



*Are we at the  
tipping point?*

**LCP pensions de-risking report:  
Buy-ins, buy-outs and longevity swaps**  
March 2019

# Welcome to our twelfth report on the buy-in, buy-out and longevity swap market in the UK.

We explore the opportunities available to trustees and sponsors looking to transfer the risks associated with defined benefit pension plans to an insurance company.

## LCP achievements over 2018:

- Lead adviser on ten buy-ins and buy-outs over £100m
- Lead adviser on Phoenix Life's first ever external transaction (£470m with the M&S Pension Scheme)
- Lead adviser on transactions with all eight of the bulk annuity insurers in the market
- Lead adviser on largest ever buy-ins for Scottish Widows (£880m) and Aviva (£925m)

### LEAD ADVISER TABLE

Number of buy-in/buy-outs over £100m

| Lead adviser         | 2014      | 2015      | 2016      | 2017      | 2018      | Total      |
|----------------------|-----------|-----------|-----------|-----------|-----------|------------|
| LCP                  | 12        | 6         | 12        | 13        | 10        | 53         |
| Aon                  | 2         | 3         | 5         | 4         | 11        | 25         |
| Mercer               | 4         | 5         | 2         | 5         | 5         | 21         |
| Willis Towers Watson | 0         | 0         | 0         | 5         | 3         | 8          |
| PWC                  | 0         | 1         | 1         | 3         | 2         | 7          |
| KPMG                 | 1         | 1         | 0         | 0         | 3         | 5          |
| Hymans Robertson     | 0         | 0         | 3         | 0         | 2         | 5          |
| Other advisers       | 2         | 2         | 0         | 1         | 2         | 7          |
| Not in public domain | 0         | 1         | 1         | 4         | 6         | 12         |
| <b>Total</b>         | <b>21</b> | <b>19</b> | <b>24</b> | <b>35</b> | <b>44</b> | <b>143</b> |

Source: Insurance company data.

*LCP is proud to have won 9 out of 13 pensions industry de-risking adviser awards since 2011, recognising how we lead the market in helping our clients to plan, negotiate and execute successful de-risking transactions.*

For further information about LCP's buy-in, buy-out and longevity swap expertise please contact Clive Wellsteed, or the LCP partner who normally advises you. For printed copies of the report, please contact the LCP marketing team on +44 (0)20 7432 6710 or email [enquiries@lcp.uk.com](mailto:enquiries@lcp.uk.com).

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The purpose of the report is to highlight the current activity and opportunities in the buy-in, buy-out and longevity swap market. This report and the information it contains should not be relied upon as advice from LCP. Specific professional advice should be sought to reflect an individual pension fund's circumstances. View a full list of our services at [www.lcp.uk.com](http://www.lcp.uk.com)

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## *Have we reached a tipping point?*

*So far, insurers have kept up with surging pension plan demand. 2019 will test this to the limit as demand builds further.*



*Clive Wellsteed*  
Partner and  
Head of Practice

## *Welcome to LCP's twelfth report on the buy-in, buy-out and longevity swap market.*

2018 was a record breaking year, with buy-in and buy-out volumes exceeding all previous records driven by exceptional insurer pricing and a slowdown in longevity improvements.

But has the market reached a tipping point?

With an increasing queue of transactions, a key question is whether pension plan demand could outstrip the available insurance capacity for the first time in 2019?

We explore this question on pages 10 to 14, where we consider the key drivers for pension plan demand, such as improved affordability. Our analysis of FTSE 100 company pension plans on pages 13 and 14 shows how the average FTSE 100 UK pension plan has seen their position develop over recent years, and the extent to which this trend may continue looking forward.

In considering the other side of the equation, on pages 15 to 18, we have commented on the constraining factors on insurance capacity, supported by the results of our surveys with the insurers and reinsurers in this market.

At the end of 2018 we also asked pension plans for their opinion on the future of the pension de-risking market, and how current trends on longevity improvements and pension scheme consolidators are likely to develop. The insights from this survey can be found throughout the report.

We are proud of the innovative work we have done over the year helping pension plans develop their de-risking strategy. You can read about how a number of LCP client case studies throughout the report including how we helped Littlewoods, M&S and PA Consulting.



*Charlie Finch*  
*Partner*  
*Author of report*



*Imogen Cothay*  
*Senior Consultant*  
*Author of report*

# 2019 report at a glance

## Buy-in and buy-out volumes exceed £20bn for the first time – is this the new norm?



See page 24

## Affordability hits record levels

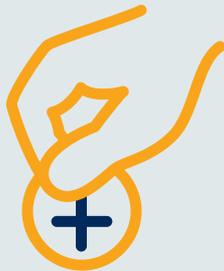
Over the past two years, the average FTSE 100 pension plan has seen their buy-out funding position improve by 10%.



See page 13

## Buy-in pricing continues at attractive levels into 2019

Innovation in insurer asset sourcing and heavy mortality experience has driven pensioner buy-in pricing to its most attractive levels since before the 2008 banking crisis.



See page 12

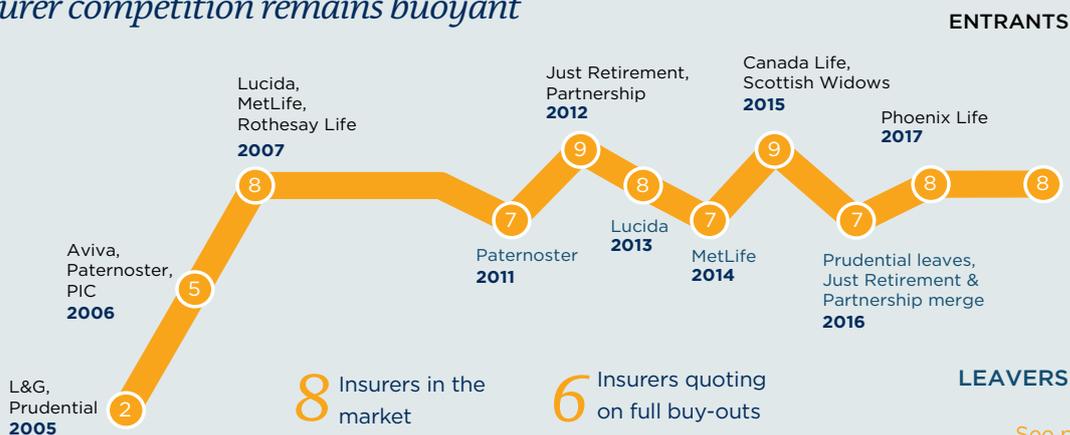
## End-game is now in sight

Over the next 10 years, 75% of the pension plans we surveyed expect to reach their long-term goal.



See page 11

## Insurer competition remains buoyant



See page 25

### Insurers are increasingly innovating on asset sourcing

Over the past year, five of the eight insurers have reduced their holdings in gilts and corporate debt in favour of illiquid investments.



See page 16

### Life expectancy is no longer increasing

2018 saw the highest number of deaths in nearly two decades.



See page 29

### A slow-down in longevity improvements is set to continue into the future

Over 50% of the pension plans we surveyed predict that a slow-down in longevity improvements is the new norm.



The re-insurers we surveyed shared this viewpoint

See page 32

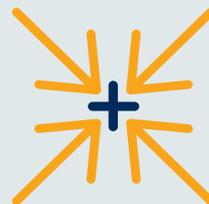
### The biggest risk to UK reinsurance longevity capacity is an increase in demand from overseas



All except one of the six reinsurers we surveyed agreed that a continued increase in longevity appetites from US pension plans in particular could reduce their capacity for UK longevity risk.

See page 17

### DB consolidators set to provide fresh competition to insurers?



Around 50% of pension plans we surveyed would consider DB consolidators as an option either now or in the future, although most would not want to be a first mover.

See page 26



「*Have we reached  
a tipping point?*」

*The tipping point is in sight.  
Increasing demand from pension  
plans is close to being in balance with  
insurer capacity and this is changing  
the market dynamics.*



*Charlie Finch  
Partner*

## Have we reached a tipping point?

*The improved pricing, increased affordability and overall market momentum has generated a record queue of schemes lining up to complete transactions in 2019.*



**Myles Pink**  
Partner

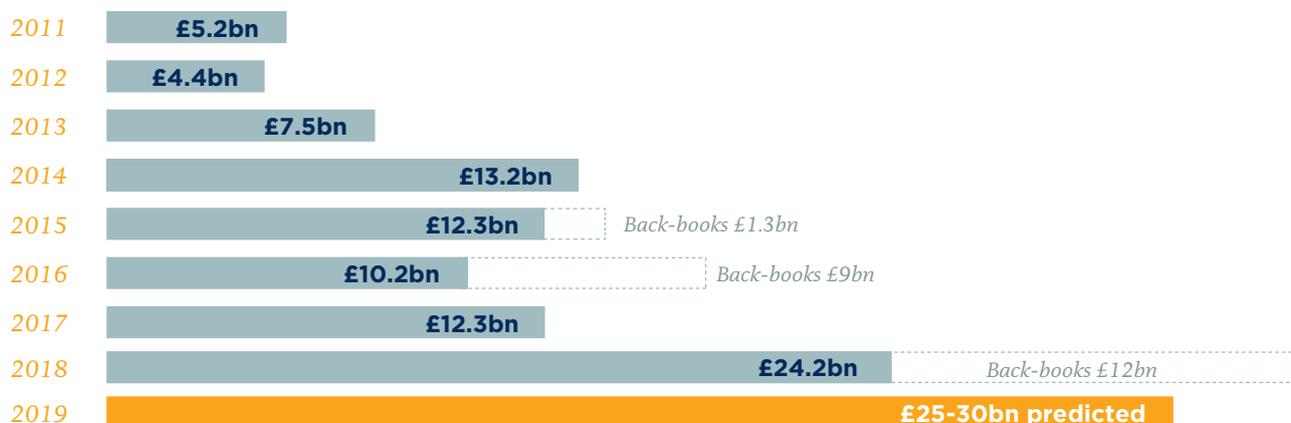
2018 has been an exceptional year. Volumes of buy-ins and buy-outs in 2018 have exceeded all previous records and high-profile companies such as British Airways and Marks & Spencer have completed significant transactions.

**See page 24 for our review of 2018.**

With all insurers gearing up to meet increasing demand from pension plans, we have seen insurer capacity expanding strongly. This dynamic has contributed to arguably the best insurer pricing in 10 years, meaning that 2018 has provided a perfect backdrop for pension plans seeking to de-risk. **See page 12 for current buy-in pricing.**

The improved pricing, increased affordability and overall market momentum has generated a record queue of pension plans lining up to complete transactions in 2019.

### Market activity: Buy-in, buy-out and annuity back-book volumes



Over the coming pages, we seek to address whether we have now reached the tipping point in the market, as we examine the dynamics behind the demand from pension plans and available insurer capacity.

### Insurer views

All insurers expect buy-in and buy-out volumes for 2019 to be at least as high as those in 2018.

**See Appendix 5 for details of how we collected the insurers' views.**



*The pipeline of deals coming to market in 2019 is now over £50bn, far busier than it has ever been before.*

**Tom Ground**  
Managing Director  
Aviva

## Have we reached a tipping point?

continued

### Views from pension plans, insurers and reinsurers

We have sought views from market participants – both the insurers active in the market and the reinsurers taking on longevity risk from the insurers – and sought views from pension plans on their attitude towards de-risking and how they expect their strategy to develop over time. These views are set out throughout this report. Further details on how these views have been collected are set out in Appendix 5.

### Over the coming years we expect a dramatic increase in demand

Nearly half of pension plans we surveyed stated that their ultimate goal, where one existed, was to buy out their pension plan with an insurer – thereby removing all pension risk. For those pension plans not targeting buy-out, buy-ins can be an effective component of a plan's self-sufficiency solution.

For most pension plans that have been targeting buy-out, they have been many years away from achieving that target. This is now changing with a number of pension plans now within a relatively short period of achieving their long-term objective, driven by the significant improvement in affordability over the past two years.

**We explore on page 13 how buy-out affordability has increased over the past two years.**

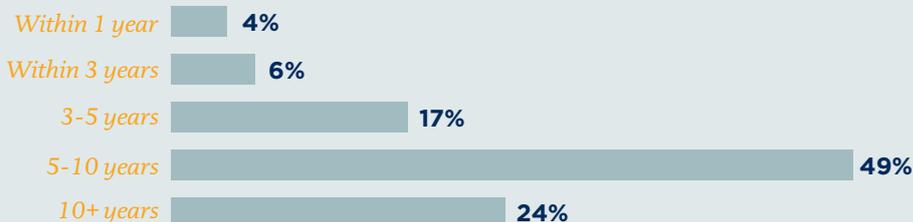
The volume of full buy-outs tripled from £3bn in 2017 to £9bn in 2018 – PA Consulting and Rentokil Initial were both able to transfer their pension plans in full to an insurer in 2018 without needing to pay any additional cash. Up until now, such full buy-outs have been relatively rare – particularly for large schemes. We expect full buy-outs to become the norm over the next few years as it becomes an established market practice. Buy-ins will continue to be popular but the growth in full buy-outs will drive a marked year-on-year increase in demand for insurance capacity.

*Most pension plans are on the path to buy-out and it is just a matter of timing as to when they achieve this.*

**Jay Shah**  
Chief Origination  
Officer  
Pension Insurance  
Corporation

### Pension plan view

When do you expect your pension plan to reach full buy-out / a self-sufficient position?



*Over 25% of the pension plans we surveyed expect to reach their long-term objective within the next five years.*

## Have we reached a tipping point?

continued

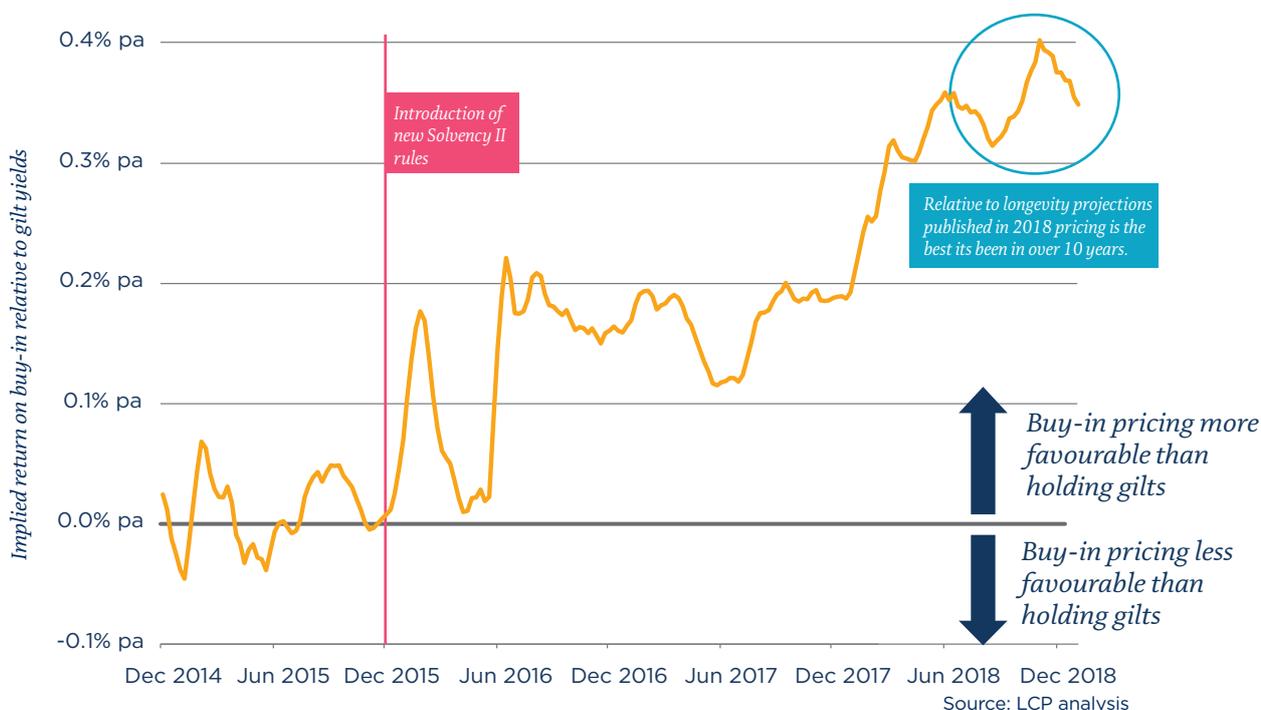
### Pensioner buy-in pricing reached record levels in 2018

The dramatic expansion in pensioner buy-ins over the past few years has been driven by the attractive value-for-money they offer compared to alternative low-risk investments.

