

Consumer-led pension strategy – Workstream 4

Benchmarking of existing pension scheme funding strategies

**Western Power
Distribution**

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Introduction

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1.1 Background and context

Over the current decade the network companies face an unprecedented challenge of securing significant investment to maintain a reliable and secure network. As the regulator, Ofgem's role is to ensure that this investment is delivered at a fair price for consumers.

To help achieve this, Ofgem developed RIIO (Revenue = Incentives + Innovation + Outputs) – A performance based model for setting the network companies' price controls, which lasts for eight years. RIIO is designed to encourage network companies to:

- Put stakeholders at the heart of their decision making process;
- Invest efficiently to ensure continued safe and reliable services;
- Innovate to reduce network costs for current and future consumers; and
- Play a full role in delivering a low carbon economy and wider environmental objectives.

It is relatively early days in the new world of enhanced consumer consultation and to date a number of areas have been excluded from the consultation process by network operators. However, Ofgem have been explicit that pension costs (due to their complex nature and significant cost/risk to consumers) must now be included and the strategies adopted by network operators for running their pension schemes need to be in line with their consumer's views on efficiency.

Western Power Distribution ('WPD') instructed us in November 2015 to support them as they developed their approach to consulting with their consumers to determine the most efficient way to fund their pension schemes. The scope of our engagement included working with WPD to design and implement a methodology to seek consumers' views on how WPD should fund its pension schemes, using a combination of quantitative, qualitative and academic research based techniques. The engagement deadline was September 2016 in order to enable the results from the research to be implemented in the 2016 actuarial valuations of WPD's pension schemes.

During the early days of the engagement, Ofgem published a consultation on 16 March 2016 titled 'Second Consultation on Ofgem's policy for funding Network Operators' Pension Scheme Established Deficits.' This set-out the requirement for network operators to consult with consumers regarding their approach to funding their pension schemes. While the consultation document did not significantly alter the methodologies developed as part of our engagement, it did provide additional validation of the approach taken.

Some relevant excerpts from the consultation document are as follows:

1.6 We also outlined a marked shift from our current approach, that envisages penalties for NWOs that are outliers in the way their Pension Scheme Established Deficits are managed or valued, to **'a new approach that looks instead to NWOs to demonstrate how they are participating in the governance of pension schemes on behalf of the consumers' (who are underwriting the risks involved).**

We believe this approach more constructively recognises the substance of relationships between NWOs and pension scheme trustees who are ultimately responsible for the schemes. Respondents also broadly supported the direction of this thinking.

1.7 The aim of our proposed reforms is two-fold: (a) to underline Ofgem's commitment to consumer funding of Pension Scheme Established Deficits, which should help to minimise the cost of financing the networks themselves to the benefit of consumers, and **(b) to encourage NWOs to pursue consumer-focused strategies for managing their commitments.**

1.10 NWOs have responsibilities towards their consumers and the strength of the employer covenant is in part underpinned by our funding commitment on behalf of consumers. **This means we can reasonably look to NWOs to represent the interests of consumers when they participate in pension scheme governance**

