute report for insurance companies,
advisers to DB schemes, regulators, trustees, and employers

Debbie Harrison

David Blake

The strategic objective of every defined benefit scheme
is to secure the members' benefits as soon as possible
at the lowest cost to the sponsor.

Pitman Trustees Limited

February 2013

A healthier way to de-risk: The introduction of medical underwriting to the defined benefit de-risking market

Published February 2013

The Pensions Institute
Cass Business School
106 Bunhill Row
London
EC1Y 8TZ
www.pensions-institute.org

ISSN: 1367-580X

© Harrison and Blake

All rights reserved. Short sections of text, not exceeding two paragraphs, may be quoted without prior permission provided acknowledgement is given to the source. Otherwise, no part of this report may be reproduced, stored in a retrieval system or transmitted in any form or by any means electrical, mechanical, photocopying, or recording, without the prior permission of the copyright holders.

Contents

About the authors	3
List of abbreviations	3
Preface	4
Executive summary	7
Towards a consistent regulatory framework and code of practice	8
Section 1: Enhanced bulk buy-ins in context	10
1.1 The relationship between a bulk buy-in and a bulk buy-out	10
1.2 The conventional defined benefit de-risking market	10
1.3 Medical underwriting: a natural progression	12
1.4 Why smaller schemes?	14
1.5 How many smaller schemes are there?	17
1.6 PIE exercises: Simplifying DB benefits for annuity pricing	19
1.7 How the enhanced bulk buy-in works	20
Section 2: The interviews	24
2.1 The impact of medical underwriting techniques on the market	24
2.2 Anti-selection and trustee disclosure	25
2.3 Obtaining medical data	27
2.4 Optimal size of schemes	29
2.5 Due diligence in the insurer selection	30
2.6 Expertise among trustees, employers and their advisers	32
Section 3: Case studies	35
3.1 The first completed medically-underwritten transactions	35
3.2 Examples from DC case studies	36
3.3 Examples from DB case studies	37
3.4 Cost of an enhanced bulk buy-in	44
Section 4: Towards a consistent regulatory framework and a code of good practice	
4.1 The regulation of the enhanced buy-in market	45
4.2 Accurate data	46
4.3 A common quotation process	47
4.4 Trustee disclosure	47
4.5 Standard procedures on the death of an annuitant	48
4.6 Trustee knowledge and understanding	49
Section 5: Conclusion and next steps	50
Glossary of terms	52
Acknowledgements	54
Sponsor statements	55
About the Pensions Institute	57
Previous Pensions Institute Reports	58

About the Authors

The Pensions Institute research team for this report was:

Debbie Harrison

Dr Debbie Harrison is a Senior Visiting Fellow at the Pensions Institute at Cass Business School.

David Blake

Dr David Blake is the Director of the Pensions Institute and Professor of Pensions Economics at Cass Business School.

The Pensions Institute (www.pensions-institute.org) is the first and only UK academic research centre focused on pensions issues. The views expressed in this report are those of the authors and not the Pensions Institute which takes no policy positions.

List of abbreviations

ABI	Association of British Insurers
AUM	Assets under management
BPA	Bulk purchase annuity
CMI	Continuous Mortality Investigation
CPI	Consumer Price Index
DB	Defined benefit
DC	Defined contribution
FCA	Financial Conduct Authority (from April 2013)
FSA	Financial Services Authority
FSCS	Financial Services Compensation Scheme
HMRC	Her Majesty's Revenue & Customs
IFA	Independent Financial Adviser
LPI	Limited price indexation
NAPF	National Association of Pension Funds
RPI	Retail Price Index
PPF	Pension Protection Fund
PRA	Prudential Regulatory Authority (from April 2013)
tPR	The Pensions Regulator

PREFACE

The Purple Book 2012¹ presents a discouraging outlook for the trustees and sponsoring employers of UK private sector defined benefit (DB) pension schemes. Scheme funding on an s179 basis² deteriorated significantly between March 2011 and March 2012, with the funding ratio (assets divided by liabilities) falling from 100% to 83%. S179 liabilities were estimated at £1,026.8bn with an aggregate deficit of £204bn, double the figure in 2011. The aggregate buy-out deficit in 2012 was £675.8bn, compared with £467bn the previous year, representing a fall in the full buy-out funding position from 67% to 60%. The stark result is that DB deficits persist in stalling corporate activities and threaten to force otherwise viable companies into liquidation.

Against this gloomy backdrop, the de-risking market for DB schemes' liabilities, which began in 2006, has developed rapidly and is predicted to grow further in 2013 and beyond. The Purple Book reports that the value of risk-transfer deals such as longevity-only deals, bulk buy-ins and bulk buy-outs, had reached about £40bn by the end of March 2012. It also states that almost 40% of s179 liabilities relate to pensioner members, which is the main focus for the longevity swaps and bulk buy-in market. According to the most recent analysis from Towers Watson, 'bulk annuity buy-ins alone could exceed £5bn in 2013'.³

Nevertheless, at present all de-risking deals completed to date represent only about 3% of DB liabilities. The market, therefore, is not even keeping pace with schemes' increasing liabilities, which means that it is not reducing the aggregate risk, but only serving to slow the rate of growth of these liabilities. Clearly, innovation and new players are required to expand the capacity and range of de-risking strategies and, importantly, to extend their availability to DB schemes of all sizes and profiles.

This report examines the most recent innovation in the de-risking market for pensioner sections – medically-underwritten (or enhanced) bulk buy-ins. It is published as news of the first completed cases were made available to us (in January 2013), details of which can be found in Section 3.

The strategic goal of employers and trustees with closed DB schemes is to wind-up the scheme through a full buy-out, usually starting with the pensioner section. For reasons we explain in Section 1, even where a scheme is ready to transact a buy-out, the first stage is typically a buy-in. As one of the case studies we examine demonstrates, a competitive price achieved through medical underwriting can enable trustees to proceed from buy-in to buy-out very rapidly

¹ The Purple Book is published jointly by the Pensions Regulator and the Pension Protection Fund (<http://www.thepensionsregulator.gov.uk/docs/purple-book-2012.pdf>). When an eligible DB scheme transfers into the PPF, the PPF generally pays a starting level of compensation of 100% of pensioners' benefits and 90% of benefits (subject to a compensation cap of £34,049 in 2012) for active and deferred members. Pension increases under the PPF are also capped. The 2012 Purple Book dataset covers 6,316 PPF-eligible DB schemes. This represents about 98% of the estimated total number of schemes and over 99% of estimated total liabilities.

² The s179 basis values the liabilities in the pension scheme at the PPF level of compensation.

³ <http://www.towerswatson.com/united-kingdom/press/8807>

– in this case within a matter of weeks. Therefore the development of new underwriting techniques for bulk purchase annuities (BPAs), together with the entry of new insurers that bring expertise from the thriving individual enhanced annuity market in relation to defined contribution (DC) schemes, brings increased potential to the de-risking market at a critical time.

As this report explains, an enhanced bulk buy-in is where the trustees buy a bulk annuity as an investment of the scheme, where some or all of the members covered by the policy are medically underwritten. Medical underwriting, which is now commonplace in the individual annuity market, has the potential to reduce the cost to the scheme of the annuity income match, compared with standard annuities, on the basis that certain members might have lower than average life expectancy.

For trustees and employers, medically-underwritten annuities can bring cost savings to a de-risking approach that offers an effective hedge against a range of risks, including interest rate, inflation, investment and longevity risks. This report examines the rationale for these strategies, the impact on residual liabilities and future de-risking exercises, and, more broadly, the potential impact on the de-risking market as a whole of the introduction of new pricing techniques and new players.

The Pensions Institute has a long tradition of high-quality research on longevity, mortality and morbidity issues. Drawing on these resources, the report evaluates the merits of medically underwritten de-risking exercises, the types of scheme likely to be targeted in 2013, the profile of schemes most likely to benefit, and the expertise and processes required for a successful transaction. Given the apparent potential of the enhanced bulk buy-in market, we also consider the need for consistent regulation across the trust-based and contract-based pensions markets, and we recommend the development of a code of practice by participants in conjunction with the government, the Pensions Regulator (tPR) and the new Financial Conduct Authority (FCA) and the Prudential Regulatory Authority (PRA), which replace the Financial Services Authority in April 2013. This will be of particular assistance to smaller employers and trustees – the present target market – and also to their advisers. The relevant advisory community often represents the smaller local and regional firms of actuarial consultants and independent financial advisers (IFAs), which might lack the expertise necessary to engage with this complex and rapidly evolving corporate finance market. Such a regulatory regime and code would help to ensure that the market reaches its full potential and at the same time protects the interests of trustees, sponsoring employers and scheme members, as well as participating financial institutions and advisers.

We would like to thank the many organisations that helped with this research in terms of access to documentation, permission to publish extracts from reports, and, in particular, participation in the extensive series of interviews that informed our analysis of current and expected future market practice. The organisations that were happy to be named are listed in the acknowledgements. Where we quote from a published report, the relevant organisation is credited. Where we quote from interviews, the comments are anonymised. This technique, pioneered by the Pensions Institute for its practitioner reports, enables us to express the views of actual and potential market stakeholders more candidly and more fully than might otherwise be the case.

The research was generously sponsored by Partnership Assurance and JLT Pension Capital Strategies. These organisations did not seek to influence the authors in any way. The views expressed here are those of the authors not the Pensions Institute, which takes no policy positions.

Debbie Harrison and David Blake

The Pensions Institute, Cass Business School, City University London

February 2013

Executive Summary

- 1. Impact on pricing:** Details of the first completed bulk purchase annuities (BPAs) that applied medical underwriting techniques emerged in January 2013. These and other case studies in this report demonstrate that with judicious medical underwriting an enhanced BPA can offer schemes savings of about 10% – much more in certain cases – relative to the cost of conventional underwriting. The differential is dependent on the number of members who qualify for enhancements – in particular the number of members with the larger liabilities – and the degree of their life-shortening conditions.
- 2. Impact on scheme security:** The strategy brings a new morbidity/mortality pricing technique to the bulk buy-in market, which already offers an effective hedge against a range of risks, such as those relating to interest rates, inflation, investment and longevity. Members see no change in their pension payments, but in certain cases – for example where the employer covenant is weak – they should benefit from an improvement in scheme security, due to the addition of the insurance company's covenant. This covenant is supported by the regulation of solvency and capital adequacy, and is backed by a compensation system.
- 3. Impact on the bulk purchase annuity market:** The combination of new players from the DC enhanced annuity market, together with the existing stalwarts of the DB BPA market, is expected to bring the line-up of enhanced underwriters to four at the beginning of 2013. It is possible that in 2013-14 some of the conventional insurers will develop their own medical underwriting services or strike up deals with specialists in order to remain competitive. This would represent a radical new trend in DB scheme de-risking, whereby the pricing of risk is much better quantified using sophisticated medical underwriting techniques.
- 4. Impact on full bulk buy-outs:** A bulk buy-in is an essential process in the transition to a bulk buy-out. It is likely to be the biggest investment decision trustees will make before arranging bulk buy-outs for the pensioner section and then for the remaining sections of the scheme, leading to scheme wind-up. Unlike other investments, the bulk buy-in – whether transacted on a standard or enhanced basis – is generally irreversible, so the counter-party risk must be considered very carefully. Moreover, the deal will shape the final bulk buy-out package, when annuities held as assets of the scheme are transferred to individual members. Accuracy of income-matching and pricing at the buy-in stage, therefore, is essential to the longer-term goals of trustees and corporate sponsors.
- 5. Potential size of enhanced bulk buy-in market:** The current focus for enhanced bulk buy-ins is smaller schemes with up to 400 pensioners. Taking a conservative view of the potential market, based on data in the Purple Book 2012, there are more than 5,000 schemes in this market, representing about 350,000 pensioners in aggregate and assets under management of about £40bn. This represents just over 10% of the assets under management (AUM) in relation to pensioner sections in the total market, indicating that if the enhanced bulk buy-in can be developed to cater for all sizes of pensioner sections, the market would represent AUM of about £380bn.

Towards a Consistent Regulatory Framework and Code of Practice

For reasons that are made clear in this report, there is a need for greater regulatory consistency in the market and a code of practice that enables it to develop safely and efficiently for schemes of all sizes.

1. Consistent regulation is required across the DB and annuity markets

An enhanced bulk purchase annuity (BPA) applies solutions developed for the DC market to DB schemes, which means that trustees and advisers need to be familiar with the dual regulatory system – tPR and the FSA – which becomes tripartite in April 2013, when the FSA is replaced with the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA). The Memorandum of Understanding between the FSA and tPR, agreed in 2005 and updated in 2007, precedes the development of the BPA market. We suggest that it should be updated urgently to address this oversight and the changes introduced by the move to separate conduct and prudential regulators for financial services.

2. A code of practice and stakeholder guidance are required, agreed between the government, the regulators and stakeholders in the market, to safeguard the interests of trustees, employers and members.

We recommend that the code and guidance should consider the following issues:

- a. **Accurate data:** At the macro level, the research for this report indicates that different sources of de-risking transaction market data are inconsistent with each other. tPR reports with a lag on de-risking activity through the Purple Book, while market participants – insurers, and in particular consultants – publish reports periodically that present quite different figures on the number and size of transactions. An orderly market requires clear and consistent data. At the micro-level, equally essential to the success of the market is the insurer's access to members' medical data, which in turn requires member cooperation and motivation. Enhanced underwriting techniques have only been available to DB schemes for about 12 months, yet already there are three different approaches evident. We suggest that competing insurers agree a fair and effective way to collaborate and to share both quantitative and qualitative information about the market. This might also enable participants to identify emerging problems before they become a regulatory issue.
- b. **Flexibility in member data collection processes:** Some insurers medically underwrite all lives in the pensioner cohort; others focus on those members for whom the liabilities are most concentrated. Some insurers collect member data via a short questionnaire, general practitioner (GP) reports, or a combination of these two processes. At least one insurer uses telephone interviews as its sole process. All of these methods appear to have their merits, but for a competitive market to develop, trustees need insurers to be flexible, so that they can select the best data collection method for the scheme profile without being forced to pre-select an insurer that uses only one specific underwriting and data-collection process.

- c. Trustee disclosure: At present trustees, knowingly or unwittingly, might not disclose to insurers facts material to the underwriting process, particularly where current or previous de-risking exercises have involved medical underwriting on a bulk or individual member basis. The result of this lack of full disclosure could lead to legal disputes, with insurers suing trustees for damages. At present the onus appears to rest with insurers to ask trustees the right questions. A common disclosure process would eliminate concerns about anti-selection issues.
- d. Standard procedures on the death of an annuitant: An important issue for insurers is the procedure trustees adopt on the death of a member, for whom they have arranged an annuity as part of a bulk arrangement held as a scheme asset. This is especially important if the scheme that holds annuities as assets enters the PPF. An ABI and NAPF report published in September 2011, 'Bulk Insured Pensions: A Good Practice Guide'⁴ said 'the trustees may want to ensure that the bulk buy-in policy caters for the possibility of the scheme entering a PPF assessment period'. We endorse this approach and suggest that it be made standard practice.
- e. Expertise of trustees, employers, and smaller firms of advisers: Evidence from tPR indicates that trustee knowledge and understanding can be poor among smaller schemes. Trustees, naturally, would seek independent and impartial advice concerning any proposed enhanced bulk buy-in, but it is essential that they understand the potential liabilities they face if the insured benefits purchased are insufficient to meet the scheme benefits payable, particularly as they move from bulk buy-in to a buy-out. They should also check how these transactions are covered in their trustee liability insurance.

We further recommend that the regulators incorporate guidance to trustees and employers on their websites about the BPA market as a whole and about medical underwriting, its opportunities and also its risks.