The chart below shows typical pensioner buy-in pricing over time expressed as an implied return compared to the yield available from holding gilts and adopting recent longevity assumptions in their liability calculations. Where buy-in pricing is above the zero line, a pension plan can typically increase its expected investment returns by exchanging gilts for a buy-in. As such, this is a key benchmark for assessing the value offered by a pensioner buy-in.

The chart shows that currently a pensioner buy-in locks into an investment return of over 0.3% pa above the yield on gilts for a typical pension plan. By exchanging gilts for a buy-in, a pension plan can improve its funding position and reduce risk.

See page 16 for details of how insurers optimise their investment strategies.



Over 2018 pensioner buy-in pricing reached its most attractive levels since before the 2008 banking crisis. The biggest driver of insurer pricing is the investment yield relative to swaps that the insurer is able to obtain on the assets it purchases to meet the buy-in liabilities. Since the introduction of Solvency II in 2016, when the rules changed about the assets insurers can hold, they have been increasingly optimising their investment strategies and moving away from corporate bonds into other debt-like assets that offer high risk-adjusted returns. In addition, the increasing evidence of slowdown in longevity improvements has contributed to big reductions in pricing, as price competition has forced insurers to strip out caution in their assumptions.

Insurers have focussed on optimising their underlying asset strategies to improve the pricing they can deliver.



David Salter  
Partner

## Have we reached a tipping point? continued

### Affordability hits record levels driving increased demand

A key driver of demand for buy-ins and buy-outs is affordability.

The average FTSE 100 company has seen affordability for a buy-out increase by over 10% over the last two years. This improvement has been driven by stalling life expectancies, good asset performance and competitive insurer pricing. The chart below shows the average funding level of the UK pension plans of the FTSE 100 over the past six years as measured relative to the estimated cost of full buy-out with an insurance company.

The improvement in buy-out funding means that the aggregate funding shortfall of the FTSE 100's UK pension plans has reduced by 30% to c£200bn in the past two years relative to the cost of buying out with an insurer.



Source: LCP analysis of the estimated buy-out funding levels for the FTSE 100 UK pension plans, based on pension disclosures in company annual reports and the constituents of the FTSE 100 at 30 November 2018.

in a little over two years, the average FTSE 100 pension plan has seen their buy-out funding position improve by over 10%.



Ken Hardman  
Partner

### What's the difference between a buy-in and a buy-out?

All buy-outs start as a buy-in. In a buy-in, the pension plan uses its assets to purchase a bulk annuity policy for some, or all, of its members. The insurer pays the monthly payroll directly to the pension plan. A buy-in can be converted into a buy-out, normally at no additional charge. The insurer then pays the pensions direct to the individuals, who cease to be members of the pension plan.

## Have we reached a tipping point? continued

### Full buy-outs set to become commonplace

To date few companies with large pension plans have chosen to move their pension plans in their entirety to an insurer through a full buy-out, focusing instead on buy-ins as a more affordable first step. So far, although nearly a quarter of the FTSE 100 have carried out pensioner buy-ins, the total volume of full transfers of FTSE 100 companies' UK pension plans to insurers currently amounts to no more than £5bn out of nearly £800bn of legacy pension liabilities across the FTSE 100.

With affordability improving there are already clear signs of an acceleration in FTSE 100 companies transferring their UK defined benefit pension plans through a full buy-out. We estimate that five FTSE 100 companies have already either closed the shortfall in assets to full buy-out or are not

far away from doing so. A recent example was Rentokil Initial which announced a £1.5bn full buy-out in December 2018.

How quickly FTSE 100 companies will be able to close the remaining shortfall to full buy-out depends on the extent to which buy-out pricing remains at current levels, whether current significant pension contributions continue and the future investment performance of their pension plan assets.

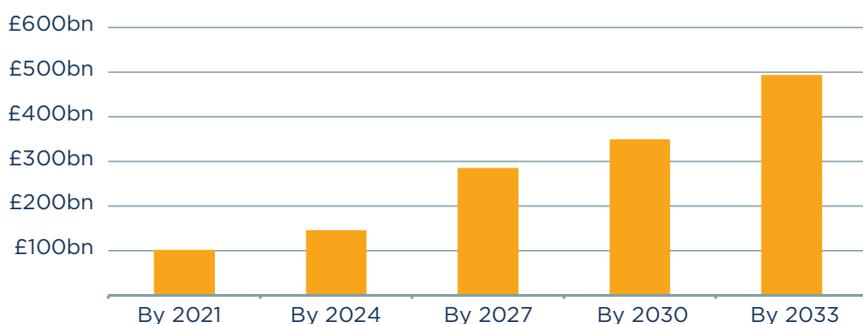
If current deficit contribution levels of c£7bn per year continue, there will likely be a huge increase in FTSE 100 companies who can afford to remove their pension obligations through a full buy-out transaction. The chart below shows the volume of pension liabilities that we project will reach full funding on buy-out over the next 15 years if current pricing and deficit contribution levels continue.

Over the next 10 years there could be as much as £300bn of liability from the FTSE 100 which reaches full buy-out funding.



David Stewart  
Partner

### FTSE 100 UK pension plans reaching full funding on buy-out



Source: LCP analysis of the estimated buy-out funding levels for the FTSE 100 UK pension plans, based on pension disclosures in company annual reports and the constituents of the FTSE 100 at 30 November 2018.

Even if FTSE 100 companies agree with their trustees to reduce deficit contributions to zero on the back of improved funding levels, we still project over £100bn of liability reaching full buy-out funding over the next 10 years if current pricing levels continue.

These figures are material in the context of the volume of full buy-out business seen in recent years. In 2018, over £9bn of full buy-out business was written, with full buy-outs representing broadly 40% of the total volume for the year. With the trends explored above for the FTSE 100 playing out in pension plans of all sizes, we anticipate that over the coming years we will see a significant increase in the demand for full buy-out transactions.

Furthermore, whilst many pension plans will focus on self-sufficiency – particularly those with suitable scale – many others will choose to move to full buy-out as this becomes in reach. Indeed, as full buy-outs become commonplace we suspect that a number of pension plans currently targeting self-sufficiency will choose instead to move to full buy-out should the opportunity arise.

## Have we reached a tipping point? continued

### Can insurer capacity keep up with demand?

We expect demand for buy-ins and buy-outs to continue to increase over the coming years. So the key question is whether insurer capacity can keep pace with demand without putting upward pressure on pricing. In our view, there are four main potential constraints on the ability of insurers to offer competitive pricing.



**Availability of capital**



**Availability of suitable investments**

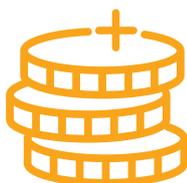


**Longevity reinsurance capacity**



**Operational capacity**

Over the next three pages we consider each of these in turn.



#### Availability of capital

Insurers typically hold excess capital above their statutory reserves so they can report strong capital ratios and provide security to policyholders. Under the regulatory regime, whenever an insurer writes a buy-in or buy-out they use some of their excess annuity fund assets (in addition to the premium received) to establish capital reserves for the newly insured liabilities – commonly described as new business strain.

This means buy-ins and buy-outs tend to be more capital intensive than other business lines. Insurers therefore set their growth plans taking into account the availability of capital in the annuity fund to support new business strain whilst maintaining strong capital ratios.

#### How insurers fund their capital

- 1 Release of reserves from back-books (the main source of capital for established insurers)
- 2 Raising new equity or debt (typically by growing insurers)



*In order for market volumes to increase, insurers will need to raise new capital through equity or debt*



**David Fink**  
Partner

Given the significant volume of available investment in global markets we don't anticipate insurer capacity being limited due to capital availability. The specialist insurers now have established track-records of raising capital and significant back-books which release reserves to support new business. Over the past two years insurers have benefited from such releases in reserves arising from lower future mortality projections. However, all the insurers would need to raise more capital to write significantly higher volumes.



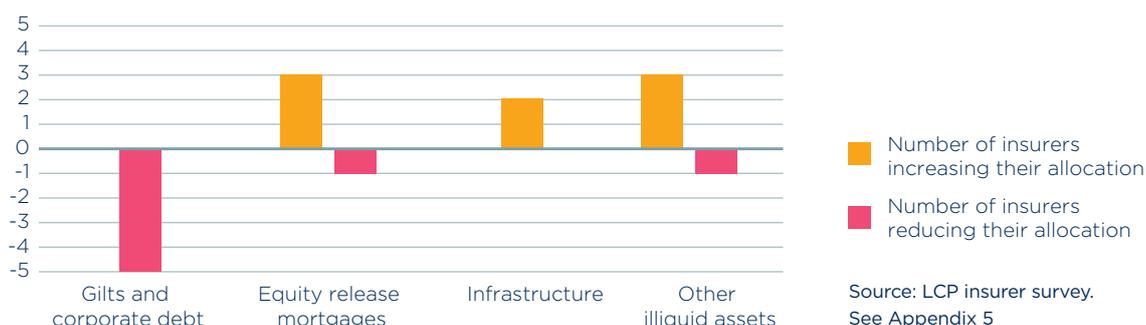
### Availability of suitable investments

The biggest driver of insurer pricing is the risk-adjusted yield the insurers can obtain on the assets in which they invest to support the pensions they insure. The higher the risk-adjusted yield, the lower the price they can offer.

Since Solvency II came into force in 2016, insurers have been innovating and optimising their investment strategies under the new regime. A key element of this has been an increasing move away from investment grade UK corporate bonds into other higher-yielding and less liquid assets. One such example is long-term infrastructure debt which can be low-risk, as it is typically secured debt, but has relatively attractive yields because it is illiquid. Other assets employed by insurers include equity release and securitised loans.

The chart below summarises how key asset allocations have changed over the past year for the annuity funds of the eight bulk annuity insurers.

### How insurers have changed their investment strategy over 2018



This demonstrates the increasing move into illiquid assets in place of traditional UK corporate bonds where yields were lower over 2018. However for the time being most insurers back-book portfolios continue to be invested primarily in gilts and corporate bonds.

Looking forwards, there is a limited pool of suitable assets to support pricing at current attractive levels and the insurers have growing teams dedicated to sourcing assets and innovating in this area. To date there have been no signs of upward pressure on pricing from available yields being diluted. Overall, we believe that the biggest constraint to the future development of the buy-in and buy-out market will be the ability of insurers to source sufficient assets at an attractive yield to support current pricing levels.

*We look across a wide range of long duration asset opportunities to support our business and remain competitive. Whilst we can see short-term opportunities, looking three to five years ahead is less clear. We anticipate insurers will increasingly invest outside of the Sterling area and develop further investments in private markets.*

**Rob Mechem** Head of DB Business Development, JUST

### Equity release – under scrutiny in 2018

Equity release (also known as lifetime mortgages) investments have increasingly been used by insurers over the past three years as they achieve attractive risk-adjusted yields under Solvency II. Just Group has the highest allocation to equity release at over a third of their asset, but for other insurers the allocation is less than 20%. However, equity release has come under particular scrutiny over 2018 after the regulator launched a consultation process.

This focused on the no-negative equity guarantee (“NNEG”) typically included in equity release products, which expose investors to losses in the event of a significant downturn in the housing market. A key question is how much capital should insurers hold against the NNEG risk and therefore what yield is achieved on equity release after adjusting for this. Although the outcome of the consultation process was not as onerous as initially anticipated, this has highlighted the regulatory risk associated with some of the newer asset classes which insurers are moving into under Solvency II.



### Longevity reinsurance capacity

Currently the majority of insurers reinsure a high proportion of their longevity risk by passing this risk to reinsurers. To date the reinsurance market has been able to comfortably support existing volumes of buy-ins and buy-outs. Reinsurers report high levels of capacity so over the next few years longevity reinsurance capacity is unlikely to be a significant constraint on the development of the market. That said, reinsurers currently use longevity risk to offset mortality risk arising from historic life insurance business, particularly in the US, and that means capacity at current pricing levels is finite.

One of the biggest risks to longevity reinsurance capacity is the US de-risking market. North American reinsurers are attracted to the UK by its active longevity market. A growth in demand for longevity reinsurance overseas, particularly the US, could impact UK longevity risk pricing as the reinsurance capacity in the UK would consequently be diverted elsewhere.

### Reinsurer views

All of the reinsurers we surveyed believed that an increase in longevity opportunities overseas could reduce their capacity for UK longevity risk.



### Operational resource

Buy-in and buy-out quotations are labour-intensive, with processes involving multiple parties quoting for each transaction. With pension plan demand having increased significantly over recent years, a number of the insurers and reinsurers are already reaching their operational capacity limits.

Looking ahead, the number of buy-ins and buy-outs cannot increase significantly without a big increase in the number of experienced people employed, which will take time. In due course, technological advances may help reduce some of the work required but, in the short term, an uptick in activity is likely to see fewer insurers quoting on those transactions which they perceive as giving them a lower return for the resource they invest in producing quotes.

*Given the number of transactions coming to market it can be difficult to allocate resource to every opportunity we would like to.*

*Danielle Harrington*  
*Business Development*  
*Director*  
*RGA*

## Have we reached a tipping point? continued

### How will dynamics shift once the tipping point is reached?

The tipping point looks like it is now in sight, but we do not believe it has yet been reached. To date insurer capacity has kept pace with the increasing demand and pricing has remained attractive. We have however highlighted a number of constraints – such as the limited availability of suitable investments and the limited operational capacity to process higher numbers of transactions – these could start to bite if volumes continue to grow. Over the medium term we therefore expect to see upward pressure on pricing as these constraints start to bite.

So is a worsening in insurer pricing anticipated by pension plans? Based on our survey of pension plans the answer is no. Over 65% of the pension plans we surveyed believed that insurer pricing would either stay the same or improve over the next year. When we asked for views over a five-year time horizon this increased to nearly 80%.

