Strictly Private and Confidential

C-Suite
Pension Strategies

Defined Benefit Pension Schemes

USE OF LONGEVITY SWAPS AND BUY-INS

And Other Unforced Errors

Edition II

Make Risk Transfer Deals Transparent

May 2023

Themes of the Paper

The UK Defined Benefit pension industry has enthusiastically adopted derisking as part of "endgame" solutions. The long bull bond market encouraged a switch out of equities. Then came more hedging of interest rate risk. Longevity swaps were a suitable follow on to the all pervasive LDI strategies.

Interest rate and longevity derisking then came together well in "buy-in" packaged deals. Derisking continues to be the assumed direction of endgame based journey plans. The risk transfer industry is buoyant.

This paper looks at the financial impact of some longevity swaps and buy-ins. They have proved to be financial mistakes. Life expectancy trends have for a decade suggested caution before transferring liabilities that schemes do not actually have. The sudden upturn in interest rates makes premia paid for buy-ins look very poorly timed.

Questions about where schemes are now arise. The cost of risk transfers needs to be set against the benefit of wait and see thinking when there is little genuine solvency concern for the sponsor and the risk to members pensions is now centred on inflation diminishing their real value.

The actuarial and consultancy professions should use the time ahead of new longevity tables appearing and Solvency II replacements becoming clear to answer some searching questions about the advice they have been providing over the last decade.

The paper uses published data from the sponsor and where relevant their parent's accounts. It also uses pension scheme accounts. What is clear is that the costs of buy-in transactions in particular can be hidden in accounting statements, flimsy explanations and half-hearted notes. The use of other comprehensive income (OCI) is central to the obfuscation. This means that investment cost and losses incurred have no direct earnings effect on the sponsor and trustee decisions are obscured. Shareholders should take note.

The paper concludes that "derisking" strategies need closer examination of their value and how they are explained to stakeholders. The current market value or close out costs of buy-ins and longevity swaps should be noted in financial statements against the cost of their purchase adjusted for payments made.

Transparency is needed.

The risk transfer industry needs to publish research which demonstrates the value of its strategies.

The value of transactions need questioning.

An alternative of running on should be a benchmark for the industry.

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The Analyses

The paper provides analyses of selected Defined Benefit schemes' finances. It looks in particular at data published by their sponsors. The data timelines are designed to connect current data with that provided at transaction decision making points. The focus is on stronger sponsors of a variety of scale where the pension scheme is not a major financial problem – more a feature of the business to be managed. The data is often fragmentary.

Financial accounts of both schemes and sponsor show there is little effort to explain or highlight the impact of decisions to seek large cash sums for investment in strategies targeting sub-inflation investment returns. Money was allocated to buy assets or back strategies which market and demographic movements show to have proved, at best, unfortunately timed. Yet the returns achieved on risk transfers and the real costs of exit are not addressed or justified. They are assumed to be a good thing.

Substantial sums were invested in a very narrow range of assets. The impact of DB schemes cornering the index linked gilt market has proved remarkable. The Bank of England had to intervene to maintain stability. A Dutch bulb market had been created. The consequences are still playing out. There may now be more unfortunate losses from the sale of illiquid assets as schemes comply with tightened control on Leveraged LDI.

How has transparency faired? Not well. The role of Other Comprehensive Income as a dumping ground for unwelcome asset write downs is a well-developed accounting trick. There are many precedents for keeping costs well hidden in accounts – goodwill accounting 30 years ago being comparable. To have actuaries and accountants working together, however, on such a project is still unusual.

Why obfuscation happens is explicable. The Risk Transfer Industry knows that if their deals had a straight earnings impact they would not happen. They have adapted. For example, current sector practice is allowing a rolling programme of buy-ins to be undertaken to avoid a large settlement charge when a buyout takes place. The overall cost of the buy-ins undertaken and the rationale for it should be noted.

The overall sense is that there is little effort to move beyond platitudes as a rationale and to set out the finances in any explicable form.

The changes in interest rates have now caused massive falls in the value of asset held alongside the actuarial appraisal of liabilities. Payments, however, have risen with inflation. Accounts provide little explanation of the impact of collateral requests on the ongoing liquidity of schemes and their ability to meet pension payments for the foreseeable future without the need to make disposals at much reduced current values. To do so would suggest that market risk had not been addressed through derisking at all.

A better asset allocation with fewer eggs in an LDI basket would have served all stakeholders better. Multi-asset managers it should be your time to shine.

Recommendations: And the Alternative

The standard of disclosures about buy-ins and longevity swaps when first undertaken should materially improve. Their continuing impact should be explained and reconciled in subsequent years.

Sponsoring companies and trustees in their annual accounts should include:

- Premia paid for buy-ins and longevity swaps against book values upfront.
- Current book value against price paid and third-party valuations to be Level 3 disclosures annually.
- The level of collateral posted on the longevity swap should be noted annually.
- Notes setting out items included in OCI and their links to other disclosures. Fewer hash numbers.
- Where a premium is paid above book value an explanation of the difference should be provided (The life expectancy assumptions used by a counter party compared with the accounts assumptions is important to assessing the values involved).
- A note of the realised profit / loss on assets sold during the year.

Accountancy bodies should consider whether it is appropriate to use OCI to absorb premia paid by pension schemes to transfer liabilities to a third party. The level of disclosure of the accounting treatment could be reconsidered.

Risk transfer consultancies should provide analyses of the financial consequences of the deals they have taken such public credit for arranging and ensure that it is transparent in public documents.

An alternative to risk transfers is needed. C-Suite Pension Strategies' view is that corporates should keep the faith with DB schemes. The FiduciaryPlus package developed with Kempen makes that possible. It is recommended as the alternative benefitting all stakeholders.

Additional questions to which the preliminary study gives rise which should be examined in greater depth are:

- Is the regulatory arbitrage between insurance and DB scheme methodologies deliberate and reasonable?
- Are longevity tables used in longevity swaps and buy-ins reasonable for use in risk transfers as well as in actuarial triennial valuations? Is the same data being used by insurers and DB schemes?
- Can trustees be confident that there is no asymmetry of information and that tables have been prepared independently of transaction counter-parties?

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Working Paper and Data Extracts

Aviva Plc : The missing link

Research Findings

Aviva provides an example of the impact of longevity swaps, buy-ins and interest rate moves in 2022. Transparency is clearly not a priority. It is extremely difficult to find information on the costs to the scheme and to the members of longevity swaps and buy-ins.

Without the related party transaction note on the buy-ins there would not be information available to compare the £2bn loss written off to OCI with the £1,062m profit made by the company on the same transactions.

There is still no information about the longevity swaps and how much of a negative amount has been included as a hash number as “Cash and other”.

The available information does suggest just how profitable buy ins are and the benefit grows as longevity trues up. As these are updated the profit to the Group and cost to the pension scheme will increase.

The longevity notes on the wider Aviva business and the write back provisions to profits suggest Aviva recognises the empirical data indicates standard assumptions are too high. In 2022 the interest rate moves highlighted Aviva had overhedged. Assets actually fell more than liabilities when most schemes had some benefit. One scheme appears to have needed a group loan to deal with collateral calls.

Business Summary

Aviva is a major life insurer with a DB scheme. Its experience has lessons for all DB scheme trustees and sponsors.

Aviva has made large profits selling its own pension assets to itself. This highlights the regulatory arbitrage available.

Key Company Figures

December	2022 £m	2021 £m	2020 £m	2019 £m
Income	(21244)	33184	31292	46569
(Loss)/Profit before tax	(2379)	801	2613	3821
Market cap	3.4.23 -£11.3bn	1.2.23 -£12.8bn		

Pension Scheme

Aviva has a large, well-funded pension scheme. It has taken a well-trodden de-risking path. It has used its own life insurance arm to buy up large parts of its pension liabilities.

DB pension scheme summary 31.12.2022

(Annual Report and Accounts 2022 Page 3.106)

The Group operates a number of defined benefit and defined contribution pension schemes. The defined benefit schemes are in the UK, Ireland and Canada. The assets and liabilities of these defined benefit schemes as at 31 December 2022 are shown below.

	UK £m 2022	Ireland £m 2022	Canada £m 2022	Total £m 2022	UK £m 2021	Ireland £m 2021	Canada £m 2021	Total £m 2021
Total fair value of scheme assets (see b(ii) below)	**10,877**	**689**	**197**	**11,763**	18,195	898	244	19,337
Present value of defined benefit obligation	**(10,002)**	**(670)**	**(259)**	**(10,931)**	(15,764)	(988)	(316)	(17,068)
IAS 19 surpluses/(deficits) in the schemes	**875**	**19**	**(62)**	**832**	2,431	(90)	(72)	2,269
Surpluses included in other assets (note 29)	**1,166**	**26**	**—**	**1,192**	2,754	—	—	2,754
Deficits included in provisions (note 49)	**(291)**	**(7)**	**(62)**	**(360)**	(323)	(90)	(72)	(485)
IAS 19 surpluses/(deficits) in the schemes	**875**	**19**	**(62)**	**832**	2,431	(90)	(72)	2,269

Under the IAS 19 valuation basis, the Group applies the principles of IFRIC 14 IAS 19 – The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction, whereby a surplus is only recognised to the extent that the company is able to access the surplus either through an unconditional right of refund to the surplus or through reduced future contributions relating to ongoing service, which have been substantively enacted or contractually agreed*. **The Group has determined that it can derive economic benefit from the surplus in the Aviva Staff Pension Scheme (ASPS) via a reduction to future employer contributions for defined contribution (DC) members, which could theoretically be paid from the surplus funds in the ASPS.*** In the RAC (2003) Pension Scheme and Friends Provident Pension Scheme (FPPS), in the UK and in the Aviva Ireland Staff Pension Fund (AISPF) in Ireland, the Group has determined that the rules set out in the schemes' governing documentation provide for an unconditional right to a refund from any future surplus funds in the schemes.

(i) Movements in the scheme surpluses and deficits

Movements in the pension schemes' surpluses and deficits comprise:

	Fair Value of Scheme Assets £m 2022	Present Value of defined benefit obligation £m 2022	IAS 19 Pensions surplus/ (deficits) £m 2022	Fair Value of Scheme Assets £m 2021	Present Value of defined benefit obligation £m 2021	IAS 19 Pensions surplus/ (deficits) £m 2021
IAS 19 surplus in the schemes at 1 January	**19,337**	**(17,068)**	**2,269**	20,125	(18,091)	2,034
Administrative expenses	**—**	**(20)**	**(20)**	—	(19)	(19)
Total pension cost charged to net operating expenses	**—**	**(20)**	**(20)**	—	(19)	(19)
Net interest credited/(charged) to investment income/(finance costs)[1]	**352**	**(310)**	**42**	260	(233)	27
Total recognised in income	**352**	**(330)**	**22**	260	(252)	8
Remeasurements:						
Actual return on these assets	**(7,125)**	**—**	**(7,125)**	(315)	—	(315)
Less: Interest income on scheme assets	**(352)**	**—**	**(352)**	(260)	—	(260)
Return on scheme assets excluding amounts in interest income	**(7,477)**	**—**	**(7,477)**	(575)	—	(575)
Gains from change in financial assumptions	**—**	**5,724**	**5,724**	—	549	549
Gains from change in demographic assumptions	**—**	**540**	**540**	—	235	235
Experience losses	**—**	**(329)**	**(329)**	—	(150)	(150)
Total recognised in other comprehensive income	**(7,477)**	**5,935**	**(1,542)**	(575)	634	59
Employer contributions	**89**	**—**	**89**	161	—	161
Plan participant contributions	**2**	**(2)**	**—**	3	(3)	—
Benefits paid	**(572)**	**572**	**—**	(564)	564	—
Administrative expenses paid from scheme assets	**(20)**	**20**	**—**	(19)	19	—
Foreign exchange rate movements	**52**	**(58)**	**(6)**	(54)	61	7
IAS 19 surplus in the schemes at 31 December	**11,763**	**(10,931)**	**832**	19,337	(17,068)	2,269

1. Net interest income of £62 million (2021: £40 million) has been credited to investment income and net interest expense of £20 million (2021: £13 million) has been charged to finance costs (see note 6)

The present value of unfunded post-retirement benefit obligations included in the table above is £88 million at 31 December 2022 (2021: £110 million).