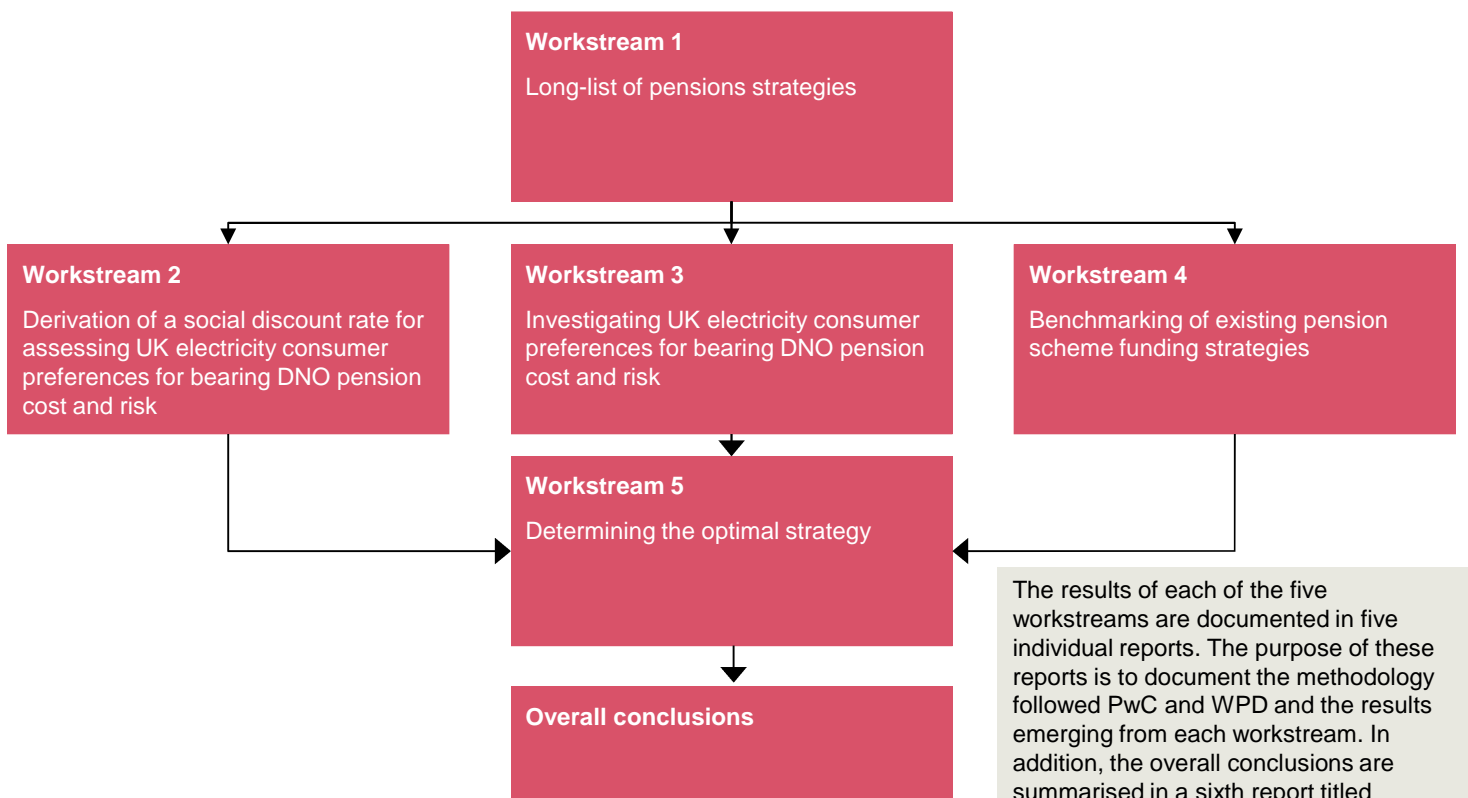
In addition the consultation document included two specific amendments to Ofgem's policy for funding network operators' pension costs (called the pension principles) as follows:

- 1 Consumers should not be expected to pay any excess costs that are avoidable by efficient management action
- 8 In light of our funding commitment, we look to employers to participate in the governance of defined benefit pension schemes with the aim of protecting the interests of the consumers who are exposed to any Established Deficit, in balance with the interest of shareholders who would be underwriting any remaining deficit. **To this end, we would look to employers to inform investment, benefit and funding strategies with objective and where possible evidence-based insights into the interests of consumers, recognising that tomorrow's consumers are as relevant as today's.** We look to employers to report transparently on their participation in the governance of these schemes.

1.2 Overview of the methodology

The methodology adopted by PwC and WPD comprised of five workstreams as follows:

Workstream	Purpose
1. Long-list of pensions strategies	<ul style="list-style-type: none"> To identify the long-list of pensions strategies which could be adopted by WPD and determine their cost and risk profile for consumers.
2. Derivation of a social discount rate for assessing UK electricity consumer preferences for bearing DNO pension cost and risk	<ul style="list-style-type: none"> To determine a discount rate using the academic research carried out to date for the purpose of comparing the relative cost (from a consumer and society perspective) of each of the pension strategies identified in Workstream 1 .
3. Investigating UK electricity consumer preferences for bearing DNO pension cost and risk	<ul style="list-style-type: none"> Use primary research techniques to: <ul style="list-style-type: none"> - Validate and inform an amendment to the social discount rate determined in Workstream 2. - Determine other relevant factors for the purpose of assessing consumers' preferred pension strategy in Workstream 1.
4. Benchmarking of existing pension scheme funding strategies	<ul style="list-style-type: none"> To provide relevant UK benchmarks for the funding of defined benefit pension schemes to provide additional validation that consumers' preferences are capable of practical implementation.
5. Determining the optimal strategy	<ul style="list-style-type: none"> To assess the long-list of pension strategies using the results of Workstreams 2, 3 and 4 in order to arrive at a pensions strategy arrived at using evidence based insights into the interests of consumers recognising that tomorrow's consumers are as relevant as today's.



1.3 Purpose of this report

The purpose of this report is to determine the UK pension scheme benchmarks for the main elements of a pension scheme strategy.

The information used to construct the benchmarks is largely taken from publicly available data provided by the Pensions Regulator in its report titled “Scheme Funding Statistics” (May 2015). The data in this report is taken from its survey of all c.6,000 UK defined benefit pension schemes.

For each benchmark the current position (i.e. the approach adopted for the 2013 actuarial valuation) is also noted.

The results of the analysis set-out in this report are then used in the assessment of the long-list of pensions strategies in the report titled “Determining the optimal strategy”.