#### Pension plan view

**If insurer pricing was expected to become 5% more expensive in the future, how might you react?**



32%

Consider deferring any insurance transactions until pricing levels have reduced

42%

Adjust timescales/contributions/investment strategy to target the higher pricing levels



26%

Not applicable, as not planning to use insurance

*With providers often competing for the same or similar assets in a finite asset pool, this could result in spread compression and upward pressure on premiums.*

*Justin Grainger  
Head of Bulk  
Purchase Annuities  
Phoenix Life*

Interestingly, when we asked pension plans how they would react if pricing increased by 5%, nearly half of pension plans intending to use insurance responded that they would defer any transaction until pricing improved. However, over half of pension plans intending to use insurance were willing to pay the higher price and would adjust their plans for the higher target. This suggests that if pricing was to increase materially then there would still be appetite from pension plans for buy-ins and buy-outs, but a significant proportion of the current appetite would fall away and the remaining pension plans would be likely to push back their de-risking plans as they reflected the reduced affordability.

Exactly where this supply and demand balance lies will doubtless play out over the coming years, but what is certain is that both pension plans and insurers will need to evolve their plans to cater for the changing dynamics in the market.

## Have we reached a tipping point? continued

### What should pension plans do?

With the supply and demand dynamics set to shift we asked the insurers for their top tips for pension plans which are starting their de-risking journey.

The biggest challenge will be gaining and holding insurer attention. Pension funds will need to do some thorough due diligence on their data and benefits to check for any execution issues and then come to market with experienced advisers and a well-developed transaction plan.

**Guy Freeman, Co-Head of Business Development, Rothersey Life**

Being well organised, realistic about what can be achieved, and having a clear plan of the steps towards any transaction will be important.

**Justin Grainger, Head of Bulk Purchase Annuities, Phoenix Life**

For smaller pension schemes in particular getting engagement from insurers in a busy market can be challenging. We are much more likely to allocate pricing resource where the de-risking adviser approaches a shorter list of insurers with clear price targets and highlights the quotation request well in advance.

**Emma Watkins, Director of Individual and Bulk Annuities, Scottish Widows**

If insurers have a good idea of the pipeline of deals early that gives them a better chance to line up capital and assets to cope with the demand. We'd recommend that trustees and sponsors engage with the bulk annuity market through their de-risking consultant early to show commitment.

**Uzma Nazir, Head of Origination Structuring, Pension Insurance Corporation**

Well prepared pension plans with a clear strategy and strong commitment from the sponsor will continue to be looked upon favourably by insurers.

**Ian Watson, Head of Retirement Income, Canada Life**

It is important for the trustee to demonstrate commitment to a transaction (e.g. cleansed data, reviewed benefit specification, clear timetable and governance, etc). We would expect feasibility exercises to be completed before bringing the scheme to the market.

**Prashant Mehta, Business Development Manager, JUST**

## *How the Littlewoods Pensions Scheme engaged with the market to achieve transaction success*



*In May 2018, the Trustee of the Littlewoods Pensions Scheme completed a pensioner buy-in of £880m with Scottish Widows. This successful transaction was the result of well-managed preparation to reach a clear objective. LCP was appointed in 2017 as specialist longevity de-risking adviser to lead the transaction.*

## Case study: Littlewoods continued

Appointing LCP was a key step in helping us demonstrate to the insurers that a transaction was viable. They worked collaboratively with our existing advisers to help us to prioritise the key preparatory steps to maximise engagement from insurers.



**John Ashworth**  
Trustee,  
Littlewoods Pensions Scheme

### Tell us about what the Trustee did and why?

- + The Trustee's strategic objective has long been to reach buy-out and we have planned our investment strategy with this in mind. As our funding position improved, it became clear that a pensioner buy-in would help us on our journey and establish relationships with insurers that would be important ahead of buy-out.

### Did you feel that the way you ran your process influenced the engagement and pricing you received from insurers? If so, can you describe what you did that gave you an edge?

- + The pricing for our buy-in exceeded our expectations and insurers have told us the way we approached the market really helped with this. We presented ourselves clearly and straightforwardly to insurers, with a focus on the strong governance process we put in place to allow us to move quickly if the pricing was competitive. Together with well-defined objectives, this gave the strong message to the insurers that we were serious about a transaction if the commercial proposals were compelling.

### What was your biggest learning point from the buy-in process or about the insurance market?

- + What struck me throughout the process were the operational constraints the insurers face in terms of pricing and quoting on each transaction presented to them. Whilst we were able to secure the interest of eight insurers in our process, I think that trustees should be prepared for a smaller number of insurers to participate when the market is busy. The key is to make sure these insurers are actively engaged by maintaining a close dialogue, running a fair process and following through if the insurer comes up with a proposal that meets or exceeds your transaction objectives.

### Any tips for others considering a buy-in?

#### Are there any traps that schemes could fall into?

- + My biggest tip is to focus on upfront preparation and concentrate on building relationships with the insurers ahead of approaching the market. LCP encouraged us to do this, both directly and alongside the LCP team. This will help the insurers to understand your strategy and objectives, and will position your scheme in the best possible light.

In terms of traps, the main one is not having a governance structure that allows you to move quickly or agreeing objectives with all key stakeholders up-front. If the insurers don't have confidence in this, then your transaction will slip down the list when the insurers are allocating their best pricing.

### Have you thought about when you might next use insurance? Can you give a flavour of the actions you are taking now?

- + We have been closing the gap towards our long-term objective of full buy-out and are concentrating on preparing for that transaction in each of the areas important to insurers. For example, we have reorganised some of our assets to ensure they are sufficiently liquid and are carrying out data cleansing of material items, including how to manage GMPs ahead of buy-out. We will complete these activities this year and are looking to target a full buy-out transaction in 2020.

# *Our review of 2018*

*In 2018 we saw a boom in transactions  
as the pensions de-risking market  
entered a new phase.*



*Imogen Cothay  
Senior Consultant*



# Market review for 2018

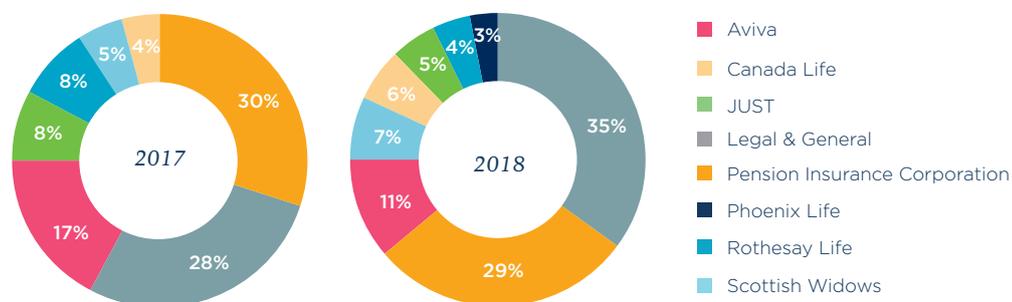
A record breaking year, with total volumes exceeding £20bn for the first time.



Emma Colpus  
Consultant

## Buy-in and buy-out volumes by insurer

Attractive pricing persisted throughout the year across all segments of the market indicating that capacity constraints have not yet been reached.



Source: Insurance company data. The full data is set out in the Appendices.

### Buy-ins/buy-outs

Total buy-in and buy-out volumes in 2018 reached a record breaking £24.2bn for the first time, significantly exceeding the previous record of £13.2bn set in 2014. In addition, there was a record “back-book” transaction – the £12bn annuity transfer from Prudential to Rothesay Life in March 2018. As this went to a single insurer, it did not noticeably reduce insurer capacity for pension plan business.

2018 saw the largest ever single transaction by a pension plan – a £4.4bn pensioner buy-in by one of British Airways’ pension plans with Legal & General. Legal & General also wrote the second largest transaction of the year, a £2.4bn PPF plus buy-out for the Nortel pension plan, making Legal & General the lead insurer for 2018 with a market share of 35%. Pension Insurance Corporation followed with a 29% market share.

All eight insurers actively participating in this market either retained their volumes of pension plan business from 2017 to 2018 or increased their volumes and are reporting strong appetite moving into 2019. Despite the large volume of business, a significant volume continued to be written right up to the end of 2018 on competitive pricing, indicating that insurer capacity constraints were not yet reached.

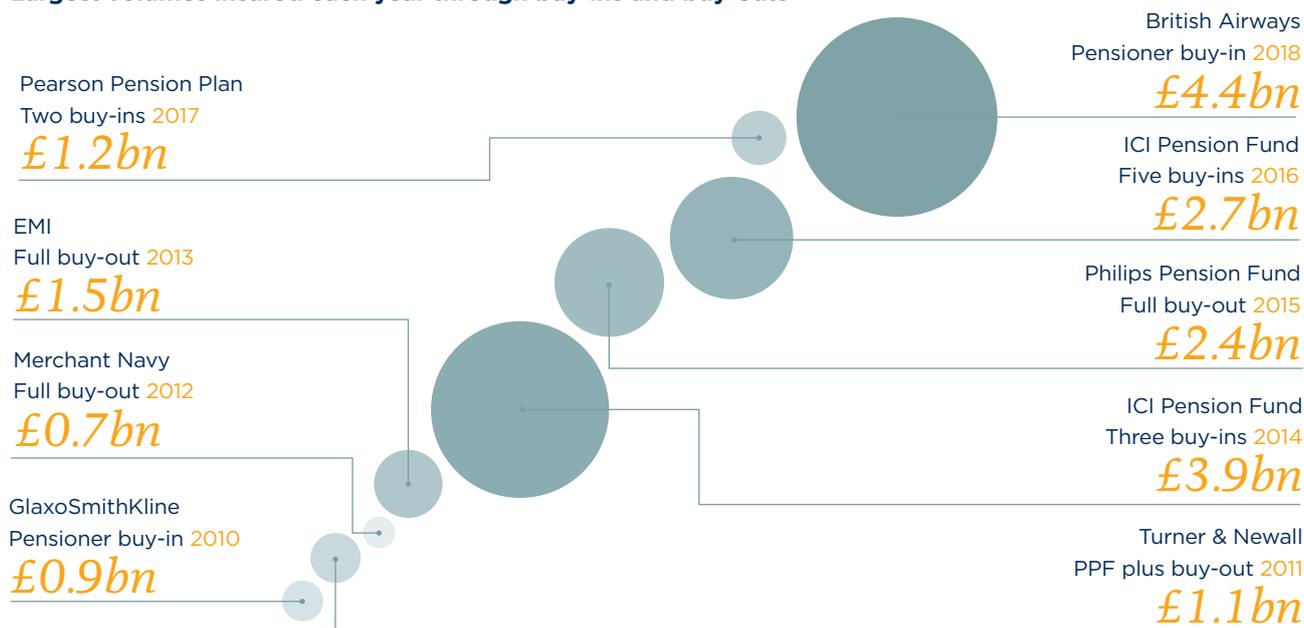
### Longevity swaps

2018 marked a relative lull in longevity swap activity, with three swaps announced – a £2bn swap by National Grid with Zurich as intermediary, a swap of undisclosed size by the Lafarge Pension Plan with Munich Re and a £300m swap by an undisclosed pension plan with Legal & General as intermediary. This quietening in activity followed five longevity swaps in 2017 totalling £6.4bn. In recent years, there has been a trend for smaller longevity swaps with an increasing number under £1bn.

A key reason for the reduced longevity swap activity was the attractive buy-in and buy-out pricing in 2018 and improved funding positions. With more pension plans able to afford to de-risk their asset strategies, it became increasingly attractive to move assets into a buy-in to hedge longevity risk rather than use a longevity swap. Looking forward into 2019, this trend is likely to continue with insurers continuing to offer attractive buy-in and buy-out propositions, but the balance could shift back towards longevity swaps if buy-in pricing does not hold up.

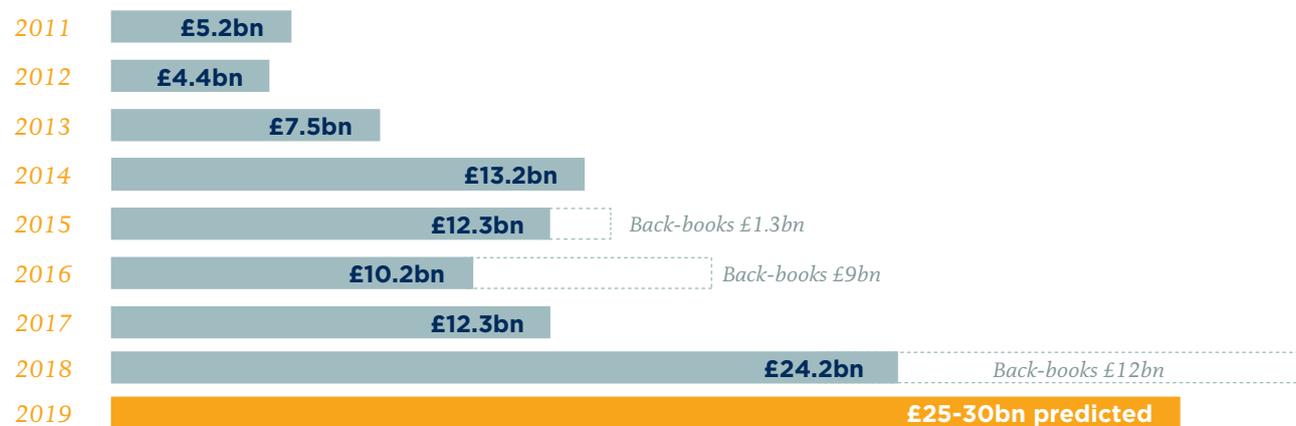
## Market review for 2018 continued

### Largest volumes insured each year through buy-ins and buy-outs



See page 46 for a list of the largest buy-ins and buy-outs

### Market activity: Buy-in, buy-out and annuity back-book volumes



### Evolving longevity swap market



\* Three longevity swaps were completed in 2009 for the same pension plan - we have grouped these as one transaction

# DB consolidators – a viable alternative to insured buy-out?

## The emergence of Superfunds

The emergence of the first DB consolidators – or “superfunds” – over 2018 has put an alternative option to insured full buy-out on the table for trustees and sponsors – the outcome is similar, with responsibility for paying benefits passed on to the DB consolidator and the link to the sponsoring company removed. However, one key difference between them is member security – DB consolidators do not operate within the insurance framework and are not expected to be subject to the same level of regulatory scrutiny or capital requirements as insurers.

## A silver standard?

The DB consolidators currently marketing themselves, Clara Pensions and the “Pensions SuperFund”, are very clear that they do not want to be considered in the same bracket as insured buy-out. They are looking to target pension plans where buy-out is not affordable (either now or within a reasonable timeframe) but where funding is available to facilitate a transfer to a DB consolidator.

For the majority of pension plans it is likely that an insured buy-out will continue to be the right answer – the Pension Superfund states that their target market is currently about 10% of UK pension plans (broadly £250bn) but they expect this to grow as DB consolidation becomes established.

## Over 50% of pension plans interested in the DB consolidator option

Our survey results show that over 10% of respondents are currently considering the DB consolidator option with further 40% believing it to be a potential option in the future, but not wishing to be the first mover.