Remeasurement losses of £1,542 million (2021: gain of £59 million) recorded in the statement of comprehensive income for the period are largely driven by:

- ***A significant increase in UK interest rates, with the rate on 15-year swaps increasing by c.270bps during 2022. This has resulted in a reduction of the fair value of fixed income securities, not fully offset by the reduction in the valuation of the defined benefit obligation from the increase in the valuation interest rate.*** Further information on the sensitivity of the IAS 19 surplus to interest rates is provided in note 50(b)(iii).
- ***During the period the ASPS completed two further bulk annuity buy-in transactions with Aviva Life & Pensions UK Limited, a Group Company.*** Due to different measurement bases applying for accounting purposes, the premium paid by the scheme exceeded the valuation of the scheme asset recognised. In the table above, this has been recognised as a loss in the actual return on assets (see note 61 Related party transactions for further information). The scheme assets recognised are transferable and so have not been subject to consolidation within the Group's financial statements.
- Experience losses on the pension schemes' liabilities which includes the impact of higher than expected inflation increases.
- The losses were partially offset by actuarial gains relating to updated demographic assumptions (including longevity assumptions).

Longevity Swaps

In March 2014 the Trustees of the Aviva Staff Pension Scheme (ASPS) completed a £5bn longevity swap. The deal passed the longevity risk to three reinsurers, Munich Re, Scor and Swiss Re. In 2015 another £600m swap was completed.

There was no mention of the longevity swaps in the pension scheme asset breakdown for either of the above years. At that point they may have been considered immaterial.

At 31.12.2022 the pension scheme assets included a "Cash and other" amount of (£1063m). The note states that "Cash and other" includes cash at bank, receivables, payables and longevity swaps. It also states that the short positions in "Cash and other" total £2675m.

It is impossible to calculate the value of the longevity swaps or their financial impact on the basis of the data.

<u>Assets (Annual Report and Accounts 2022 – Page 3.108)</u>

Total scheme assets are comprised by country as follows:

	2022				2021			
	UK £m	Ireland £m	Canada £m	Total £m	UK £m	Ireland £m	Canada £m	Total £m
Bonds	**7,969**	**530**	**63**	**8,562**	17,503	842	97	18,442
Equities	**—**	**18**	**—**	**18**	—	25	—	25
Property	**74**	**—**	**—**	**74**	153	—	—	153
Pooled investment vehicles	**1,710**	**273**	**132**	**2,115**	4,153	347	145	4,645
Derivatives	**(158)**	**56**	**—**	**(102)**	46	17	—	63
Insurance policies	**3,423**	**—**	**—**	**3,423**	4,343	—	—	4,343
Repurchase agreements	**(646)**	**(191)**	**—**	**(837)**	(4,376)	(331)	—	(4,707)
Cash and other[1]	**(1,063)**	**3**	**2**	**(1,058)**	(3,002)	(2)	2	(3,002)
Total fair value of scheme assets	**11,309**	**689**	**197**	**12,195**	18,820	898	244	19,962
Less: consolidation elimination for non-transferable Group insurance policy[2]	**(432)**	**—**	**—**	**(432)**	(625)	—	—	(625)
Total IAS 19 fair value of scheme assets	**10,877**	**689**	**197**	**11,763**	18,195	898	244	19,337

1. Cash and other assets comprise cash at bank, receivables, payables, and longevity swaps. At 31 December 2022, cash and other assets primarily consist of short positions of £(2,675) million (2021: £(3,098) million).
2. As at 31 December 2022, the FPPS asset includes an insurance policy of £432 million (2021: £625 million) issued by a Group company that is not transferable under IAS 19 and is consequently eliminated from the Group's IAS 19 scheme assets. Insurance policies issued by other Group companies of £2,991 million as at 31 December 2022 (2021: £3,718 million) included in the ASPS assets are transferable and so are not subject to consolidation.

IAS 19 plan assets include investments in Group-managed funds of £1,468 million (2021: £2,351 million) and transferable insurance policies with other Group companies of £2,991 million (2021: £3,718 million) in the ASPS. Where the investments are in segregated funds with specific asset allocations, they are included in the appropriate line in the table above, otherwise they appear in 'Cash and other'. There are no significant judgements involved in the valuation of the scheme assets. Insurance policies are valued on the same basis as the pension scheme liabilities, as required by IAS 19.

Related Party Transactions 2022 p3.138 re Group Insurance Policy

"Our UK fund management companies manage most of the assets held by the Group's main UK staff pension scheme, for which they charge fees based on the level of funds under management. The main UK scheme holds investments in Group-managed funds and insurance policies with other group companies, as explained in note 50(b)(ii). As at 31 December 2022, the Friends Provident Pension Scheme ('FPPS'), acquired in 2015 as part of the acquisition of the Friends Life business, held an insurance policy of £432 million (2021: £625 million) issued by a group company, which eliminates on consolidation. ***During the year, Aviva Group Holdings Limited provided a short term loan of £88 million to FPPS.*** As at 31 December 2022 £26 million remained outstanding, which is included within the Group's loan assets and as a deduction from FPPS plan assets, and does not eliminate on consolidation."

Buy-Ins

Over the four years, 2019 – 2022, the ASPS has completed 7 buy-ins with Aviva Life & Pensions UK Ltd (AVLAP). It has a framework in place for more deals.

The pensions notes to the account states that the buy-ins were completed and they are included in the scheme assets note as "Insurance policies".

However, much more detail is given under the Related Party Transactions note (see note 1 - Related Party Transaction note from 2022 Accounts below).

The notes show the transactions from the company's and the pension scheme's perspectives.

AVLAP took the premium received, deducted the recognised gross insurance liabilities and took an instant profit on the buy-in. C-Suite has constructed the tables below. The implied profit totalled £1062m over the four years and is apparently included in the company's reported results.

ASPS £m	Premium Paid	Recognised plan assets	Loss taken to OCI
2022 (2 buy-ins)	1324	891	433
2021 (3 buy-ins)	2456	1760	696
2020 (1 Buy-in)	873	579	294
2019 (1 buy-in)	1665	1126	539
	6318	**4356**	**1962**

AVLAP £m	Premium received	Recognised Gross insurance liabs	Implied profit
2022 (2 buy-ins)	1324	1001	323
2021 (3 buy-ins)	2456	2184	272
2020 (1 Buy-in)	873	737	136
2019 (1 buy-in)	1665	1334	331
	6318	**5256**	**1062**

Aviva Life & Pensions UK Ltd: (Loss)/Profit before tax in accounts:

2022	£(2379m)
2021	*£801m (profit before tax of continuing operations after disposals)
2020	£2613m
2019	£3821m

At 31 December 2022 the recognised cumulative technical provisions shown in AVLAP were £3342m (2021 £4264m).

At 31 December 2021 the cumulative transferable asset plan shown in ASPS was £2875m (2021 £3543m).

There is an apparent regulatory arbitrage.

Longevity Assumptions

For schemes well hedged on interest rates, the derisking of buy-ins comes from longevity. The Aviva 2021 accounts show it considers longevity assumptions are high and will enable it to reduce provisions (see note 2 below). It has a committee considering the subject in relation to its wider annuity business. Schemes like Aviva's own undertaking buy-ins tend to keep their accounting mortality assumptions high. Aviva's own assumptions are high by most standards. High assumptions mean that the apparent OCI loss on transfers is kept down. Risk transferred will benefit the transferee. If mortality assumptions decrease in the following years, the impact seeps through OCI.

December	2022	2021	2020	2019	2018	2017	2016	2015
Male at 60	87.9	88.0	88.0	88.2	88.8	88.9	89.0	89.8
Female at 60	89.6	89.7	89.8	89.6	90.2	90.3	90.2	90.8
Male at 40	89.3	89.6	89.4	90.0	90.7	91.1	91.4	91.7
Female at 40	91.4	91.8	92.0	91.9	92.5	92.5	92.8	92.6
Impact on Present Value of DB obligation	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**
All members one year younger	308	680	714	613	536	565	606	396

Notes from Accounts

1.Pension Scheme Notes

Related Party Transaction note 61 from 2022 Accounts Page 3.139

"During the year, the Aviva Staff Pension Scheme (ASPS) completed two (2021: three) bulk annuity buy-in transactions with Aviva Life & Pensions UK Limited (AVLAP). Total premiums of £1,324 million (2021: £2,456 million) were paid by the scheme to AVLAP, with AVLAP recognising total gross liabilities of £1,001 million (2021: £2,184 million). The difference between the premiums and the gross liabilities implies profit2 of £323 million (2021: £272 million), which does not include costs incurred by the Group associated with the transactions, and is driven primarily by differences between the measurement bases used to calculate the premium and the accounting value of the associated gross liabilities. The ASPS recognised the total plan assets of £891 million (2021: £1,760 million), with the difference between the plan assets recognised and the premiums paid being recognised as an actuarial loss through Other Comprehensive Income. As at 31 December 2022, AVLAP recognised cumulative technical provisions of £3,342 million (2021: £4,264 million) in relation to buy-in transactions with the ASPS which have been included within the Group's gross liabilities, and the ASPS held a transferable plan asset of £2,875 million (2021: £3,543 million) which does not eliminate on consolidation."

2. Longevity in Aviva General business notes – 2022 Accounts

The 2022 accounts show that Aviva's own work was highlighting decreases in life expectancy. The extent to which an asymmetry of information between the industry and pension scheme advisers has arisen is of note. The following note should at least suggest the long term rate of improvement being used should be dropped.

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“There is considerable uncertainty as to whether the improvements in life expectancy that have been experienced over the last 40 years will continue into the future. In particular, there is likely to be a reduced level of improvement from the two key drivers of recent improvements, smoking cessation (as you can only give up smoking once) and the use of statins in the treatment of cardiovascular disease (where the most significant benefit from use in higher risk groups has now been seen). Despite continued medical advances emerging, dietary changes, increasing obesity and strains on public health services have slowed the historical trend since around 2011. In the UK, this has led to some significant industry-wide longevity reserve releases in recent years, as the assumptions around future longevity improvements have been weakened. The potential impact of the COVID-19 pandemic on medium and longer term longevity projections, via ongoing direct effects (e.g. endemic COVID-19) or via indirect effects (e.g. strains on the NHS), also adds to the uncertainty but we do not currently anticipate a material impact on the overall outlook.

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The Committee reviewed and challenged the longevity, persistency, expense and residential and commercial property growth assumptions used for the quarterly operating updates, and 2022 half year and full year financial statements. The process around the setting of longevity assumptions was a particularly significant area for review as those judgements could have a material impact on Aviva’s SII and IFRS results. During 2022, the Committee worked closely with the Audit Committee of the Group’s UK Life subsidiary, Aviva Life & Pensions UK Ltd, to review the detailed analysis and to validate changes observed in recent mortality experience and the resulting impact on the existing longevity assumptions. The Committee reviewed the impact of the period of higher inflation and the rising interest rate environment during 2022. This included residential property assumptions, the impact on the general insurance business of current and future claims inflation, and impacts on the Aviva Staff Pension Scheme.

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The impact of interest rates on long-term insurance business relates primarily to annuities in the UK (including any change in credit default and reinvestment risk provisions), where an increase in the valuation interest rate, in response to materially increasing interest rates, has decreased liabilities. This line also includes changes to liabilities in respect of annuity contracts linked to inflation.
The impact of change in mortality and morbidity assumptions for assurance contracts relates mainly to the UK following a review of recent experience and moving onto the latest CMI series mortality tables.
The impact of mortality for annuitant contracts on long-term business relates primarily to the UK. In 2022, there has been a reduction in reserves due to longevity assumptions arising from:

– Updates to base mortality to reflect methodology and process refinements on BPA business, totalling £54 million;
– Updates to the rate of mortality improvements for a change to the long-term-rate rate used to taper improvements at the oldest ages from between ages 90 to 115 to between ages 85 to 110, which gave a reduction of £382 million and
– Updates to mortality improvements moving onto the latest CMI_2021 model from CMI_2019, which gave a reduction of £101 million.
  In 2021 there was a reduction in reserves due to longevity assumptions arising from:
– Updates to base mortality to reflect experience and updated assumptions for anti-selection on individual annuities totalling £112 million; and
– Updates to the rate of mortality improvements, consisting of a change to the allowance for differences in mortality improvements in the annuitant population compared to the general population on which CMI_2019 is based of £195 million and other adjustments of £(41) million.

In the general insurance and health business, an impact of £147 million (2021: £(85) million) has arisen primarily as a result of a material increase in the interest rates used to discount claim reserves for both periodic payment orders (PPOs) and latent claims.

In 2020 the impact of mortality for annuitant contracts on long-term business related primarily to a to a reduction in reserves of £390 million in the UK. This was due to changes in assumptions on both individual and bulk purchase annuities arising from:

- Updates to base mortality to reflect recent experience of £224 million;
- Updates to the rate of mortality improvements, including moving to CMI 2019 and changing the long-term rate of future mortality improvements for males of £210 million;
- Changes to assumptions for anti-selection on individual annuities of £(68) million; and
- Net impacts arising from COVID-19 of £24 million.