Covenant, deficit and deficit recovery

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2. Covenant, deficit and deficit recovery

2.1 Size of WPD's pension liabilities

Key:

WPD's pension schemes

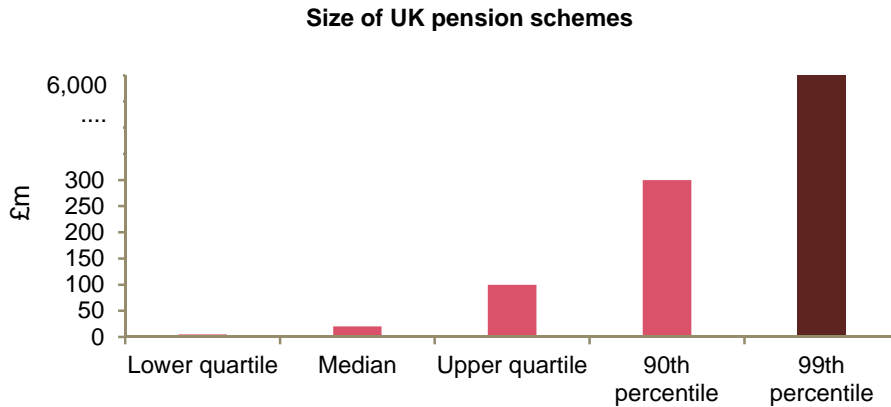


Chart 2.1

The chart shows the range of sizes of all private-sector defined benefit schemes in the UK

2.2 Size of WPD's pension liabilities

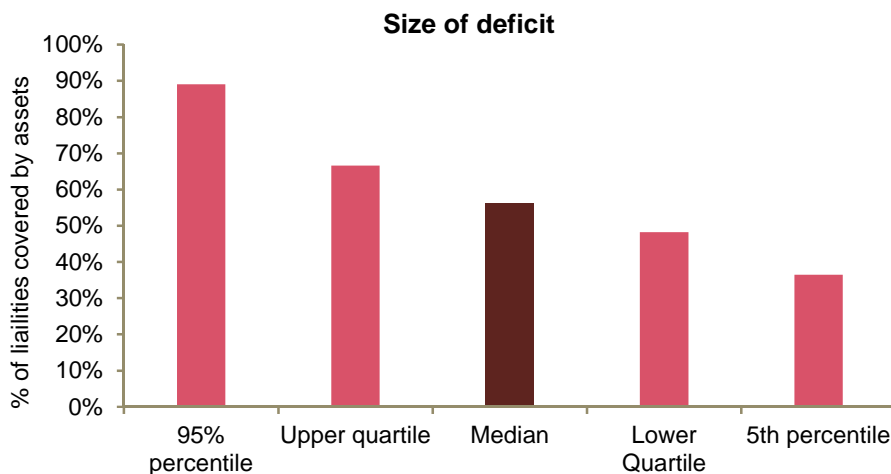


Chart 2.2

The chart shows how well funded UK private-sector defined benefit schemes are i.e. what proportion of the schemes' liabilities are covered by the assets held.

The chart uses a consistent calculation approach for all schemes and therefore removes any distortions caused by different approaches adopted by each scheme's trustees.

2.3 What is WPD's ability to fund the deficit and make good any additional deficit volatility?

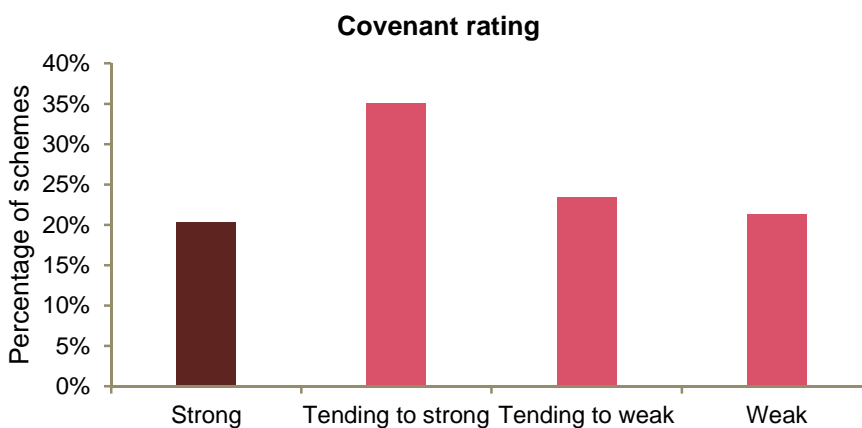


Chart 2.3

The chart shows the range of covenant ratings for companies with a UK private-sector defined benefit scheme.

The covenant rating is an overall summary from an exercise carried out regularly by the pension scheme trustees to assess the company's ability to fund the deficit and make good any additional deficit that might emerge in the future i.e. it is a measure of the financial ability (and willingness) of the employer to support the scheme, both now and in the future.