*DB Consolidators target pension plans where buy-out is not affordable in the foreseeable future.*

## Pension plan view

### What is your view on DB consolidators?



48%

This is not something you are likely to consider now or in the future



40%

You wouldn't want to be a first mover, but it could be an option in future



12%

This is something you are currently considering or planning to consider



*Sam Jenkins*  
Senior Consultant

## DB consolidators – a viable alternative to insured buy-out? continued

### Key differences in the protections under DB consolidators compared to insured buy-out.

|   | Transfer to a DB consolidator   | Insured buy-out  |
|---|---|--|
| Who has power in relation to such a transfer? | Trustees need to approve as it is a bulk transfer of liabilities                                      | Company typically has ability to trigger wind-up and buy-out if sufficient funding is made available |
| Regulator                                     | Pensions Regulator  | Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA)                          |
| Required capital buffer                       | Currently being consulted on, but expected to be below insurer levels                                 | Sufficient capital to withstand a “1 in 200” event over one year                                     |
| Recourse for additional capital               | No further capital once exhausted but possibility of transfer to a better capitalised DB consolidator | Insurers typically hold a further 50%+ capital buffer, and can raise further capital in the markets  |
| Ultimate backstop if provider fails           | PPF expected to provide protection (at reduced PPF compensation levels for members)                   | FSCS expected to provide 100% compensation with no limit   |

### Who are the current DB consolidators?

At a high level, the key structural difference between the two propositions currently in the market is that one looks to run off liabilities and share any upside through an increase to member benefits (the Pension SuperFund), whilst the other targets buy-out and shares any upside by moving to buy-out sooner (Clara-Pensions). Pension plans may find either of these approaches more attractive than the other, and there will be other important factors to consider (not least the consolidator’s “price” for the transfer and the level of security for members’ benefits). We expect that other DB consolidators will emerge if this market takes off, which could be structured differently to the two propositions described above.

### The Government has a fine balancing act

The Government and the Pensions Regulator have a tough balancing act in how they regulate this fledgling market. If the regulations imposed on DB consolidators are too onerous then DB consolidators may not be viable. This needs to be balanced against suitable protections for members who transfer to a DB consolidator.

The Government’s consultation, which closed on 1 February 2019, set out possible ways DB consolidators could be regulated but the proposals on capitalisation levels were unclear with a wide range of options put forward. We expect further clarity to emerge during the coming months.

### What does the future hold?

The Pensions Regulator is expected to give the green light for the first transfer to a DB consolidator in the coming months. This will likely be a trigger for other pension plans to more seriously consider the DB consolidator option. In many cases this conversation may simply rule out DB consolidators at the current time. However, some trustee boards may receive proposals from their sponsors to pay in a cash lump sum to facilitate a transfer to a DB consolidator. For those with a weak sponsor covenant or uncertain future such a proposal may be attractive. Circumstances can change quickly so it is worth pension plans understanding the options available to them, and who knows what future innovations we may see in this nascent market?

# *Mortality: the latest developments*

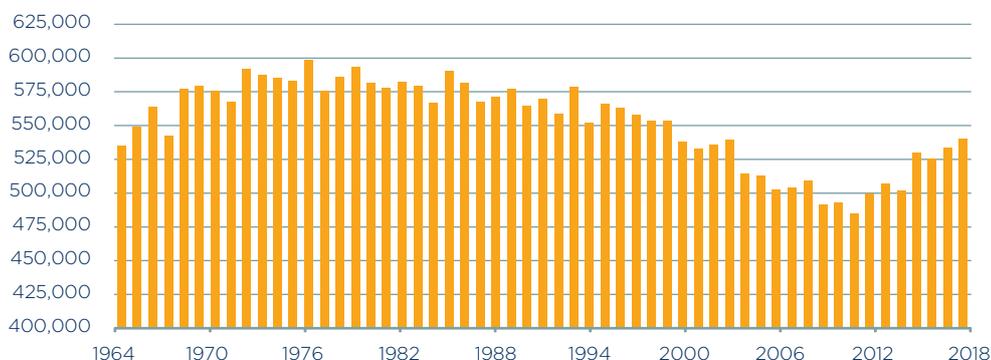


# Mortality – the latest developments

## 2018 – the heaviest year in nearly two decades

2018 turned out to be another year with a high number of deaths in England and Wales. It started heavy – with severe cold weather in February/March, the so-called ‘Beast from the East’ – which set the scene for the rest of the year. The number of deaths during 2018 was the highest since 1999. The chart below highlights the dramatic change since 2011.

### Number of deaths in England & Wales

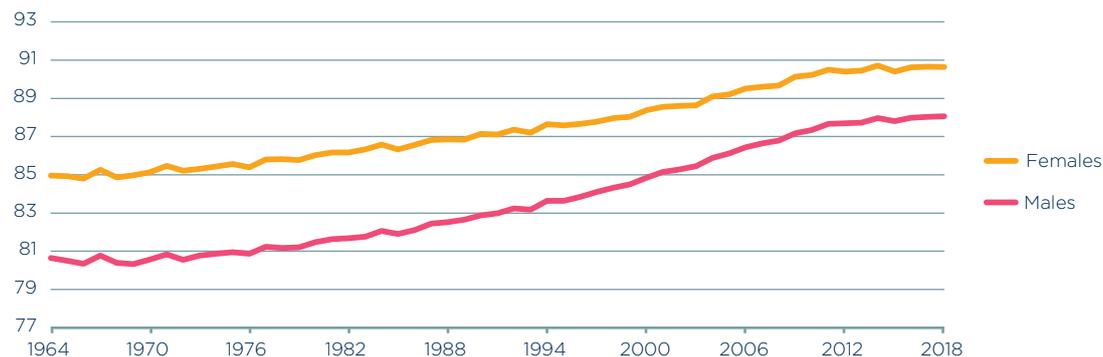


Source: Office for National Statistics (ONS) based on mortality data for England & Wales (E&W)

A report by the ONS found that winters of 2015, 2017 and 2018 with higher death rates coincided with circulation of the dominant influenza A subtype H3N2, which typically causes more hospitalisations and deaths in older people, and the lower deaths in 2014 and 2016 were dominated by H1N1. The dominant subtype of flu, and the vaccine effectiveness, appear to have been the most important factors in determining the number of deaths in recent winters. The dominant strain for 2019 is H1N1, the relatively mild version. Although excess winter deaths are influencing the trend, there has been a slowdown in the summer months too, so other factors are also influencing this decrease in mortality improvement rates.

We have seen in 2018 a continuation of the slowdown in improvements in mortality rates observed since 2011, with improvements close to nil. The chart below shows the practical stalling of the increasing trend in life expectancy.

### Life expectancy at 65 in England and Wales



Source: ONS, Period life expectancies

We have seen a continuation of the slowdown in improvements in mortality rates, with improvements close to nil.



Chris Tavener  
Partner

## Mortality – the latest developments continued

There is a slowdown in mortality improvements across many developed countries.

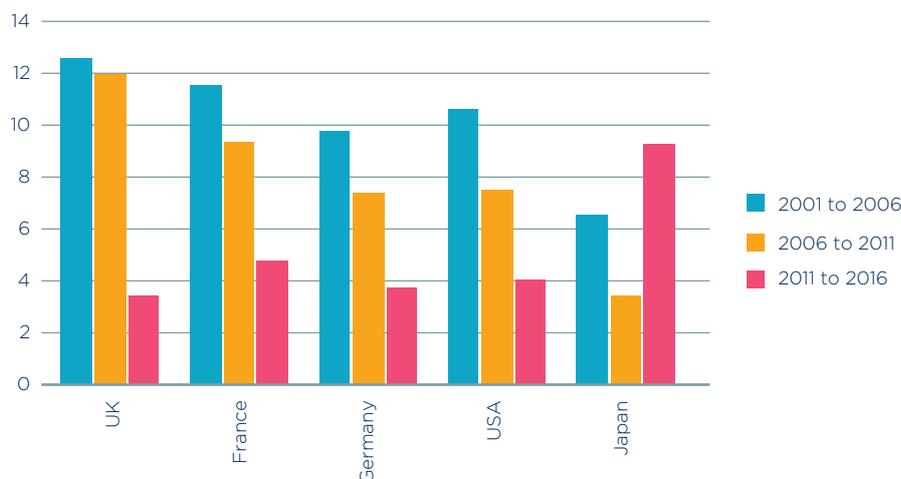


Ben Rees  
Consultant

### Not just a UK phenomenon

The slowdown in mortality improvements has not only been observed in England and Wales. The chart below shows there has been a slowdown in many developed countries. France, Germany and USA have seen a significant deceleration in improving male life expectancies since 2011, similar to that seen in the UK. Japan has bucked the trend by having a slowdown and then bouncing back, showing a period of slowdown can be reversed.

**Annualised increase in life expectancy at age 65 (weeks)  
for selected countries, males**



Source: Human Mortality Database

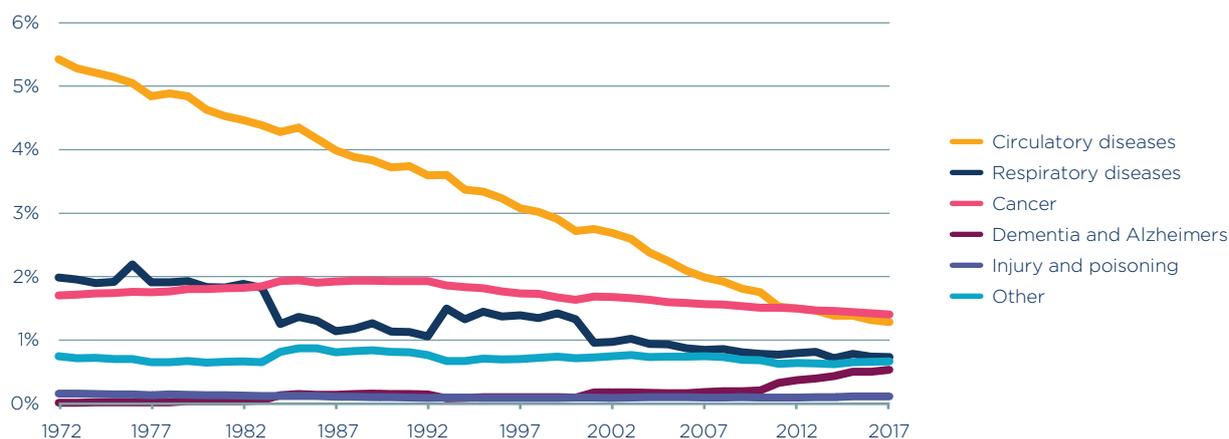
### What is driving mortality rates?

As shown in the chart below, reductions in mortality from circulatory diseases have historically been the main driver for improvements in life expectancy. In the last few years cancer has become the leading cause of death for males, with much more limited improvements to date. The slowdown in improvements from circulatory diseases, together with the increased deaths reported due to dementia, have been attributed to driving the slowdown in mortality improvements. The increase in dementia since 2010 is most likely due to improvements in diagnoses, changes to recording practice and a greater awareness by healthcare professionals and the general public. This will inevitably have led to a reclassification in the death rates recorded against other causes.

Historically the main driver for improvements in life expectancy is reductions in mortality from circulatory diseases.

## Mortality – the latest developments continued

### Mortality rates by cause of death group (England & Wales, Males over age 65, standardised)



Source: Office for National Statistics (ONS) based on mortality data for England & Wales (E&W)

### How does this impact my pension plan?

Most pension plans will see a further reduction in liability valuations in 2019 as the most recent data feeds through. The most popular model for projecting mortality rates used by pension plans has just been updated to reflect the experience over 2018 (the 2018 release of the CMI Projections Model) and to more closely follow the slowdown in improvements seen in the general population of England & Wales (via a reduction to the core “period smoothing parameter”).

The CMI has also introduced new functionality that allows users the possibility of adjusting the model to reflect their views on how specific groups of pensioners may be experiencing different rates of improvement to the general population of England & Wales that the CMI model is calibrated to.

Insurers and reinsurers will already be reflecting the latest mortality data within their pricing, which has been part of the reason for the attractive pricing in 2018. The continuing trend may encourage insurers to take further steps in reducing the level of caution built into their longevity pricing over 2019.

### Looking forward

The new era of lower mortality improvement rates should not necessarily have come as a surprise – most pension plans have been assuming a slowdown in improvements, towards 1% pa to 2% pa in the long-term, rather than the 2-3% pa seen in the past. However, few pension plans were anticipating the speed at which the slowdown has occurred.

Perhaps we shouldn't be focusing on the slowdown itself. A key question is - are the current rates now a new long-term “norm”? Based on our survey of our clients and contacts, the general view is that mortality improvements will be lower than in the past, but progress will continue.

The latest mortality data has been a contributing factor to the attractive pricing in 2018.



Yadu Dashora  
Partner

## *Pension plan view*

**Across the UK there has been a slow-down in improvements in life expectancies. What's the pensions plan's views on where this trend might go?**



**52%**

A slow-down in longevity improvements (potentially to zero) is the new normal



**12%**

Despite the recent slow-down, increases in life expectancy will revert to the higher rates seen in the late 1990s / early 2000s and settle here



**32%**

Medical and lifestyle advances will drive ever higher increases in life expectancy



**4%**

We have reached the peak of human life expectancy and people will not live as long in the future

With smoking now less prevalent, future developments in prevention and avoidance of deaths due to cancer and dementia will influence mortality rates for pensioners. The Alzheimer's Society report that by 2021, over a million people in the UK will be living with dementia - the recently published 'NHS 10 Year Plan' includes steps to prevent such long-term health conditions.

Technology is bound to have an influence, perhaps in ways we can't currently imagine - for instance, the advancement of wearable tech, directly linked to your GP, could lead to quicker treatment (and even prevention) through automatic intervention, rather than triggered via the traditional visit to the GP when you become aware of an issue and eventually make it to the clinic. Imagine waking up to a text saying a prescription is being delivered that morning due to an abnormal temperature/heart beat having been detected whilst you were asleep.

*The reinsurers we surveyed believe that pensioners of DB pension plans have been affected less by the slowdown in improvements than the general population.*



**Tim Gilbert**  
Consultant

### **Reinsurer survey**

We asked six reinsurers for their views of the developing longevity trends:

- The majority of reinsurers agree that they have seen a slowdown in longevity improvements in the short-term but they generally expect there to be higher improvements over the long-term, albeit perhaps at lower rates than historically observed.
- The evidence indicates that pensioners of DB pension plans, particularly the more affluent ones, have been affected less by the slowdown in improvements than the general population.
- Key drivers for the level of improvements in the future include medical advances (particularly for diseases other than heart disease), use of technology, changing behaviours and the financing of the health/social care sector.

**See Appendix 5 for details of how we collected reinsurers' views.**

# *LCP LifeAnalytics...*

## *the missing link in understanding pensions risk*



Create an effective risk management framework.



Ensure optimal investment and funding strategy decisions.



Assess value-for-money of buy-ins, buy-outs and longevity swaps.

*Are you thinking about longevity risk in the right way?*

Answer three simple questions about your scheme to find out...



[lifeanalytics.lcp.uk.com](https://lifeanalytics.lcp.uk.com)



## *How a collaborative approach led to a £855m full buy-out for the PA Consulting Pension Scheme*



*In June 2018, the Trustee of the PA Consulting Pension Scheme completed a full buy-out with Pension Insurance Corporation (PIC). This successful transaction was a result of a collaborative approach between the Trustee, the Company and advisers. LCP advised the Trustee on the full buy-out.*

*LCP never failed to deliver and because of that the Scheme has achieved the ultimate goal; something we never thought we would be able to do if you had asked us two years ago.*

*Daniel Baker*

*Pensions Manager (UK & Ireland), PA Consulting*

### **Background:**

#### **How had the Trustee prepared the Scheme prior to this full buy-out?**

- + Longevity risk had been identified as a key unhedged risk for the Scheme and LCP had advised the Trustee on a comprehensive “buy-in readiness” project, including data cleansing and drafting benefit specifications, in anticipation of approaching the market for pensioner buy-in pricing. Improved insurer pricing in late 2017 meant the focus shifted from a pensioner buy-in to a full buy-out – the work undertaken on the buy-in readiness project meant the Trustee was well prepared and able to react quickly to a Company proposal to investigate a full buy-out.