Legal and General Plc : Assured obfuscation

L&G is a UK financial services provider. Segments include Retirement Institutional; Capital; and Investment Management.

Research Findings

Why scheme members benefit from life insurers transferring scheme assets to the Group is not explained.

Legal and General have been selling annuities to its own pension scheme since 2016. The annuities result in an OCI loss because they do not have an IAS19 value. L&G include an unspecified profit on the transactions in Group accounts. In 2022 further annuities were purchased for a premium of £61m (2021 £82m)

In 2021 the scheme acquired a £1.1bn Assured Payment Policy (a bespoke style of product marketed by the life insurer). In 2022 the value of this APP is shown as £820m (2021 £1214m). Details are unclear of the impact on the scheme and the Group profits. The meaning of the notes provided is remarkably obscure.

Pension Scheme

2017 Accounts Pension Notes

During 2017, an asset switch was made for the Scheme and fund, resulting in a significant reduction in the holding of equities and an increased holding in LDI funds. The main goal of the use of LDI is to hedge movements in the liabilities due to changes in interest rate and inflation expectations. On a gilts flat measure, the Scheme and Fund currently hedge 68% interest rate changes and 64% inflation expectation changes.

Annuities are purchased to mitigate risks for certain parts of the pension liabilities which passes the risks from the Scheme and Fund onto the group.

During 2017 annuities were purchased from the group. A premium of £161m (2016: £nil) was paid from the assets of the Scheme and the Fund to purchase these annuities. These annuities are not recognised as an asset for IAS 19 purposes and so the actuarial remeasurement recognised in the Consolidated Statement of Comprehensive Income includes allowance for this premium payment as well as annuity receipts over 2017 of £53m.

The gross amount of actuarial losses net of tax recognised in the Consolidated Statement of Comprehensive Income for the year was £72m (2016: £121m loss net of tax); cumulative £(898)m (2016: £(826)m).

(v) Investment and other variances

	2017 £m	2016 £m
Investment variance[1]	**129**	147
M&A related and other variances[2]	**(105)**	(134)
Total investment and other variances	**24**	13

1. Includes a positive variance in respect of the defined benefit pension scheme of £94m (2016: £29m) reflecting the impact of the acquisition of annuity assets from LGR, and the beneficial rate difference between the IAS19 and annuity discount rates.
2. Includes gains and losses, expenses and intangible amortisation relating to acquisitions and disposals. 2017 includes the £17m net gain resulting from the disposal of Legal & General Netherlands (2016: includes the £60m net loss resulting from the classification of Cofunds as held for sale (£64m loss) and the disposal of Suffolk Life (£4m gain)).

(ii) Related party transactions

The group has the following related party transactions:

- Annuity contracts issued by Legal and General Assurance Society Limited (LGAS) for consideration of £161m (2016: £3m) purchased by the group's UK defined benefit pension schemes during the year, priced on an arm's length basis;

Dec 2019 Accounts Pensions Notes

(ii) Services provided to and by related parties

All transactions between the group and associates, joint ventures and other related parties during the year are on commercial terms which are no more favourable than those available to companies in general.

Loans and commitments to related parties are made in the normal course of business.

The group has the following material related party transactions:

- Annuity contracts issued by Legal and General Assurance Society Limited for consideration of £78m (2018: £59m) purchased by the group's UK defined benefit pension schemes during the period, priced on an arm's length basis;
- Loans outstanding from related parties at 31 December 2019 of £83m (2018: £201m), with a further commitment of £16m;
- The group has total other commitments of £1,213m to related parties (2018: £837m), of which £749m has been drawn at 31 December 2019 (2018: £507m).

Immediate annuity contracts are offered to individual policyholders. Immediate annuities provide a regular income stream to the policyholder, purchased with a lump sum investment, where the income stream starts immediately after the purchase. These annuities may include a guaranteed payment period.

(iv) Investment and other variances

	2019 £m	2018 £m
Investment variance[1]	(27)	(126)
M&A related and other variances[2]	(123)	(62)
Total investment and other variances	**(150)**	(188)

1. Investment variance includes differences between actual and smoothed investment return on traded and real assets, economic assumption changes (e.g. credit default and inflation) and the impact of any difference between the actual allocated asset mix and the target long-term asset mix on new pension risk transfer business written during the period and held at a period end.
2. M&A related and other variances includes gains and losses, expenses and intangible amortisation relating to acquisitions and disposals. 2019 reflects the impact of impairing £55m of capitalised software intangibles following a groupwide review, as well as a £43m gain on the disposal of the group's stake in IndiaFirst Life Insurance Company Limited.

Dec 2021 Accounts Pensions Notes

(iv) Investment and other variances

	2021 £m	2020 £m
Investment variance related to protection liabilities	111	(459)
Investment variance related to the traded investment portfolio and direct investments	19	(299)
Other investment variance[1]	211	67
Investment variance	**341**	(691)
M&A related and other variances[2]	(108)	297
Total investment and other variances	**233**	(394)

1. Other investment variance includes variances in respect of the defined benefit pension scheme, reflecting the impact of the acquisition of annuity assets from LGR, and the difference between the IAS 19 and annuity discount rates.
2. M&A related and other variances includes gains and losses, expenses and intangible amortisation relating to acquisitions, disposals and restructuring. 2021 includes: the impact of the sale of a book of retail investment products within the L&G Personal Investing business to Fidelity International Limited, announced in October 2020; the costs associated with LGIM's appointment of State Street to provide Charles River technology and middle office services, including the recognition of a multi-year restructuring provision; and the impact of impairing capitalised software intangibles as a result of various restructuring exercises.

Investment variance includes differences between actual and long-term expected investment return on traded and real assets (including direct investments), economic assumption changes caused by changes in market conditions or expectations (e.g. credit default and inflation), the impact of any difference between the actual allocated asset mix and the target long-term asset mix on new pension risk transfer business, and the yield associated with assets held for future new pension risk transfer business from the valuation discount rate.

The long-term expected investment return is based on opening economic assumptions applied to the assets under management at the start of the reporting year. The assumptions underlying the calculation of the expected returns for traded equity, commercial property and residential property are based on market consensus forecasts and long-term historic average returns expected to apply through the cycle.

Dec 2022 Accounts Pensions Notes

(iv) Investment and other variances

	2022 £m	2021 £m
Investment variance related to protection liabilities[1]	841	111
Investment variance related to the traded investment portfolio and direct investments[2]	(408)	19
Other investment variance[3]	(164)	211
Investment variance	**269**	341
M&A related and other variances[4]	(132)	(108)
Total investment and other variances	**137**	233

1. The positive investment variance in protection liabilities of £841m reflects the formulaic impact of the increases in UK and US government bond yields which have resulted in higher discount rates being used to calculate the group's protection liabilities.
2. The negative investment variance in the traded investments portfolio and direct investments of £408m largely reflects volatile global equity market performance in the traded investment portfolio, as well as the revaluation of some land assets and development projects as a result of higher interest rates.
3. Other investment variance includes the IAS 19 movements in respect of the group's defined benefit pension schemes.
4. M&A related and other variances include gains and losses, expenses and intangible amortisation relating to acquisitions, disposals and restructuring as well as business start-up costs.

Investment variance includes differences between actual and long-term expected investment return on traded and real assets (including direct investments developed with the intention of sale), the impact of economic assumption changes caused by changes in market conditions or expectations (e.g. credit default and inflation), the impact of any difference between the actual allocated asset mix and the target long-term asset mix on new pension risk transfer business, and the yield associated with assets held for future new pension risk transfer business from the valuation discount rate.

The long-term expected investment return is based on opening economic assumptions applied to the assets under management at the start of the reporting year. The assumptions underlying the calculation of the expected returns for traded equity, commercial property and residential property are based on market consensus forecasts and long-term historic average returns expected to apply through the cycle.

Other pension scheme numbers

	2022	2021	2020	2019	2018	2017	2016	
	£m	£m	£m	£m	£m	£m	£m	Total
Employer Contributions	100	101	127	79	80	92	71	**650**
Benefits paid	102	103	128	123	193	244	89	**982**
Discount rate	4.83	1.84	1.25	2.08	2.88	2.47	2.70	
Inflation assumption	3.36	3.50	3.00	3.00	3.25	3.35	3.25	
Mortality								
Men 60	87.0	87.2	87.5	87.7	87.7	88.0	88.1	
Women 60	88.1	88.4	88.8	89.0	88.8	88.9	89.0	
Men 40	89.0	89.3	89.6	89.8	89.8	90.6	90.7	
Women 40	89.5	89.8	90.1	90.4	90.2	90.6	90.7	

Breakdown of Assets

December	2022	2021	2020	2019	2018	2017	2016
	£m	£m	£m	£m	£m	£m	£m
Equities	0	0	22	131	113	78	595
Bonds	0	0	0	0	0	1111	638
Investment fund	0	0	1029	1100	913	0	0
Property	0	0	0	53	52	74	68
Other -cash & equivalents	48	114	30	8	14	19	93
APP *	820	1214	396	0	0	0	0
Total	**868**	**1328**	**1477**	**1292**	**1092**	**1282**	**1394**
Premiums paid for annuities	61	82	50	78	59	161	0

*

1. During the year, the Fund and the Scheme undertook APP top-ups under the existing contracts with Legal and General Assurance Society Limited (LGAS), a group company, resulting in a premium paid by the Fund and the Scheme of £65m and £18m respectively. The plan asset recognised is transferable and therefore has not been eliminated on consolidation within the group's financial statements.

Pearson Plc : No FT. No comment

Pearson has funded its pension scheme well. It is well placed to align the scheme with the ESG policies and benefit its past and present employees.

Pearson is a learning company with a digital education vision. Revenues are £3.4bn. Quoted in the UK the market capitalisation is £6.6bn. It sold Financial Times and The Economist in 2018 and made a one-off additional contribution to the scheme. It performed strongly in 2022 with operating profits of £455m. Net debt is £0.6bn. Its pension scheme has been in surplus for some years on an accounting basis, benefiting from £450m in contributions between 2014 and 2017. Carion Capital; Threadneedle; Blackrock and Silchester own over 5%.

Research Findings

£450m in cash contributions over 4 years to 2017 added to an already strong financial position of the scheme. The one-off 2017 contribution of £234m was a windfall reflecting strategic steps made by the sponsor. The investment made in pensioner buy-in followed – providing no tangible benefit to members. Those resources could now be supporting an inflation related pension increase.

The value of the buy-in policy fell by the end of 2022 by **£680m**. Life expectancy assumptions are high. Longevity updates will add to the losses on the buy-ins. Interest rate increases add to the opportunity cost. Those are taken through reserves and do not have an earnings per share impact. The decision to cut the life expectancy assumption by 1.2 years in 2021 from that used in 2018 is noteworthy. The female mortality assumption remains high. The USA life expectancy figures given in the accounts suggest a gap of well over 2 years between the countries.

There is scope to set a long term stable strategy and have agreements to use surpluses as they arise to benefit former and current employees. The long term strategy can be aligned with Pearson's stated ESG commitments – "Adding Life to a Lifetime of Learning. Partner with Pearson and realise the life you imagine." Pearson has ample financial capacity to provide the contingent support for the scheme which makes such an approach practical.

Pension Scheme

Key numbers

Dec	2022	2021	2020	2019	2018	2017	2016	2015	2014
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Scheme Assets	3088	4125	3588	3341	3240	3337	3339	2803	2714
Liabilities	-2514	-3588	-3178	-2912	-2671	-2792	-3181	-2466	-2524
Net	**574**	**537**	**410**	**429**	**569**	**545**	**158**	**337**	**190**

Buy-ins

In October 2017 the trustees agreed a buy-in with Aviva and L&G totalling £1.2bn.

In February 2019 they agreed a further buy-in with L&G for £500m. After this 95% of scheme pensioners are matched with buy-in policies costing £1.7bn.

Pension scheme assets detailed in the December 2022 accounts show the value of the insurance asset to be £1.02bn. The difference is a movement in OCI and has not affected earnings.

Total buy-in costs:	**£1.7bn**
Buy-in insurance value Dec 2022:	**£1.02bn**
Buy-in value loss:	**£680m**

Breakdown of assets

Dec	2022	2021	2020	2019	2018	2017	2016	2015	2014
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Insurance	1019	1444	1507	1437	940	968	-	-	-
Equities	494	495	72	66	65	67	100	392	760
Bonds	278	371	215	234	65	100	334	280	1221
Property	185	206	179	168	227	267	267	252	244
Pooled asset investment funds	679	1238	1220	1002	1425	1468	2237	1402	-
Other	433	371	395	434	518	467	401	477	489
Total assets	**3088**	**4125**	**3588**	**3341**	**3240**	**3337**	**3339**	**2803**	**2714**

A better balanced diversified asset portfolio would have avoided the 25% 2021 to 2022 decrease in value. The cause of the 45% fall in the pooled asset investment funds is not addressed specifically.