Guidance is also needed for advisers to smaller schemes, as frequently this service is provided by regional or local firms of IFAs and actuarial consultants, which might lack expertise in what is a new, complex and rapidly developing market.

⁴ <http://www.abi.org.uk/Publications/58274.pdf>

Section 1: Enhanced Bulk Buy-Ins in Context

1.1 The relationship between a bulk buy-in and a bulk buy-out

A bulk buy-in is generally considered to be a pre-requisite for a buy-out. In some cases, the buy-in might be treated as a long-term asset of the scheme, but in others, it might be the intention from the outset to arrange a bulk buy-out, as in the case study presented at the start of Section 3. In the latter case, we understand the scheme and provider might describe the transaction as a buy-out.

A bulk buy-in is an asset of the scheme, purchased to hedge pensioners' income streams in relation to interest rate, inflation and longevity risks. Buy-out pricing demands absolute precision in this match on an individual basis, since the transaction results in the assignment to each pensioner of an individual annuity that is underwritten solely by the insurer (i.e., the trustees have discharged all liability for these individuals, who are no longer scheme members). To ensure this precise match, insurers told us that there needs to be a period of time – created by the buy-in phase – when the insurer and trustees consolidate the data and ensure absolute accuracy. The consolidation process might take just a few weeks, where a small number of pensioners are involved; in large transactions it could take several months or even a year.

1.2 The conventional defined benefit de-risking market

The BPA market has been around for several decades, but until 2006 it was dominated by two insurance companies: Legal & General and Prudential. Of the new players that entered in or after 2006, Synesis pulled out in 2008 and Lucida closed to new business in June 2012.⁵ Probably the biggest surprise came in 2011, when Paternoster – the company which started the new market – was bought by Goldman Sachs. It now operates as a sister company to Rothesay Life.

Despite these upheavals, de-risking business has been brisk over the past three to four years with the market commentators reporting a significant increase in the size of BPA and longevity swap deals.⁶ According to Lane Clark and Peacock's (LCP's) April 2012 report on BPA and longevity swap deals,⁷ record levels of activity in 2011 brought total market volumes to £40bn since 2006, with £12.3bn worth of business transacted during 2011 alone; a 50% year-on-year increase. LCP said:

This influx of new business to insurers means that over 500,000 DB members now benefit from the protections of an insurance policy – either through a buy-in policy held by the scheme trustees or a buy-out policy in the member's own name – with numbers increasing by about 100,000 a year.

⁵ At the time of writing, it was in the process of selling its back book to another provider.

⁶ See, for example, <http://www.towerswatson.com/assets/pdf/6871/TW-EU-2012-25152-Risk-Transfer-Report.pdf>, http://www.lcp.uk.com/media/522776/lcp_pensioner_buy-in_for_smaller_transactions.pdf, <http://www.aon.com/unitedkingdom/mid-market/mid-market-survey.jsp>, http://www.metlife.co.uk/mal/documents/1_News_PRBI_2012.pdf

⁷ <http://www.lcp.uk.com/news--publications/publications-and-research/2012/lcp-pension-buy-ins-buy-outs-and-longevity-swaps-2012/?alttemplate=downloadRegistration>

Meanwhile, Towers Watson expects the buy-in market alone to be worth in excess of £5bn in 2013.

Yet the market remains small relative to aggregate scheme liabilities: to date de-risking transactions account for about 3% of total liabilities (i.e., £40bn out of a total of £1340.5bn) and just short of 10% of pensioner liabilities (£380bn). Without innovation in pricing it seems unlikely that the market would be able to match the potential appetite of trustees and employers.

The attractions of the conventional bulk buy-in can be summarised as follows:⁸

1. The bulk buy-in represents an important step towards a bulk buy-out, which might take place within weeks of the buy-in (where the buy-out is the ultimate objective from the outset). It might also represent a long-term asset of the scheme.
2. It hedges interest-rate, inflation, investment and longevity risk for the liabilities covered.
3. It has no material profit and loss (P&L) impact for the sponsoring company under international accounting standards.
4. Annuities are long-term insurance contracts. The FSA (FCA and PRA from April 2013) regulates insurance companies and requires them to demonstrate their solvency and capital adequacy on an annual basis. This confers a high level of security for the scheme's counter-party (annuity provider) risk.
5. Back-up from the sponsoring employer remains as an additional member protection. Moreover, insurance companies tend to de-risk their own balance sheets through reinsurance companies, which buy longevity risk from insurance companies and investment banks operating in the longevity risk transfer market. If reinsurance is in place, the insurance company remains fully liable to meet the terms of the contract with the trustees, even if a reinsurance company it used subsequently defaults.
6. In the event of an insurance company defaulting, the Financial Services Compensation Scheme (FSCS) pays 90% of the annuity income with no upper limit.⁹ The FSCS covers all business conducted by firms authorised by the FSA (FCA/PRA), including BPAs. It is funded by levies on authorised firms.¹⁰
7. All scheme members are treated equitably, both on an ongoing basis and on wind-up. For example, the payments under a bulk buy-in can be restructured to comply with the statutory priority order, if required, which is a key trustee concern.
8. Administration usually is retained by the trustees, so members see no change in the way their pensions are paid.

⁸ This list is partly drawn from LCP's 'Pensioner buy-in for smaller transactions', March 2012 (http://www.lcp.uk.com/media/522776/lcp_pensioner_buy-in_for_smaller_transactions.pdf)

⁹ <http://www.pensionsadvisoryservice.org.uk/security-of-pensions/financial-services-compensation-scheme>

¹⁰ <http://www.fscs.org.uk/industry/funding/>

9. A pensioner bulk buy-in currently costs 0% to 5% above the typical funding reserve for pensioners (although depending on the relative strength of the assumptions underlying the funding reserve, it can be outside of this range).

10. Typically funding strains are very modest, which means that additional company contributions may not be required, even where there is a deficit.

1.3 Medical underwriting: a natural progression

The introduction of medical underwriting in the bulk buy-in market represents a natural progression or refinement of a trend already well-established in the BPA market. It used to be the case that a conventional BPA did not take pensioners' health and socio-demographic status into account, but today the underwriter considers the industry sector and also a range of data from the trustees which can provide a reasonable indication of members' expected longevity. Standard scheme data that would be available to all insurers include age, sex, size of pension, and postcode.

It is possible that the scheme's mortality assumptions do not reflect the true socio-economic profile of the pensioners. An example might be where the employer is in the manufacturing sector, where the impact of a lifetime in manual work is known to affect longevity. B&CE, until recently best known for its industry-wide DC scheme for the building and construction sector, states that about 60% of these members qualify for an enhancement and also that early retirement due to ill-health is very common.

While postcode underwriting helps to identify the member's socio-economic status, interviewees said that it can be a blunt tool. Moreover, recent research suggests that it is the size of pension, rather than the occupation that is the more accurate indicator of mortality. In May 2012, Mercer announced¹¹ that it was advising smaller pension schemes to review their mortality data in the light of new figures published by Continuous Mortality Investigation (CMI),¹² a research group of the Actuarial Profession. The CMI's research highlighted the wide variation of mortality experience among members of different pension schemes in the UK. Mercer observed:

The research [from the CMI] shows a wide fluctuation in mortality rates both between industry sectors and within each industry sector. For example, overall mortality rates in the financial sector are around 20% less than the rates calculated by schemes in basic industries, such as mining and paper. However, within the financial sector, members receiving pensions of less than £1,500 a year were almost twice as likely to die earlier than pensioners receiving over £25,000 each year. The data suggests that working in the same industry could be less relevant to life expectancy than the level of pension received, which itself is likely to be just a proxy for the socio-economic group an individual belongs to.

¹¹ <http://uk.mercer.com/press-releases/Mortality-assumptions-for-small-pension-schemes-need-review>

¹² <http://www.actuaries.org.uk/research-and-resources/pages/continuous-mortality-investigation-latest-publications>

However, pension size, while useful, might also be misleading. Given modern working patterns, a small pension might indeed indicate a low standard of living and, hence, possibly lower life expectancy, but the member might also have several other company pensions and sources of private retirement income.

Medical underwriting was introduced in the individual annuity market in the UK in the mid-1990s and is now an established technique. In 2011 enhanced individual annuity sales rose to more than £3bn, an increase of 22% over 2010, according to Towers Watson.¹³ This trend is expected to continue.

Enhanced annuities are based on medical underwriting techniques that take account of the individual's lifestyle and health. Where these factors indicate a lower than average lifespan, the price of the annuity, in respect of an individual life in a bulk buy-in, might be 10-40% lower than the price of a standard annuity where there is no medical underwriting and which, therefore, reflects 'average' health.

2012 saw the first enhanced buy-ins in the process of being placed and the details of what we understand are the first completed deals were provided to us in January 2013 (See 3.1). For the BPA market as a whole, the line-up at the beginning of 2013 looks like this:

- Aviva: Targets schemes up to £50m with no minimum. Main focus is pensioners, but will accept deferreds. Thought to be able to offer medical underwriting for individual pensioners.
- Just Retirement: Enhanced specialist from the DC market targeting pensioner sections of up to c. 400; entered the market formally in late 2012.
- Legal & General: No stated minimum; targets pensioners and deferreds; offers enhanced annuities for selected lives via its Large Individual Defined Benefit Annuity (LIDBA) service.
- MetLife: Minimum £2-5m. Main focus is pensioners, but will accept deferreds. Currently no medical underwriting capabilities.
- Partnership: Enhanced specialist from the DC market targeting pensioner sections of c. 10-400; entered market formally in early 2012.
- Pensions Insurance Corporation (PIC): Minimum c. £10m; main focus is pensioners, but will accept actives and deferreds. Currently no medical underwriting capabilities
- Prudential: Large schemes only (possibly minimum of c. £100m). Pensioners only. Currently no medical underwriting capabilities.
- Rothesay Life: Large schemes only (possibly a minimum of c. £100m). Pensioners and deferreds accepted. Currently no medical underwriting capabilities.
- Potential new entrants: In addition to the insurers noted above, there are others who do not want to be identified that we understand are considering entry to the bulk buy-in market.

¹³ <http://www.towerswatson.com/united-kingdom/press/6451>

Interest on the part of insurers in medical underwriting has been matched by a corresponding interest on the part of consultants. Several of the national firms have formally extended their BPA services to incorporate enhanced underwriting techniques. We are aware of specialist services offered, for example, by Barnett Waddingham, Hymans Robertson, JLT, and LCP, but we understand that most consultants with recognised capabilities in the BPA market offer the ability to broker a medically-underwritten BPA.

Typically, 'streamlined' enhanced consultancy services are based on arrangements with one or more insurance companies, which agree to provide pre-negotiated and potentially enhanced contracts, streamlined quotations, and, in some cases, a fixed fee that includes legal advice from a recognised law firm. Consultants say that pre-negotiated contracts with insurers provide immediate access to an enhanced contract (that is, compared to insurers' standard terms) and that this avoids the potentially lengthy and costly negotiations required to secure similar terms in the open market, which can slow down the process and, with volatile markets, risk the deal failing due to bad market timing. This type of service is likely to guarantee trustee confidentiality in relation to any medical data that is obtained from members: the confidentiality clause is protected through the consultant's non-disclosure agreements with insurers, so that only the insurance company has access to the data.

One of the biggest concerns for trustees and employers is the risk that a transaction fails, which leaves the scheme – and, directly or indirectly, the employer – out of pocket. According to LCP¹⁴, across the market as a whole, fewer than 20% of bulk buy-in quotations lead to a completed transaction. Market timing is a key issue for all de-risking transactions, but might be particularly so for medically underwritten BPAs due to the time it might take to secure information from individual members about their health and lifestyle.

1.4 Why smaller schemes?

Consultants, insurance companies and independent trustees, among others, differ in their views of the optimal scheme size for an enhanced bulk buy-in, but the general consensus at the time of writing was that the strategy is suitable for schemes with a maximum of about 400. The explanation for the upper limit is not based on actuarial calculations, but is the result of a trade-off between a range of factors including feasibility, trustee knowledge of the retired membership, 'random variation risk', covenant risk-hedging, and economies of scale.

We were informed that the evidence so far indicates that member response rates to the request for medical information are closest to 100% for schemes with fewer than 400 pensioners. In other words, the medical underwriting exercise is not – at present – considered feasible in schemes with larger pensioner sections. Since the market is so new, the evidence is limited, but we expect to see more robust quantitative data emerge over the next year or so, as completed cases become available for closer scrutiny.

¹⁴ Pensioner buy-in for smaller transactions http://www.lcp.uk.com/media/522776/lcp_pensioner_buy-in_for_smaller_transactions.pdf

Of the reasons cited for the current upper limit in the size of the pensioner cohort, trustee knowledge, is considered the most important qualitative factor. This is because in a small scheme, the trustees might have a good understanding of the liability profile of the pensioner section under consideration, since they are likely to know many of the pensioners personally, and vice versa. Such relationships can be particularly helpful if the trustees are to persuade members to provide medical information. Moreover, consultants and providers say they prefer to deal with comparatively small tranches of pensioners since it is easier – in terms of time and resources – to make contact with individual members to secure the medical information required for accurate quotation purposes.

In addition, a small scheme will experience substantial random variation risk, which means that deaths are much more difficult to predict. By contrast, in big schemes, the law of large numbers serves to make death rates more predictable and so, in theory, reduces the potential benefits from medical underwriting.

A point we found very persuasive in this debate is the way in which a BPA can improve scheme security for certain smaller schemes (where these represent the legacy schemes of smaller employers, as opposed to the legacy schemes of large corporates acquired through M&A activity). In some cases, smaller employers have comparatively weak covenants, as might be the case, for example, where liabilities are significant relative to the company balance sheet and where the employer is in a declining industry, such as traditional manufacturing, particularly where the company has a single line of business. In this case, the addition of the insurance company covenant can strengthen the overall long-term security of the scheme, which benefits all parties including the members. As one interviewee put it, 'for schemes in this situation, sharing covenant risk is a no-brainer'. We stress, however, that this point only applies to weaker employer covenants – for many smaller employers, the scheme liabilities are modest relative to the balance sheet and the funding levels are comparatively robust.

Large corporates with well-diversified businesses might have a very strong covenant, in which case diversification across covenants is unlikely to be an objective. However, trustees might consider whether the insurance company's 'covenant hedge' is valuable for specific reasons – for example, where the insurer covenant hedges economic risks, due to its UK or global business model and its reinsurance arrangements, to which the employer itself is vulnerable.

Last, but not least on this point, there is the issue of economies of scale, i.e., the cost of running a pension scheme for smaller companies can represent a very inefficient use of resources. We suggest, however, that other factors might also come into play during this early stage in the market's development. For example, the preference for smaller schemes might be due in part to the business models of insurance companies new to this market segment. Although they might have significant expertise in medical underwriting, their balance sheets might be relatively small which could limit their capacity for taking on large schemes, even where they reinsure most or all of the longevity risk, as is common practice.

A further factor is the close alignment between the trustee's and corporate sponsor's objectives in smaller schemes. For reasons that are not fully understood, schemes with fewer than 100 members – the smallest tPR category used in the Purple Book – tend to be better funded on a s179 valuation basis than larger schemes (92% funded in schemes with fewer than 100 members,

compared with 80% for the 100-999 category and 78% for the 1000-9999 category)¹⁵. This might be because smaller schemes may have taken less investment risk than larger schemes, which means that they might not have suffered as badly from the collapse in equity markets, and, moreover, might have benefitted from the rally in gilt values associated with quantitative easing (QE). Furthermore, given the size of these schemes, the sponsors might have been able to fund any deficit that has arisen more quickly than their larger counterparts and be in a position to make good any deficit over shorter time horizons.