### **Approach:**

#### **What were the key ingredients to achieve full buy-out?**

- + As well as the extensive preparatory work, the buy-out project was combined with two member option exercises. The Scheme ran a Pension Increase Exchange and Enhanced Transfer Value (ETV) exercise as part of the wider project. This helped improve the economics of the buy-out and make it affordable. The innovative structuring of the ETV exercise meant the Scheme benefitted from absolute price certainty whilst continuing to run the exercise after the buy-out was signed.

### **Result:**

#### **What was the outcome?**

- + The Trustee successfully completed the full buy-out with PIC in June 2018 with the final result meeting both the Trustee and Company objectives set at the start of the project. It's another example of how important a collaborative approach amongst all stakeholders can be in achieving a great outcome for all parties.

### **Advice for others:**

#### **What advice would you give someone planning to do the same?**

- + Be prepared so you are able to react quickly to opportunities. Undertaking data cleansing and benefit specification preparation work puts you in a great position to capture pricing opportunities and to maximise insurer engagement when you do approach the market – standing out as a well prepared pension plan is increasingly important as demand steps up in the buy-in and buy-out market.

# Using an open underwriting process to achieve competitive pricing for the £1.4bn buy-in by the Marks & Spencer Pension Scheme.

## M&S

EST. 1884

LCP helped us maintain momentum in our strategic review of a range of options for removing longevity risk and advising on our approach to the insurers and reinsurers. As a result of effective preparations and a focused process, we were able to capture a valuable market opportunity in longevity pricing and execute two simultaneous transactions ahead of the deadline.

**Simon Lee**, Head of M&S Pension Trust and Chief Investment Officer

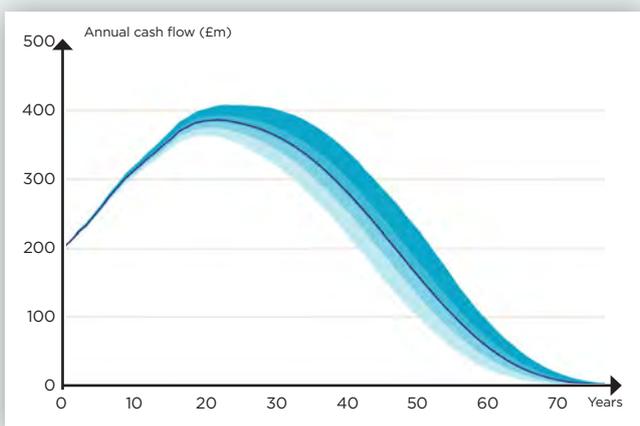
### Background

- £11bn pension plan with c.50% pensioner liabilities
- Unusual pension plan demographics (90% female population, significant part-time working)
- Well-funded and substantially de-risked for investment and market risks
- LCP appointed as specialist longevity de-risking adviser to a joint working group of trustee and company representatives

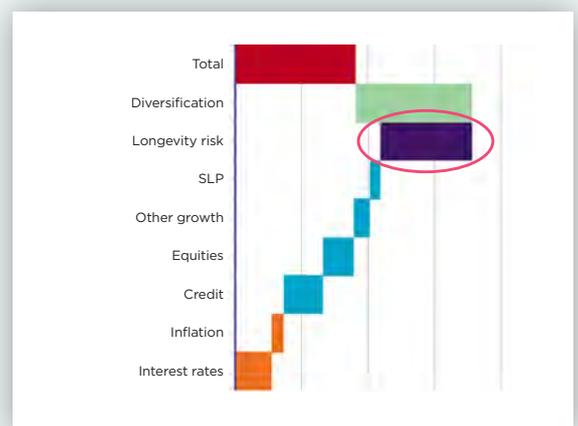
### Evaluating longevity de-risking:

- Longevity risk was measured using LCP LifeAnalytics and then combined with other risks in LCP Visualise
- As the chart below illustrates, longevity was identified as the dominant risk
- There was a concern that the cost of longevity risk removal could rise in the medium to long term

### + LCP LifeAnalytics



### + LCP Visualise



## Case Study: M&S continued

### Implementing longevity de-risking:

We recognised that most insurers pass substantial amounts of longevity risk to reinsurers (in respect of pensioner buy-ins) and that the same reinsurance underwriting was required whether buy-ins, longevity swap, or a combination was adopted.

### LCP set up a Common Data Room

We set up new infrastructure to run a common online data room so that, for the first time, both insurers and reinsurers could access the same data simultaneously.

This gave all parties access to better quality data and a well run query process. The result was improved efficiency for all parties as reinsurers could provide pricing to each insurer in the buy-in process without running parallel quotes based on separate data sets provided by each insurer.

The outcome was high levels of engagement and attractive pricing.

Reinsurers

Insurers



### Solution

1. One third of pensioner longevity risk removed through two buy-in transactions.
2. Attracted by LCP's open process, reinsurers committed to fully modelling **all** pensioner demographic risk, making future underwriting exercises easier.

Fully-modelled on reinsurers  
and insurers systems

M&S Pension Scheme



£1.4bn  
Longevity  
risk removed

£3.1bn  
of possible  
future de-risking  
opportunities

£925m  
buy-in  
Aviva

£470m  
buy-in  
Phoenix Life

Approx values as at March 2018

*We welcome the use of a common data room through which reinsurers can ask questions to and seek clarifications from the advisers running the buy-in process. This direct access is likely to lead to an efficient underwriting process and more attractive pricing for the end pension scheme.*

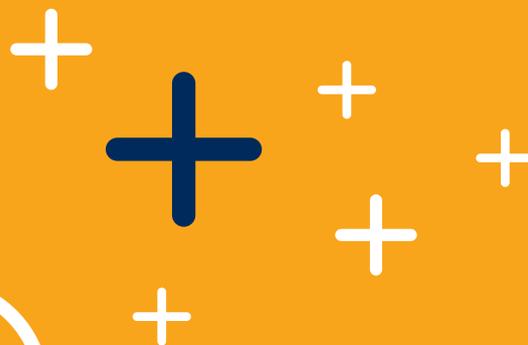
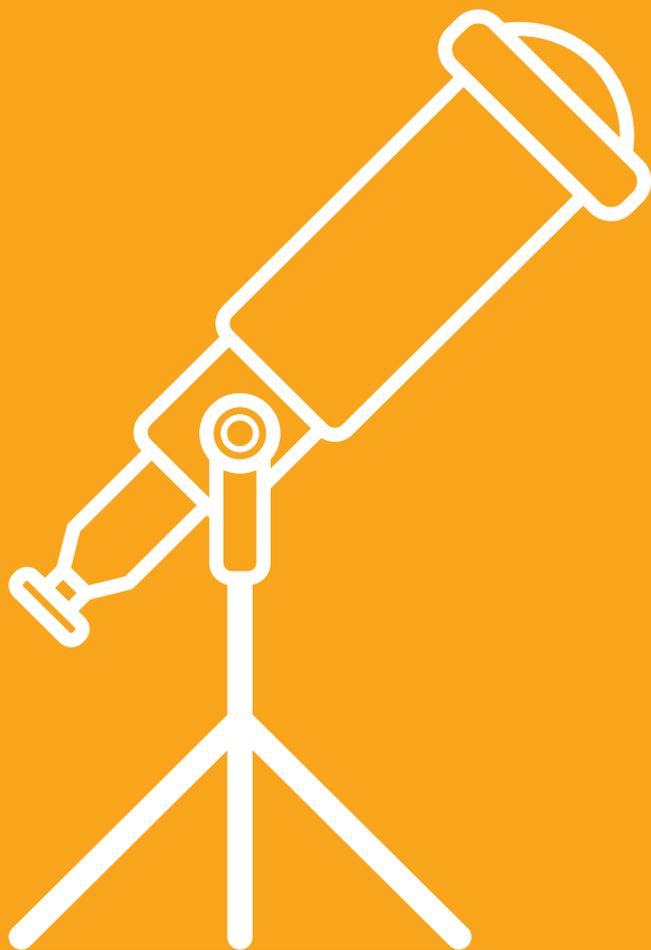
#### Amy Kessler

Senior Vice President and  
Head of Longevity Risk Transfer  
Prudential Financial (Reinsurer)

### What does this mean for you?

For large pension schemes committed to phased de-risking using buy-ins, longevity swaps or a combination, the common data room removes inefficiencies in the underwriting process, improves reinsurer and insurer engagement and maximises the scheme's pricing opportunities and flexibility in the short and long term.

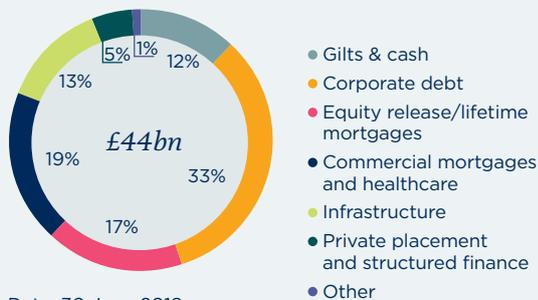
*An overview of  
the eight insurers  
in the market*



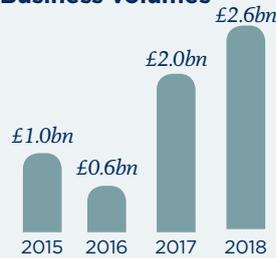
## Aviva

- Entered the bulk annuity market in 2006.
- Has gradually increased market presence over the past 5 years, writing their largest transaction to date in March 2018 at £925m with the Marks and Spencer Pension Scheme.
- Significant growth in team over past year reflects ambition to grow to become a key market leader
- The Aviva Group is considered a Global Significant Important Financial Institution, and as such undergoes a higher level of scrutiny from regulators.

### Annuity asset portfolio



### Business volumes



### Largest pension plan transaction



### Team size



### Target market



### Transaction features offered

| Feature                          | Available?                         | Minimum transaction size? |
|----------------------------------|------------------------------------|---------------------------|
| Residual risk cover              | ✓                                  | £100m                     |
| Surrender /collateral structures | Considered on a case-by-case basis | £500m                     |
| Price-lock mechanisms            | ✓                                  | £10m                      |

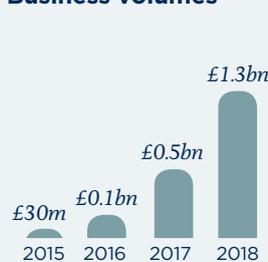
## Canada Life

- Entered the bulk annuity market at the end of 2015.
- Initially focused on smaller pensioner buy-ins under £100m, but now increasingly looking at larger pensioner buy-ins.
- In 2018 they wrote their largest transaction to date, a £625m pensioner buy-in for the Reuters Pension Fund.
- Has experience of back-book annuity transfers, with significant transactions in 2005 and 2007, and more recently with Equitable Life in 2015.

### Annuity asset portfolio



### Business volumes



### Largest pension plan transaction



### Team size



### Target market



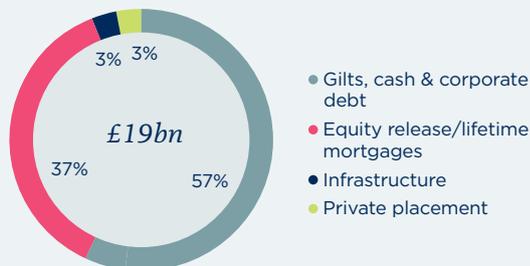
### Transaction features offered

| Feature                             | Available? | Minimum transaction size? |
|-------------------------------------|------------|---------------------------|
| Residual risk cover                 | ✗          | n/a                       |
| Termination / collateral structures | ✗          | n/a                       |
| Price locks during exclusivity      | ✓          | No minimum size           |

## JUST

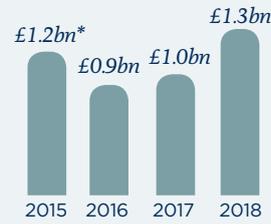
- Formed by the merger of Just Retirement and Partnership in April 2016.
- Historically JUST's preference was to write medically underwritten buy-ins with the underwriting taking place pre-transaction. However focus now is quoting on a conventional basis or on a basis where medical underwriting takes place post-transaction with an upfront price saving.
- Business model makes significant use of equity release mortgages to support new business.
- In 2018 they wrote their largest transaction to date, a £290m pensioner buy-in.

### Annuity asset portfolio



Date: 30 June 2018

### Business volumes



\* Includes transactions written by Partnership and Just Retirement

### Largest pension plan transaction



### Team size



### Target market



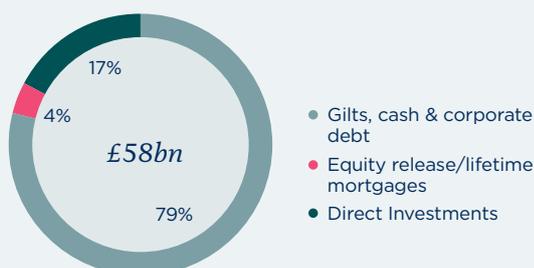
### Transaction features offered

|                                     | Available?                         | Minimum transaction size? |
|-------------------------------------|------------------------------------|---------------------------|
| Residual risk cover                 | Considered on a case-by-case basis | No minimum size           |
| Termination / collateral structures | ✗                                  | n/a                       |
| Price locks during exclusivity      | ✓                                  | No minimum size           |

## Legal & General

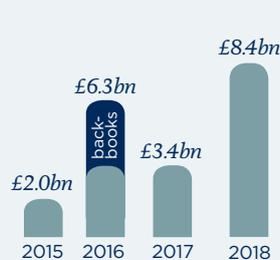
- Longest established provider in the bulk annuity market, quoting on the full range of transaction sizes and types.
- Since 2014 L&G have been increasingly active at the larger end of the market.
- Business volumes in 2018 were dominated by mega-deals: a £4.4bn pensioner buy-in for the British Airways sponsored Airways Pension Scheme (APS), and a £2.4bn buy-out of the Nortel Networks UK Pension Plan.
- The APS buy-in marked the largest transaction completed in this market to date.

### Annuity asset portfolio

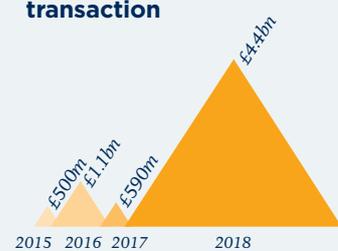


Date: 31 December 2017

### Business volumes



### Largest pension plan transaction



### Team size



### Target market



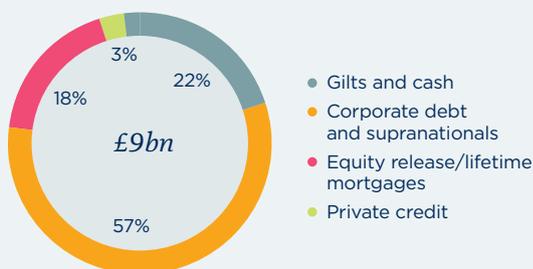
### Transaction features offered

|                                     | Available?                         | Minimum transaction size? |
|-------------------------------------|------------------------------------|---------------------------|
| Residual risk cover                 | ✓                                  | £100m                     |
| Termination / collateral structures | Considered on a case-by-case basis | £1bn                      |
| Price locks during exclusivity      | ✓                                  | No minimum size           |

## Phoenix Life

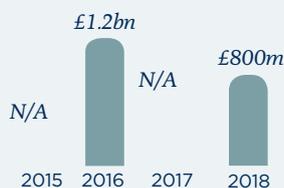
- Phoenix Life has primarily operated to date as a specialist consolidator of annuity backbooks and closed life funds.
- In late 2016 completed a £1.2bn buy-in with its own pension plan and is now actively quoting on large bulk annuity opportunities. Formally entered the bulk annuity market in 2017.
- In 2018 completed a £470m pensioner buy-in with the M&S Pension Scheme. This was their first external transaction.