Other pension scheme numbers

Dec	2022	2021	2020	2019	2018	2017	2016	2015	2014	Total
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Employer Contributions	15	14	3	3	6	234	99	72	62	**508**
Benefits paid	136	123	119	124	140	188	112	95	92	
DC payments										
DC underpin incl in liabs		-	67	33	23	32	181	-	-	
Discount rate	4.9	1.9	1.4	2.0	2.8	2.5	2.5	3.7	3.6	
Inflation assumption	3.4	3.3	2.9	3.0	3.3	3.2	3.3	3.1	3.0	
Mortality										
Men 65	22.5	22.6	24.0	24.0	23.8	23.6	23.5	23.5	24.4	
Women 65	24.7	24.8	24.3	24.3	24.5	25.7	25.6	25.6	24.5	
Assets / benefits paid	22.7	33.5	30.2	26.9	23.1	17.8	29.8	29.5	29.5	

ITV Plc : Programme costs

ITV has been at the forefront of risk transfers over the last decade. They have proved extremely costly. There is still scope for the scheme to align with the Group's ESG strategies.

ITV Plc is a longstanding integrated producer / broadcaster consisting of ITV Studios and Media & Entertainment. Its market capitalisation is £3.2bn. RWC, Schroder, Artemis and Threadneedle all own over 5% each.

Research Findings

In 2011 ITV Plc was under some performance pressure. It undertook a pension scheme derisking exercise through a longevity swap which had little upfront cost. Subsequent interest rate movements and the flat line nature of longevity experience, in contrast to improved assumptions likely to have been included in the swap, have meant large 'out of the money' positions have arisen: £271m at 31/12/2022. 2023 longevity tables will make the cost of the swap look worse offset by interest rate rises.

Without the longevity swap the scheme would have been in surplus and employer contributions could have been far lower. The buy-in has had the same effect. The value of the position also has to be set against the much reduced value of the assets. In the last 10 years £1027m has been paid into the scheme in cash.

£98m was spent on a buy-in over and above book values. Money left in cash would have been protected from the [25%] asset value fall in 2022, given the asset portfolio is linked to actuarial (not cash) liabilities. In 2022 cash payments were covered 21 times by assets held. This falls significantly in 2023 to 15 times.

Pension Scheme

Key numbers

Dec	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Scheme Assets	2437	3873	4032	3892	3632	3866	3833	3270	3341	2870	2693
Liabilities	-2292	-3943	-4120	-4037	-3719	-3987	-4200	-3446	-3687	-3315	-3244
Net	**145**	**-70**	**-88**	**-145**	**-87**	**-121**	**-367**	**-176**	**-346**	**-445**	**-551**

Longevity Swap

In August 2011 the Trustees entered into a £1.7bn longevity swap with Credit Suisse. The pension scheme will make monthly fixed payments to Credit Suisse. In return Credit Suisse will make payments into the scheme that broadly match the amount of the benefits being paid out.

Advisors:

Willis Towers Watson – Paul Kitson, Mark Duke
PWC – Raj Mody

ITV's 2011 accounts stated that "The recognition of the swap resulted in a reduction to the scheme's assets due to its classification as a negative asset plan". This loss was included within "Market value of assets – other". Actual amount not shown in accounts.

In the ITV accounts for 2022 the pension assets **totalled £2437m** after the negative asset in relation to the longevity swap of **£(271m)**. If the swap had not been completed the assets would have been **£2708m**.

Buy-in

In November 2018 the Trustees entered into a bulk annuity insurance contract buy-in for £580m. A consequence was that the members involved lost their pension increase exchange (PIE) resulting in a past service cost of £5m. In addition some members had a change of their rate of pension increases resulting in a credit of £15m recognised as exceptional past service item in the profit and loss account.

Acquisition of the buy-in insurance policy is treated as an investment decision of the trustees and so related asset value movement goes through OCI. For IAS 19, fair value of the buy-in is matched with the valuation of insured member benefits. As sections of the pension scheme were in surplus this gave rise to **£94m loss** in the OCI.

Breakdown of Assets

Dec	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Equities		-	-	76	169	260	633	651	654	748	632
Bonds	2225	3480	3605	3127	2606	3233	2867	2219	2329	1801	1806
Other		-	-	-	-	-	-	20	22	-	-
Property/infrastructure	345	316	325	295	277	197	157	123	128	114	97
Hedge funds/insurance policies	-	1	2	49	172	234	264	236	225	203	187
Insurance policies Buy in	17	530	553	544	530	-	-	-	-	-	-
Cash & equivalents	121	134	149	140	183	240	183	86	50	27	89
Longevity Swap	-271	-588	-602	-339	-305	-298	-271	-65	-67	-23	-118
Total	**2437**	**3873**	**4032**	**3892**	**3632**	**3866**	**3833**	**3270**	**3341**	**2870**	**2693**

Other pension scheme numbers

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	Total
Employer Contributions	145	82	67	82	90	90	93	102	103	91	82	**1027**
Benefits paid	156	187	187	194	195	201	165	158	145	140	139	**1867**
DC payments	29	26	25	23	21	18	16	16	15	8	9	**206**
Discount rate	5.1	1.8	1.4	2.1	2.9	2.5	2.6	3.8	3.5	4.5	4.2	
Inflation assumption	3.2	3.4	3.0	3.0	3.2	3.2	3.3	3.0	3.0	3.4	2.9	
Mortality												
Men 65	21.6	21.7	21.7	22.6	22.5	24.5	22.4	23.2	23.1	23.0	21.9	
Women 65	24.1	24.1	24.1	24.6	24.5	24.4	24.5	25.7	25.6	25.5	25.1	
Assets / benefits paid	15.6	20.7	21.6	20.1	18.6	19.2	23.2	20.7	23.0	20.5	19.4	

Keysight Technologies Inc : Building a better planet?

Keysight is a major USA technology group focussed on electronic test and measurement equipment. The Group has a market capitalisation of $32bn. Profit before tax in the year to October 2022 was $1285m. Keysight is strongly in favour or the ESG agenda. Its CEO states it will "build a better planet".

A "get rid could not be bothered" mindset in relation to pensions fits badly with the corporate ethos.

Research Findings

Of the £676m assets in 2019, £120m had been contributed in cash in the previous 6 years. In 2019 the surplus in the scheme was £105m. Unnecessarily contributed, much of the value has now been given to a life insurer.

In March 2021 a buy-in for £257m out of a pension scheme of £629m was completed with a further £58m shortly after. Both these buy-ins were with Just Group plc with Willis Towers Watson acting as the scheme's actuary and as the instigator of the risk transfers because it said they were opportunistically good value. The market cap of Just Group is around £900m – a fraction of Keysight's market value.

The 2022 Group accounts shows a 30% mark down on the combined value of the buy-ins.

Employer contributions in the 6 years to 2019 were nearly £120m – in line with actual cash payments. The cash contributions as part of the general portfolio have lost a substantial amount of their value.

Pension Scheme

The UK pension scheme is held by Keysight Technologies UK Ltd

Key numbers

Oct	2021	2020	2019	2018	2017	2016	2015	2014
	£m	£m	£m	£m	£m	£m	£m	£m
Scheme Assets	629	668	676	596	588	548	465	438
Liabilities	-592	-573	-571	-509	-544	-594	-490	-464
	37	**95**	**105**	**87**	**44**	**-46**	**-25**	**-26**

Buy-in

In March 2021 a buy-in transaction was completed for £257m. The asset value of this buy-in at 3/10/2021 is shown as £235m.

In Keysight Technologies Inc's 10K for the year ended 31/10/2022 the buy-ins are shown under "Other investments" in the table of DB Plan assets. At 31/10/21 they are shown at $364m and at 31/10/2022 at $254m – a currency and actuarial led reduction of 30%.

A further buy-in of £58m was transacted in March 22.

Breakdown of Assets

Oct	2021	2020	2019	2018	2017	2016	2015	2014
	£m	£m	£m	£m	£m	£m	£m	£m
Equities	35	34	189	168	229	196	166	160
Bonds	295	567	416	362	291	288	240	223
Diversified Growth Funds	65	68	71	65	67	62	58	33
Other	-1	-1	0	1	1	2	1	1
Property	-	-	-	-	-	-	-	21
Insurance policies Buy in	235	-	-	-	-	-	-	-
Total	**629**	**668**	**676**	**596**	**588**	**548**	**465**	**438**

Other pension scheme numbers

October	2021	2020	2019	2018	2017	2016	2015	2014	
	£m	£m	£m	£m	£m	£m	£m	£m	Total
Employer Contributions	1	1	14	19	21	20	20	25	**121**
Benefits paid	23	25	22	21	23	20	14	19	**167**
DC payments	2.7	1.9	1.9	1.8	2.8	2.4	1.2	3.2	
Discount rate	1.9	1.7	1.9	2.8	2.6	3.8	4.0	4.0	
Inflation assumption	3.5	3.0	3.0	3.2	3.4	3.3	3.3	3.3	
Mortality									
Men 60	-	-	-	-	-	-	28.7	28.6	
Women 60	-	-	-	-	-	-	30.9	30.1	
Assets / benefits paid	27.3	26.7	30.7	28.4	25.6	27.4	33.2	23.1	

National Grid Plc : Still in the dark

National Grid plc is an energy company operating in the United Kingdom and the United States. The Company's businesses supply gas and electricity to various customers and communities. Its segments include UK Electricity Transmission, UK Electricity Distribution, UK Electricity System Operator (ESO), New England and New York.

Research Findings

Purchase of Longevity swap has resulted in a reduction of plan assets of £80m as at 31.3.22.
Buy-ins have given an actuarial loss totaling £0.8bn to date.

The Group has built up a large scheme over many years. It could see the scheme as having both corporate and social purposes which could readily do better for all stakeholders.

Pension Scheme

The company has security arrangements with the trustee of £286m as at 31.3.22 in the form of surety bonds but these may be provided as letters of credit or cash. Counter indemnities are also taken out.

Key numbers

March	2022	2021	2020	2019	2018
	£bn	**£bn**	**£bn**	**£bn**	**£bn**
Scheme Assets	16.9	14.7	14.4	15.5	15.3
Liabilities	-14.3	-13.6	-12.8	-14.3	-14.2
	2.6	**1.1**	**1.6**	**1.2**	**1.1**

Buy-in

In year ended 31.3.20 the Trustees entered into 2 bulk annuity insurance contracts (buy-ins). These were funded by existing assets - £2.8bn of gilts were exchanged for the buy-in with Rothesay Life and £1.6bn of gilts with Legal & General. The portfolio risk had then already been addressed by buying the assets transferred.

2020 Accounts state “Pricing of policies was highly competitive, methodology for calculating buy-ins differs from price paid resulting in recognition of actuarial loss of £0.7bn on purchase.” Recorded in OCI.

2021 Accounts Pension note states that for year ended 31.3.21 included in “Return on plan assets in excess of interest” is an actuarial loss in respect of buy-in policies of £0.1bn.

2022 Accounts Pension note for unquoted liability matching assets “Includes buy-in policies held by NGUKPS with a total value of £2.7 billion (2021: £4.1 billion; 2020: £3.3 billion).”

Longevity Swap

In March 2018 the Trustees entered into a £2bn longevity swap with Zurich covering around 6k pensioners. A significant portion of the longevity risk has been reinsured by Zurich with Canada Life Reinsurance.

Aon acted as lead transaction adviser for swap and reinsurance arrangement. Also provided actuarial and investment services, including negotiating insurance terms with Zurich and reinsurance with Canada Life Re.

Chair of Group Trustee – Jon Carlton; FD National Grid plc – Andrew Bonfield; Aon – Martin Bird

In the 2018 accounts the note from the finance committee states that the longevity swap was enacted in March 2018 and further details were in the pension notes. Full details or amounts/costs are not given in this note. In the National Grid plc 2022 accounts the negative asset in relation to the longevity swap is **£80m**.