2. Covenant, deficit and deficit recovery (Cont'd)

2.4 Recovery plan length

Key:

WPD's pension schemes

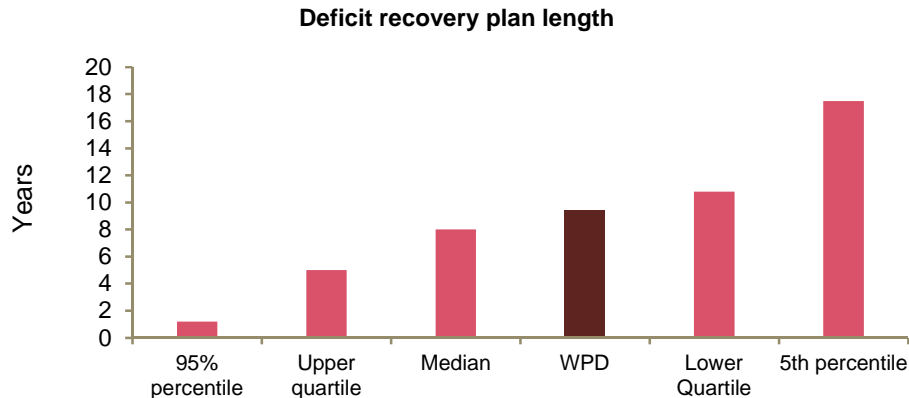


Chart 2.4

The chart shows the range of periods over which deficits are expected to be repaid for UK private-sector defined benefit schemes.

2.5 Conclusions

- WPD's pension liabilities are within the top 1% of UK pension schemes by size (WPD's pension liabilities are around £6bn – the top 50 biggest UK private sector defined benefit schemes range from £5bn to £40bn).
- While the pension scheme is one of the largest in the UK, the relative size of the pension scheme deficit is around median.
- Pension scheme deficits are made good from a combination of future asset returns on existing assets and additional company contributions (called deficit contributions). The balance between future asset returns and company contributions varies between schemes and is significantly influenced by the company's ability to repay the existing deficit and any additional deficit that could emerge in the future if there is a greater reliance on future asset returns. For example if the pension scheme deficit is small relative to a company's revenues and profitability (both short and medium term) then the company and trustees have options for recovering the deficit where there is a greater reliance on future asset returns and a longer period for deficit repair contributions. In this situation the company is described as having a strong covenant.
- WPD's covenant is one of the strongest in the range of UK private sector companies with defined benefit pension schemes.
- Chart 2.3 indicates that, whilst WPD has a strong covenant, the deficit recovery period chosen by WPD and its pension scheme trustees indicates that (compared to other pension schemes in the UK) they have chosen not to take advantage of the flexibility which the strong covenant provides.
- Section 5 of this report covers the extent to which future asset returns are assumed to be sufficient to meet the pension payments and the resulting estimated deficit requiring additional funding through deficit contributions.

Liability assumptions

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3. Liability assumptions

3.1 Assumption for life expectancy

Key:

WPD's pension schemes

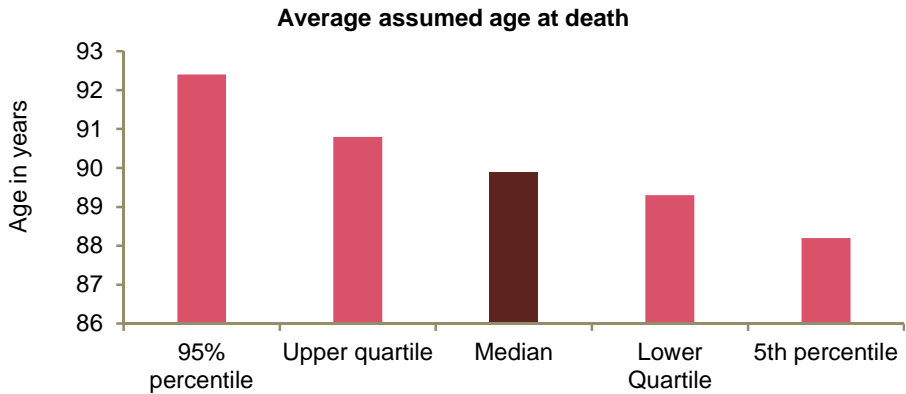


Chart 3.1

The chart shows the range of assumed average life expectancies used by UK private sector pension schemes.