Although the initial interest has been in the small schemes of small employers, in theory the market could extend to cover small-scale transactions involving larger employers. Larger schemes might consider enhanced bulk buy-ins where they decide to de-risk in a series of transactions that involve cohorts of pensioners rather than the entire pensioner section. The reason for this might be the preference to stagger the funding, but it might also be because the trustees and their consultant feel that the phased approach mitigates the risks associated with market timing. The main drawback of this approach is that multiple transactions might increase the overall cost of de-risking, while there is a risk that the method of determining the membership covered by each transaction might give rise to the perception of anti-selection risk by insurers.

Alternatively, where the bulk buy-in relates to a large pensioner section, the consultant might suggest that only a small number of lives are medically underwritten (this appears to be the approach of one of the insurers in the market). In many cases, the retired company directors and executives appear to account for a disproportionately large share of liabilities. Several interviewees referred to the 'Pareto principle' or '80-20 rule', where 80% of the liabilities relate to 20% of the lives. We are not aware of any statistical evidence confirming this principle in the context of the medical underwriting of pension liabilities, but nevertheless the high-liability cohort might be the focus of medical underwriting in a larger scheme, especially if some of the directors are known to be in poor health. Under this scenario, the remaining members might be underwritten on a standard basis, but this would need to be by the same insurer, since otherwise anti-selection issues would come into play.

In the light of the above, while we believe that enhanced underwriting might be applicable to all schemes in future – depending on whether they seek medical underwriting for every pensioner or just the high-liability members – in this report we concentrate on smaller schemes, rather than smaller transactions, since this is the most likely focus of market interest in the short-term. Having said that, in the tables below, we also indicate the full potential of the enhanced de-risking market on the assumption that in due course consultants and insurers will be able to develop medical underwriting services and processes that can be applied to larger schemes.

A further factor to consider is that small 'scheme' is not necessarily synonymous with small employer. The primary market at present is the schemes of smaller companies, where this is their main or only DB arrangement. This market relates to the first two categories of schemes for data purposes in the 2012 Purple Book: those with fewer than 100 members and those with fewer than 1000 members. However, a second market might be located in larger corporates, many of

¹⁵ Based on data in the first table on p. 99 of the Purple Book 2012.

which have small legacy schemes due to M&A activities. For these schemes, in many respects the underwriting approach is the same as for the main category described above. However, it might be the case that the corporate sponsor is particularly keen to de-risk legacy schemes, while consultants and insurers can reasonably expect a higher level of sophistication in the main trustee board, which might already be more familiar with, and open to, de-risking propositions.

1.5 How many smaller schemes are there?

As mentioned above, tPR categorises schemes according to total membership (5-99, 100-999, etc),¹⁶ but it also provides a breakdown of membership categories that includes the number of pensioners. To estimate the number of schemes with up to 400 pensioners, we first considered the relative proportions of active/deferred members and pensioners. The average is 65% and 35% respectively, but there can be wide variations: for some schemes, the percentage of pensioners is at least 45%.

We understand that this variation is due to a range of factors. For example, the scheme-specific ratio is likely to reflect the date on which the scheme was established and when it was closed (assuming it is closed – a small minority are still open). Most DB schemes among smaller companies were established in the late-1970s and early-1980s, following the government's introduction of attractive terms for contracting out of the State Earnings Related Pension Scheme (SERPS) in 1978, which offered significant national insurance (NI) contribution reductions for employees and employers. This triggered a major push on the part of advisers and consultants to promote DB to smaller employers that previously had considered this option too expensive and too complicated.

DB funding problems first emerged formally at the turn of the present century. These were triggered by a range of factors, including the end of the equity bull market, the introduction of new and significantly less favourable mortality assumptions, and changes in accounting rules that put scheme deficits on the corporate balance sheet, which meant that the deficit affected corporate actions, such as raising finance and engaging in M&A activity. Smaller schemes were among the first to close to new members and future accrual – often in a single step. Large employers with a high public profile hesitated to take the single-step route due to concerns over negative publicity and also because of potential trade union problems, which became a major issue. When large companies did announce closure (Iceland and Ernst & Young were among the first), this was delivered in two stages: initially to new members and then, usually about five years later, to all future accrual.

So, a typical smaller scheme might have opened in 1980 and closed in 2000, which means that memberships might have lasted for up to 20 years. By 2012, this scheme would have been closed for 12 years, so the membership is likely to be mature, with the pensioner section representing about 40-50% of the total. This example merely serves to illustrate the diversity of scheme profiles. Practitioners examining the target market will have more detailed analysis at their disposal, based on client-specific data.

¹⁶ Although there are schemes with fewer than five members, the Purple Book states 'results indicating five or less schemes have been suppressed to preserve confidentiality'.

Using tPR's average ratio, we base our estimate of market size on tPR's first two categories: 5-99 and 100-999. Tables 1 and 2 below are based on data in the Purple Book 2012. It is important to note that the percentage of pensions in relation to total membership (pensioners, actives and deferreds) is about 35%, but tPR states that they represent 39% of liabilities in aggregate. Consultants to whom we spoke argued that pensioners would have a similar sized claim on scheme assets. Moreover, deferred members' liabilities are likely to be lower due to the fact that their pension rights are not payable until a future date, so the present value of deferred liabilities tends to be less than pensioner liabilities. It is also worth noting that the s179 measure of liabilities allows for the fact that deferred pensioners are 'expensive' relative to the technical provisions measure of liability, so this will work in the opposite direction to the impact above, reducing the proportion of the liabilities represented by pensioners.

Table 1: DB scheme total members vs pensioner sections

Members	No. schemes	Pensioners	Total members	% Pensioners
5-99	2,260	34,275	99,289	34%
100-999	2,829	319,582	993,861	32%
Sub-total	5,089	353,857	1,099,300	32%
All schemes	6,198	4,359,458	11,732,760	37%

Source: Purple Book 2012, Appendix 3

In Table 2 we assume, for the sake of simplicity, that pensioners also represent 39% of assets under management (AUM).

Table 2: DB scheme total assets under management vs pensioner section

Members	Total members (£bn)	Pensioners (£bn)*
5-99	11.6	4.5
100-999	89.6	35
Sub-total	101.2	39.5
All schemes	10,268	379.9

*Based on the assumption that the pensioner section represents 39% of s179 liabilities and AUM. Note: the s179 liabilities will be higher than the AUM for schemes in deficit.

Source: Purple Book 2012, Appendix 4

To summarise this analysis, the initial target market for enhanced bulk buy-ins in 2013-15 is likely to comprise:

- 5,089 schemes
- 353,857 pensioners
- £39.5bn AUM for these pensioners

1.6 PIE exercises: Simplifying DB benefits for annuity pricing

Most annuities sold in the DC market are comparatively simple products compared with DB benefits. For example, indexation (a feature rarely selected by individual annuitants, due to the cost) is either a fixed rate or linked to the retail price index (RPI). By contrast, DB benefits can be very complicated to match with precision. Rules on widow/widower's benefits, on pension splitting on divorce, and on guaranteed minimum pension (GMP) and non-GMP rights can be convoluted. But probably the most difficult matching exercise is in relation to indexation, which is complex due to changing legislation and to scheme-specific funding arrangements, which may have changed over time (and here we should bear in mind that different sets of rules will apply to different sets of pensioners, depending on when they joined). A significant number of schemes have elected to put in place greater levels of indexation increase than is required by legislation, and these are often more complex and therefore costly or difficult to insure (such as Limited Price Indexation (LPI) with a minimum increase of 3% and a maximum increase of 5%, or fixed 5% increases), since they cannot be efficiently hedged

This problem has given rise to the Pension Income Exchange (PIE) exercises that, starting in 2009, are being used as a pre-buy-in exercise. A PIE is where pensioner members agree to exchange their non-statutory pension increases for a higher immediate income that is not inflation-linked. In a PIE exercise, non-statutory pension increases, such as LPI, where the increase can vary between a minimum 3% and a maximum of 5%, the variable indexation rights are eliminated. Where PIEs are transacted ahead of a more extensive de-risking exercise, they can lower the cost of a bulk buy-in and the eventual bulk buy-out. Under such transactions, the member must receive impartial advice.

It is important to note that PIE exercises do not affect the member's rights apart from in relation to the shape of future indexation. For this reason, PIEs are regarded as quite separate from total pension increase exchange (TPIE) exercises.¹⁷ TPIE exercises (also known as Flexibility at Retirement (FaR) and Flexible Retirement Option (FRO)) give non-pensioner members (those over age 55 but below scheme pension age) the option to take an early retirement pension, usually involving a transfer from the scheme of the value of their pension to secure an immediate annuity in the shape and form that the member desires. PIE exercises should also be distinguished from enhanced transfer values (ETVs), where the member is offered a financial incentive to transfer out of the scheme. ETVs have become very common, particularly since 2008, but

¹⁷ See, for example, <http://www.kpmg.com/UK/en/services/Tax/Pensions/Documents/managing-pension-liabilities-market-update.pdf>, <http://www.buckconsultants.com/Portals/0/uk/publications/white-papers/IT-Pension-Increase-Exchange-uk.pdf>

the government and regulators' concern about the potential mis-use of this transaction led to the formation of a government-led working group which in June 2012 published a voluntary code of practice for all incentive exercises.¹⁸

Finally, it is worth noting that any exercises that involve a transfer out of the scheme on the part of members in poor health can affect conventional insurers' willingness to quote for bulk buy-ins and buy-outs, for anti-selection reasons. However, we understand that where an insurer medically underwrites all pensioners in a cohort this is not an issue, since the quotation would reflect member-specific health conditions and would therefore identify a cohort that had above-average good health and quote accordingly. If the market develops so that all insurers use medical underwriting – as this report suggests is likely – then there should be no concerns about anti-selection.

1.7 How the enhanced bulk buy-in works

A common misunderstanding about enhanced bulk buy-ins is that insurers 'cherry-pick', removing the unhealthy lives and leaving behind pensioners with above-average longevity. Were this to be the case, such an exercise would render it virtually impossible for the trustees to secure any further bulk buy-in or bulk buy-out quotations on reasonable terms for the remaining healthy pensioners.

In practice, under an enhanced bulk buy-in, the insurer provides an annuity covering the full designated tranche of pensioners (both healthy and impaired lives). Depending on the insurance company's model, an attempt will be made to medically underwrite either all of the lives or only some. Under the second model the insurer usually medically underwrites the members with the largest pensions. (In very small schemes, for example, we understand that a retired chief executive might account for up to 50% of the liabilities.) The process for the second model, therefore, is to examine the liability profile of the pensioner section, to medically underwrite the high-liability cases, and to write annuities for the remaining members on a standard or average mortality basis. The cases selected for medical underwriting would be processed first because these would take longer than the standard underwriting for the remaining pensioners. In these transactions, the insurer would submit a single price after completion of underwriting covering both the medically underwritten and non-underwritten members.

The actual scheme saving, relative to a conventional bulk buy-in, will depend on the extent of the medical data members are willing to disclose and the resulting ratio of healthy to unhealthy lives across the entire membership or the high-liability cohort. We understand that in some cases there might be no saving at all from the enhanced route because members as a whole – or the high-liability members where these are the only pensioners medically underwritten – might be in average or above-average good health.

¹⁸ <http://www.incentiveexercises.org.uk>

In summary, the process involved in an enhanced bulk buy-in is similar to the conventional transaction, but with the added complexity of securing and evaluating the medical data.

The evaluation and quotation process

An enhanced underwriting process, where high-liability lives are selected for medical underwriting, can be described as follows.

1. The trustees provide the consultant with the available member data: age, sex, postcode, level of pension, etc. The initial evaluation identifies the cohort of members that represent the bulk of liabilities.
2. Note that if a PIE or TPIE is undertaken, this will take at least three months from start to finish and the buy-in could not take place until these exercises are completed.
3. Initial consideration is given to the expected impact of de-risking on the residual scheme liabilities and on future de-risking exercises. In practice, the consultant can only give an estimate of the potential range of impacts of impairments on this population (i.e., if all lives are healthy, if there is a moderate incidence of impairment, and if there are high levels of incidence and severity of impairment). Generally, the model that is developing provides high-level information to the insurer which produces illustrations of how the impact of underwriting might affect the overall buy-in premium.
4. It is also worth noting that at present two of the insurers in the enhanced market issue 'short form' initial underwriting requests (one or two sides of A4 paper with simple tick-box questions and a request to the member to provide contact details for their doctor). Short form underwriting helps the insurers determine which of the members who returned the forms require further underwriting via information from the doctor or a detailed conversation directly with the member.
5. The trustees grant permission to enable the insurance company/companies to contact the members and/or request a general practitioner's report.
6. The consultant approaches the market for indicative quotes.
7. The medical underwriting takes place directly between the insurer and the members, so that the information remains confidential.
8. The insurance companies invited to the auction provide guaranteed quotes.
9. The trustees conduct a due diligence exercise (with the help of a separate insurance company analyst) to assess the financial strength, business model, and commitment to the market, among other features, of the insurer that has offered the best (and possibly second best) quotation. This will take into account any reinsurance arrangements – an important issue since, in effect, this is where the 'liability buck' stops.

10. A post-deal review considers the actual impact of the bulk buy-in on the residual scheme liabilities; the need, if any, for changes in investment strategy; and the revised process towards a full bulk buy-out.¹⁹

Obtaining medical information

The success of the enhanced buy-in relies on the cooperation of the scheme members in order to secure the medical information. It is important to appreciate that there is no immediate personal benefit to the scheme member if it is discovered that they have a life-shortening condition. In the individual annuity market associated with DC schemes, medical underwriting delivers a direct benefit to the annuitant in the form of a bigger income. By contrast, in an enhanced bulk buy-in, any differential between the standard and enhanced rate benefits the scheme through a price reduction within the overall bulk annuity premium; the member's income from the scheme remains exactly the same. Arguably, there is an indirect benefit to members in terms of increased security across the whole pension scheme, both in terms of a reduction in funding risk due to holding a perfectly matched asset, and also in terms of those schemes that benefit from a substantial price improvement through the underwriting process, which might expect to improve the funding level of the scheme post-transaction.

Medical underwriting requires access to details about individual members' state of health, so the trustees need to give permission for the insurer to contact the members. Typically the process is for the trustees to send a letter to the members explaining their plans and objectives (i.e., to enter a buy-in and by doing this to increase the security of the pension scheme) and to explain that if members complete the form/respond to the phone questionnaire, and provide their GPs' details, where applicable, this will assist in the process. The form is not returned to the trustees, but to the insurer(s).

As will be evident from the descriptions below, the three procedures currently used for obtaining member information are quite different, although we understand that some insurers offer flexibility, so that consultants and trustees can select the method most likely to succeed in relation to the membership profile. A flexible approach is more likely to facilitate competitive bidding, otherwise consultants and trustees might feel obliged to select just one enhanced provider at a relatively early stage. This is because members cannot be expected to provide health and lifestyle information to more than one insurer via potentially different means.

The general practitioner's report

This method is used where the insurer focuses on the high-liability pensioners, but it is also used in conjunction with the short questionnaire (see below), where the insurer needs further evidence, for example, where more complex and/or serious medical conditions are identified through the initial screening questions. Where a GP report is required, the trustees ask the selected members to sign a consent form.

¹⁹ See Aon 2012 guide p 8. Note the availability of a 'sweep-up' mechanism to ensure deferred/active members are included as they reach retirement.

The phone interview

At present, we understand that this method is used only where the high-liability pensioners will be medically underwritten. Once the trustees have secured the members' permission, the insurance company's medically-trained interviewers contact members to arrange the phone interview. Proponents of the telephone interview argue that this is a much more effective way to obtain detailed and specific medical information in an environment that is comfortable for the member.

The short questionnaire

This method tends to be used where all the pensioners will be medically underwritten, but, as mentioned above, the insurer might follow up with a GP report in a minority of cases.