Breakdown of Assets

March	2022	2021	2020	2019	2018
		£m	£m	£m	£m
Equities	1932	1356	1464	1965	2233
Bonds	2741	3767	3837	3625	3949
Gov't securities	786	1836	2051	6114	5629
Property	1124	669	688	857	963
Diversified alternatives	1766	712	893	771	789
Liability-matching assets**	**8113**	5864	4982	1751	1174
Longevity swap	-80	-64	-51	-35	-
Cash	477	284	251	299	426
Other	6	256	249	160	167
Total	**16865**	**14680**	**14364**	**15507**	**15330**

Liability Matching Assets**	£m	Description
Quoted	2023	Consists of pooled funds which invest mainly in fixed interest securities.
Unquoted	6090	Includes buy-in policies held by NGUKPS with a total value of £2.7 billion (2021: £4.1 billion; 2020: £3.3 billion).
Total	**8113**	**Included within liability-matching assets above is £6.6 billion (2021: £2.5 billion; 2020: £2.8 billion) of repurchase agreements. These are used to increase the market exposure of the liability-matching portfolios.**

Other pension scheme numbers

March	2022	2021	2020	2019	2018	
	£m	£m	£m	£m	£m	**Total**
Employer Contributions	167	138	156	174	150	**785**
Benefits paid	919	731	752	837	770	**4009**
Discount rate	2.78	2.0	2.4	2.4	2.6	
Inflation assumption	3.6	3.2	2.7	3.3	3.2	
Mortality						
Men 60	22.0	21.8	22.1	22.0	22.3	
Women 60	23.8	23.7	23.8	23.6	23.9	
Assets / benefits paid	18.4	20.1	19.1	18.5	19.9	

AG Barr Plc : No sugaring the bill

A.G. Barr P.L.C. is a United Kingdom-based branded consumer goods company, which is involved in soft drinks business and oat products.

Research Findings

A G Barr provides a straight-forward example of the impact of buy ins. Disclosure is good. The first detail provided after the market rates changed significantly will be noteworthy.

Pension Scheme

Key numbers

January	2022	2021
	£m	£m
Scheme Assets	113.9	116.0
Liabilities	-114.9	-123.9
Net	**-1.0**	**-7.9**

Buy-in

In April 2016 the Trustees purchased an annuity policy with Canada Life for £34.7m. In the accounts at 31.1.2017 this buy-in was in the scheme assets at £31.5m. At 31.1.2019 it was at £30.8m.

In September 2019 another policy was purchased with Canada Life at a cost of £22.7m. Total cost of both policies was £57.4m. At 31.1.2022 the total value of the buy-in policies included in the pension scheme assets was £46.4m representing a loss of £11m.

Breakdown of Assets

January	2022	2021	2020	2019	2018	2017
	£m	£m	£m	£m	£m	£m
Equities	6.3	31.4	29.1	29.7	30.0	46.4
Bonds	33.0	20.8	21.1	24.8	28.0	28.2
Debt	21.8	6.8	7.1	8.1	9.4	-
Property	-	-	-	-	-	0.5
Cash	6.4	6.4	4.4	8.2	6.3	5.2
Buy-in policy	46.4	50.6	54.8	30.8	31.6	31.5
Total	**113.9**	**116.0**	**116.5**	**101.6**	**105.3**	**111.8**

Babcock International Group Plc : Early to the party. Bad hangover

Babcock International Group PLC is a United Kingdom-based aerospace, defence and security company.

Research Findings

The innovative Babcock longevity swap in 2009 was unfortunate in being just ahead of the direction change in mortality. It has been a heavy weight ever since. The recent change in methodology to assess the out of the money position shows a determination to address issues. The collateral provided is not the only indicator. Level 3 data can include the cost of closing the position.

Pension Scheme

Key numbers

March	2022	2021
	£m	£m
Scheme Assets	4733.1	4623.6
Liabilities	-4541.5	-4902.5
Net	**191.6**	**-278.9**

Longevity Swap

In 2009 the Trustees of Babcock set up a longevity swap agreement with Credit Suisse for £750m to run over 50 years (details of the contract below).

At 31.3.2010 these agreements had a negative balance sheet value of £158m. In addition, the group has agreed to fund the incremental cost of the executed longevity swaps over a 20 year period at an annual cash cost of £7m. In the 2022 accounts these additional payments have increased to £15.6m.

Also, in the 2022 accounts the longevity swaps were revalued using a different basis. The restatement reduced the retirement benefit surplus by £26.9m. The negative asset value at 31.3.22 is £293.7m.

19. Longevity Swap Contract

In December 2009 the Scheme entered into an agreement with Credit Suisse. Under the terms of this contract the Trustee is committed to pay a series of fixed payments over a 50 year term to Credit Suisse and in return Credit Suisse will make variable payments to the Trustee to cover the Scheme's obligation to pensioners and their dependants. The value of the contract at year end is shown below:

	Expiration	2021 £'000	2020 £'000
Liability driven investment swaps	November 2059	**(53,800)**	(65,642)

During the year to 31 March 2021, the Scheme's gross commitment to make fixed payments was £19,737,376 and Credit Suisse's gross variable payments due to the Trustee was £18,299,654.
The net payment of £1,437,722 is shown as payments in respect of this investment (see note 22).

Under the terms of this contract the Trustee had placed collateral to the value of £53,800,000 at 31 March 2021 (2020: £65,650,000).

The value of the longevity swap is affected by changes in underlying assumptions such as discount rate, inflation and the mortality scaling factors.

Extra Longevity Swap Payments

The Group's cash contribution rates payable to the schemes are expected to be as follows:

	Devonport Royal Dockyard Scheme	Babcock International Group Scheme	Rosyth Royal Dockyard Scheme	Babcock Rail Ltd section of the Railways Pension Scheme	Other	Total
Future service contribution rate	21.6%	51.1%	–	12.5%	15.3% – 48.0%	–
Future service cash contributions	£12.1m	£5.3m	–	£0.4m	£2.1m	£19.9m
Deficit contributions	£18.6m	–	£66.6m	£1.6m	£1.5m	£88.3m
Additional longevity swap payments	£7.3m	£3.6m	£4.7m	–	–	£15.6m
Expected employer cash costs for 2022/23	£38.0m	£8.9m	£71.3m	£2.0m	£3.6m	£123.8m
Expected salary sacrifice contributions	£6.3m	£0.4m	–	£0.5m	£0.6m	£7.8m
Expected total employer contributions	£44.3m	£9.3m	£71.3m	£2.5m	£4.2m	£131.6m

Assets and scheme position

The fair value of the assets and the present value of the liabilities of the Group pension schemes at 31 March were as follows:

	2022				2021 (restated)			
	Principal schemes £m	Railways scheme £m	Other schemes £m	Total £m	Principal schemes £m	Railways scheme £m	Other schemes £m	Total £m
Fair value of plan assets								
Growth assets								
Equities	31.6	14.3	30.6	76.5	55.0	12.5	23.0	90.5
Property funds	364.0	0.1	5.1	369.2	437.1	2.1	4.7	443.9
High yield bonds/emerging market debt	44.1	–	0.4	44.5	348.4	–	–	348.4
Absolute return and multi-strategy funds	46.0	182.9	31.8	260.7	428.5	194.6	25.4	648.5
Low-risk assets								
Bonds	1,924.1	77.2	77.5	2,078.8	1,422.9	54.7	83.4	1,561.0
Matching assets*	2,094.0	1.3	101.8	2,197.1	1,682.7	1.7	108.5	1,792.9
Longevity swaps	(283.5)	–	(10.2)	(293.7)	(250.9)	–	(10.7)	(261.6)
Fair value of assets	4,220.3	275.8	237.0	4,733.1	4,123.7	265.6	234.3	4,623.6
Percentage of assets quoted	100%	100%	100%	100%	100%	100%	100%	100%
Percentage of assets unquoted	–	–	–	–	–	–	–	–
Present value of defined benefit obligations								
Active members	756.0	65.7	35.8	857.5	857.6	126.1	39.4	1,023.1
Deferred pensioners	1,066.2	93.5	132.7	1,292.4	1,227.3	107.4	152.4	1,487.1
Pensioners	2,170.4	167.9	53.3	2,391.6	2,205.1	136.1	51.1	2,392.3
Total defined benefit obligations	3,992.6	327.1	221.8	4,541.5	4,290.0	369.6	242.9	4,902.5
Net assets/(liabilities) recognised in the statement of financial position	227.7	(51.3)	15.2	191.6	(166.3)	(104.0)	(8.6)	(278.9)

* The Babcock International Group Pension Scheme, Devonport Royal Dockyard Pension Scheme and Rosyth Royal Dockyard Pension Scheme invest in segregated portfolios, pooled investment vehicles and derivative contracts. The Trustee has authorised the use of derivatives by the investment managers for efficient portfolio management purposes including to reduce certain investment risks such as interest rate risk and inflation risk. The principal investment in derivatives is gilt repurchase agreements, interest rate and inflation swaps in the liability matching portfolio; total return swaps in the return seeking portfolios. These derivatives are included within the matching assets and equities classifications. The matching assets category includes gross assets of £3,966 million (2021: £3,860 million) and associated repurchase agreement liabilities of £1,872 million (2021: £2,177 million). Repurchase agreements are entered into with counterparties to better offset the scheme's exposures to interest and inflation rates, whilst remaining invested in assets of a similar risk profile.

The schemes do not invest directly in assets or shares of the Group.

The longevity swaps have been valued in line with assumptions that are consistent with the requirements of IFRS 13 using Level 3 inputs. The key inputs to the valuation are the discount rate and mortality assumptions.

Rolls Royce Holdings Plc : Losses effortlessly obscured

Rolls-Royce Holdings plc is a United Kingdom-based engineering company. The Company is a broad-based power and propulsion provider. The Company's segments include Civil Aerospace, Defence, Power Systems, and New Markets.

Research Findings

By the time the longevity swap was wrapped up in the £4.6bn buy-in in 2019, it was costing the scheme £292m. This is against its initial headline of a £3bn deal in 2011. In the 2019 accounts a further £600m loss was taken through OCI. This deal was in anticipation of a buyout in 2019 and 2020. The liabilities passed to Legal & General. “There is no impact upon the income statement arising from the transaction.” Overall losses of £0.9bn against the value of assets acquired to meet liabilities valued on an AA bond yield basis were taken against OCI and did not affect earnings. There is no comment on the return on shareholder money made.

In 2011 and 2019 the professional involvement made the standard self-congratulatory statements.

The impact of the longevity swaps and buy-ins is unexplained and needs further analysis.

Pension Scheme

Key numbers

Dec	2022	2021	2020
	£m	£m	£m
Scheme Assets	5215	9128	9762
Liabilities	-4621	-8010	-8879
	594	**1118**	**883**

Longevity Swap

In November 2011 the trustees of Rolls Royce completed a £3bn longevity swap with Deutsche Bank. On 31.12.11 the longevity swap was included in the scheme assets as a negative £79m. This increased to a negative £126m by the following year.

At 31.12.2013 the longevity swap was valued on an external fair market basis rather than using the same assumptions as used for the valuation of the scheme’s liabilities. This gave a positive figure of £3m. If the same basis of valuation for the previous year had been used there would have been a negative amount of £156m.

By 31.12.2018 the longevity swap was a negative asset of £292m.

Buy-in

In June 2019 the trustees completed a £4.6bn buy-in with L&G. As part of this deal the longevity swap was transferred to L&G. As a result of this transaction an asset re-measurement net loss of £600m went through OCI.

Not clear where buy-in is included in net assets.

Breakdown of Assets

Fair value of scheme assets at 31 December

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Sovereign debt	3,574	120	3,694	5,756	217	5,973
Corporate debt instruments	1,492	257	1,749	3,122	389	3,511
Interest rate swaps	196	–	196	54	–	54
Inflation swaps	212	–	212	106	–	106
Cash and similar instruments [1]	(1,066)	–	(1,066)	(811)	144	(667)
Liability driven investment (LDI) portfolios [2]	4,408	377	4,785	8,227	750	8,977
Listed equities	–	78	78	–	101	101
Unlisted equities	40	–	40	54	–	54
Synthetic equities [3]	(8)	–	(8)	43	4	47
Sovereign debt	–	–	–	–	4	4
Corporate debt instruments	772	–	772	802	–	802
Cash	–	5	5	–	2	2
Other	3	33	36	2	–	2
At 31 December	5,215	493	5,708	9,128	861	9,989

[1] UK cash and similar instruments include repurchase agreements on UK Government bonds amounting to £(1,221)m (2021: £(1,087)m). The latest maturity date for these short-term borrowings is April 2024

[2] A portfolio of gilt and swap contracts, backed by investment-grade credit instruments and diversified liquidity funds, that is designed to hedge the majority of the interest rate and inflation risks associated with the schemes' obligations

[3] Portfolios of swap contracts designed to provide investment returns in line with global equity markets. The maximum exposure (notional value and accrued returns) on the portfolios was £344m (2021: £550m)

"The liquidity of the UK scheme was not significantly impacted by the rapid rise in UK Government bond yields in the second half of 2022. The UK scheme (and its predecessor schemes) ***benefited from prudent cash funding from the Group in previous financial years*** coupled with long-term liability hedging programmes. These factors have resulted in the scheme being relatively well funded and consequently enabled it to keep leverage relatively low. Throughout 2022, the UK scheme maintained adequate levels of liquidity and eligible collateral to service its leveraged positions".