3.2 Assumption for RPI pension increases

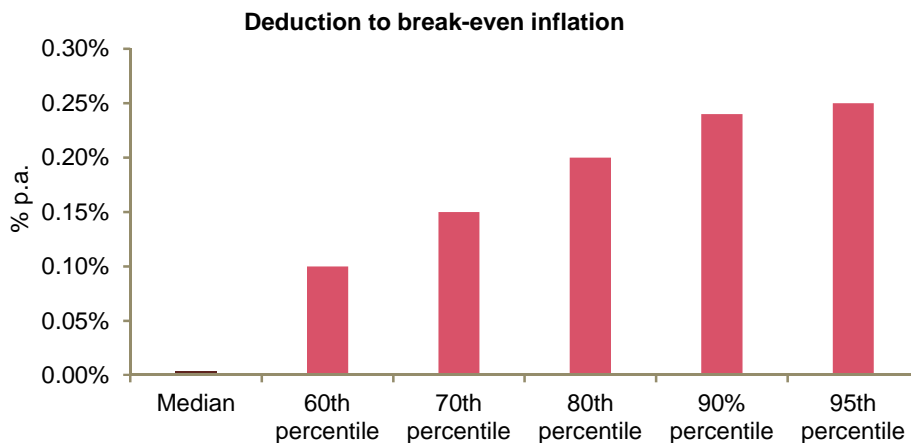


Chart 3.2

The chart shows the range of deductions made to break-even inflation for UK private sector pension schemes

This assumption is used to estimate future pension increases.

3.3 Assumption for the proportion of members which will require a spouse's pension to be paid

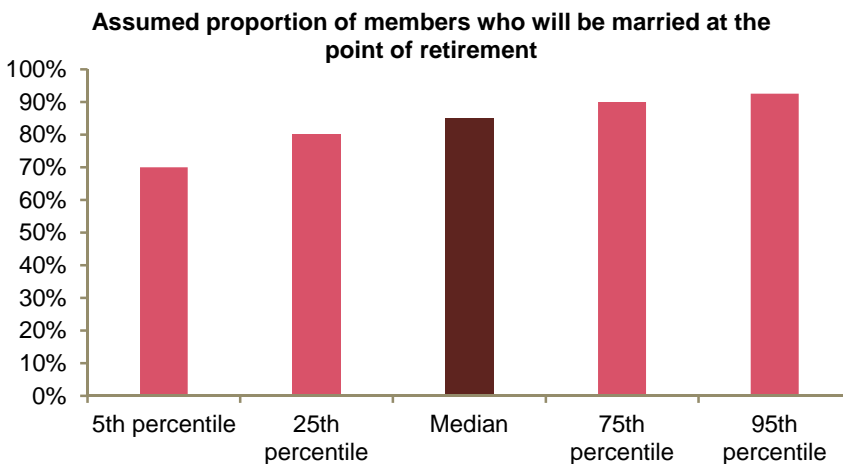


Chart 3.3

The chart shows the range of assumptions for the proportion of members who are assumed to be married at retirement (and so there is potential for a spouse's pension to be paid on their death).

3. Liability assumptions (Cont'd)

Key:

WPD's pension schemes

3.4 Assumption for how much pension will be exchanged for a lump sum on retirement

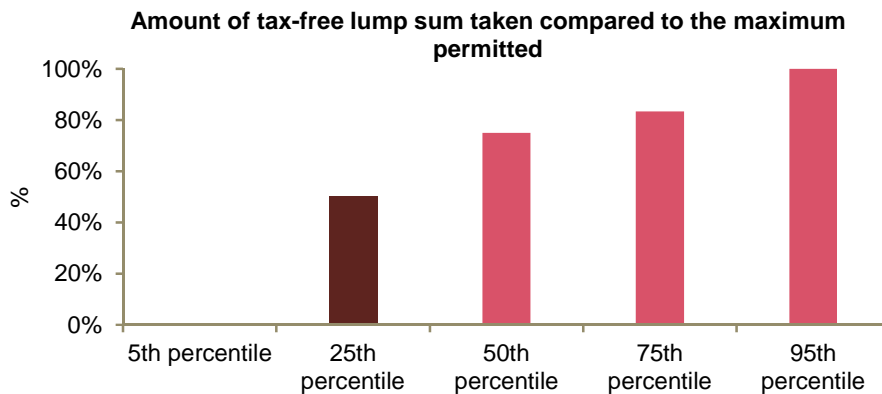


Chart 3.4

The chart shows the range of assumptions for the amount of tax-free lump taken at retirement for UK private sector defined benefit schemes.