Under this model, once the member's permission is secured by the trustees, the members are sent a short questionnaire which generally requires yes/no answers. These answers are converted via algorithms to a rating system. Proponents of this method argue that it is a quick and effective way to get a high level of response. To complete the underwriting process, the insurance company might also ask certain members for permission to contact their GP. This might be in relation to the high-liability cohort and to questionnaire responses that indicate the member has a more complex medical condition.

A short questionnaire might ask the following questions:

1. What is your height?
2. What is your weight?
3. Have you smoked 10 or more manufactured cigarettes per day for the past 10 years?
4. Have you smoked 3oz/85g or more of rolling tobacco per week for the past 10 years?
5. Have you been diagnosed with high blood pressure, requiring ongoing medication?
6. Have you had a heart attack requiring hospital admission?
7. Have you been diagnosed with diabetes requiring insulin or tablet treatment?
8. Have you suffered a stroke (CVA), excluding mini-strokes (TIAs)?
9. Have you been diagnosed with angina requiring ongoing medication?
10. Have you been diagnosed with cancer (excluding skin cancer and benign tumours) requiring surgery, chemotherapy or radiotherapy?

Section 2: The Interviews

Closed schemes are on a journey to a full buy-out. The buy-in can certainly help them get there and the enhanced buy-in might help them get there more quickly. But trustees need to be very careful. The expertise within the market in terms of consultancy skills and underwriting expertise is still evolving. **Independent trustee**

In this section, we explore the issues raised by consultants, insurance companies, reinsurance companies, and independent trustees. We focus in particular on the enhanced bulk buy-in, but we also address issues that concern the de-risking market as a whole.

2.1 The impact of medical underwriting techniques on the market

There was near-unanimous agreement on the positive impact medical underwriting would bring to the de-risking market:

The market needs to move from using average mortality assumptions to more refined processes. The use of enhanced underwriting techniques marks a watershed for the de-risking market. **Consultant**

In the DC market, the entry of enhanced providers really shook things up competition-wise and this was very welcome. The existing market had become complacent – there was an urgent need for new underwriting techniques and for greater competition. This is what I expect to happen in the DB buy-in market – in fact it's already having a positive effect. **Insurance company**

There were some initial reservations about the small number of enhanced players, so the entry of new providers and the adoption of medical underwriting by existing insurers were welcomed:

The last thing we want is a 'unique' proposition offered by just one insurance company. We need to know there is a competitive market, so we can judge pricing effectively. **Consultant**

With just one or two enhanced players, competition is weak and it's not an efficient market. With four or five, I'll be much happier. **Consultant**

Interviewees stressed that they wanted to see a market that included established players as well as newcomers:

This is a market authentication issue. If well-known major buy-in players develop medical underwriting techniques, then it makes the market more balanced and less 'new'. **Consultant**

Importantly, insurers urged consultants to treat the introduction of medical underwriting as an extension of existing rating opportunities, not as a separate type of bulk buy-in:

It should not be a case of having to choose medical underwriting versus non-medical

underwriting. Techniques used in standard buy-in underwriting already take account of geographical and social factors; full medical underwriting extends this process through the introduction of new and more precise rating factors. For this reason, we would expect consultants to include a range of enhanced and traditional insurers in the tender process. Insurance company

Indeed, the overwhelming view was that once medical underwriting was established it would become an essential feature that insurers would have to offer if they wanted to remain competitive:

The de-risking market is very young and will develop rapidly over the next few years. There is no doubt that once the conventional insurers see what the enhanced insurers are doing they will have to compete. Independent trustee

Insurers that don't offer medical underwriting have two choices: they can introduce this technique directly or they can do a deal with one of the specialists, so they can offer this service to trustees. Consultant

2.2 Anti-selection and trustee disclosure

Despite the generally positive response to enhanced bulk buy-ins, interviewees raised concerns about potential anti-selection issues. The first concern related to schemes:

The residual liabilities are the most important issue. Trustees must consider the unintended consequences of an enhanced buy-in. Independent trustee

If an enhanced deal doesn't go through because the pensioners are generally in above-average good health, this could result in future anti-selection problems. Insurers will ask about previous exercises and will be concerned if an enhanced buy-in exercise has failed. They will assume this is because the medical profile of the members – or at least the key members with the highest level of pensions – is healthier than average and they will quote a higher price accordingly. Consultant

As noted in the previous section, however, anti-selection concerns should disappear if all insurers offer medical underwriting, as this process would provide an accurate member-specific health profile. Moreover, one interviewee said that any increase in the trustees' understanding of scheme-specific mortality was to be welcomed:

If the outcome of the enhanced deal process resulted in evidence that mortality was expected to be light, due to pensioner members' above-average good health, then the trustees and their advisors arguably should reconsider their mortality assumptions for funding. The possible outcome here is that the trustees' view of pensioner liabilities will increase and become, to a degree, better aligned to where the insurance market has now priced this risk. Consultant

Another argument offered was that information about high-liability members' poor health might cause trustees to consider their longer-term goal, which is the full bulk buy-out:

Trustees need to consider if de-risking the pensioner section on an enhanced buy-in basis might affect the prospects of a full buy-out in future. If they discover that the key

members of the pensioner section are in poor health, they might be better positioned for a full buy-out if they retain these members in the scheme. In due course, full buy-outs might operate on a medical underwriting basis. It's a question of evaluating really carefully the immediate, medium-term, and long-term de-risking prospects. Consultant

The second anti-selection concern related to the conventional insurance company's response to being invited to take part in a tender process that included enhanced providers:

We expect insurers to ask if an enhanced provider is in on the bidding process. Conventional providers are worried about anti-selection because the enhanced provider has access to additional medical data. Consultant

The simple truth is that conventional underwriters are spooked by the presence of an enhanced provider in the auction. If a conventional provider wins over an enhanced provider, it will be very worried as the implication is that the key members are in above-average health. Consultant

Disclosure of 'material information' by trustees proved to be a major concern for insurance companies and there seemed to be some confusion over the trustees' responsibility on this point:

As an insurer, we expect potential buyers to disclose all material facts. The onus in a buy-in falls on trustees to disclose all information about the current and previous de-risking exercises. If trustees don't get this point, then they are in danger, because insurance companies will seek redress if it emerges that a previous transaction or the current bidding process might involve specialist underwriting techniques. We don't want to have to rely on asking the right questions – trustees should automatically disclose all relevant information. At present, this whole issue of disclosure is very subjective and that's worrying. Insurance company

In practice, at present the schemes that consultants and trustees are most likely to consider for medical underwriting are those where they expect to see heavier expected mortality than might be normally predicted by insurers writing conventional business. Historically, these schemes will have given rise to material 'experience profits' for insurers, as they would have been priced at a level reflecting 'average' mortality and as experience from year to year turns out to be heavier, the insurer would recognize additional profits over and above those that they had 'booked' when they wrote the business. In this respect, medical underwriting creates a more level playing field for trustees and insurers.

Beyond the concerns of the insurance companies, reinsurers also said they were also keeping a close eye on enhanced underwriting and the potential impact on the risks that they undertake:

Where we provide reinsurance for longevity risk in relation to a cohort of pensioners' lives, we need to know what previous de-risking exercises have taken place and whether these have incorporated medical underwriting. This includes TPIE exercises, as the trustees might have removed high-value pensioners in poor health from the scheme, which will affect the characteristics of the risk we are reinsuring. Disclosure of all previous de-risking exercises is crucial to a well-functioning market.

Reinsurance company

2.3 Obtaining medical data

All interviewees agreed that accurate member medical data are the prerequisite to an accurate enhanced bulk buy-in quotation. To obtain the data, the consultant and insurance company rely on the trustees to secure the members' permission, so that the insurance company can approach the member for information. We were told that the preliminary analysis is crucial:

The preliminary analysis of the membership and the identification of the members who represent the bulk of the liabilities are crucial. If the medical profile of these members is misjudged, the enhanced deal might fail. Insurance company

We were also told that consultants and insurers rely on trustees' discretion in providing personal details of retired scheme members:

It is often the case with smaller schemes that the trustees know the retired executives who account for most of the liabilities. Therefore they might be willing to provide a generic insight without breaking confidences. Consultant

In a smaller scheme, there might be useful data that in a larger scheme would be statistically insignificant. For example, if several directors and executives have taken early ill-health retirement, this could be a very positive indicator that medical underwriting is worth considering. Insurance company

The greatest challenge cited was the task of getting members to complete medical questionnaires or respond to a phone interview within the usual turn-around time, which we understand is eight to 10 weeks:

In the individual market, the annuitant is incentivized to provide as many details as possible because he or she benefits directly from the enhanced rate. In an enhanced buy-in, it's the scheme that benefits – there's nothing in it for the members, so motivating them to provide very personal details about their state of health and about their smoking habits, for example, is never going to be easy. Consultant

Members can get very worried if they are contacted about a de-risking exercise. They think it's being considered because there's a problem with the scheme. Insurance company

However, from what limited information is available at present, it seems that members are willing to disclose the medical details, provided they understand the purpose of the exercise:

It's important to remember that several enhanced insurers focus on the retired executives and directors. We find that retired senior managers quickly grasp the purpose of the de-risking exercise and appreciate that this is designed to further strengthen their scheme and, therefore, their frequently substantial pension rights. Insurance company

There is an upside for the member for completing the questionnaire. If a deal goes ahead because of a greater incidence of impairments, then the member's benefits should be more secure. Also, if impairments are very material, then the funding position of the scheme may improve, resulting in a reduced reliance on the sponsor's covenant. Consultant

It's a good idea to get on board one or two members with the largest pensions first. If we can find the right way to secure their cooperation, this sets the tone for communications to other members. Insurance company

There was marked disagreement over the best way to obtain information from members:

A simple questionnaire is the best way and can achieve a response rate of up to 90%. However, this does need to be supplemented with GP reports in the case of the minority of members whose questionnaire response indicates a more serious underlying medical condition, especially where these are high-liability members. Insurance company

Simplified questionnaires are too shallow and can only result in imperfect underwriting. Using trained medical experts to conduct phone interviews achieves a much more comprehensive medical profile for all the key members. Insurance company

While it is inevitable that insurers will disagree over their chosen methodology, interviewees stressed that it shouldn't be a case of either/or, but that insurers need to make different methods available, so that trustees and their consultants can select the approach to members most likely to succeed, given their knowledge of the membership:

We need to consider all methods for getting medical data – questionnaires, phone interviews by medically trained staff, and also GPs' reports. They are all relevant. Consultant

Resolving this issue was seen as the key to the growth of an efficient market:

Sorting out the way to establish a whole-of-market enhanced quotation process is the main challenge. We have very few players in the buy-in market, even fewer with enhanced underwriting expertise, but the latter group already uses at least three different approaches to obtaining the data. As trustees, we can't ask members to agree to be approached by three different insurers, so at present we have to pre-select an enhanced underwriter and this means that we might not get a whole-of-market quote. Independent trustee

Insurers need to be flexible and offer the data collection approach preferred by the consultant and trustees – not the method that suits the insurer best. If insurers move to this model, consultants and trustees can be confident that they will secure a competitive quotation. Insurance company

Data sharing between insurers and with stakeholders in the market was seen as important for the development of best practice and flexibility:

The best medical underwriting methodologies will emerge only with time; we need to see a track record of data obtained and to measure this against the quotations. Consultant

Several consultants in the small scheme market have introduced a 'quick-quote' system to help with the preliminary assessment, but opinions varied on the merits of this approach:

The idea is that we can get a good assessment of the potential for an enhanced buy-in if we test the scheme with an insurer that has a rapid turn-around time. We can do this in two weeks and at a low cost. If the result is positive, we can take the scheme to market with greater confidence of a successful outcome. Consultant

Do we use one provider that offers a streamlined process? This is the model some consultants now offer, but it is worrying. How do we know whether the provider that offers a quick-quote service is the best? Consultant

Irrespective of the consultant's approach to the bidding process, interviewees agreed that the trustees need to be 'ready to go' to take advantage of market opportunities:

What you need is to agree beforehand a series of trigger points, so that you can react quickly to market timing. For this to be successful, you have to be absolutely prepared with everything lined up and ready to go. Consultant

Trigger points, for example with reference to funding and to gilt and inflation movements, should be discussed well in advance of the buy-in exercise, as the tensions of the process can lead to irrational behaviour and poor decision-making. Consultant

Opportunities arise that have nothing to do with technical issues. It might be the case that providers discount pricing because they need to meet new business quotas.²⁰ Consultant

2.4 Optimal size of schemes

In terms of market potential, several interviewees stressed the need for better data and for independent modelling to rationalize the current debate:

We need better modelling to demonstrate the rationale for smaller schemes and to identify the cut-off point where medical underwriting becomes statistically unreliable or simply impractical from a logistical perspective. Consultant

It was felt, by some, that there were no rational barriers to medically underwriting larger schemes:

At present, it is assumed that only smaller schemes can benefit from enhanced buy-ins. We challenge that view. In theory, medical underwriting could be extended to any scheme where there is a cohort of members that account for a disproportionate level of liabilities. We accept this is a more complicated exercise and requires access to the medical information provided by a larger number of retired executives and directors, but we think this should be possible. Consultant

One interviewee suggested that the proposed target market of smaller schemes was due to the insurers' business model and the imperatives of the balance sheet, rather than logic:

²⁰ This point was also raised in Towers Watson's Derisking Report 2012: <http://www.towerswatson.com/united-kingdom/research/6871>

Is the focus on smaller schemes due to the genuine informational disadvantage or due to the insurers' ability to only medically underwrite a certain number of members?

Independent trustee

What the new entrants are proposing in terms of focusing only on the smaller schemes is driven by their capacity – they simply can't take on £1bn+ liabilities. So we need to consider how the market might develop in practice, where large insurers adopt medical underwriting and have the capacity to deal with the big schemes. Consultant

One option for larger scheme is to divide the pensioner section in a way that would facilitate a series of bulk buy-ins:

This is a very complex issue, but also a very exciting prospect. We might, for example, simply divide the pensioner section according to age, but we might also consider a division based on the level of pension. Whichever way you cut it, you need to think very carefully about the impact of one or more buy-ins on the residual membership profile and the liabilities. Consultant

Other interviewees raised concerns over multiple transactions:

We need to think very carefully about the total advisory costs associated with all these transactions. These may negate any upside through 'tranching-up' the membership, especially as each exercise is likely to be run on a whole-of-market basis. We also need to think about what happens if the scheme transacts bulk buy-ins for five tranches of pensioners, each with a different insurer. How complex now is the full wind-up and buy-out of the scheme? Consultant

Employers might press for multiple transactions relating to individuals and sections of pensioners. This can be dangerous, partly because there is a greater chance of something going wrong – as in 'too many moving parts' – but also because the residual impact on the scheme might be difficult to predict in terms of future de-risking exercises. It's essential that employers and trustees keep a focus on the ultimate goal, which is a full buy-out. Consultant

2.5 Due diligence in insurer selection

There were very mixed views on the way in which an enhanced provider should be selected. Several consultants said that brand is an important consideration for trustees:

Trustees need to recognise the name of the insurer. It's hard trying to convince them that a new player is a better alternative, even if it can offer and support a better price. Consultant

However, one insurer said that brand was irrelevant, but that financial strength was crucial:

This isn't the retail market, where an individual customer might go for a brand name he or she recognises, usually based on spurious reasons, such as the fact that the insurer has been reliable as a car insurance provider. In the DB de-risking market, it's about financial strength. If you are rated by S&P, Moody's or Fitch, then there is a clear due diligence process as far as the trustees are concerned. If the insurer is not rated, what will be the trustees' legal position if things go pear-shaped? Insurance company

A consultant countered this view:

Big isn't necessarily best. We always use a specialist to evaluate the potential provider and a lot depends on their reinsurance arrangements, their commitment to the market and on their additional capital. Consultant

The above views suggest that 'brand' is understood in different ways. Insurance company analysts were more specific on the factors to consider, although again, their views varied:

When we evaluate an insurance company, we are not interested in the price of the deal; nor do we focus that much on financial strength ratings, which can be pretty meaningless if considered in isolation. Brand is totally immaterial – think about the number of 'big' household name insurers that were around in the 1980s and 1990s that have since disappeared. Our job is to consider what could go wrong. We need to ask who is providing the capital and are they committed to the bulk annuity market? What happens if the insurance company withdraws from the market or is taken over? How does the company reinsure its longevity risk and how committed to the market is that reinsurance company? How do they manage their capital and balance their risks in the UK and globally? Insurance company analyst

We consider brand important from a corporate finance perspective, as this concept incorporates an implicit assumption of a strong covenant and also longevity in the market, which we take into consideration carefully, given the long-term nature of de-risking strategies. Faced with two quotes that are not so far apart, I'd rather go with the company that's very well-diversified and has been in the business for decades, rather than a relative newcomer. So, we consider the pricing relative to the insurer's covenant. It's rarely advantageous for trustees to go with a weaker covenant just because the price is lowest. Where the employer covenant is comparatively weak, this issue is critical. Insurance company analyst

The relevance of the insurer's covenant to the scheme's stability emerged as an important consideration:

It's often said that introducing an insurer's covenant, in addition to the employer's, is automatically better. This is simply not true where the scheme sponsor's business is thriving and is large and well-diversified, although we have encountered cases in large schemes where the insurer's covenant offers a hedge against economic conditions to which the employer might be vulnerable. However, the addition of a strong insurer's covenant in the case of smaller companies, where the employer covenant is relatively weak, is a no-brainer. Moreover it does not make good business sense for some smaller companies to run a DB scheme, due to diseconomies of scale.