Amounts recognised in OCI in respect of defined benefit schemes

	2022			2021		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Actuarial gains and losses arising from:						
Demographic assumptions [1]	19	–	19	(101)	(2)	(103)
Financial assumptions [2]	3,423	602	4,025	416	159	575
Experience adjustments [3]	(235)	(7)	(242)	(88)	12	(76)
Return on scheme assets excluding financing income [2]	(3,751)	(207)	(3,958)	(112)	(30)	(142)
	(544)	388	(156)	115	139	254

[1] For the UK Scheme, this reflects latest available CMI mortality projections and an update of the post-retirement mortality assumptions based on an analysis prepared for the 31 March 2020 funding valuation

[2] Actuarial gains and losses arising from financial assumptions arise primarily due to changes in interest rates and inflation

[3] This reflects realised inflation being higher than expected in the period, resulting in increases in actual pension increases and deferred pension expectations

	2021			2020		
	UK schemes £m	Overseas schemes £m	Total £m	UK schemes £m	Overseas schemes £m	Total £m
Present value of funded obligations	(8,010)	(863)	(8,873)	(8,879)	(895)	(9,774)
Fair value of scheme assets	9,128	861	9,989	9,762	894	10,656
Net asset/(liability) on funded schemes	1,118	(2)	1,116	883	(1)	882
Present value of unfunded obligations	–	(1,341)	(1,341)	–	(1,568)	(1,568)
Net asset/(liability) recognised in the balance sheet	1,118	(1,343)	(225)	883	(1,569)	(686)
Post-retirement scheme surpluses [1]	1,118	30	1,148	883	24	907
Post-retirement scheme deficits	–	(1,373)	(1,373)	–	(1,580)	(1,580)
Included in liabilities associated with assets held for sale	–	–	–	–	(13)	(13)

Media Communications

November 2011 Press Release

Aerospace and engineering firm Rolls-Royce has announced the completion of a longevity swap transaction completed to give additional security to the members of its final salary pension scheme. In a longevity swap contract with Deutsche Bank, Rolls-Royce have offloaded some £3 billion worth of pension liabilities, covering some 37,000 pensioners.

Rolls-Royce said the costs of the transaction would be borne by the pension fund and that it would have no material cost on funding.

Under the longevity swap transaction, Rolls-Royce pension fund trustees and Deutsche Bank have agreed on an average life expectancy. If pensioners live longer than this then Deutsche Bank make payments to the pension fund to help them meet their liabilities. If the reverse happens, the cost of making pension payments drops and the fund will have to make payments to Deutsche Bank.

Andrew Shilston, Rolls-Royce Finance Director, said: “We have made sure that as our pensioners live longer in retirement we have made proper provision for them. This is the latest in a series of measures we have taken to achieve greater certainty for our future funding requirements”.

Andrew Reid, Managing Director and European Head of Pensions Origination, Deutsche Bank, said; “Deutsche Bank has shown clear leadership in this growing market. Our team from across the Corporate & Investment Bank combined structuring expertise with Deutsche Bank’s balance sheet strength to deliver a cost effective solution for the Rolls-Royce Pension Fund.”

Deutsche Bank have apparently offloaded much of the longevity risk to reinsurers as part of this transaction. French reinsurer SCOR participated in this part of the transaction with SCOR Global Life SE entering into their first longevity reinsurance transaction in the UK. They say that they have reinsured a “significant share of the longevity risk assumed by Deutsche Bank, following the completion of a GBP 3 billion longevity swap transaction between Deutsche Bank and the Rolls-Royce Pension Fund in the UK.”

Gilles Meyer, CEO of SCOR Global Life, commented; “This deal confirms the transaction execution capability of the Longevity team in London. We have successfully and effectively been able to transpose the market-leading brand characteristics for which the wider SCOR team is known onto a new and innovative market. We are delighted to have been able to partner up with Deutsche Bank on this transaction.”

Denis Kessler, Chairman and CEO of SCOR, said; “The completion of this transaction is a key milestone in terms of demonstrating the Group’s ability to deliver on the initiatives set out in the “Strong Momentum” plan. We look forward to being a leading part of the Longevity market over the years to come.”

Aon Hewitt acted as lead advisor to the Trustees for this longevity swap transaction. Martin Bird, Managing Principal at Aon Hewitt, said; “The Rolls-Royce Trustees entered into the swap to further enhance the security of all the members’ benefits. We worked closely with the Trustees to decide that this was the right approach for them to take and also that the swap was structured in a way that offered the best possible terms on price, security and other key longevity hedge features.”

Again, we can see significant longevity risk being handed off from pension fund to an arranging bank and ultimately to reinsurers. The way this transaction is structured almost begs for it to be transferred to the capital markets in insurance-linked security form, particularly as the payments between the bank and the fund are based on longevity divergence from an agreed average.

June 2019 Press Release: Rolls Royce signs £4.6bn pension deal with L&G

Rolls Royce has agreed a £4.6bn partial buy-in deal with Legal and General for its defined benefit pension scheme.

In an announcement today (June 6), the parties stated the deal was the largest bulk annuity transaction ever made in the UK market, surpassing L&G's previous record of £4.4bn with British Airways.

The partial buyout with the Rolls-Royce UK Pension Fund covers the benefits of about 33,000 in-payment pensioners, and follows a previous deal made in 2016 – when L&G agreed a £1.1bn buyout of the 11,000 members of the Vickers Group pension scheme, which is part of the Rolls-Royce Group.

As a result of the transaction, Legal & General will be responsible for the administration and payments of the pensions to the relevant scheme members once the transaction moves to buyout.

L&G stated the deal also involved the transfer of a hedging portfolio and the restructuring of an existing longevity swap held by the pension scheme.

The provider has now transacted more than £6bn in global bulk annuity transactions in 2019 and has transacted four of the five largest UK bulk annuity deals, it added.

Laura Mason, chief executive of L&G Retirement Institutional, said: "Working collaboratively with the scheme and its advisers, we can provide the security of insurance, whilst also ensuring that the scheme members benefit from the quality customer service for which the L&G group is known.

"The scale of the transaction provides further opportunities for us to invest directly in the UK economy and make a positive difference in our towns and local communities."

Joel Griffin, head of global pensions and benefits at Rolls-Royce, said the company was "delighted to be able to offer greater stability and certainty for the members of the Rolls-Royce UK Pension Fund, by protecting the benefits of around 33,000 pensioners for the future through this transaction.

"This would not have been possible without the close collaboration and commitment of our trustees and advisers over many years, ensuring that the scheme is well-funded," he concluded.

Extract from 2022 financial report appendix

The extract below shows the scheme's assets had fallen £3.9bn in the year to £5.3bn. The report states "Funding has improved on the solvency measure"

UK Defined Benefit (DB) Plan

- UK DB Plan (RRUKPF) closed to future accrual on 31 December 2020 (closed to new hires in 2007). Around 6,000 employees have a benefit in RRUKPF and most are now building up savings in our DC plan
- RRUKPF represents 75% of gross pension liabilities and 91% of gross pension assets for the Group
- It has £5.2bn of assets and surplus of £594m (IAS 19 basis*). Assets have reduced by £3.9bn. This is largely due to the decrease in the value of the fund's liability matching assets as a result of rises in UK Government and corporate bond yields. Accordingly, liabilities fell by £3.4bn largely due to higher discount rates
- The fund was not a forced seller of any assets in September or October when UK Government bond yields spiked, as it had sufficient collateral in its liability matching portfolio. No loans were needed from the employer. Funding has improved on the solvency measure
- The next statutory funding valuation is due as at 31 March 2023. The statutory funding position at 31 December 2022 was estimated to be 109%
- Cash contributions:

2020: £24m   2021: £99m**   **2022: £1m**

Hays Plc : Shorter life expectancy

Hays PLC is a United Kingdom-based company, which is engaged in providing qualified, professional, and skilled recruitment. The Company operates in four geographic regions, such as Australia & New Zealand, Germany, United Kingdom & Ireland, and Rest of World.

Hays has a market capitalisation of £1.72bn (*£2.1b)n.* It has a strong net cash financial position. It is a recruiter and has a theme of "working for tomorrow". It has net fees of £1,2bn and operating profits of £210m.

Research Findings

Hays entered into a £263m buy-in during 2019. At June 2022 the asset acquired was valued at £191m. The Group has a plan to achieve a buyout of the scheme. At June 2021 it had a £24m actuarial deficit. It paid a £16m deficit contribution to the scheme.

It has cautious longevity assumptions with 45 year old life expectancies of male 23.2 years, female 25.8 years, down from a 2021 assumption of 25 years and 27.3 years.

One year mortality = £20m

The exceptionally high mortality assumptions will have protected the balance sheet in 2019 and made the transaction of doubtful value for shareholders.

Pension Scheme

Key numbers

June	2022	2021
	£m	£m
Scheme Assets	675.5	902.4
Liabilities	-573.5	-855.8
	102.0	**46.6**

Buy-in

In August 2018, Hays Pension Trustee Limited entered into a bulk purchase annuity policy (buy-in) contract with Canada Life Limited for a premium of £270.6m in respect of the existing pensioners of the Hays defined benefit Scheme as at 31 December 2017. Their ultimate aim is a complete buyout.

At 30.6.2019 the buy-in was included in the DB Scheme's assets at £263.5m and at 30.6.22 the buy-in policy is shown as an asset of £191.6m.

(NB - Insight run the LDI funds for Hays. A breakdown of these funds show quoted assets of £383.5m and negative unquoted assets of £243.8m giving a net figure of £139.7m)

Breakdown of Assets

June	2022		2019	2018
	£m		**£m**	**£m**
Equities	0		89.3	85.5
Bonds and gilts	218.4		124.3	339.5
Absolute return funds	31.2		37.3	37.7
LDI funds	139.7		241.6	258.5
Real estate	65.9		53.1	50.7
Buy-in policy and other insurance	191.6		263.5	0
Cash	28.7		18.0	20.9
Total	**675.5**		**827.1**	**792.8**

In relation to the LDI funds the valuations have been determined as follows: – Repurchase agreements (where the Scheme has sold assets with the agreement to repurchase at a fixed date and price) are included in the Consolidated Financial Statements at the fair value of the repurchase price as a liability. The assets sold are reported at their fair value reflecting that the Scheme retains the risks and rewards of ownership of those assets;

The LDI portfolio is managed by Insight (a Bank of New York Mellon company)

Merchant Navy Officers Pension Scheme : Inflationary tide not flagged

Research Findings

The scheme has been carefully shepherded into buyouts by its advisors since 2014. The £1.6bn longevity swap in 2014 was not well timed – but the impact is never made clear as the longevity swap was converted into a PIC buyout. The value achieved is not transparent.

Pension Scheme

Buy-in / Longevity Swap

In 2014 the Trustees arranged a £1.6bn longevity swap (First to use a Guernsey-based captive specially created by WTW to assist clients in accessing reinsurers. Specifically set up for ease of flipping to a buy-in within five years).

In 2017 the trustees arranged a £500m buy-in with L&G. Two further buy-ins were arranged with PIC. The first one was in Feb 2020 for £1.6bn and included the longevity swap. The second was in Feb 2022 for £400m.

Total cost was £2.5bn and the asset value in pension scheme accounts at 31.3.2022 was £2069.5m.

NB There still appears to be a final premium/repayment due under the PIC agreements.

The Fund's buy-in policies have been valued on an insurance buy-out basis, as provided by the Insurer.

The Scheme held insurance policies at the year-end as follows:

	2022 £m	2021 £m
L&G Buy-in	484.6	523.1
PIC Buy-in	1,252.7	1,406.3
PIC Buy-in 2	332.2	-
	2,069.5	1,929.4

As at the end of the Fund year the pensioner population includes the following insured members:

- L&G Buy-in – 2,002 (2021: 2,197)
- PIC Buy-in – 12,498 (2021: 12,793)
- PIC Buy-in 2 – 1,815 (2021: Nil)

A bulk insurance policy is valued at the fair value of the liability as calculated and provided by the insurer in accordance with the related obligation. The valuation is determined using assumptions over pension increases, inflation and interest rates and longevity.

Breakdown of Assets

March	2022	2021
	£m	£m
Equities	0	0.4
Bonds and gilts	556.9	787.3
Pooled investment vehicles	478.4	758.4
Derivatives	492.4	541.7
Insurance policies	2069.5	1929.4
Cash and other	73.3	62.4
Total	**3670.5**	**4079.6**

QinetiQ Group Plc : Engineering solutions to non problems

QinetiQ Group plc is a United Kingdom-based science and engineering company. The Company operates in the defence and security markets. The Company operates through two divisions: Europe, Middle East and Australasia (EMEA) Services and Global Products.