3.5 Terms of the exchange at retirement for converting pension into lump sum

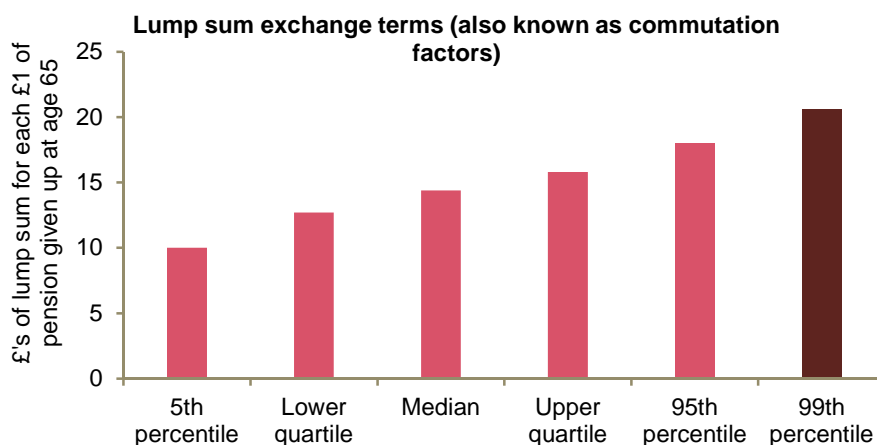


Chart 3.5

The chart shows the range of conversion terms when members reach retirement and choose to convert pension into a lump sum.

3.6 Conclusions

- WPD and its pension scheme trustees, consistent with standard approach within the UK pensions environment, use a large number of assumptions to estimate the pension payments that will need to be made from its pension schemes.
- The full suite of assumptions is significant, however, four of the assumptions are the most significant in estimating the pension payments that will need to be made. These are life expectancy, future price inflation (for calculating pension increases), the proportion of scheme members who are married (as this will result in a payment of a spouse's pension following a member's death) and amount of pension which is exchanged for a tax-free lump sum by members when they retire.
- Taking each of these in turn:
 - The life expectancy assumptions adopted by WPD are in line with the median levels adopted across all UK private sector defined benefit schemes. While there are significant geographic differences in life expectancy, the benchmark data presented is not separated by geographic location and so represents an average across the whole of the UK. Given the diversity in the geographic locations of WPD's pension scheme members the blend of WPD's workforce would not be expected to show significantly different characteristics to the UK average and so the benchmark data shown could be considered to be comparable to WPD's population.

3. Liability assumptions (Cont'd)

3.6 Conclusions (continued)

- The majority of pension schemes in the UK have pension increases which are inflation-linked in some way. The benchmark data shows the RPI assumption adopted across a range of UK pension schemes and is presented as a deduction from the so-called 'break-even' inflation rate (where 'break-even' inflation refers to the difference between the yield available on fixed-interest Gilts and index-linked Gilts). The assumption adopted by WPD and its trustees is consistent with the market median approach in the UK which is that the assumption for future inflation is in line with the break-even inflation rate with no deduction. While the assumption adopted is median compared to other UK pension schemes, it could be considered to include a margin for prudence compared to a best-estimate of future inflation as a result of the supply-demand imbalance for index-linked Gilts (resulting in an increased estimate for future inflation by the addition on an 'inflation risk premium').
- The majority of pension schemes in the UK pay a pension to a member's spouse on the members' death. Therefore the assumption for how many members are married has a significant influence on the estimate of the future pension payments required. WPD and its pension scheme trustees make an assumption that 80%-85% (depending on the scheme) of members are married at retirement which is in line with the median assumptions adopted across the range of UK pension schemes. While this assumption is in line with the assumption adopted by other UK pension schemes it could be considered to include a margin for prudence compared to national statistics on the proportion of the UK population who are married. For the UK population as a whole the proportion who are married between 67% (for males between aged 35-65) and 76% (for males aged 65-69) and has been falling year on year over the last 10 years.
- The majority of pension schemes in the UK allow members to exchange some of their pension for a tax-free lump sum when they retire. WPD and its pension scheme trustees' assumption is below median. This results in a higher estimate of the future payments required from WPD's pension arrangements compared to the market of UK pension schemes. Not only is this assumption more prudent than the UK as a whole, but in practice in the UK the majority of people choose to exchange pension for a tax-free lump sum at retirement (and this behaviour is consistent with both the academic evidence researched in the report titled "Derivation of a social discount rate for assessing UK electricity consumer preferences for bearing DNO pension cost and risk and the results of the UK consumer survey in report titled "Investigating UK electricity consumer preferences for bearing DNO pension cost and risk."
- Finally, in situations where WPD's pension scheme members do exchange pension for a tax-free lump sum then the terms of the exchange are decided by WPD and its pension scheme trustees. The terms of the exchange in place currently are at the 99th percentile of UK pension schemes. This means that they are some of the highest in the UK resulting in higher pension payments in the future compared to the universe of UK private sector defined benefit schemes.
- In summary the assumptions made by WPD and its pension scheme trustees for estimating future pension payments are more prudent (when considered on an overall basis) than the median adopted by the universe of UK private sector defined benefit schemes.
- The additional prudence in this element of the actuarial valuation provides the additional option for lower-than-median margins for prudence in the assumptions for future asset returns (if the overall margin for prudence is to be consistent with UK market medians).