Insurance company analyst

Commitment to the market was identified by one interviewee as the most problematic issue:

With constant changes in the market players, we might know the identity of the counter party at the time of the buy-in and be satisfied about its financial strength and commitment to the market – only to discover that a few weeks' later this insurer has withdrawn from the market or has been taken over by an insurer we do not know.

Independent trustee

We have been very cautious in dealing with new market entrants, especially if they are single-line insurers with private owners that do not demonstrate a business model committed to the market, for example. To us, this indicates a potential lack of longevity, as the owners might not see the risk of business failure as a threat to the group. It also represents a potentially weak covenant. Insurance company analyst

The role of reinsurers in relation to the insurer's covenant was also mentioned:

The fact that the insurer reinsures its longevity risk is not enough to satisfy me. You need to see through the contract between the insurer and trustees to see how this would work in practice in 'what if' situations, for example if the insurer goes bust. In this case, the scheme will just be one of many creditors and there might be insufficient reinsurance to cover everything. Also, in many cases the reinsurance is arranged post-deal – especially with smaller transactions, which get packaged together at a later date. Overall I would say that getting sufficient information about reinsurance arrangements is very difficult and the reinsurers themselves don't tend to be very forthcoming. Insurance company analyst

2.6 Expertise among trustees, employers and their advisers

One of the concerns interviewees raised about the burgeoning buy-in market was that trustees and employers might become distracted by short-term expedients and might fail to consider long-term strategy:

Trustees and employers must focus on the strategic direction for the scheme. This macro approach is often lacking and in its place is a micro focus that is based on a product mentality. Insurance company

The alignment of the trustee and corporate sponsor objectives might also prove problematic:

I advise a large multi-billion pound scheme. The new employer, driven by the views of the corporate treasurer, is anti-buy-in. The corporate treasurer looks at the cost of borrowing money to support the scheme covenant versus the cost of de-risking premiums and is not persuaded to favour a buy-in. The trustees have a dilemma. If they go for the buy-in, they might stabilize the scheme, but at the risk that the employer might withhold future funding because it disagrees. Independent trustee

Moreover, one interviewee pointed out that in very small schemes, the trustee and corporate sponsor's objectives can appear to be well aligned, but not necessarily for the right reasons:

We find that where deals are in the £50m-plus range, the quality of scheme governance tends to be much better than it is for small schemes looking to transact, say, a £10m deal. Once you get to very small schemes, there is often a governance overlap between the employer and the trustees, because the finance director sits on the trustee board. These are not insuperable issues, but you need to be aware of them and be confident that the trustees and employers are both well advised and that due diligence is being carried out for both parties. Insurance company

Separately, tPR has expressed serious concerns about the levels of knowledge, training and governance in smaller schemes and also about the quality of data.²¹ Interviewees said that tPR had a crucial role to play in educating trustees about enhanced bulk buy-ins and that this applied to small and large scheme alike:

You might think that trustees of large DB schemes that are also responsible for small legacy schemes might have higher levels of knowledge about de-risking and that the same would be true of the employers. In practice, this is not necessarily the case. The trustees of the main scheme tend to neglect legacy schemes, due to lack of time, so their potentially higher level of awareness and knowledge does not necessarily translate into action. **Independent trustee**

It's not just trustees and employers who need to be educated about the potential benefits of enhanced bulk buy-ins – we were told that front-line consultants in the larger firms also need to improve their knowledge:

In some cases, the incumbent investment consultant and actuary might not be up to speed with developments because they are remote from the firm's buy-in research engine. **Consultant**

We need to educate the consultants that operate on the front line in this market. Expertise tends to be concentrated among the members of the firm's buy-out team, but these specialists are not the first point of contact with trustees. There is a pressing need to ensure that scheme investment consultants and the actuaries are made aware of enhanced buy-in opportunities and risks. **Insurance company**

There were also very real concerns about the level of knowledge among smaller firms of advisers:

Initially, at least, we expect enhanced BPAs to take place in the smaller company market and, in these cases, the employers and trustees often rely on a local or regional firm of consultants or IFAs. As an industry we need to make sure these firms are supported. This isn't a matter of good will – if anything goes wrong in small deals due to lack of expertise, it will affect all of us. **Insurance company**

Finally, interviewees disagreed over which party should drive the agenda and, therefore, which adviser should take precedence in negotiations:

Trustees are usually advised by a benefits and investment consultant. It's possible that consultants have a vested interest in preferring buy-ins and in avoiding buy-outs, as the buy-out reduces the size of the scheme and therefore would reduce the consultant's remuneration. **Independent trustee**

What the employer needs is to de-risk as soon as possible through a full buy-out, even if it means borrowing to do so. Actuarial and investment consultants have strong vested interests in keeping the scheme going. They are hugely conflicted – if they organise a full buy-out, then they've lost their ongoing advisory fee income. **Insurance company**

²¹ www.thepensionsregulator.gov.uk/docs/role-of-trustees-in-dc-schemes-statement-oct-2011.pdf

Employers should take a hard look at the type of advisers in the market. Where the consultant earns an on-going fee for advising the trustees, it is conflicted in the de-risking market because it has a vested interest in keeping that scheme going. Transfer the entire risk to an insurance company and you cut off the source of fee income stream. Insurance company

But investment consultants said that their profession should be well-aware by now of the 'writing on the wall':

In reality most schemes are now building strategies towards fully de-risking or removing the scheme from the employer's balance sheet, so the writing is on the wall to a degree. Consultants need to wake up to commercial realities, to the future of the industry, and to their clients' needs. Consultant

It was suggested that accountancy-based consultants that advise employers might also be considered biased:

We see a very different perspective from the employer's consultant – the agenda will definitely be from the company's perspective and will not necessarily be in the best interests of the scheme. Consultant

This view was countered, however:

The journey to full wind-up needs to be considered from an overarching corporate-restructuring perspective. Corporate sponsors need to consider how best to deploy their resources and to balance the demands of pension scheme funding with the imperatives of maintaining the company's reputation in the market and its share price. Consultant

De-risking the pension scheme is part of de-risking the corporate balance sheet. It's the employer – usually the finance director and/or corporate treasurer – who needs to drive the process because these are the individuals who hold the purse strings. Insurance company

To conclude this interview section, it seems likely that the introduction of more sophisticated underwriting techniques will prompt very serious discussions between trustees, employers and their respective advisers. This is why we propose that a code of good practice is developed that accommodates the potentially conflicted objectives of trustees and employers. The role of the regulators will be crucial here:

Ultimately a buy-in or buy-out is a trustee decision, so they make the final decisions. In reality, the process needs to be jointly owned with joint goals which may differ somewhat between sponsor and trustees, but each has a vital role to play in the process. Consultant

Corporate sponsors need to own the balance sheet problem and understand the price of not taking action to de-risk. Consultant

Corporates that don't take de-risking action will go bust. It's as simple as that. If you look at the deficits of the FTSE 100 companies you can see that these are way off the scale. The Pension Protection Fund couldn't cope with them, so, like the banks, they are too big to fail. But, as we now know, they can and will fail. If they don't de-risk, they will end up in the PPF, whether the PPF likes it or not. Consultant

Section 3: Case Studies

In this section, we provide a case study for a medically-underwritten transaction that was completed recently. This is thought to be the first time such information has been made available.

We then consider the savings that might be achieved in a DB scheme through an enhanced bulk buy-in. These case studies, which are based on real cases that are not yet completed, demonstrate that the cost saving to the scheme of medically underwriting a pensioner section is in the region of 10% when compared with non-medical underwriting and can be much higher, we understand.

3.1 *The first completed medically-underwritten transactions*

The objectives of the employer and trustees were fully aligned: they wanted to get the best price possible for the pensioner section, as part of a strategic plan to wind-up the scheme in a secure and cost-effective manner. Partnership Assurance

In December 2012, Partnership Assurance completed the first two medically-underwritten bulk annuity transactions (valued at just over £3m and just under £1m, respectively). Here we highlight the key features of the first case on an anonymised basis. We conclude with our observations on what all stakeholders can learn from this very early experience in the market.

Transaction size: c. £3m

Transaction type: A bulk buy-in. We understand that the trustees and employer's strategic plan is to wind-up the scheme as quickly as possible and that Partnership's pricing enabled them to achieve that objective through a buy-in that will move to a buyout within weeks.

The employer: A traditional manufacturer in the North of England. The employer and trustees had considered a bulk buy-in about nine months earlier, but were unable to proceed due to the cost being prohibitive.

The medical underwriting: There were 18 pensioners, all of whom completed the one-page questionnaire. In a minority of cases, Partnership also requested a GP report. The insurer's analysis revealed that more than one-third of the pensioners qualified for an enhanced premium.

Timing: The process from the initial discussion to the trustees locking into terms and completing the transaction took just over two months.

Scheme saving: We do not have details of the previous bid pricing, but it is evident that the savings achieved through medical underwriting were significant relative to the previous quotation, as the scheme was able to secure a viable price that will lead very shortly to a buy-out.

Observations:

1. The cost savings of medically underwriting the bulk transaction were sufficient to enable the scheme to proceed almost immediately with an

affordable buy-out, rather than with a prolonged buy-in, thus taking the scheme more rapidly towards its strategic goal to wind up the scheme.

2. The success of the outcome depended to a great extent on the alignment of the objectives of all parties to the transaction. In this case, we understand that the employer and trustees were of one mind, and that they and their advisers worked very closely with the insurer.
3. The case is notable for the speed with which it progressed from quotation to completion.
4. It is also notable that all the pensioners responded to the request for medical information, including those who were asked to permit the insurer to request a GP report.
5. The advisory market for these deals, which represent transactions worth c. £1-5m, comprises small regional IFAs and small regional actuarial consultants. Such firms would benefit from additional expertise and guidance from the industry, for example through our proposed code of conduct, and support from the regulators. The same is true for the employers and trustees.

3.2 Examples from DC case studies

We now turn to look at the effect of enhancements for various conditions in the retail (individual DC annuity) market, the market in which enhanced annuities started. Tables 3 and 4 show the conditions commonly seen in the retired population, where it is believed that around 60% of individuals have conditions that could qualify for enhancements.²² Table 3, which shows the case of a single male life with a £25,000 fund, indicates that additional income (relative to the average standard rate) of 11.8% is available in the case of heart disease, while in the case of diabetes, the additional income is 32.1%. In the case of joint lives, Table 4 shows slightly lower enhancements of 9.4% and 20.3%, respectively, for the same two impairments.

Table 3: Enhancements for various conditions available with a single life annuity for a 65-year-old male with a £25,000 fund

	Smoker	Diabetes	Heart disease	Stroke	Combination	Average standard rate
Partnership rate	£1608.31	£1739.70	£1471.48	£1739.70	£1582.92	
% additional income versus average standard	22.2%	32.1%	11.8%	32.1%	20.2%	£1316.50
% additional income versus best standard	18.0%	27.7%	8.0%	27.7%	16.2%	£1362.60

Source: Partnership.

²² Ulla Suomio (2012) 'Proportion of cases that could qualify for an enhanced annuity', Partnership research study, June.

Combination assumes overweight, high blood pressure and high cholesterol.

Table 4: Enhancements for various conditions available with a joint life annuity for a 65-year-old male with a £25,000 fund (assuming a healthy spouse 3 years younger)

	Smoker	Diabetes	Heart disease	Stroke	Combination	Average standard rate
Partnership rate	£1313.17	£1413.66	£1285.62	£1413.66	£1341.85	
% additional income versus average standard	11.7%	20.3%	9.4%	20.3%	14.2%	£1175.30
% additional income versus best standard	5.5%	13.6%	3.3%	13.6%	7.8%	£1244.88

Source: Partnership. Combination assumes overweight, high blood pressure and high cholesterol.

3.3 Examples from DB case studies

Turning to DB schemes, we consider two examples of anonymised schemes for which Partnership provided a quotation for enhanced buy-in. Scheme A had total cost savings of 10.99%, while Scheme B had total cost savings of 9.8%. The benchmark for comparison here and in Scheme B below is a conventional underwriting process that assumes members have no impairments.

Scheme A

- Scheme with 98 retired lives
- Total cost for healthy lives: £12.92 million
- Total cost if all lives enhanced: £11.50 million
- Saving if all lives enhanced: £1.42 million (10.99%)
- Viewing individual prices, two lives account for 37.7% of the cost and 40.1% of the saving from the enhanced annuity for which they qualified (see highlighted rows).