Research Findings

The Chair of the scheme commented on the buy-in.

“The buy-in improves the risk profile and investment efficiency of the scheme for all members and represent a significant step towards securing the benefits promised.” And no more.

The deals undertaken resulted in write downs against book values of £145m on £810m. As the real longevity assumptions true up, there will not be a rebound in value to enable the scheme to seek better pensions or support current provision levels.

Pension Scheme

Key numbers

March	2022	2021
	£m	£m
Scheme Assets	2065.7	2071.8
Liabilities	-1703.5	-1857.5
Net pension before tax	362.2	214.3
Deferred tax liability	-96.4	-45.5
	265.8	**168.8**

Buy-in

In April 2019 the Qinetiq trustees arranged their first buy-in with Scottish Widows for approx £700m. As a result of the transaction, the accounting pension surplus recorded on the Group's balance sheet reduced by an estimated £120m.

In June 2021 the second buy-in was completed with Legal & General for £132.3m. As a result of this the accounting pension surplus reduced by £25m.

(NB As part of the agreement, an umbrella contract was established, which enables future transactions with Legal & General to be completed quickly and easily on the same pre-agreed terms when favourable pricing opportunities arise.)

Breakdown of Assets

March	2022	2021		2019	2018
	£m	£m		£m	£m
Equities	220.8	187.6		178.8	174.7
LDI investment	291.8	362.3		690.8	1050.9
Asset backed security investment	501.7	455.6		0	0
Alternative bonds	208.6	254.8		304.4	232.9
Corporate bonds	97.4	98.0		96.0	311.3
Property funds	29.5	76.6		145.6	138.7
Cash	78.5	49.3		75.1	80.2
Insurance buy-ins	645.9	588.0		566.4	0
Outstanding payment in respect of buy-in	0	0		-96	0
Derivatives	-8.5	-0.4		2.5	1.8
Total	**2065.7**	**2071.8**		**1963.6**	**1990.5**

RSA Group : Too big to explain

RSA Insurance Group Ltd is an international general insurer. The Company provides personal, commercial and specialty insurance products and services direct-to-customers.

Research Findings

RSA was very pleased in 2009 that it had been able to exploit gilt curve anomalies to fund a longevity swap with Rothesay. No additional funding was needed. The costs of the gilt longevity swaps were initially spelt out in the Group figures and then shown in a net format. By the time the group was sold to the Canadian group Intact the longevity swap was out of the money by £3bn. The latest figures show it has reached a negative value of £3.6bn.

In February 2023 the scheme was subject to the largest ever buy-in with Pensions Investment Corporation.

Michelle Wright, head of pensions strategy at LCP, advised RSA and Intact on all aspects of the buy-in process. One hopes LCP pointed out just how much better off all parties would have been without the 2009 transaction and how that value could have helped provide better pensions for past and present employees.

“But the deal sets the tone for record breaking deal volumes in 2023”.

Sponsors are accelerating “their derisking plans in the light of rising gilt yields”.

Pension Scheme

Key numbers

December	2022	2021	2020
	£m	£m	£m
Scheme Assets	5792	9410	9855
Liabilities	-5461	-8679	-9401
Other net surplus measurements	-110	-254	-179
Net	**221**	**477**	**275**

Longevity Swap

In 2009 the trustees of RSA Group DB pension scheme completed a gilt swap and longevity insurance deal with Goldman Sachs and its insurance division Rothesay Life to protect almost half of their liabilities from future longevity risk. This allowed the scheme to secure £1.9bn of its pensioner liabilities without the need for a buy-in or buyout annuity plan.

At 31.12.2022 the value of the asset and longevity swap had a negative asset value of £2,044m. Other investments have a value of £7,836m giving a net asset value of £5,792m.

Breakdown of Assets

December	2022	2021	2020		2009	2008
	£m	£m	£m		£m	£m
Equities	23	596	669		1508	1173
Government debt	4048	6616	6850		0	0
Non Government debt	1781	3656	3494		0	0
Bonds		0	0		3414	3453
Derivatives	-18	1053	1061		0	0
Property	421	659	636		131	345
Cash	1278	86	202		158	71
Other (inc annuity contracts, infrastructure and growth alternatives	303	380	390		1436	0
Value of asset and longevity swaps	-2044	-3636	-3447		-1837	0
Total	**5792**	**9410**	**9855**		**4810**	**5042**

December 2022 Pension Notes extract

Where assets are classified as unquoted the valuations are firstly:

- Taken from the underlying managers in the case of non-developed market equity, non-UK sovereign debt, pooled nongovernment debt and other pooled funds – these funds themselves will be subject to annual (or more frequent) audit
- Provided by an independent surveyor (in the case of direct property)
- Taken at the mark to market valuation used for collateral purposes in the case of derivative contracts

During Q4 2022 firm bids were received for some of the unquoted and more illiquid assets at a discount to the valuations provided by the managers. While no final decision has been taken to sell these assets at the bid levels, these discounts have been applied in the valuations above based on a view that the bids reflect a more appropriate measurement technique for determining fair value under IFRS 13 at 31 December 2022. This reflects a change in accounting estimate under IAS 8 for the assets where bids have been received.

RSA Pension Scheme Historical Summary

	2008 £m	2009 £m	2010 £m	2011 £m	2012 £m	2013 £m	2014 £m	2015 £m	2016 £m	2017 £m	2018 £m	2019 £m
Equities	1,173	1,508	1,536	1,493	1,182	1,200	1,108	723	764	752	648	822
Bonds	3,453	3,414	3,828	4,588	4,890	5,165	6,447	6,608	8,565	8,887	8,074	8,943
Cash	71	158	109	320	145	66	67	73	61	70	200	90
Property & Other	345	131	169	59	915	925	1,403	1,386	1,483	1,477	1,849	1,952
Present value of funded obligations fully covered by insurance arrangement	0	1,436	1,431	1,510								
Value of obligations under insurance arrangement	0	-1,837	-1,809	-2,157								
Value of asset and longevity swap					-914	-790	-1,525	-1,597	-2,232	-2,387	-2,506	-2,791
Total assets in scheme	**5,042**	**4,810**	**5,264**	**5,813**	**6,218**	**6,566**	**7,500**	**7,193**	**8,641**	**8,799**	**8,265**	**9,016**
Total Liabilities	**-4,536**	**-5,178**	**-5,467**	**-6,002**	**-6,492**	**-6,731**	**-7,598**	**-7,126**	**-8,893**	**-8,940**	**-8,103**	**-8,822**
Net surplus/Deficit	**506**	**-368**	**-203**	**-189**	**-274**	**-165**	**-98**	**67**	**-252**	**-141**	**162**	**194**
Contributions	123	130	125	100	128	122	114	113	110	101	137	107
Mortality rate: Life expectancy at 60												
Male	85.8	87.5	87.5	87.5	87.6	87.6	87.6	88.0	88.1	87.8	87.2	87.0
Female	87.0	88.1	88.1	88.1	88.2	88.8	88.9	89.1	89.2	88.9	88.7	88.5

Commerzbank Finance Ltd : The Bank runs off

Commerzbank is a German based commercial bank with branches and offices in nearly 50 countries. It acquired Dresdner Bank in 2008 and with it the long-established UK investment bank Kleinwort Benson.

Research Findings

Commerzbank acquired Dredsner Kleinwort Benson and with it the pension scheme of some of the leading figures of late 20th century investment banking. In the 6 years to 2017 it put £212m into the scheme to bring the assets to £1.1bn. In 2018 it took a £232m write down through the OCI following a buy-in deal with Pension Investment Corporation (PIC). Subsequently, members were given annuities by PIC and there was no P/L settlement impact on the Commerzbank finance accounts. Now there is no scope for inflation linked increases for members.

Pension Scheme

Key numbers

December	2021	2020	2019	2018	2017	2016
	£m	£m	£m	£m	£m	£m
Scheme Assets	1328	1477	1292	1092	1282	1394
Liabilities	-2348	-2615	-2375	-2183	-2543	-2628
Sub net	-1020	-1138	-1083	-1091	-1261	-1234
Annuities	990	1051	944	858	875	779
Net position	**-30**	**-87**	**-139**	**-233**	**-386**	**-455**

2017 Accounts Pension Notes

The Company maintains funded pension schemes in the UK for deferred pensioner and pensioner members the Dresdner Kleinwort Pension Plan (DK Plan) and the Dresdner Bank AG London Branch Pension Plan (Branch Plan) Both schemes are operated in London on behalf of group undertakings The assets of these schemes are held in a separate trustee administered fund These are both closed schemes

The trustees of the DK Plan and the Company have agreed a series of contributions in respect of the DK Plan payable from 1 January 2017 to 31 December 2020. This includes contributions of £33.5m during the year end 31 December 2017, intended to clear the deficit as at 1 January 2017, and additional contributions of £33.5m per annum from 1 January 2018, intended to be used to move the scheme to self-sufficiency, that will initially be paid into an escrow account retained on the Company's balance sheet. The Company and the trustees may agree to an alternative approach, in which case the agreement will be superseded. The overall contribution paid to the final salary section of the DK Plan in 2017 was £33.5m. The overall contribution for 2018 is expected to be £Nil.

Dec 2019 Accounts: Pensions Notes

The DK Plan previously exposed the Company to a number of risks including changes in pensions' legislation and actuarial risk, such as longevity risk, inflation risk, interest rate risk and investment risk. However since buy-in took place the majority of these risks are now mitigated by the insurance policies in place.

In respect of the DK Plan the following table shows the movement in the defined benefit asset during the year ended 31 December 2019:

	Defined benefit obligation £'000	Fair value of plan assets £'000	Net defined benefit asset £'000
At 1 January 2019	(777,910)	1,081,694	303,784
Included in profit and loss:			
Administrative expenses	-	(1,500)	(1,500)
Interest (cost) / income	(21,434)	29,940	8,506
	(799,344)	1,110,134	310,790
Included in OCI – Re-measurements:			
Actuarial (loss) arising from financial assumptions	(69,136)	-	(69,136)
Actuarial gain arising from demographic assumptions	37,164	-	37,164
Actuarial (loss) arising from experience adjustments	(9,310)	-	(9,310)
Return on plan assets excluding interest income on assets	-	(224,121)	(224,121)
	(840,626)	886,013	45,387
Benefits paid	77,796	(77,796)	-
At 31 December 2019	(762,830)	808,217	45,387

Dec 2021 Accounts: Pensions: Note 22

Following the full insurer buy in of the Plan during 2019, the scheme had an insurance policy that matched the vast majority of the liabilities. On 25 November 2021 the insurance policy was assigned directly into members' names resulting in the settlement of the policy and the related liabilities. The Plan continues to hold surplus assets which are held in separate trustee administered funds and are managed subject to an appropriate level of risk, taking into account they are expected to cover the cost of equalising Guaranteed Minimum Pensions and any extra liabilities identified. This has led to the current asset split shown below.

The allocation of assets as at 31 December 2021 was (all assets had a quoted market price in an active market):

	£m	%
Gilts	41.8	93.5%
Cash and Repos	2.9	6.5%
Total	44.7	100%

The following table shows the movement in the defined benefit asset during the year ended 31 December 2021:

	Defined benefit obligation	Fair value of plan assets	Net defined benefit asset
	£'000	£'000	£'000
At 1 January 2021	(853,105)	902,712	49,607
Included in profit and loss prior to 25 November 2021:			
Administrative expenses	-	(451)	(451)
Interest (cost) / income	(9,809)	10,388	579
Included in profit and loss after 25 November 2021:			
Administrative expenses	-	(49)	(49)
Interest (cost) / income	(2)	82	80
	(862,916)	912,682	49,766
Included in OCI – Re-measurements prior to 25 November 2021:			
Actuarial gain arising from financial assumptions	5,161	-	5,161
Actuarial (loss) arising from demographic assumptions	(2,392)	-	(2,392)
Actuarial (loss) arising from experience adjustments	(6,064)	-	(6,064)
Return on plan assets excluding interest income on assets	-	(1,386)	(1,386)
Included in OCI – Re-measurements after 25 November 2021:			
Actuarial gain arising from financial assumptions	3	-	3
Return on plan assets excluding interest income on assets	-	(1,445)	(1,445)
	(866,208)	909,851	43,643
Benefits paid prior to 25 November 2021	31,971	(31,971)	-
Benefits paid after 25 November 2021	-	-	-
Settlement on the buy-out of the scheme	833,174	(833,174)	-
At 31 December 2021	(1,063)	44,706	43,643

Other Unforced Errors

Leveraged LDI, Collateral Calls and Illiquid Asset Sales

Interest rate risk is one of the factors trustees need to manage. Gilt yields came after 2000 to be the benchmark tool of choice of actuaries in assessing liabilities. The need to eliminate limit interest rate risk became central to actuarial and, through it, trustee thinking. Liability Driven Investing provided a technique to deliver it. Concerns then arise as to how sufficient returns on a portfolio could still be generated and leveraged LDI seemed to provide and answer.