### Annuity asset portfolio



Date: 30 June 2018

### Business volumes



### Largest pension plan transaction



### Team size



### Target market



### Transaction features offered

|                                     | Available?   | Minimum transaction size?    |
|-------------------------------------|--|------------------------------|
| Residual risk cover                 | x  | n/a                          |
| Termination / collateral structures | Termination is considered on a case-by-case basis. Collateral not currently offered. | £500m for termination rights |
| Price locks during exclusivity      | ✓  | No minimum size              |

## Pension Insurance Corporation (PIC)

- Established specialist mono-line insurer focused on bulk annuities, which entered the bulk annuity market in 2006.
- PIC achieved the highest market share of any insurer over the period 2015 to 2017.
- Has completed a number of significant full buy-out deals, including £2.4bn with the Philips Pension Fund in 2015 and £1.5bn with the Rentokil Initial 2015 Pension Scheme in 2018.

### Annuity asset portfolio



Date: 30 June 2018

### Business volumes



### Largest pension plan transaction



### Team size



### Target market



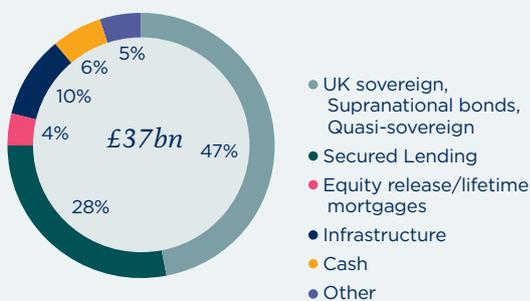
### Transaction features offered

|                                     | Available? | Minimum transaction size? |
|-------------------------------------|------------|---------------------------|
| Residual risk cover                 | ✓          | No minimum size           |
| Termination / collateral structures | ✓          | Large transactions only   |
| Price locks during exclusivity      | ✓          | No minimum size           |

## Rothsay Life

- Established specialist mono-line insurer focused entirely on bulk annuities.
- As well as bulk annuities for pension schemes, Rothsay Life has grown through acquisitions (Paternoster in 2011 and MetLife Assurance Limited in 2014) and annuity back-book transfers (£1bn from Zurich in 2015, £6bn from Aegon in 2016 and £12bn from Prudential in 2018).
- Shareholders include a Blackstone private equity fund, GIC (Singapore sovereign wealth fund) and Massachusetts Mutual Life Insurance Company.

### Annuity asset portfolio



Date: 30 June 2018

### Business volumes



### Largest pension plan transaction



### Team size



### Target market



### Transaction features offered

|                                     | Available? | Minimum transaction size? |
|-------------------------------------|------------|---------------------------|
| Residual risk cover                 | ✓          | £200m                     |
| Termination / collateral structures | ✗          | n/a                       |
| Price locks during exclusivity      | ✓          | No minimum size           |

## Scottish Widows

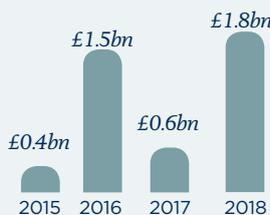
- Scottish Widows is wholly owned by Lloyds banking group. Entered the bulk annuity market in late 2015, drawing on both internal resource and hiring experienced specialists.
- Unlike the other insurers in the market, Scottish Widows initially largely retained longevity risk, however in February 2018 they completed their first longevity reinsurance transaction.
- In 2018 completed their largest transaction to date, a £880m pensioner buy-in with the Littlewoods Pensions Scheme.

### Annuity asset portfolio



Date: 30 November 2018

### Business volumes



### Largest pension plan transaction



### Team size



### Target market



### Transaction features offered

|                                     | Available?                         | Minimum transaction size? |
|-------------------------------------|------------------------------------|---------------------------|
| Residual risk cover                 | ✓                                  | No minimum size           |
| Termination / collateral structures | Considered on a case-by-case basis | No minimum size           |
| Price locks during exclusivity      | ✓                                  | No minimum size           |

# *Appendices*



# Appendix 1 & 2

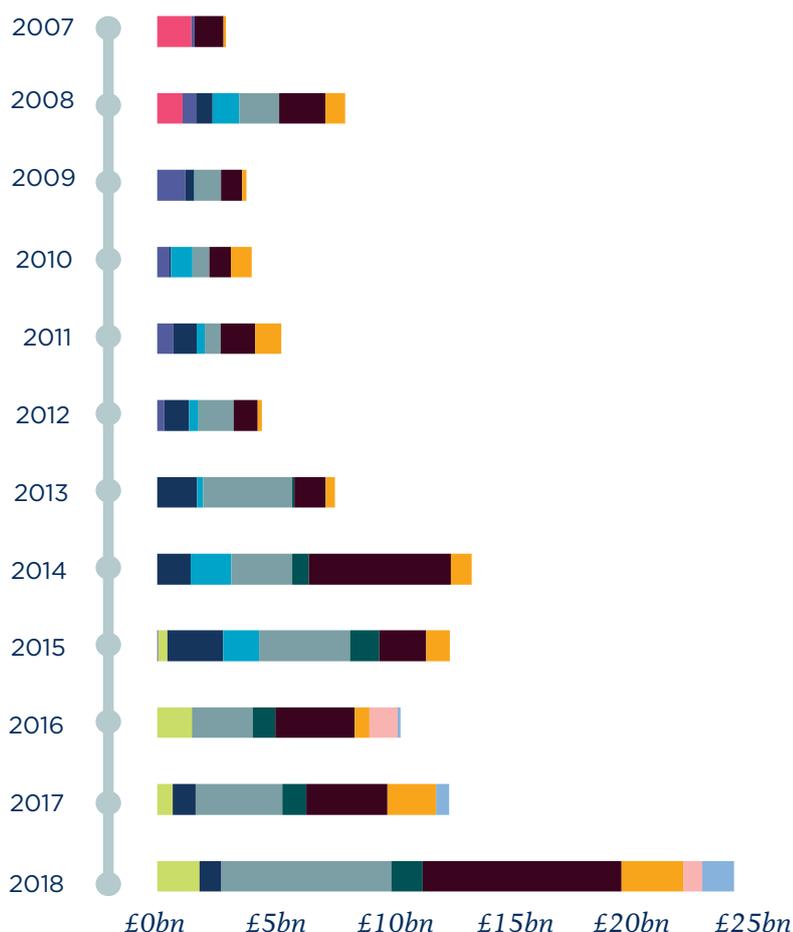
## Buy-in and buy-out volumes by insurer

| Total size of transactions (£m) |               |              |              |               |                   |              |                      |               |                   |
|---------------------------------|---------------|--------------|--------------|---------------|-------------------|--------------|----------------------|---------------|-------------------|
| Insurer                         | Date of entry | H1 2017      | H2 2017      | Total 2017    | Market share 2017 | H1 2018      | H2 2018 <sup>3</sup> | Total 2018    | Market share 2018 |
| Aviva                           | May 2006      | 326          | 1,719        | 2,045         | 17%               | 1,540        | 1,056                | 2,596         | 11%               |
| Canada Life                     | February 2015 | 276          | 268          | 544           | 4%                | 0            | 1,333                | 1,333         | 6%                |
| JUST                            | late 2012     | 295          | 703          | 998           | 8%                | 718          | 596                  | 1,314         | 5%                |
| Legal & General                 | 1986          | 1,504        | 1,901        | 3,405         | 28%               | 507          | 7,844                | 8,351         | 35%               |
| Pension Insurance Corporation   | October 2006  | 1,875        | 1,779        | 3,654         | 30%               | 3,257        | 3,881                | 7,138         | 29%               |
| Phoenix Life                    | December 2016 | 0            | 0            | 0             | 0%                | 470          | 326                  | 796           | 3%                |
| Rothsay Life                    | July 2007     | 405          | 555          | 960           | 8%                | 170          | 755                  | 925           | 4%                |
| Scottish Widows                 | October 2015  | 405          | 240          | 645           | 5%                | 1,105        | 660                  | 1,765         | 7%                |
| <b>Total<sup>1</sup></b>        |               | <b>5,086</b> | <b>7,165</b> | <b>12,251</b> | <b>100%</b>       | <b>7,767</b> | <b>16,451</b>        | <b>24,218</b> | <b>100%</b>       |

<sup>1</sup> Only business with a UK pension plan is included. The table therefore excludes the £12bn transfer of annuities from Prudential to Rothsay Life in March 2018.

Rounding may mean that some numbers do not sum.

### Insurer activity



### Defining transactions

#### Hunting PLC

£110m pensioner buy-in  
First pensioner buy-in

2.9

#### Cable & Wireless Thorn

£1bn pensioner buy-in  
£1.1bn full buy-out

7.9

#### Babcock International

£1.1bn of longevity swaps  
First longevity swap

3.7

3.8

#### GSK

£900m pensioner buy-in

4.0

4.3

#### Turner & Newall

£1.1bn PPF+ buy-out

5.2

7.0

#### Uniq

£830m PPF+ buy-out

#### MNOPF

£680m full buy-out

4.4

2.2

#### EMI

£1.5bn full buy-out

7.5

8.8

#### ICI Pension Fund

£3.9bn across three buy-ins

13.2

21.9

#### BT

£16bn longevity swap

#### Philips Pension Fund

£2.4bn full buy-out

12.3

9.4

#### ICI Pension Fund

£2.7bn across five buy-ins

10.2

2.6

#### Rolls-Royce

£1.1bn full buy-out

#### Pearson Pension Plan

£1.2bn across two buy-ins

12.3

6.4

#### The British Airways sponsored Airways Pension Scheme (APS)

£4.4bn pensioner buy-in

24.2

2.3\*

● Buy-in/buy-out volumes (£bn)

● Longevity swaps (£bn)

Source: Insurance company data.

\*This excludes the Lafarge UK Pension Plan longevity swap in August 2018

# Appendix 3

## Longevity Swaps written by UK pension plans

| Sponsoring company/<br>pension plan    | Date           | Liabilities<br>covered £m | Structure           | Intermediary                  | Reinsurer (where disclosed)                |
|--|----------------|---------------------------|---------------------|-------------------------------|--|
| Lafarge Pension Plan                   | August 2018    | Undisclosed               |                     |                               | Munich Re                                  |
| Undisclosed                            | August 2018    | 300                       | Fully intermediated | Legal & General               | Scor                                       |
| National Grid                          | May 2018       | 2,000                     | Fully intermediated | Zurich Assurance              | Canada Life Re                             |
| MMC UK                                 | September 2017 | 3,400                     | Captive insurer     | Captive                       | Prudential / Canada Life Re                |
| British Airways                        | September 2017 | 1,600                     | Captive insurer     | Captive                       | Partner Re / Canada Life Re                |
| Skanska                                | July 2017      | 300                       | Fully intermediated | Zurich Assurance              | Scor                                       |
| SSE                                    | June 2017      | 800                       | Pass through        | Legal & General               |  |
| Undisclosed                            | January 2017   | 300                       | Fully intermediated | Zurich Assurance              | Scor                                       |
| Undisclosed                            | December 2016  | 900                       | Fully intermediated | Legal & General               |  |
| Undisclosed                            | October 2016   | 50                        | Fully intermediated | Zurich Assurance              | Pacific Life Re                            |
| Pirelli                                | August 2016    | 600                       | Fully intermediated | Zurich Assurance              | Pacific Life Re                            |
| Scottish Power                         | July 2016      | 1,000                     | Fully intermediated | Abbey Life<br>(Deutsche Bank) |  |
| Undisclosed                            | December 2015  | 90                        | Fully intermediated | Zurich Assurance              | Pacific Life Re                            |
| RAC Pension Scheme                     | November 2015  | 600                       | Sponsor subsidiary  | Aviva Life & Pensions         | Scor                                       |
| Heineken                               | September 2015 | 2,400                     | Fully intermediated | Friends Life                  | Swiss Re                                   |
| AXA                                    | July 2015      | 2,800                     | Sponsor subsidiary  | Axa                           | RGA  |
| Scottish Power                         | February 2015  | 2,000                     | Fully intermediated | Abbey Life<br>(Deutsche Bank) |  |
| MNOPF                                  | January 2015   | 1,500                     | Captive insurer     | MNOPF IC Limited              | Pacific Life Re                            |
| Phoenix Group                          | August 2014    | 900                       | Sponsor subsidiary  | Phoenix Life                  | RGA  |
| BT                                     | July 2014      | 16,000                    | Captive insurer     | Trustee-owned captive         | Prudential Insurance Company of America    |
| Aviva                                  | March 2014     | 5,000                     | Sponsor subsidiary  | Aviva Life & Pensions         | Swiss Re / Munich Re / Scor                |
| Carillion                              | December 2013  | 1,000                     | Fully intermediated | Deutsche Bank                 | Syndicate of reinsurers                    |
| BAE Systems                            | December 2013  | 1,700                     | Fully intermediated | Legal & General               | Hannover Re / RGA                          |
| AstraZeneca                            | December 2013  | 2,500                     | Fully intermediated | Deutsche Bank                 | Syndicate of reinsurers                    |
| Bentley Motors                         | May 2013       | 400                       | Fully intermediated | Abbey Life<br>(Deutsche Bank) |  |
| BAE Systems                            | February 2013  | 3,200                     | Fully intermediated | Legal & General               | Hannover Re                                |
| Liverpool Victoria<br>Friendly Society | December 2012  | 800                       | Fully intermediated | ReAssure (Swiss Re)           | Swiss Re                                   |
| AkzoNobel                              | May 2012       | 1,400                     | Fully intermediated | ReAssure (Swiss Re)           | Swiss Re                                   |
| Pilkington                             | December 2011  | 1,000                     | Fully intermediated | Legal and General             | Hannover Re                                |
| British Airways                        | December 2011  | 1,300                     | Fully intermediated | Rothsay Life                  | Pacific Life Re / undisclosed              |
| Rolls-Royce                            | November 2011  | 3,000                     | Fully intermediated | Deutsche Bank                 | Syndicate of reinsurers (including Scor)   |
| ITV                                    | August 2011    | 1,700                     | Fully intermediated | Credit Suisse                 | Pacific Life Re / undisclosed              |
| Pall                                   | January 2011   | 70                        | Fully intermediated | J P Morgan                    |  |
| British Airways                        | July 2010      | 1,300                     | Fully intermediated | Rothsay Life                  | Pacific Life Re / undisclosed              |
| BMW                                    | February 2010  | 3,000                     | Fully intermediated | Abbey Life<br>(Deutsche Bank) | Hannover Re / Pacific Life Re / Partner Re |
| Babcock International                  | December 2009  | 300                       | Fully intermediated | Credit Suisse                 | Pacific Life Re / RGA / undisclosed        |
| Local government                       | December 2009  | 750                       | Fully intermediated | ReAssure (Swiss Re)           | Swiss Re                                   |
| Babcock International                  | September 2009 | 350                       | Fully intermediated | Credit Suisse                 | Pacific Life Re / RGA / undisclosed        |
| RSA Insurance Group                    | July 2009      | 1,900                     | Fully intermediated | Rothsay Life                  | Pacific Life Re / undisclosed              |
| Babcock International                  | June 2009      | 500                       | Fully intermediated | Credit Suisse                 | Pacific Life Re / RGA / undisclosed        |

Source: Insurance company data.