Sex	Premium					
	Healthy	Impaired	Saving	% of saving	% saving	% of cost
F	7820.00	6073.00	1747.00	0.12%	22.3%	0.06%
M	324557.00	292593.00	31964.00	2.25%	9.8%	2.51%
F	7421.00	6010.00	1411.00	0.10%	19.0%	0.06%
F	14592.00	11614.00	2978.00	0.21%	20.4%	0.11%
F	20202.00	17124.00	3078.00	0.22%	15.2%	0.16%
F	89358.00	77063.00	12295.00	0.87%	13.8%	0.69%
M	108878.00	88175.00	20703.00	1.46%	19.0%	0.84%
F	76761.00	67236.00	9525.00	0.67%	12.4%	0.59%
F	97336.00	79938.00	17398.00	1.22%	17.9%	0.75%
F	6252.00	5199.00	1053.00	0.07%	16.8%	0.05%

	Healthy	Impaired	Saving	% of saving	% saving	% of cost
F	15887.00	14261.00	1626.00	0.11%	10.2%	0.12%
F	4278.00	3171.00	1107.00	0.08%	25.9%	0.03%
F	62238.00	53713.00	8525.00	0.60%	13.7%	0.48%
F	41811.00	31250.00	10561.00	0.74%	25.3%	0.32%
M	12195.00	10071.00	2124.00	0.15%	17.4%	0.09%
F	5396.00	4018.00	1378.00	0.10%	25.5%	0.04%
F	100271.00	84029.00	16242.00	1.14%	16.2%	0.78%
F	34201.00	28822.00	5379.00	0.38%	15.7%	0.26%
F	10601.00	8035.00	2566.00	0.18%	24.2%	0.08%
F	65092.00	56020.00	9072.00	0.64%	13.9%	0.50%
M	78940.00	67977.00	10963.00	0.77%	13.9%	0.61%
M	14422.00	12565.00	1857.00	0.13%	12.9%	0.11%
M	174102.00	160573.00	13529.00	0.95%	7.8%	1.35%
M	85583.00	76358.00	9225.00	0.65%	10.8%	0.66%
F	3308.00	2503.00	805.00	0.06%	24.3%	0.03%
F	2791.00	2052.00	739.00	0.05%	26.5%	0.02%
F	445363.00	417412.00	27951.00	1.97%	6.3%	3.45%
F	8057.00	6897.00	1160.00	0.08%	14.4%	0.06%
F	12647.00	9381.00	3266.00	0.23%	25.8%	0.10%
M	313462.00	289684.00	23778.00	1.67%	7.6%	2.43%
M	22405.00	18970.00	3435.00	0.24%	15.3%	0.17%
F	12224.00	10865.00	1359.00	0.10%	11.1%	0.09%
F	49695.00	44083.00	5612.00	0.40%	11.3%	0.38%
F	164589.00	145151.00	19438.00	1.37%	11.8%	1.27%
F	86984.00	74608.00	12376.00	0.87%	14.2%	0.67%
F	10484.00	8554.00	1930.00	0.14%	18.4%	0.08%
F	9936.00	8977.00	959.00	0.07%	9.7%	0.08%
F	6712.00	5568.00	1144.00	0.08%	17.0%	0.05%
F	14519.00	11422.00	3097.00	0.22%	21.3%	0.11%
M	9764.00	7850.00	1914.00	0.13%	19.6%	0.08%
F	33372.00	28335.00	5037.00	0.35%	15.1%	0.26%
M	8108.00	6933.00	1175.00	0.08%	14.5%	0.06%
F	13363.00	11340.00	2023.00	0.14%	15.1%	0.10%
F	12274.00	10389.00	1885.00	0.13%	15.4%	0.09%
F	41509.00	29536.00	11973.00	0.84%	28.8%	0.32%
F	27774.00	24922.00	2852.00	0.20%	10.3%	0.21%
F	41384.00	34044.00	7340.00	0.52%	17.7%	0.32%
M	30982.00	25117.00	5865.00	0.41%	18.9%	0.24%
F	1839874.00	1731011.00	108863.00	7.66%	5.9%	14.24%
F	10936.00	10009.00	927.00	0.07%	8.5%	0.08%
F	177516.00	168764.00	8752.00	0.62%	4.9%	1.37%
F	1075.00	865.00	210.00	0.01%	19.5%	0.01%
M	165109.00	146128.00	18981.00	1.34%	11.5%	1.28%
F	10366.00	8752.00	1614.00	0.11%	15.6%	0.08%
F	68813.00	61641.00	7172.00	0.50%	10.4%	0.53%
F	1349.00	1082.00	267.00	0.02%	19.8%	0.01%

	Healthy	Impaired	Saving	% of saving	% saving	% of cost
F	177476.00	153245.00	24231.00	1.71%	13.7%	1.37%
M	10444.00	7914.00	2530.00	0.18%	24.2%	0.08%
F	18529.00	15113.00	3416.00	0.24%	18.4%	0.14%
F	13343.00	11426.00	1917.00	0.13%	14.4%	0.10%
M	27495.00	24714.00	2781.00	0.20%	10.1%	0.21%
F	8624.00	7737.00	887.00	0.06%	10.3%	0.07%
F	30563.00	26150.00	4413.00	0.31%	14.4%	0.24%
F	4498.00	3998.00	500.00	0.04%	11.1%	0.03%
F	9202.00	7232.00	1970.00	0.14%	21.4%	0.07%
F	56641.00	46061.00	10580.00	0.74%	18.7%	0.44%
F	28273.00	24359.00	3914.00	0.28%	13.8%	0.22%
M	101538.00	90802.00	10736.00	0.76%	10.6%	0.79%
F	7273.00	5396.00	1877.00	0.13%	25.8%	0.06%
M	37716.00	30469.00	7247.00	0.51%	19.2%	0.29%
F	5045.00	4835.00	210.00	0.01%	4.2%	0.04%
F	57509.00	47687.00	9822.00	0.69%	17.1%	0.45%
F	189215.00	165865.00	23350.00	1.64%	12.3%	1.46%
M	843772.00	805053.00	38719.00	2.73%	4.6%	6.53%
M	80108.00	67315.00	12793.00	0.90%	16.0%	0.62%
F	46003.00	37914.00	8089.00	0.57%	17.6%	0.36%
F	77231.00	66828.00	10403.00	0.73%	13.5%	0.60%
M	20732.00	17871.00	2861.00	0.20%	13.8%	0.16%
F	26631.00	22572.00	4059.00	0.29%	15.2%	0.21%
M	986575.00	915745.00	70830.00	4.99%	7.2%	7.64%
F	104233.00	93563.00	10670.00	0.75%	10.2%	0.81%
F	327907.00	319544.00	8363.00	0.59%	2.6%	2.54%
F	69165.00	55603.00	13562.00	0.95%	19.6%	0.54%
M	54536.00	47215.00	7321.00	0.52%	13.4%	0.42%
M	185730.00	157626.00	28104.00	1.98%	15.1%	1.44%
M	3027368.00	2566283.00	461085.00	32.46%	15.2%	23.43%
F	38698.00	32190.00	6508.00	0.46%	16.8%	0.30%
F	20635.00	14869.00	5766.00	0.41%	27.9%	0.16%
F	98241.00	79734.00	18507.00	1.30%	18.8%	0.76%
F	28937.00	25571.00	3366.00	0.24%	11.6%	0.22%
F	77243.00	64004.00	13239.00	0.93%	17.1%	0.60%
M	27097.00	23548.00	3549.00	0.25%	13.1%	0.21%
F	20941.00	19156.00	1785.00	0.13%	8.5%	0.16%
F	329579.00	292670.00	36909.00	2.60%	11.2%	2.55%
M	18257.00	16007.00	2250.00	0.16%	12.3%	0.14%
F	104437.00	90857.00	13580.00	0.96%	13.0%	0.81%
F	7039.00	6314.00	725.00	0.05%	10.3%	0.05%
M	401811.00	364965.00	36846.00	2.59%	9.2%	3.11%
TOTAL	12921228.00	11500753.00	1420475.00	100%	10.99%	100%

Source: Partnership.

Scheme B

In this example, there was an unexpectedly large proportion of impaired lives (87 out of 107 respondents). In addition, there was a large number of spouses with health impairments. The pensioner profile represented a combination of white- and blue-collar employees with members living all over the UK and Ireland.

- Total cost for healthy lives: £33.9 million
- Total cost if all lives enhanced: £30.6 million
- Saving if all lives enhanced: £3.3 million (9.8%)
- No indication without underwriting exercise that mortality should be anything other than 'average'.
- The benefit of medical underwriting was spread more evenly over the membership than in the case of Scheme A.

Table 6: Cost savings per member from medical underwriting in Scheme B

Reference	Premium	Healthy	Difference	% saving	% of total saving	% of cost
1	256540	273722.00	17182.00	6.3%	0.52%	0.84%
2	507994	558880.00	50886.00	9.1%	1.54%	1.66%
3	321542	340448.00	18906.00	5.6%	0.57%	1.05%
4	286834	332620.00	45786.00	13.8%	1.38%	0.94%
5	55129	57297.00	2168.00	3.8%	0.07%	0.18%
6	57271	64174.00	6903.00	10.8%	0.21%	0.19%
7	501674	519718.00	18044.00	3.5%	0.55%	1.64%
8	27165	31826.00	4661.00	14.6%	0.14%	0.09%
9	454963	472142.00	17179.00	3.6%	0.52%	1.49%
10	234876	244113.00	9237.00	3.8%	0.28%	0.77%
11	192989	200578.00	7589.00	3.8%	0.23%	0.63%
12	72015	111191.00	39176.00	35.2%	1.19%	0.24%
13	59948	62306.00	2358.00	3.8%	0.07%	0.20%
14	394984	502909.00	107925.00	21.5%	3.26%	1.29%
15	354218	381859.00	27641.00	7.2%	0.84%	1.16%
16	166643	173197.00	6554.00	3.8%	0.20%	0.54%
17	72953	103009.00	30056.00	29.2%	0.91%	0.24%
18	396799	408893.00	12094.00	3.0%	0.37%	1.30%
19	73405	76292.00	2887.00	3.8%	0.09%	0.24%
20	452173	469349.00	17176.00	3.7%	0.52%	1.48%
21	52038	66421.00	14383.00	21.7%	0.44%	0.17%
22	81875	97686.00	15811.00	16.2%	0.48%	0.27%
23	96233	113145.00	16912.00	14.9%	0.51%	0.31%
24	128946	169080.00	40134.00	23.7%	1.21%	0.42%
25	230746	207686.00	-23060.00	-11.1%	-0.70%	0.75%
26	160058	248394.00	88336.00	35.6%	2.67%	0.52%
27	117443	122062.00	4619.00	3.8%	0.14%	0.38%

Reference	Premium	Healthy	Difference	% saving	% of total saving	% of cost
28	22107	22976.00	869.00	3.8%	0.03%	0.07%
29	103540	116941.00	13401.00	11.5%	0.41%	0.34%
30	227132	260084.00	32952.00	12.7%	1.00%	0.74%
31	160055	178815.00	18760.00	10.5%	0.57%	0.52%
32	551672	582414.00	30742.00	5.3%	0.93%	1.80%
33	262175	323836.00	61661.00	19.0%	1.87%	0.86%
34	631349	655043.00	23694.00	3.6%	0.72%	2.06%
35	171302	178038.00	6736.00	3.8%	0.20%	0.56%
36	251994	261904.00	9910.00	3.8%	0.30%	0.82%
37	96619	100419.00	3800.00	3.8%	0.11%	0.32%
38	222984	241465.00	18481.00	7.7%	0.56%	0.73%
39	36933	53181.00	16248.00	30.6%	0.49%	0.12%
40	17382	24737.00	7355.00	29.7%	0.22%	0.06%
41	366776	371648.00	4872.00	1.3%	0.15%	1.20%
42	27357	28433.00	1076.00	3.8%	0.03%	0.09%
43	104051	125025.00	20974.00	16.8%	0.63%	0.34%
44	451983	470952.00	18969.00	4.0%	0.57%	1.48%
45	73354	76238.00	2884.00	3.8%	0.09%	0.24%
46	1046400	1079188.00	32788.00	3.0%	0.99%	3.42%
47	178880	194186.00	15306.00	7.9%	0.46%	0.58%
48	27387	34418.00	7031.00	20.4%	0.21%	0.09%
49	155176	161278.00	6102.00	3.8%	0.18%	0.51%
50	54130	70199.00	16069.00	22.9%	0.49%	0.18%
51	64830	88190.00	23360.00	26.5%	0.71%	0.21%
52	264365	292072.00	27707.00	9.5%	0.84%	0.86%
53	55687	58406.00	2719.00	4.7%	0.08%	0.18%
54	89641	117883.00	28242.00	24.0%	0.85%	0.29%
55	310434	324737.00	14303.00	4.4%	0.43%	1.02%
56	24588	36217.00	11629.00	32.1%	0.35%	0.08%
57	12873	13592.00	719.00	5.3%	0.02%	0.04%
58	56626	63536.00	6910.00	10.9%	0.21%	0.19%
59	25898	32538.00	6640.00	20.4%	0.20%	0.08%
60	40761	49237.00	8476.00	17.2%	0.26%	0.13%
61	6892	7336.00	444.00	6.1%	0.01%	0.02%
62	182526	199834.00	17308.00	8.7%	0.52%	0.60%
63	48408	71877.00	23469.00	32.7%	0.71%	0.16%
64	105280	133506.00	28226.00	21.1%	0.85%	0.34%
65	96419	100211.00	3792.00	3.8%	0.11%	0.32%
66	62505	68294.00	5789.00	8.5%	0.18%	0.20%
67	59932	62289.00	2357.00	3.8%	0.07%	0.20%
68	142584	172350.00	29766.00	17.3%	0.90%	0.47%
69	188862	196289.00	7427.00	3.8%	0.22%	0.62%
70	6500	6756.00	256.00	3.8%	0.01%	0.02%
71	11711	12249.00	538.00	4.4%	0.02%	0.04%
72	24119	25322.00	1203.00	4.8%	0.04%	0.08%
73	172146	178916.00	6770.00	3.8%	0.20%	0.56%

Reference	Premium	Healthy	Difference	% saving	% of total saving	% of cost
74	66749	82837.00	16088.00	19.4%	0.49%	0.22%
75	834303	863642.00	29339.00	3.4%	0.89%	2.73%
76	169779	179369.00	9590.00	5.3%	0.29%	0.56%
77	185795	202486.00	16691.00	8.2%	0.50%	0.61%
78	16351	24356.00	8005.00	32.9%	0.24%	0.05%
79	127107	132590.00	5483.00	4.1%	0.17%	0.42%
80	29494	30653.00	1159.00	3.8%	0.04%	0.10%
81	785373	845594.00	60221.00	7.1%	1.82%	2.57%
82	365208	384916.00	19708.00	5.1%	0.60%	1.19%
83	79899	130239.00	50340.00	38.7%	1.52%	0.26%
84	87244	90675.00	3431.00	3.8%	0.10%	0.29%
85	51983	55433.00	3450.00	6.2%	0.10%	0.17%
86	37954	40184.00	2230.00	5.5%	0.07%	0.12%
87	27961	29060.00	1099.00	3.8%	0.03%	0.09%
88	77363	92875.00	15512.00	16.7%	0.47%	0.25%
89	390763	437114.00	46351.00	10.6%	1.40%	1.28%
90	192142	201681.00	9539.00	4.7%	0.29%	0.63%
91	72236	75472.00	3236.00	4.3%	0.10%	0.24%
92	348702	356959.00	8257.00	2.3%	0.25%	1.14%
93	138439	176639.00	38200.00	21.6%	1.16%	0.45%
94	106062	136054.00	29992.00	22.0%	0.91%	0.35%
95	14878	15463.00	585.00	3.8%	0.02%	0.05%
96	520737	616642.00	95905.00	15.6%	2.90%	1.70%
97	64277	67585.00	3308.00	4.9%	0.10%	0.21%
98	131267	192575.00	61308.00	31.8%	1.85%	0.43%
99	15062	21652.00	6590.00	30.4%	0.20%	0.05%
100	111744	117332.00	5588.00	4.8%	0.17%	0.37%
101	77231	82775.00	5544.00	6.7%	0.17%	0.25%
102	272711	286850.00	14139.00	4.9%	0.43%	0.89%
103	3875	5410.00	1535.00	28.4%	0.05%	0.01%
104	131346	186939.00	55593.00	29.7%	1.68%	0.43%
105	464025	488454.00	24429.00	5.0%	0.74%	1.52%
106	13624	14159.00	535.00	3.8%	0.02%	0.04%
107	703415	1227297.00	523882.00	42.7%	15.85%	2.30%
108	179821	193889.00	14068.00	7.3%	0.43%	0.59%
109	41391	43601.00	2210.00	5.1%	0.07%	0.14%
110	581771	615217.00	33446.00	5.4%	1.01%	1.90%
111	1324116	1396691.00	72575.00	5.2%	2.20%	4.33%
112	97968	153463.00	55495.00	36.2%	1.68%	0.32%
113	230174	239226.00	9052.00	3.8%	0.27%	0.75%
114	469081	478175.00	9094.00	1.9%	0.28%	1.53%
115	344320	349075.00	4755.00	1.4%	0.14%	1.13%
116	158922	228305.00	69383.00	30.4%	2.10%	0.52%
117	23126	24412.00	1286.00	5.3%	0.04%	0.08%
118	167097	155002.00	-12095.00	-7.8%	-0.37%	0.55%
119	149137	197558.00	48421.00	24.5%	1.46%	0.49%