Consequences of derisking by hedging the measure has been that UK pension schemes cornered the market in index linked gilts. When the value of the asset came under question – as it did for tulip bulbs in 17th century Holland – and selling started, the exodus had a big impact. This time it led to large collateral calls and the fall of the Government.

The LDI crisis has produced able defences. In the eyes of practitioners it showed that only financially experienced trustees understood what they were doing well enough to be able to respond quickly enough. Better practitioners to be given more power and perhaps trustee bodies could lose member nominated amateur constituents. Further, illiquid investments should be sold because they were likely to cause collateral issues for the “waterfalls” they proposed to deal with any future big market swings. Anyway, illiquids delay derisking transactions. Trustees need to be “pragmatic” in getting rid of them ASAP. As funding had improved, all the more reason to race into the Endgame. Don’t question whether you should be here at all.

Herein lies the source of the next series of unforced errors by DB pension scheme. Which schemes suffered most from collateral calls and from hurried illiquid sales will take time to emerge. The December 2022 year - end financial statements are starting to provide data. But it would also be wrong to assume that disclosure will be any other than minimalist. Losing 25% of the value of assets is no problem.

Accounting and actuarial valuation techniques can provide conflicting drivers. Transparency and explanations for decisions taken, specifically in relation to transactions, should be at a higher standard. Without them there is a struggle to assess whether deals are in the best interest of members and sponsors.

The Risk Transfer Industry Needs Scrutiny

The risk transfer industry prospers and should be ready to set out how its success works for everybody. If those large sponsor cash contributions of the last 10 years had been kept in cash or put in The Post Office savings account schemes would be better off today. Time for it to address the charge it has caused countless unforced errors. Those who aided derisking transactions should assess the damage without referencing consultants’ glibly confident view of what is in member best interests.

The risk of interest rates in 2022 and the sharp increases in October reduced actuarial liabilities and drove down the value of well-matched asset portfolio. The impact of leveraged LDI on cash positions created major problems which required Bank of England intervention to ensure market stability. The 2022 results season has highlighted just how far values fell.

The premise of derisking and LDI is that the schemes can become market desensitised. The question is, however, whether they are cash payment sensitive. Maintaining LDI positions caused liquidity problems. Beyond that is there sufficient income (asset maturities in the portfolio and LDI collateral flexibility) to pay actual pensions without the need to sell assets at a loss?

The table below shows the change in asset and liability positions and the actual pensions to be paid in a year. Schemes / sponsors should confirm that the expected payments to members can be made without incurring actual losses because of the derisking / LDI strategies in place. They should confirm that the “hedging the measure” not the payment schedule has not created a new risk with the scheme requiring high returns on the asset base currently diminished in value.

The explanations provided avoid transparency and detail for major asset value falls.

Aviva

(Dec)	Post LDI £m	Pre LDI £m	% Fall	Payments £m
Assets	11,763	19,337	39%	572
Liabilities	10,931	17,068	36%	
Net	832	2,269		

Britvic Plc : You've been tangoed

Research Findings

Britvic has been assiduous in derisking and has a large surplus. A leap up from 2% to 5.25% in the discount rate did not increase the surplus. If it had stuck to the well balanced portfolio of 2013 it would be very well placed now to help past and present employees in their pension.

Alternatively it could have avoided the contributions made of £148m. The near £300m fall in the value of liabilities and assets has no impact on cash payments. Let's hope there is free enough cash to avoid sales at low values, else Britvic's derisking strategy will have "unsolved" its pension position and wasted a surplus.

Pension Scheme

The company has security arrangements with the trustee of £286m as at 31.3.22 in the form of surety bonds but these may be provided as letters of credit or cash. Counter indemnities are also taken out.

Key numbers

September	2022	2021	2020	2019	2018
	£m	£m	£m	£m	£m
Scheme Assets	565	864	898	907	739
Liabilities	-446	-739	-809	-780	-658
	119	**125**	**89**	**127**	**81**

Breakdown of Assets

September	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
		£m	£m	£m	£m	£m	£m	£m	£m	£m
UK Equities						20	46	51	99	119
Overseas Equities	2	1	18	20	24	23	5	20	48	107
Properties	32	30	30	30	31	23	3	4	6	8
Corporate bonds	373	450	419	416	375	374	339	283	196	142
LDI	130	366	420	431	295	313				
Fixed interest gilts							73			18
Index linked gilts							267	274	245	151
Cash & other	28	17	11	10	14	6	72	7	2	2
Total	**565**	**864**	**898**	**907**	**739**	**759**	**805**	**639**	**596**	**547**

Other pension scheme numbers

September	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	Total
		£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Employer Contributions	5.4	5.0	5.0	20.0	19.9	20.0	20.0	20.4	20.0	12.5	**148.2**
Benefits paid	29.5	27.4	31.5	31.4	52.3	40.4	26.4	18.9	19.1	17.1	
Discount rate	5.25	2.05	1.7	1.8	2.95	2.7	2.3	3.8	4	4.55	
Inflation	3.65	3.35	2.9	3.05	3.25	3.2	3.05	3.15	3.2	3.35	
Mortality											
Men 65	21.7	21.7	21.6	21	21.5	21.6	21.5	21.4	21.3	22.2	
Women 65	24.6	24.5	24.4	23.6	24	24.1	24.5	24.4	24.3	24.8	
Assets / benefits paid	19.2	31.5	28.5	28.9	14.1	18.8	30.5	33.8	31.2	31.9	

Man Group Plc : Booker prize plot

Research Findings

Man Group set up a reservoir trust in 2012 to protect it from excess contributions. It gave up too soon and wound it up in 2019. When interest rates rebounded it was caught flat-footed with collateral calls and was, by its own admission, a forced seller. Its 2022 asset value fell 40% in a strangely unbalanced portfolio. Keeping money in a multi asset reservoir trust (or under the bed) would have been much better financially. A good plot line wasted.

Pension Scheme

Key numbers

December	2022	2021	2020	2019	2018	2017	2016	2015	2014
	$m	$m	$m	$m	$m	$m	$m	$m	$m
Scheme Assets	294	473	492	439	400	499	455	471	483
Liabilities	-272	-444	-490	-422	-376	-464	-426	-422	-438
Asset ceiling	0	-2	0	-1	0	-3	-2	-1	0
Net	22	27	2	16	24	32	27	48	45

With a little patience and sustained diversification of risk the scheme would now be very well placed to help employees past and present to have better pensions.

Breakdown of Assets

December	2022	2021	2020	2019	2018	2017	2016	2015	2014
	$m	$m	$m	$m	$m	$m	$m	$m	$m
*Fund investments	90								
Index linked Gov Bonds	21	45	44		42		40		38
Absolute return bonds	66	109	128		97		43		0
LDI	77	104	134		104		97		56
Diversified growth fund		106	69		50		95		101
Man Alternative Risk Premia Fund		56	51		48		0		0
Cash	12	23	38		35		63		37
Reservoir Trust							80		92
UK Equities									19
Non UK Equities									19
Corporate Bonds									77
Total	**266**	**443**	**464**		**376**		**418**		**439**

* Diversified growth fund and Man Alternative Risk Premia Fund added together

December 2022 pension scheme notes: Scheme Assets

Part of the investment objective of the UK Plan is to minimise fluctuations in the UK Plan's funding levels due to changes in the value of the liabilities. This is primarily achieved using the LDI funds, which aim to hedge movements in the pension liability due to changes in interest rate and inflation expectations. LDI primarily involves the use of government bonds (including repurchase agreements) and derivatives such as interest rate and inflation swaps. There are no annuities or longevity swaps. These instruments are typically priced and collateralised daily by the UK Plan's LDI manager and/or central clearing houses. Given that the purpose of LDI is to hedge corresponding liability exposures, the main risk is that the investments held move differently to the liability exposures. This risk is managed by the trustees, their advisers and the UK Plan's LDI manager, who regularly assess the position.

During September and October 2022, a large increase and subsequent volatility in real gilt yields led to many LDI funds calling for collateral at short notice. There was limited impact on the UK Plan other than a sharp fall in fund values due to the high level of hedging (i.e. matching the fall in liabilities). The UK Plan's investments were rebalanced regularly, and the target hedging level of 100% of interest rates and inflation was preserved throughout the period, with the funding level volatility relatively muted as a result. At 31 December 2022, the UK Plan's hedging assets continue to hedge around 100% of interest rates and inflation on the technical provisions basis. The level of leverage utilised was in line with regulatory requirements, with the LDI funds themselves running a lower than target level of leverage. The UK Plan has sources of cash from the collateral waterfall, trustee bank account, and access to daily-dealing funds should further collateral calls be made.

The government bond assets and diversified growth funds have prices quoted in active markets and the absolute return bonds, LDI and Man Diversified Risk Premia are primarily unquoted. At 31 December 2022, around 33% of the UK Plan assets relate to those with quoted prices and 67% with unquoted prices (2021: around 35% quoted and 65% unquoted). The UK Plan does not invest directly in property occupied by Man Group or our shares.

Other pension scheme numbers

September	2022	2021	2020	2019	2018	2017	2016	2015	2014
		£m	£m	£m	£m	£m	£m	£m	£m
Employer Contributions	1	5	1	0	*-19	0	3	24	-7
Benefits paid	12	18	15	24	29	18	16	12	14
Discount rate	4.8	1.9	1.3	2.1	2.9	2.4	2.6	3.7	3.6
Inflation assumption	3.3	3.4	3	3.1	3.3	3.3	3.3	3.3	3
Mortality									
Men 60	26.9	27.1	26.8	26.6	26.8	27	27.2	27.1	27
Women 60	29.7	29.5	29	28.8	29	29	29.4	29.3	
Assets / benefits paid	24.5	26.3	32.8	18.3	13.8	27.7	28.4	39.3	34.5

Unforced Errors: A Summary

Once closed to future accrual and new members schemes had straight forward payment schedules – comparable to an amortising loan. Having a well balanced asset portfolio to make the payments was not uncharted territory – structured to reflect the repayment dates with its maturities. Narrowing investment decisions to mimic the actuaries' assessment of the value of liabilities rather than cash payment dates looked like an unforced error. When interest rates reversed it clearly proved a mistake.

The hope is now that the derisking process was well enough managed, in cash payment terms, that asset write downs do not become realised losses required to pay pensions leaving the residual assets on a downward spiral. The assets held to annual benefit payments becomes a noteworthy ratio.

Company	2022	2021	%change	2022	2021	2022	2021
				Benefits Paid		Asset/ Benefit Ratio	
	£m	£m		£m	£m		
Aviva Plc (Dec 2022)							
Assets	10877	18195	40%	572	564	19	32
Liabilities	-10002	-15764	37%				
Net surplus/(deficit)	875	2431	64%				
Legal & General Plc (Dec 2022)							
Assets	868	1328	35%	102	103	9	13
Liabilities	-1480	-2348	37%				
Net surplus/(deficit)	-612	-1020	40%				
Pearson Plc (Dec 2022)							
Assets	3088	4125	25%	136	123	23	34
Liabilities	-2514	-3588	30%				
Net surplus/(deficit)	574	537	-7%				
ITV Plc (Dec 2022)							
Assets	2437	3873	37%	156	187	16	21
Liabilities	-2292	-3943	42%				
Net surplus/(deficit)	145	-70	307%				
Rolls Royce Holdings Plc (Dec 2022)							
Assets	5215	9128	43%	329	768	16	12
Liabilities	-4621	-8010	42%				
Net surplus/(deficit)	594	1118	47%				
RSA Group (Dec 2022)							
Assets	5792	9410	38%	309	340	19	28
Liabilities	-5461	-8679	37%				
Net surplus/(deficit)	331	731	55%				

Given the issues of collateral calls and the constant pressure now to sell illiquid investments at "pragmatic" values, schemes should be asked to disclose what sales made are at "realised" losses.

Making the elimination of interest rate risk a central part of pension strategies loomed too large over the sector. Those who took a proportionate response to falls in interest rates are now seeing the benefits. Whether that inspires them to accelerate now to buyout or seek to use the benefits to serve the interests of employees past and present is an intriguing issue. A topic where new voices aside from the Sirens of Risk Transfer are needed.

Disclaimer

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