Assumptions for future asset returns

4

4. Assumptions for future asset returns

4.1 Asset portfolio – degree to which it is growth orientated

Key:

WPD's pension schemes

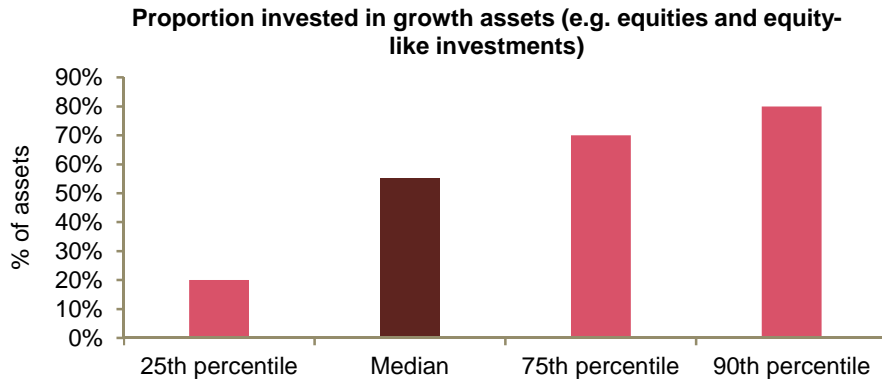


Chart 4.1

The chart shows the degree of investment in growth assets for UK private-sector defined benefit pension schemes.

4.2 Allowance for future asset returns in the deficit calculation

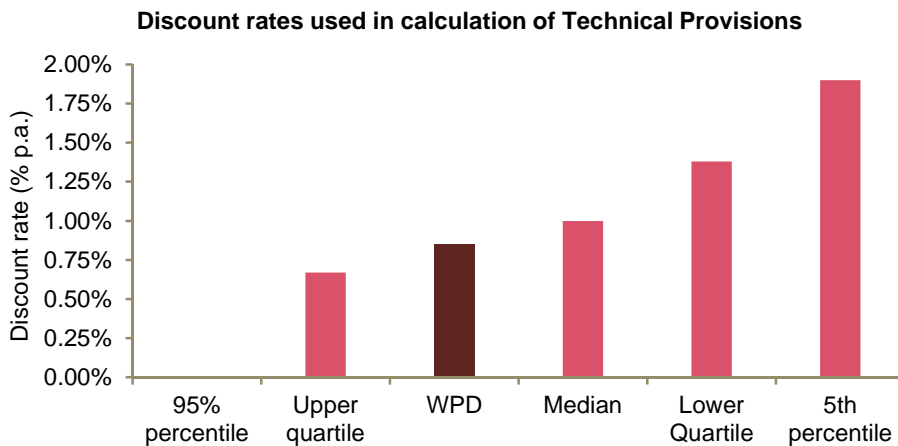


Chart 54.2

The chart shows the range of discount rates used for the calculations of Technical Provisions for UK private sector defined benefit schemes.

4.3 How prudent are discount rates compared to investment strategies?

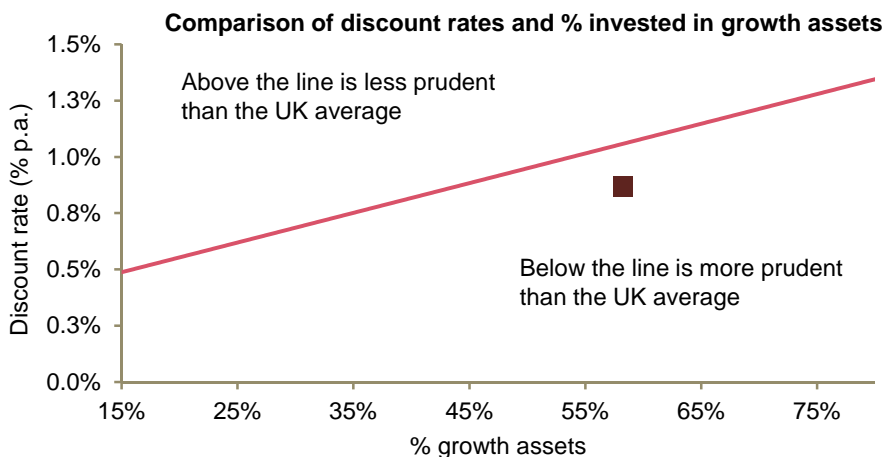


Chart 4.3

The chart shows the correlation between discount rates used in calculating the Technical Provisions and the scheme's investment strategy for UK private sector defined benefit schemes.