Reference	Premium	Healthy	Difference	% saving	% of total saving	% of cost
120	372185	401073.00	28888.00	7.2%	0.87%	1.22%
121	351380	366116.00	14736.00	4.0%	0.45%	1.15%
122	29490	31511.00	2021.00	6.4%	0.06%	0.10%
123	427881	440849.00	12968.00	2.9%	0.39%	1.40%
124	200153	252880.00	52727.00	20.9%	1.59%	0.65%
125	22145	23016.00	871.00	3.8%	0.03%	0.07%
126	111381	135501.00	24120.00	17.8%	0.73%	0.36%
127	413707	451474.00	37767.00	8.4%	1.14%	1.35%
128	207274	215425.00	8151.00	3.8%	0.25%	0.68%
129	108981	113266.00	4285.00	3.8%	0.13%	0.36%
130	6221	6528.00	307.00	4.7%	0.01%	0.02%
131	8750	9094.00	344.00	3.8%	0.01%	0.03%
132	44068	48752.00	4684.00	9.6%	0.14%	0.14%
133	91738	95345.00	3607.00	3.8%	0.11%	0.30%
134	472166	483103.00	10937.00	2.3%	0.33%	1.54%
135	32822	38749.00	5927.00	15.3%	0.18%	0.11%
136	3184	4292.00	1108.00	25.8%	0.03%	0.01%
137	45489	47278.00	1789.00	3.8%	0.05%	0.15%
138	75958	87698.00	11740.00	13.4%	0.36%	0.25%
139	26607	28250.00	1643.00	5.8%	0.05%	0.09%
140	156683	170010.00	13327.00	7.8%	0.40%	0.51%
141	101866	127847.00	25981.00	20.3%	0.79%	0.33%
142	337982	358599.00	20617.00	5.7%	0.62%	1.11%
143	101444	142768.00	41324.00	28.9%	1.25%	0.33%
144	53761	55875.00	2114.00	3.8%	0.06%	0.18%
145	10766	12907.00	2141.00	16.6%	0.06%	0.04%
146	208828	217040.00	8212.00	3.8%	0.25%	0.68%
147	107010	111218.00	4208.00	3.8%	0.13%	0.35%
148	84730	132593.00	47863.00	36.1%	1.45%	0.28%
149	114054	118923.00	4869.00	4.1%	0.15%	0.37%
150	20652	21464.00	812.00	3.8%	0.02%	0.07%
151	116606	146856.00	30250.00	20.6%	0.92%	0.38%
152	48368	56856.00	8488.00	14.9%	0.26%	0.16%
153	370128	379761.00	9633.00	2.5%	0.29%	1.21%
154	87809	91262.00	3453.00	3.8%	0.10%	0.29%
155	111788	125060.00	13272.00	10.6%	0.40%	0.37%
156	356289	375618.00	19329.00	5.1%	0.58%	1.17%
157	85821	89196.00	3375.00	3.8%	0.10%	0.28%
158	431234	450202.00	18968.00	4.2%	0.57%	1.41%
159	105136	117538.00	12402.00	10.6%	0.38%	0.34%
160	161041	167374.00	6333.00	3.8%	0.19%	0.53%
161	77783	92975.00	15192.00	16.3%	0.46%	0.25%
162	34050	36804.00	2754.00	7.5%	0.08%	0.11%
163	443193	464739.00	21546.00	4.6%	0.65%	1.45%
164	217212	243252.00	26040.00	10.7%	0.79%	0.71%
TOTAL	30579616	33885564	3305948.00	9.8%	100.00%	100.00%

Source: Partnership.

Tables 5 and 6 illustrate that, in the DB market, the same sort of enhancements are available as in the retail market, although the impact of enhanced rates is spread across lives that are in average and in below-average health. The crucial difference between the two is that in the case of the retail market, the cost benefits accrue to the plan member, while in the DB market, these accrue to the scheme.

3.4 Cost of an enhanced bulk buy-in

The costs of an enhanced bulk buy-in will vary depending on scheme size and complexity. At the larger end of the market, where bespoke deals are arranged that frequently involve collateral and/or security features, fees can range between £500,000 and more than £1m. Fees will also vary between advisors, some of which offer a fixed fee to smaller schemes that includes legal costs. If a bulk buy-in does not proceed, the minimum costs to the scheme are the adviser's broking fees, although it may be that legal advice has also been sought and must therefore be paid for.

Having spoken with consultants in this market we understand that the following examples are typical for the cost of a bulk buy-in underwritten on a standard basis. The lower end of the ranges represents very small transactions:

- Broking exercise (obtaining quotes): £10,000 - £100,000
- Legal advice (contracts): £20,000 - £50,000
- Transactional costs: £10,000 - £60,000
- Implementation costs: £10,000 - £100,000

For a pensioner bulk buy-in of £10m-£20m, the expected fees might be as follows:

- Broking exercise: £30,000
- Legal advice: £20,000
- Transactional costs: £20,000
- Implementation costs: £30,000

These are indicative advisors fees. It should be noted there is also an investment of time for both the trustees and sponsoring employer.

Trustees need to put these costs into context. This is likely to be the largest single investment decision they make and once the deal is agreed, there appear to be no associated investment expenses during the time that the policy is held as a buy-in. We understand that these total costs represent somewhere in the range of 0.5% to 1% of the premium paid to the bulk annuity provider.

4. Towards a Consistent Regulatory Framework and a Code Of Practice

The FSA and tPR need to work together to ensure a clear overarching regulatory framework is established for the buy-in and buy-out market. Insurance company

There is a relevant analogy between the consumer in the retail annuity market and the trustee in the DB scheme market. In both cases, they are seeking to take out an insurance contract that is complex (relative to their respective levels of knowledge), for which they might have no learning curve, and which is usually irreversible. Therefore, although trustees are legally responsible for the actions they take, arguably, in practice, the onus for good governance and due diligence falls on the industry – under the supervision of the regulators – due to the asymmetry in information between the buy and sell sides. This is particularly important given that the current market focus for enhanced bulk buy-ins is smaller schemes which, as tPR has noted, frequently lack the expertise and governance structures associated with larger schemes.

Here we summarise the concerns that arose in the course of the research and we offer proposals which the regulators and industry might consider in relation to regulation and the development of a code of practice designed to ensure that the market progresses in a safe and orderly manner and is fair and transparent for all parties concerned. We suggest that trustees, employers and scheme members will have more confidence if the various parties to the transaction agree to adhere to such a code, which we suggest might be agreed between the government, the regulators and stakeholders to the market.

While we would expect the industry to develop the code of practice, it is important that this initiative is informed by the government and also by the regulators, which might provide similar guidance, with consistent messaging, on their websites. A clear and consistent regulatory approach to the market would provide a firm foundation for the code.

4.1 *The regulation of the enhanced buy-in market*

The FSA (from April 2013 the FCA and PRA) regulates the insurance companies that operate in the BPA and retail annuity markets. This regulation includes solvency and capital adequacy requirements. The Financial Services Compensation Scheme (FSCS) covers defaults irrespective of whether the annuities are held by a scheme or in the name of individual ex-members.

However, an enhanced bulk buy-in applies DC solutions to DB schemes, which are regulated by tPR. This means that many of the processes operate under a dual regulatory system, which becomes tripartite in April 2013. Areas of overlap include where trustees purchase annuities via a bulk buy-in (including individually underwritten contracts) and where they purchase annuities that are assigned to individual members, either through individual exercises or a bulk buy-out. The former exercise falls within tPR's remit, while the latter exercise represents a discharge of the scheme's liabilities in relation to the individual member's guaranteed income payments, which crosses into FSA/FCA/PRA

territory. This means that trustees are dealing with multiple rule books, which are further influenced by European legislation, such as Solvency II. Trustees – and/ or their advisers – need to be experts in a complex and constantly changing regulatory environment.

The regulation of advice is equally confusing. Advice to employers and trustees is not regulated by tPR and the FSA (even though most firms of consultants are FSA-regulated). However, where trustees arrange individual annuities in members' names, through TPIE exercises for example, this is considered to be FSA territory, although as the code of practice on incentive exercise demonstrates, tPR takes a keen interest in such procedures, as does the government.

The FSA has a memorandum of understanding with tPR,²³ which originally aimed to set out the processes for cooperation and coordination between the two regulators in relation to DB and DC pensions, and which set out the ways in which they were to collaborate on guidance, policy and standards. The memorandum states that 'the application to pension schemes of each regulator's governing legislation will, so far as possible, be complementary and transparent'.

The agreement was published in 2005 and has been updated once, in 2007, which means it pre-dates the development of the de-risking market. It comes as no surprise, therefore, that it makes no mention of the use of bulk annuities in DB de-risking exercises. We suggest that this oversight might be addressed:

Recommendation 1:

The memorandum of understanding between the FSA and tPR should be updated to incorporate the different regulatory systems that apply in the case of enhanced bulk buy-ins. This is particularly urgent in the light of the move away from a single financial services regulator (FSA) in 2013 to a regime where two separate regulators address conduct (FCA) and prudential (PRA) issues, respectively.

4.2 Accurate data

There is a need for accurate data at both the macro and micro levels.

At the macro-level, our research indicates that different sources of buy-in market data are inconsistent. tPR reports with a lag on de-risking activity through the Purple Book, while market participants – insurers and, in particular, consultants – publish reports periodically that present quite different figures on the number and size of transactions.

An orderly market requires clear and consistent data. This, in turn, requires a central source of data that draws on the experience of all market participants (although such participants might provide such data on an anonymised basis). Importantly, for trustees and employers to appreciate the financial risks they are taking when they embark on an enhanced bulk buy-in process, there needs to

²³ http://www.fsa.gov.uk/pubs/mou/fsa_tpr.pdf

be accurate data on the proportion of deals that reach a successful conclusion and the proportion that fail, with analysis of the reasons for the latter.

At the micro-level, equally essential to the success of the market is the insurer's access to members' medical data, which in turn requires member cooperation and motivation. Enhanced underwriting techniques have only been available to DB schemes for about 12 months, yet already there are three different approaches evident.

Recommendation 2:

Clear and consistent data are a prerequisite for an orderly market. This is an issue the regulators need to address jointly. Data should include the number and size of deals and examples of case studies that demonstrate the ways in which an enhanced bulk buy-in can lead to scheme savings. Data should also include examples of cases that do not lead to any savings following the medical underwriting exercise. In particular, it is essential to capture the percentage of enhanced bulk buy-in deals that reach a satisfactory conclusion and the percentage which fail relative to conventional buy-ins, including the reasons for failure and the associated scheme costs.

Recommendation 3:

Collaboration between competing insurers – including the sharing of early quantitative and qualitative statistical experience in the market in relation to underwriting techniques and member data collection – should be a priority.

4.3 Flexibility in member data collection processes

For a competitive market to develop, trustees and their advisers need insurers to be flexible, so that they can select the best underwriting approach and data collection method for the scheme profile. This would avoid the situation whereby trustees are forced to pre-select an insurer that uses only one underwriting and data-collection process.

Recommendation 4:

Insurers should be encouraged to develop a flexible approach to underwriting and member data collection to enable schemes to benefit from a whole-of-market bidding process. Trustees and advisers need clear information on the relative methods available and on any restrictions in insurers' models.

4.4 Trustee disclosure

An important concern raised by interviewees was that trustees, knowingly or unwittingly, might not disclose facts material to the underwriting process, particularly where current or previous de-risking exercises have involved an element of medical underwriting. We understand that the result of this lack of disclosure could lead to future legal disputes, whereby conventional insurers sue

the trustees for damages due to the fact that they underwrote contracts in the absence of certain material facts.

Insurance law is quite specific in terms of the buyer's obligation to disclose all material facts – even if no specific questions are asked.²⁴ While the legal process in relation to disputes in contract law takes into account the potential for consumer misunderstanding, it is likely to be less lenient in relation to employers and trustees, who are advised by consultants and lawyers.

At present, it seems that the onus rests with insurers to ask questions of the trustees to determine if any previous bulk or individual de-risking activities might affect the risk profile of the scheme.

Recommendation 5:

Trustee disclosure of material facts should form part of the code of good practice. To avoid anti-selection concerns on the part of conventional insurers, trustees should be required to complete a standard disclosure form that captures all previous de-risking exercises, including failed as well as successful transactions. An important issue to resolve is whether full disclosure of medical information is required where the data were obtained by an enhanced underwriter.

We anticipate that the potential problem of anti-disclosure will disappear over time, as conventional insurers develop their own medical underwriting processes, which would mean that all insurers would obtain a clear medical profile of the pensioner cohort.

4.5 Standard procedures on the death of an annuitant

A specific issue for insurers is the procedure trustees adopt when a member for whom they have arranged an annuity – as part of a bulk arrangement held as a scheme asset – dies. Particular issues arise if the scheme that holds a bulk annuity as an asset enters the PPF. An ABI and NAPF report published in September 2011, 'Bulk Insured Pensions: A Good Practice Guide'²⁵ said 'the trustees may want to ensure that the bulk buy-in policy caters for the possibility of the scheme entering a PPF assessment period'. We endorse this approach and suggest that it be made standard practice.

Recommendation 6:

A standard procedure for trustee disclosure on the death of a member for whom they hold an annuity – or whose life forms part of a bulk buy-in annuity – would save administrative time on the part of the scheme

²⁴ The academic and professional literature on this subject is vast and it is not the purpose of this report to interrogate insurance contract law. We consulted, among other documents, http://lawcommission.justice.gov.uk/docs/ICL1_Misrepresentation_and_Non-disclosure.pdf, http://lawcommission.justice.gov.uk/docs/cp182_ICL_Misrep_Non-disclosure_Breach_of_Warranty.pdf, http://www.financial-ombudsman.org.uk/publications/ombudsman-news/46/46_non_disclosure_insurance.htm, http://legal.practitioner.com/regulation/standards_9_3_1.htm,

²⁵ <http://www.abi.org.uk/Publications/58274.pdf>

and the insurance company and would prevent the situation whereby the insurer had to reclaim funds.

Recommendation 7:

Trustees should consider the possibility of entering the PPF when they arrange buy-ins so that the responsibility for informing insurance companies of the change of ownership and of the death of annuitants is formally transferred.

Special attention should be paid to trustees responsibilities during the assessment period before formal entry to the PPF.

The ABI and NAPF report already covers this point as follows:

During an assessment period trustees must be [able to] reduce benefits to the level of compensation the PPF would pay. For a buy-in, it is common to specify within the policy terms what happens should a PPF assessment period begin, otherwise the policy will pay at the full rate of benefits whilst the trustees are permitted to only pay at the reduced PPF levels. Options include allowing the full or partial surrender of the policy or applying the surplus to other scheme purposes. (43)

4.6 Expertise of trustees, employers and their advisers

As expert advice and a clear understanding of all available options is very important – it should also be in the interests of the trustees to be well informed and not have to rely on their advisors' recommendations blindly. (ABI and NAPF 6)

Clearly, the trustees require expert independent professional advice to ensure they have considered fully the opportunities and risks of an enhanced bulk buy-in, but as the above quotation indicates, the trustees need a high level of knowledge in order to choose their advisers carefully. As noted earlier in this report, evidence from tPR indicates that trustee knowledge and understanding can be poor among smaller schemes. This, we suggest, makes them potentially vulnerable.