# Appendix 4

## Buy-ins and buy-outs over £100m announced since 2007

| Name                     | Size (£m) | Sector                 | Insurer                        | Date           | Type               | LCP advised  |
|--------------------------|-----------|------------------------|--------------------------------|----------------|--------------------|--------------|
| British Airways          | 4,400     | Airline                | Legal & General                | September 2018 | Pensioner buy-in   |              |
| ICI                      | 3,000     | Chemicals              | Legal & General                | March 2014     | Pensioner buy-in   | ✓            |
| TRW                      | 2,500     | Automotive             | Legal & General                | November 2014  | Pensioner buy-out  |              |
| Philips                  | 2,400     | Technology             | Pension Insurance Corporation  | November 2015  | Full buy-out       | Trustee-side |
| Nortel                   | 2,400     | Telecommunications     | Legal & General                | October 2018   | PPF+ buy-out       |              |
| Total                    | 1,600     | Oil and Gas            | Pension Insurance Corporation  | June 2014      | Pensioner buy-in   | ✓            |
| Civil Aviation Authority | 1,600     | Public                 | Rothsay Life                   | July 2015      | Pensioner buy-in   |              |
| Rentokil initial         | 1,515     | Business services      | Pension Insurance Corporation  | December 2018  | Full buy-out       |              |
| EMI                      | 1,500     | Music Entertainment    | Pension Insurance Corporation  | July 2013      | Full buy-out       |              |
| Siemens                  | 1,265     | Industry               | Pension Insurance Corporation  | June 2018      | Pensioner buy-in   |              |
| Phoenix Life             | 1,180     | Financial services     | Phoenix Life                   | December 2016  | Pensioner buy-in   |              |
| Turner and Newall        | 1,100     | Engineering            | Legal & General                | October 2011   | PPF+ buy-out       |              |
| Thorn                    | 1,100     | Engineering            | Pension Insurance Corporation  | December 2008  | Full buy-out       |              |
| Rolls-Royce              | 1,070     | Automotive             | Legal & General                | November 2016  | Full buy-out       |              |
| Cable & Wireless         | 1,050     | Communications         | Prudential                     | September 2008 | Pensioner buy-in   | Company-side |
| M&S                      | 925       | Retail                 | Aviva                          | March 2018     | Pensioner buy-in   | ✓            |
| GlaxoSmithKline          | 900       | Pharmaceutical         | Prudential                     | November 2010  | Pensioner buy-in   | ✓            |
| Aon                      | 890       | Financial services     | Pension Insurance Corporation  | March 2016     | Pensioner buy-in   |              |
| Littlewoods              | 880       | Retail                 | Scottish Widows                | May 2018       | Pensioner buy-in   | ✓            |
| PA Consulting            | 855       | Consulting             | Pension Insurance Corporation  | June 2018      | Full buy-out       | Trustee-side |
| Uniq                     | 830       | Food Producer          | Rothsay Life                   | December 2011  | PPF+ buy-out       | ✓            |
| P&O                      | 800       | Shipping               | Paternoster (now Rothsay Life) | December 2007  | Pensioner buy-in   |              |
| BHS                      | 770       | Retail                 | Pension Insurance Corporation  | July 2018      | Full buy-out       |              |
| ICI                      | 750       | Chemicals              | Legal & General                | July 2016      | Pensioner buy-in   | ✓            |
| Dockworkers              | 725       | Shipping               | Pension Insurance Corporation  | October 2017   | Full buy-in        | ✓            |
| Rank                     | 700       | Gambling               | Rothsay Life                   | February 2008  | Full risk transfer |              |
| Undisclosed              | 690       | Unknown                | Pension Insurance Corporation  | June 2017      | Pensioner buy-in   |              |
| MNOPF                    | 680       | Shipping               | Rothsay Life                   | December 2012  | Full buy-in        |              |
| Northern Bank            | 680       | Financial Services     | Prudential                     | April 2015     | Pensioner buy-in   | ✓            |
| Lehman Brothers          | 675       | Financial Services     | Rothsay Life                   | April 2015     | Full buy-out       |              |
| NCR                      | 670       | Technology             | Pension Insurance Corporation  | November 2013  | Full buy-out       |              |
| ICI                      | 630       | Chemicals              | Scottish Widows                | June 2016      | Pensioner buy-in   | ✓            |
| Thomson Reuters          | 620       | Information Technology | Canada Life                    | August 2018    | Pensioner buy-in   | Company-side |
| ICI                      | 600       | Chemicals              | Prudential                     | March 2014     | Pensioner buy-in   | ✓            |
| ICI                      | 590       | Chemicals              | Scottish Widows                | September 2016 | Pensioner buy-in   | ✓            |
| Wolseley Group           | 590       | Plumbing               | Pension Insurance Corporation  | June 2017      | Pensioner buy-in   |              |
| Pearson                  | 590       | Education              | Legal & General                | September 2017 | Pensioner buy-in   | ✓            |
| Pearson                  | 590       | Education              | Aviva                          | October 2017   | Pensioner buy-in   | ✓            |
| Undisclosed              | 590       | Unknown                | Pension Insurance Corporation  | November 2018  | Full buy-out       |              |
| Plumbers Pension Scheme  | 570       | Plumbing               | Legal & General                | June 2017      | Pensioner buy-in   | ✓            |
| Undisclosed              | 550       | Unknown                | Legal & General                | H2 2018        | Pensioner buy-in   |              |
| Undisclosed              | 535       | Financial Services     | Pension Insurance Corporation  | April 2015     | Full buy-out       | ✓            |
| Pearson                  | 500       | Education              | Legal & General                | February 2019  | Pensioner buy-in   | ✓            |
| MNOPF                    | 500       | Shipping               | Lucida                         | September 2009 | Pensioner buy-in   |              |
| Cadbury                  | 500       | Food Producer          | Pension Insurance Corporation  | December 2009  | Pensioner buy-in   |              |
| ICI                      | 500       | Chemicals              | Legal & General                | March 2015     | Pensioner buy-in   | ✓            |
| ICI                      | 500       | Chemicals              | Prudential                     | June 2015      | Pensioner buy-in   | ✓            |
| ICI                      | 500       | Chemicals              | Legal & General                | June 2015      | Pensioner buy-in   | ✓            |
| MNOPF                    | 490       | Shipping               | Legal & General                | November 2017  | Pensioner buy-in   |              |
| Philips                  | 480       | Technology             | Rothsay Life                   | August 2013    | Pensioner buy-in   | ✓            |
| M&S                      | 470       | Retail                 | Phoenix Life                   | March 2018     | Pensioner buy-in   | ✓            |
| Undisclosed              | 460       | Luxury goods           | Legal & General                | November 2016  | Full buy-out       | ✓            |
| Delta                    | 450       | Engineering            | Pension Insurance Corporation  | June 2008      | Pensioner buy-out  |              |
| Undisclosed              | 450       | Unknown                | Rothsay Life                   | July 2017      | Full buy-out       | ✓            |
| InterContinental Hotels  | 440       | Hotels                 | Rothsay Life                   | August 2013    | Full buy-out       |              |

# Appendix 4

## Buy-ins and buy-outs over £100m announced since 2007

| Name   | Size (£m) | Sector                | Insurer                         | Date           | Type             | LCP advised |
|--|-----------|-----------------------|---------------------------------|----------------|------------------|-------------|
| Co-op  | 425       | Retail                | Pension Insurance Corporation   | January 2019   | Pensioner buy-in |             |
| Undisclosed                                  | 400       | Unknown               | Aviva                           | September 2018 | Pensioner buy-in |             |
| Powell Duffryn / PD Pension Plan             | 400       | Engineering           | Paternoster (now Rothesay Life) | March 2008     | Full buy-out     |             |
| Wiggins Teape                                | 400       | Manufacturing         | Scottish Widows                 | November 2015  | Pensioner buy-in |             |
| Undisclosed                                  | 390       | Unknown               | Scottish Widows                 | September 2018 | Pensioner buy-in |             |
| Undisclosed                                  | 380       | Unknown               | Aviva                           | December 2017  | Pensioner buy-in |             |
| ICI  | 380       | Chemicals             | Legal & General                 | September 2016 | Pensioner buy-in | ✓           |
| CDC  | 370       | Public                | Rothesay Life                   | November 2009  | Full buy-in      |             |
| Undisclosed                                  | 370       | Unknown               | Rothesay Life                   | December 2014  | Full buy-out     |             |
| Friends Provident                            | 360       | Financial Services    | Aviva                           | April 2008     | Pensioner buy-in |             |
| AA   | 350       | Motoring              | Canada Life                     | August 2018    | Pensioner buy-in |             |
| Tate & Lyle                                  | 350       | Food Producer         | Legal & General                 | December 2012  | Pensioner buy-in | ✓           |
| Undisclosed                                  | 340       | Unknown               | Legal & General                 | July 2013      | Deferred buy-in  |             |
| ICI  | 330       | Chemicals             | Legal & General                 | March 2016     | Pensioner buy-in | ✓           |
| BAA (Heathrow Airport)                       | 325       | Airport               | Legal & General                 | May 2018       | Pensioner buy-in |             |
| Alliance Boots                               | 320       | Pharmaceutical        | Pension Insurance Corporation   | June 2010      | Full buy-out     |             |
| Cookson                                      | 320       | Engineering           | Pension Insurance Corporation   | July 2012      | Pensioner buy-in |             |
| Philips                                      | 310       | Technology            | Prudential                      | September 2014 | Pensioner buy-in | ✓           |
| Aggregate Industries                         | 305       | Mining                | Pension Insurance Corporation   | February 2010  | Pensioner buy-in | ✓           |
| Philips                                      | 300       | Technology            | Prudential                      | June 2014      | Pensioner buy-in | ✓           |
| Interserve                                   | 300       | Construction          | Aviva                           | July 2014      | Pensioner buy-in | ✓           |
| ICI  | 300       | Chemicals             | Prudential                      | November 2014  | Pensioner buy-in | ✓           |
| Undisclosed                                  | 300       | Unknown               | Aviva                           | June 2015      | Pensioner buy-in |             |
| TKM  | 300       | Automotive            | Aviva                           | November 2015  | Full buy-out     |             |
| Undisclosed                                  | 290       | Unknown               | JUST                            | April 2018     | Pensioner buy-in |             |
| Undisclosed                                  | 285       | Unknown               | Legal & General                 | September 2018 | Full buy-out     |             |
| Undisclosed                                  | 280       | Unknown               | Rothesay Life                   | September 2018 | Full buy-out     |             |
| Home Retail Group                            | 280       | Retail                | Prudential                      | June 2011      | Pensioner buy-in | ✓           |
| Cobham                                       | 280       | Aerospace & Defence   | Rothesay Life                   | July 2013      | Pensioner buy-in |             |
| Western United                               | 280       | Food Producer         | Rothesay Life                   | June 2014      | Full buy-out     |             |
| Undisclosed                                  | 275       | Unknown               | Pension Insurance Corporation   | April 2018     | Pensioner buy-in |             |
| Hays   | 270       | Recruitment           | Canada Life                     | August 2018    | Pensioner buy-in | ✓           |
| West Midlands Integrated Transport Authority | 270       | Transport             | Prudential                      | April 2012     | Pensioner buy-in |             |
| BBA Aviation                                 | 270       | Aviation              | Legal & General                 | April 2008     | Pensioner buy-in |             |
| Tullet Prebon Pension Scheme                 | 270       | Banking               | Rothesay Life                   | May 2017       | Full buy-out     |             |
| Undisclosed                                  | 270       | Unknown               | Legal & General                 | June 2017      | Pensioner buy-in |             |
| ICI  | 260       | Chemicals             | Scottish Widows                 | March 2017     | Pensioner buy-in | ✓           |
| Undisclosed                                  | 260       | Unknown               | Legal & General                 | November 2017  | Full buy-out     | ✓           |
| Undisclosed                                  | 260       | Unknown               | Rothesay Life                   | December 2018  | Full buy-out     | ✓           |
| Undisclosed                                  | 255       | Unknown               | Legal & General                 | January 2013   | Full buy-in      |             |
| TI Group / Smiths Group                      | 250       | Engineering           | Legal & General                 | March 2008     | Pensioner buy-in |             |
| TI Group / Smiths Group                      | 250       | Engineering           | Paternoster (now Rothesay Life) | September 2008 | Pensioner buy-in |             |
| Undisclosed                                  | 250       | Media                 | Aviva                           | December 2011  | Pensioner buy-in | ✓           |
| Undisclosed                                  | 250       | Unknown               | Legal & General                 | August 2012    | Pensioner buy-in |             |
| Smiths Group                                 | 250       | Engineering           | Pension Insurance Corporation   | October 2016   | Pensioner buy-in |             |
| Cancer Research                              | 250       | Charities             | Canada Life                     | March 2017     | Pensioner buy-in | ✓           |
| Undisclosed                                  | 250       | Unknown               | Pension Insurance Corporation   | November 2018  | Pensioner buy-in | ✓           |
| Undisclosed                                  | 250       | Unknown               | Legal & General                 | October 2017   | Pensioner buy-in |             |
| SSE  | 245       | Energy                | Pension Insurance Corporation   | November 2016  | Pensioner buy-in |             |
| Undisclosed                                  | 245       | Unknown               | JUST                            | September 2017 | Pensioner buy-in | ✓           |
| Weir Group                                   | 240       | Engineering           | Legal & General                 | December 2007  | Pensioner buy-in |             |
| Law Society                                  | 235       | Legal                 | MetLife (now Rothesay Life)     | June 2011      | Full buy-out     |             |
| General Motors                               | 230       | Vehicle Manufacturing | Rothesay Life                   | October 2012   | Full buy-out     | ✓           |
| Colfax                                       | 230       | Machinery             | Legal & General                 | March 2019     | Full buy-out     |             |

# Appendix 4

## Buy-ins and buy-outs over £100m announced since 2007

| Name                             | Size (£m) | Sector                | Insurer                         | Date           | Type             | LCP advised |
|----------------------------------|-----------|-----------------------|---------------------------------|----------------|------------------|-------------|
| Kingfisher                       | 230       | Retail                | Legal & General                 | December 2015  | Pensioner buy-in |             |
| Pilkington                       | 230       | Glass Manufacturing   | Pension Insurance Corporation   | August 2016    | Pensioner buy-in |             |
| Pensions Trust                   | 225       | Charities             | Paternoster (now Rothesay Life) | July 2008      | Pensioner buy-in |             |
| Leyland DAF                      | 225       | Vehicle Manufacturing | Pension Insurance Corporation   | January 2009   | Full buy-out     |             |
| Undisclosed FTSE 250             | 220       | Unknown               | Legal & General                 | June 2010      | Unknown          |             |
| Undisclosed                      | 220       | Retail                | Legal & General                 | March 2009     | Pensioner buy-in | ✓           |
| Undisclosed                      | 220       | Unknown               | Pension Insurance Corporation   | November 2013  | Full buy-out     |             |
| ICI Specialty Chemicals          | 220       | Chemicals             | Prudential                      | August 2015    | Pensioner buy-in | ✓           |
| Aon                              | 210       | Financial Services    | Pension Insurance Corporation   | October 2014   | Pensioner buy-in |             |
| Undisclosed                      | 210       | Unknown               | Pension Insurance Corporation   | November 2017  | Pensioner buy-in |             |
| Siemens (VA Tech)                | 210       | Technology            | Pension Insurance Corporation   | December 2015  | Full buy-out     |             |
| Investec Bank                    | 210       | Financial Services    | Aviva                           | November 2016  | Full buy-out     | ✓           |
| Kingfisher                       | 210       | Retail                | Pension Insurance Corporation   | April 2018     | Pensioner buy-in |             |
| Smiths Group                     | 210       | Engineering           | Canada Life                     | September 2017 | Pensioner buy-in |             |
| Taylor Wimpey                    | 205       | House building        | Partnership                     | December 2014  | Pensioner buy-in |             |
| Undisclosed                      | 200       | Unknown               | Aviva                           | June 2018      | Full buy-out     | ✓           |
| Undisclosed                      | 200       | Unknown               | Pension Insurance Corporation   | April 2018     | Pensioner buy-in | ✓           |
| 600 Group                        | 200       | Machinery             | Pension Insurance Corporation   | July 2018      | Full buy-out     |             |
| Undisclosed                      | 200       | Unknown               | Scottish Widows                 | April 2016     | Pensioner buy-in | ✓           |
| Denso                            | 200       | Automotive            | Pension Insurance Corporation   | March 2012     | Full buy-out     |             |
| SR Technics                      | 200       | Aviation              | Pension Insurance Corporation   | April 2012     | PPF+ buy-out     |             |
| Undisclosed                      | 200       | Unknown               | Pension Insurance Corporation   | November 2014  | Pensioner buy-in | ✓           |
| 3i                               | 200       | Financial Services    | Pension Insurance Corporation   | March 2017     | Pensioner buy-in | ✓           |
| Undisclosed                      | 200       | Unknown               | Pension Insurance Corporation   | July 2017      | Pensioner buy-in |             |
| Undisclosed                      | 195       | Unknown               | Pension Insurance Corporation   | June 2018      | Pensioner buy-in |             |
| Smith & Nephew                   | 190       | Medical               | Rothesay Life                   | January 2013   | Pensioner buy-in | ✓           |
| Undisclosed                      | 190       | Unknown               | Pension Insurance Corporation   | August 2015    | Full buy-out     |             |
| GKN                              | 190       | Engineering           | Pension Insurance Corporation   | November 2016  | Pensioner buy-in |             |
| Makro UK                         | 185       | Retail                | Rothesay Life                   | August 2014    | Full buy-out     | ✓           |
| Undisclosed                      | 185       | Banking               | Aviva                           | December 2010  | Pensioner buy-in |             |
| William Hill                     | 180       | Bookmakers            | JUST                            | May 2018       | Pensioner buy-in |             |
| Undisclosed                      | 180       | Unknown               | Pension Insurance Corporation   | December 2017  | Pensioner buy-in |             |
| Undisclosed                      | 180       | Unknown               | Aviva                           | December 2018  | Full buy-out     |             |
| Sea Containers                   | 180       | Shipping              | Aviva                           | August 2017    | PPF+ buy-out     |             |
| M-Real Corporation               | 180       | Paper Manufacturing   | Legal & General                 | March 2008     | Full buy-out     |             |
| Undisclosed                      | 180       | Unknown               | Pension Insurance Corporation   | October 2015   | Full buy-out     |             |
| Undisclosed                      | 180       | Unknown               | Aviva                           | November 2017  | Pensioner buy-in |             |
| DRG Pension Fund                 | 180       | Paper & Stationery    | Legal & General                 | January 2007   | Full buy-out     |             |
| Undisclosed                      | 175       | Unknown               | Legal & General                 | H2 2018        | Full buy-out     |             |
| First Quench                     | 175       | Retail                | Pension Insurance Corporation   | April 2013     | PPF+ buy-out     | ✓           |
| TI Group / Smiths Group          | 170       | Engineering           | Pension Insurance Corporation   | September 2013 | Pensioner buy-in |             |
| Undisclosed                      | 170       | Unknown               | Pension Insurance Corporation   | April 2011     | Full buy-out     | ✓           |
| Undisclosed                      | 170       | Unknown               | Pension Insurance Corporation   | July 2014      | Full buy-out     |             |
| Electricity Association Services | 170       | Utilities             | Legal & General                 | November 2007  | Full buy-out     |             |
| Emap                             | 170       | Media                 | Paternoster (now Rothesay Life) | October 2007   | Full buy-out     |             |
| Toshiba                          | 170       | Conglomerate          | Rothesay Life                   | March 2018     | Full buy-out     |             |
| Gartmore                         | 160       | Financial Services    | Pension Insurance Corporation   | April 2012     | Full buy-in      | ✓           |
| Morgan Crucible                  | 160       | Engineering           | Lucida                          | March 2008     | Pensioner buy-in | ✓           |
| London Stock Exchange            | 160       | Financial Services    | Pension Insurance Corporation   | May 2011       | Pensioner buy-in |             |
| Undisclosed                      | 160       | Unknown               | Legal & General                 | June 2016      | Unknown          |             |
| Undisclosed                      | 160       | Unknown               | Aviva                           | June 2018      | Deferred buy-out |             |
| Pfizer                           | 160       | Pharmaceutical        | JUST                            | March 2018     | Pensioner buy-in |             |
| Ofcom                            | 150       | Public                | Legal & General                 | July 2008      | Pensioner buy-in | ✓           |
| Dairy Crest                      | 150       | Food Producer         | Legal & General                 | December 2008  | Pensioner buy-in |             |
| Dairy Crest                      | 150       | Food Producer         | Legal & General                 | June 2009      | Pensioner buy-in |             |
| Aon                              | 150       | Financial Services    | MetLife (now Rothesay Life)     | June 2009      | Pensioner buy-in |             |

# Appendix 4

## Buy-ins and buy-outs over £100m announced since 2007

| Name                        | Size (£m) | Sector                       | Insurer                        | Date           | Type             | LCP advised |
|-----------------------------|-----------|------------------------------|--------------------------------|----------------|------------------|-------------|
| Meat & Livestock Commission | 150       | Food Producer                | Aviva                          | June 2011      | Pensioner buy-in |             |
| TI Group / Smiths Group     | 150       | Engineering                  | Rothsay Life                   | September 2011 | Pensioner buy-in |             |
| Eni Lasmio                  | 150       | Energy                       | Paternoster (now Rothsay Life) | November 2007  | Full buy-out     |             |
| Undisclosed                 | 150       | Unknown                      | Pension Insurance Corporation  | September 2016 | Pensioner buy-in |             |
| Undisclosed                 | 145       | Unknown                      | Legal & General                | January 2009   | Pensioner buy-in |             |
| Undisclosed                 | 140       | Unknown                      | Prudential                     | August 2012    | Pensioner buy-in |             |
| ICI Specialty Chemicals     | 140       | Chemicals                    | Pension Insurance Corporation  | November 2016  | Pensioner buy-in | ✓           |
| TI Group                    | 140       | Technology                   | Pension Insurance Corporation  | January 2017   | Pensioner buy-in |             |
| Denso                       | 135       | Automotive                   | Pension Insurance Corporation  | September 2009 | Full buy-out     |             |
| Aggregate Industries        | 135       | Unknown                      | JUST                           | July 2016      | Pensioner buy-in | ✓           |
| Undisclosed                 | 135       | Unknown                      | Scottish Widows                | December 2018  | Full buy-out     |             |
| West Ferry Printers         | 130       | Printing                     | Aviva                          | September 2008 | Pensioner buy-in | ✓           |
| Vivendi                     | 130       | Communications               | MetLife (now Rothsay Life)     | November 2008  | Full buy-out     |             |
| Undisclosed                 | 130       | Unknown                      | Aviva                          | December 2017  | Full buy-out     |             |
| Undisclosed                 | 130       | Unknown                      | Legal & General                | June 2017      | Full buy-out     |             |
| Unilever                    | 130       | Consumer goods               | Legal & General                | September 2014 | Pensioner buy-in | ✓           |
| Undisclosed                 | 130       | Unknown                      | JUST                           | August 2016    | Pensioner buy-in | ✓           |
| Next                        | 125       | Retail                       | Aviva                          | August 2010    | Pensioner buy-in |             |
| Undisclosed                 | 125       | Unknown                      | JUST                           | March 2017     | Pensioner buy-in |             |
| ICI                         | 120       | Unknown                      | Legal & General                | October 2018   | Pensioner buy-in | ✓           |
| GKN                         | 120       | Engineering                  | Rothsay Life                   | January 2014   | Pensioner buy-in |             |
| Undisclosed                 | 120       | Unknown                      | JUST                           | October 2016   | Pensioner buy-in | ✓           |
| Undisclosed                 | 120       | Unknown                      | Rothsay Life                   | December 2014  | Full buy-out     |             |
| Undisclosed                 | 120       | Unknown                      | Pension Insurance Corporation  | November 2012  | Pensioner buy-in |             |
| JLT                         | 120       | Employee benefits consulting | Prudential                     | September 2013 | Pensioner buy-in |             |
| Undisclosed                 | 120       | Unknown                      | Rothsay Life                   | December 2014  | Pensioner buy-in |             |
| Undisclosed                 | 120       | Unknown                      | Just Retirement                | October 2015   | Pensioner buy-in |             |
| Undisclosed                 | 120       | Unknown                      | Scottish Widows                | October 2017   | Pensioner buy-in | ✓           |
| Western United              | 115       | Food Producer                | Rothsay Life                   | November 2012  | Pensioner buy-in | ✓           |
| Undisclosed                 | 115       | Unknown                      | Legal & General                | June 2017      | Pensioner buy-in |             |
| Hunting                     | 110       | Energy                       | Paternoster (now Rothsay Life) | January 2007   | Pensioner buy-in | ✓           |
| Undisclosed                 | 110       | Unknown                      | Aviva                          | December 2011  | Pensioner buy-in |             |
| Western United              | 110       | Food Producer                | Rothsay Life                   | March 2014     | Pensioner buy-in | ✓           |
| Land Securities             | 110       | Property                     | JUST                           | December 2016  | Pensioner buy-in |             |
| Undisclosed                 | 110       | Unknown                      | Legal & General                | December 2015  | Full buy-out     |             |
| Undisclosed                 | 110       | Unknown                      | Aviva                          | December 2018  | Full buy-out     | ✓           |
| Undisclosed                 | 110       | Unknown                      | Rothsay Life                   | December 2017  | Full buy-out     |             |
| Undisclosed                 | 110       | Unknown                      | Rothsay Life                   | December 2018  | Full buy-out     |             |
| Undisclosed                 | 105       | Unknown                      | JUST                           | July 2018      | Pensioner buy-in |             |
| Undisclosed                 | 105       | Unknown                      | Rothsay Life                   | October 2018   | Full buy-out     |             |
| Aon                         | 105       | Financial Services           | Pension Insurance Corporation  | March 2012     | Pensioner buy-in |             |
| Alcatel-Lucent              | 105       | Telecommunications           | Pension Insurance Corporation  | November 2016  | Pensioner buy-in |             |
| Siemens (VA Tech)           | 100       | Technology                   | Pension Insurance Corporation  | April 2013     | Pensioner buy-in |             |
| Undisclosed                 | 100       | Manufacturing                | MetLife (now Rothsay Life)     | January 2010   | Pensioner buy-in |             |
| Undisclosed                 | 100       | Retail                       | Aviva                          | March 2010     | Pensioner buy-in |             |
| MNOPF                       | 100       | Various                      | Lucida                         | May 2010       | Pensioner buy-in |             |
| Undisclosed                 | 100       | Unknown                      | Pension Insurance Corporation  | December 2012  | Pensioner buy-in | ✓           |
| The Church of England       | 100       | Charities                    | Prudential                     | February 2014  | Pensioner buy-in | ✓           |
| Undisclosed                 | 100       | Unknown                      | Legal & General                | December 2017  | Full buy-out     |             |
| Undisclosed                 | 100       | Unknown                      | Legal & General                | November 2015  | Full buy-out     |             |
| SSE                         | 100       | Energy                       | Pension Insurance Corporation  | November 2016  | Pensioner buy-in |             |
| Pharmacia                   | 100       | Pharmaceutical               | Scottish Widows                | March 2017     | Pensioner buy-in |             |
| Undisclosed                 | 100       | Unknown                      | Aviva                          | April 2017     | Full buy-out     |             |
| Undisclosed                 | 100       | Unknown                      | Pension Insurance Corporation  | July 2017      | Pensioner buy-in |             |
| Undisclosed                 | 100       | Unknown                      | Aviva                          | November 2017  | Full buy-out     |             |
| Hitachik UK                 | 100       | Unknown                      | Scottish Widows                | January 2018   | Pensioner buy-in |             |
| Undisclosed                 | 100       | Unknown                      | Pension Insurance Corporation  | September 2018 | Full buy-out     |             |

Source: Insurance company data.

# Appendix 5

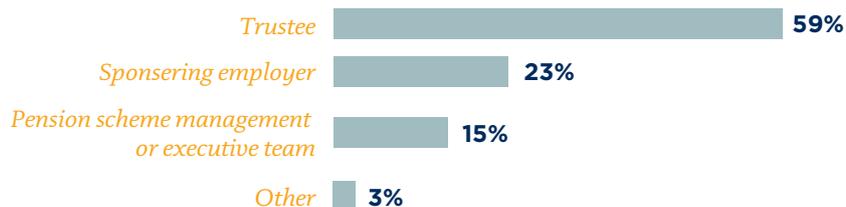
## Summary of views from pension plans

At the end of 2018 we performed a survey of representatives from pension plans to gauge their views on the de-risking market.

The survey respondents consisted of the following individuals:

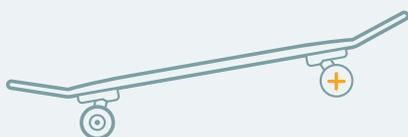
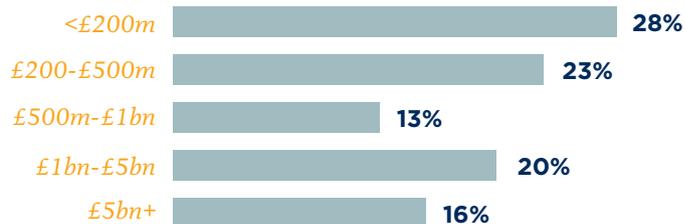
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### What is your role on your pension scheme(s)?



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### What is the approximate size of your pension scheme(s)?



### Summary of views from market participants

The following eight insurers provided views for this report: **Aviva, Canada Life, JUST, L&G, Phoenix Life, PIC, Rothesay Life, Scottish Widows**

The following six reinsurers provided views for this report: **Challenger, Partner Re, Hannover, RGA, Munich Re, PICA**



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