Recommendation 8:

Trustees should seek independent and impartial advice concerning any proposed enhanced bulk buy-in. It is essential that they understand any potential liabilities that they face if the insured benefits purchased are insufficient to meet the scheme benefits payable. They should also consider some form of trustee liability insurance.

Recommendation 9:

tPR should incorporate enhanced bulk buy-ins in its Trustee Knowledge & Understanding (TKU) course and on the website in general. The information should also be made available via links from the FCA and PRA websites.

It's not just trustees who require a high level of knowledge and understanding. This point equally applies to employers and to the advisers they and the trustees appoint for a BPA exercise. Moreover, given that insurers' appetite for enhanced

BPA – initially at least – is focused on smaller company schemes, where local and regional advisers might be involved, it is essential that these firms have access to the expertise required to transact secure deals in a market that is complex and changing. Without this expertise there is a greater likelihood of deals failing or being transacted in a sub-optimal manner.

Recommendation 10:

The industry should work with the regulators to produce a dedicated trustee and employer guide to enhanced bulk buy-ins. This should build on the existing ABI/NAPF guide and be updated annually to incorporate emerging data and case studies. All advisers – particularly the smaller firms – require access to a source of impartial information and guidance.

5. Conclusions and Next Steps

We hope that this report will stimulate debate among all stakeholders in the de-risking market and that it will help to foster an efficient and transparent market that will ensure access to more affordable bulk buy-ins for trustees and employers through the application of medical underwriting techniques.

As with any new market that involves complex underwriting techniques, we believe that it is essential for the industry and regulators to work together to ensure trustees, corporate sponsors and scheme members are fully protected from the perceived and potentially unforeseen consequences of transactions that are intended to lead ultimately to a full buy-out.

In due course, we expect to see the enhanced bulk buy-in market expand as new and existing players develop medical underwriting expertise for schemes of all sizes and not just the smaller schemes targeted initially by the current participants. In due course, we also anticipate that there might be acquisitions among insurers, as major players seek to acquire the medical underwriting expertise they require to compete. The potential for instability in the market, therefore, is significant.

For the market to gain the confidence of trustees and employers and to meet what we expect to be a rapidly growing demand, we have made two key recommendations. The first is that the regulators collaborate to ensure that the shared territory between tPR, the FCA and the PRA is governed with consistency and rigour in relation to pensions and insurance law. This might require government oversight. We suggest that the days when the DC and DB markets operated as discrete entities are long gone and that the introduction of medically underwritten bulk annuities is just the latest in a series of emerging areas of concern, where the boundaries between what was once an institutional/retail divide have become porous.

The second key recommendation – to develop a code of practice for enhanced bulk buy-ins – requires the collaboration of all stakeholders, in particular, the insurers, the consultants, the reinsurers, the insurance company analysts, and the pension lawyers. This follows naturally from our first recommendation, which deals with the potential problems that can arise where trust and contract law interact in a new multi-billion pound market and where at stake is the future of the private sector employers currently burdened with DB scheme deficits.

To take these recommendations forward, the Pensions Institute proposes to facilitate the initial discussions between the government, the regulators, and all interested stakeholders through a series of industry debates and the formation of a working group and steering committee to develop the code of practice. In the meantime, we welcome your feedback to this report.

Debbie Harrison (dr.debbie.harrison@gmail.com)
and David Blake (d.blake@city.ac.uk)

Glossary Of Terms

Bulk buy-in (conventional): Trustees buy a bulk annuity policy from an insurer, as an asset of the scheme, to provide a 'shadow' payroll or payment facility that matches exactly the retirement incomes of the designated pensioner section (bulk buy-ins normally only cover pensioners in the scheme). The exercise provides a complete hedge for interest rates, inflation, the potential shortfall in yield on pension scheme assets, and the cost of insuring longevity risk. The bulk annuity is held in the trustees' names on behalf of the scheme. The insurer might take on responsibility for administration of the members and their benefits, but, more typically, this remains with the scheme. As with a bulk buy-out, a single exercise can accommodate all pensioners, or the trustees might arrange a series of transactions to deal with different tranches of retired members.

Bulk buy-in (enhanced): As per the conventional bulk buy-in, but here the trustees buy a bulk annuity, as an asset of the scheme that reflects the health and lifestyle of individual pensioners. The medical underwriting might relate to all of the pensioners or only to the high-liability members, in which case the rest of the members are underwritten on standard terms by the same insurer. By taking member-specific mortality assumptions into consideration, the cost of the enhanced bulk buy-in might be considerably lower than the bulk standard annuity.

Bulk buy-out: The pension scheme – which is almost always closed to both new members and future accrual – transfers (and discharges responsibility for) the scheme's entire liability for benefit payments in relation to a group of scheme members, usually complete schemes, including deferred pensioners and pensioners. In return for receiving a fixed sum or premium from the pension scheme, the insurer issues individual annuity policies for the designated members. These members cease to be beneficiaries of the scheme because benefits are secured in full under the insurance policies. The pension trust remains in place for any remaining scheme members. The bulk buy-out can accommodate all pensioners in a single exercise or the trustees can arrange a series of transactions to deal with different tranches of pensioners.

Deferred annuities: The trustees pay a premium to secure a guaranteed annuity rate for members when they reach the normal retirement age (as defined by the pension scheme benefits). However, members retain the option to select early or late retirement, to commute part of their pension for a tax-free lump sum at retirement, and to transfer their benefits to an alternative pension arrangement.

Enhanced transfer value (ETV): An ETV allows deferred members to transfer out of the scheme in exchange for a statutory amount plus an enhancement in respect of the pension given up, usually funded by the employer. ETVs are covered by the June 2012 code of practice on incentive exercises that resulted from a government-led industry initiative.²⁶

Longevity swap: The pension scheme pays a fixed set of cash flows to the counterparty, based on the projected mortality rates for the designated scheme members (where the projections are made at the start of the swap). In return,

²⁶ <http://www.incentiveexercises.org.uk>

it receives cash flows based on realised mortality rates (with reference to either named scheme members or a wider population) at the time the cash flows take place. The objective is to match as closely as possible the cash flows the scheme receives from the counterparty with the required pensioner payments. A perceived attraction of swaps is that they enable schemes to hedge risk without the capital investment involved in the purchase of a bulk buy-out or bulk buy-in. The strategy, which was first used in 2008, is considered suitable for larger schemes, with typical deals representing liabilities of about £1bn. Scale is important, due to the complexity of contract terms, which can be expensive to negotiate and sustain, together with the counterparty's requirement for robust historical longevity data for risk assessment purposes, among other factors. However, it should be noted that one major insurer is thought to be able to offer longevity swaps for much smaller deals. With regards to interest rate and inflation rate swaps, these are viable for well below £1bn of liabilities and are potentially available to relatively small sizes of liabilities through pooled LDI (liability-driven investing) investments.

Pension Increase Exchange (PIE): A PIE exercise can be undertaken for scheme members where their pensions are already in payment and where they remain members of the scheme. A PIE gives pensioner members the option to exchange their non-statutory pension increases for a higher immediate income that is not inflation-linked. In theory, a PIE can be of significant benefit to members in poor health, where the higher immediate income is of more value than future increases. For the scheme, PIE exercises can help to simplify complex and variable indexation rights, such as Limited Price Indexation, which can be expensive to match with a bulk annuity due to the lack of a perfect hedging instrument. It is thought that PIE exercises can reduce the cost of a bulk buy-in. PIE exercises involve impartial advice or guidance to the individual member to ensure that the indexation exchange terms are fair and that the decision is fully understood. PIEs are classed as 'modification' exercises in the June 2012 code of practice on incentive exercises.

Total Pension Increase Exchange (TPIE): A TPIE is an exercise offered to scheme members who are not yet in receipt of a pension, and are typically aged 55-65 (55 being the earliest age when a pension can be paid via an individual annuity; 65 being the typical normal scheme pension age). TPIE exercises give non-pensioner members in this age bracket the option to take an early retirement pension, usually by transferring the value of their pension to secure an immediate annuity in the shape and form that the member desires. Medical underwriting can result in an enhanced level of income for the member as well as the choice of income shape which might, for example, exclude a spouse's pension where the member is unmarried. The scheme benefits from the transfer of the member's liability to an insurance company. All transfers out of a scheme require the member to receive impartial advice. TPIEs are covered by the June 2012 code of practice for incentive exercises.

Vesting arrangements: Here trustees secure annuity premiums in advance of the date deferred members reach retirement. The rates are based on socio-demographic assumptions that will enable future retirees to be accommodated by the buy-in provider. This is a vesting arrangement to secure tranches of members under buy-ins in the future, 'mopping up' retirees when there is sufficient economies of scale to do so, but, as with much of the pricing basis, locked down with the insurer upon signing the initial agreement, leaving primarily the discount rate underlying the pricing as the only variable to be decided at the time.

Acknowledgements

Aon Hewitt
Association of British Insurers
Aviva
B&CE
BDO
BESTrustees
Buck Consultants
Capita
Cazalet Consulting
Financial Services Authority
Grant Thornton
Hannover Re
Hymans Robertson
JLT
Just Retirement
KPMG
Lane Clark & Peacock
Legal & General
Mercer
MetLife
Oval Pensions Solutions
Pacific Life Re
Partnership
Penfida Partners
Pitman Trustees Limited
Rothesay Life
The Pensions Regulator
Towers Watson

Sponsor Statement by Partnership Assurance



Partnership is delighted to co-sponsor the Pensions Institute report 'A healthier way to de-risk: The introduction of medical underwriting to the defined benefit de-risking market' having pioneered the development of the enhanced buy-in market in the UK.

Partnership is a specialist provider of financial solutions for people with health and lifestyle conditions, as well as those suffering from a serious medical impairment. To date, our primary focus has been impaired and enhanced annuities.

Through individual underwriting Partnership is able to offer those with a reduced life expectancy an increased income in retirement. With research showing that more than 50% of people at retirement are able to qualify for an enhancement, this is a market that has experienced considerable growth in recent years.

Partnership is an expert in the field of medical underwriting and believes that the in-house data set it has accumulated over 17 years is market leading.

Partnership believes that its years of accumulated data and knowledge give it an unrivalled understanding of the impact of health and lifestyle choices on longevity. This is critical to our success and enables us to make accurate estimates in relation to life expectancy. Partnership is one of the fastest growing UK insurers, as evidenced by being Number 1 in both the 2011 Sunday Times HSBC Top Track 250 annual league table and the 2012 Sunday Times Deloitte Buyout Track 100.

Our most recent development is in the area of defined benefit de-risking. This is particularly the case for smaller company pension schemes, which traditionally have had limited access to de-risking solutions, where we have been able to demonstrate how the cost of insuring liabilities can be reduced by taking into account the specific health and lifestyle of individual members.

We believe this report will be an important step in helping to build awareness of the innovation taking place in respect of enhanced de-risking. We welcome the proposal around the development of a code of practice and look forward to working with key stakeholders across the market to establish how individual underwriting can be embedded into de-risking exercises.

Sponsor Statement By JLT Pension Capital Strategies



JLT Pension Capital Strategies (JLT PCS) is pleased to co-sponsor this report which examines the development of the enhanced buy-in market and the associated implications.

JLT PCS has a long and well-established reputation for guiding clients with defined benefit pension schemes through de-risking transactions, from the initial contact with insurers, to negotiating terms and the signing of contracts and placing business with all major buy-in/buy-out providers. Our team has completed in excess of 50 buy-in and buy-out transactions, ranging in size from below £1m to in excess of £500m, covering deal structures from conventional bulk annuities to fully bespoke de-risking solutions.

The bulk annuity market continues to evolve and develop; we see underwritten (enhanced) bulk annuities as an important step forward for smaller pensioner buy-in transactions, by which we mean transactions involving up to 400 pensioner members.

In 2012 the first two insurers to formally enter the enhanced bulk annuity marketplace were first Partnership Assurance, early in 2012, and then Just Retirement, towards the end of 2012. These new entrants to the buy-in market bring a refined approach to the pricing of risk and, importantly, they bring additional capacity for deals to be written, which should enable the market to continue to expand and develop.

Importantly, due to the underwriting processes deployed by these new entrants, together with the potential for further new entrants which may adopt alternative processes, a new way of managing and running the competitive broking process will need to be developed in order to ensure an efficient and effective bulk annuity exercise is carried out on behalf of pension scheme trustees and sponsors.

We believe this report represents the catalyst for the drive towards these new broking processes.

JLT PCS looks forward to supporting the future development of a code of best practice for this market.

About the Pensions Institute

The objectives of the Pensions Institute are:

- to undertake high quality research in all fields related to pensions
- to communicate the results of that research to the academic and practitioner community
- to establish an international network of pensions researchers from a variety of disciplines
- to provide expert independent advice to the pensions industry and government.

We take a fully multidisciplinary approach. For the first time disciplines such as economics, finance, insurance, and actuarial science through to accounting, corporate governance, law and regulation have been brought together in order to enhance strategic thinking, research and teaching in pensions. As the first and only UK academic research centre focused entirely on pensions, the Pensions Institute unites some of the world's leading experts in these fields in order to offer an integrated approach to the complex problems that arise in this field. The Pensions Institute undertakes research in a wide range of fields, including:

Pension microeconomics

The economics of individual and corporate pension planning, long term savings and retirement decisions.

Pension fund management and performance

The investment management and investment performance of occupational and personal pension schemes.

Pension funding and valuations

The actuarial and insurance issues related to pension schemes, including risk management, asset liability management, funding, scheme design, annuities, and guarantees.

Pension law and regulation

The legal aspects of pension schemes and pension fund management.

Pension accounting, taxation and administration

The operational aspects of running pension schemes.

Marketing

The practice and ethics of selling group and individual pension products.

Macroeconomics of pensions

The implications of aggregate pension savings and the impact of the size and maturity of pension funds on other sectors of the economy (e.g. corporate, public and international sectors).

Public policy

Domestic and EU social policy towards pension provision and other employee benefits in the light of factors such as the Social Chapter of the Maastricht Treaty and the demographic developments in Europe and other countries.

Research disseminated by the Pensions Institute may include views on policy but the Pensions Institute itself takes no institutional policy positions. For more details, see: [pensions-institute.org](https://www.pensions-institute.org)

Previous Pension Institute Reports



'Delivering DC? Barriers to participation in the company-sponsored pensions market', by Debbie Harrison, Alistair Byrne, and David Blake, October 2004.

'Pyrrhic Victory? The unintended consequences of the Pensions Act 2004', by Debbie Harrison, Alistair Byrne, Bill Rhodes and David Blake, October 2005.

'Annuities and Accessibility: How the industry can empower consumers to make rational choices', by Debbie Harrison, Alistair Byrne and David Blake, March 2006.

'Dealing with the reluctant investor: Innovation and governance in DC pension investment', by Alistair Byrne, Debbie Harrison and David Blake, April 2007.

'An unreal number: How company pension accounting fosters an illusion of certainty', by David Blake, Zaki Khorasanee, John Pickles and David Tyrrall, January 2008.

'And death shall have no dominion: Life settlements and the ethics of profiting from mortality', by David Blake and Debbie Harrison, July 2008.

'Ending compulsory annuitisation: What are the consequences?', by David Blake, Edmund Cannon and Ian Tonks, July 2010.

'Ending compulsory annuitisation: Quantifying the consequences?', by David Blake, Edmund Cannon and Ian Tonks, September 2010.

'Caveat Venditor: The brave new world of auto-enrolment should be governed by the principle of seller not buyer beware' by Debbie Harrison, David Blake and Kevin Dowd, October 2012.

'An evaluation of investment governance in London Local Government Pension Schemes: A discussion paper for stakeholders to the London Funds', by David Blake and Debbie Harrison, November 2012.