4. Assumptions for future asset returns

4.4 Conclusions

- The pension payments from WPD's pension schemes (in line with the approach taken by all UK pension schemes) will be made out of the assets held in the pension scheme at the time that the pension payments are made. The assets will be generated from two sources: future investment returns on the existing assets and (if this is estimated to be insufficient) from additional deficit contributions paid by WPD. Therefore, the estimate of whether the assets will be sufficient (and deficit contributions will be required) depends on the assumption, made by WPD and its pension scheme trustees, for future investment returns on the assets currently held. The assumption made for future asset returns will usually be influenced by the existing asset mix and the degree of prudence in the estimate of future investment returns from the individual asset classes.
- WPD's pension schemes currently invest around 55% of their existing assets in equities (and equity-like investments). This is consistent with the median level across the universe of UK private sector defined benefit schemes.
- However, WPD and its pension scheme trustees assume a level lower than median for future asset returns when calculating the deficit. This results in a deficit which would be higher than would be calculated had a UK median approach been adopted.
- Specifically, the discount rate adopted by WPD and its trustees was around 0.85% p.a. above the 20 year Gilt yield whereas the UK overall median was around 1% p.a. above the 20 year Gilt yield, and the median for UK pension schemes with a similar investment strategy to WPD's pension schemes is also around 1% p.a. above the 20 year Gilt yield.
- The benchmarking data for discount rates is presented as a single equivalent discount rate (i.e. any changes in discount rates over the full duration of the scheme have been averaged to enable meaningful comparison). In practice, WPD and its pension scheme trustees have discussed a long-term objective for the scheme where the scheme's assets would only be required to generate 0.5% p.a. above Gilt yields. If the UK median single equivalent discount rate of 1% p.a. above Gilt yields was re-expressed to reflect a long-term target of 0.5% p.a. above Gilt yields then the UK median discount rate would be c.1.5% p.a. (on average) over the first c.20 years followed by 0.5% p.a. thereafter

*Actuarial
assumptions subject
to benchmarking*

5

5. Actuarial assumptions subject to benchmarking

5.1 Discount rates

Assumption	Central Networks Group of the ESPS	WPD Group of the ESPS
5.1.1 Discount rate (before retirement)	Fixed-interest Gilt yield curve +2% p.a.	
5.1.2 Discount rate (after retirement)	Fixed-interest Gilt yield curve +0.5% p.a.	

5.2 Liability assumptions (financial)

Assumption	Central Networks Group of the ESPS	WPD Group of the ESPS
5.2.1 Future price inflation (RPI)	Derived from the difference between the yields on fixed-interest and index-linked Gilts (using the Bank of England yield curve) with no adjustment for an inflation risk premium	
5.2.2 Future price inflation (CPI)	0.75% p.a. less than RPI assumption	
5.2.3 Future pay rises (general)	RPI plus 1.5% p.a.	
5.2.5 Future pay rises (promotional)	None	
5.2.5 Pension increases	Derived from the RPI (post 88 GMP: CPI) assumption using best estimate inflation uncertainties allowing for the minima and maxima that apply. This results in the following assumptions:	
	RPI-linked	3.6% p.a.
	RPI-linked with a cap of 5% p.a.	3.5% p.a.
	Post 1988 GMPs – CPI linked with a cap of 3% p.a.	2.2 p.a.

5. Actuarial assumptions subject to benchmarking (Cont'd)

5.3 Liability assumptions (demographic)

Assumption	Central Networks Group of the ESPS	WPD Group of the ESPS
5.3.1 Pension payment age for retirements in normal health	Pre April 1988 joiners: age 60 Post April 1988 joiners: age 63	Pre April 1988 joiners: age 60 Post April 1988 joiners: age 63
5.3.2 Rate of early retirement (employees)	All members retire at pension payment age. ESPS pre-88 male joiners retire at age 60 with their pre-17 May 1990 benefits reduced by the appropriate reduction factor	All members retire at age 62 without reduction for early payment (or age 60 for pre 1 April 1988 female joiners)
5.3.3 Rate of early retirement (ex-employees)	All members retire at their pension payment age applying at date of leaving service, or, if left service under redundancy arrangements, the age at which unreduced benefits can be taken	All members retire at the pension payment age applying at date of leaving service, or, if left service under redundancy arrangements, the age at which unreduced benefits can be taken
5.3.4 Future life expectancy (after retirement)	S2PMA/S2PFA with a scaling factor of 105%/90% for non-pensioners/pensioners Future improvements in line with CMI 2015 with a 1.5% p.a. long-term rate of improvement	S2PMA/S2PF A with a scaling factor of 95%/90% for non-pensioners/pensioners Future improvements in line with CMI 2015 with a 1.5% p.a. long-term rate of improvement
5.3.5 Future life expectancy (before retirement)	ACM00/ACM00 tables published by the CMI with a 85% adjustment to death rates	ACM00/ACF00 tables published by the CMI with a 85% adjustment to death rates
5.3.6 Proportions of members who are married	80% at point of retirement	<ul style="list-style-type: none"> Non-pensioners: 85% males and 75% females at point of retirement or earlier death Pensioners: 75% males and 65% females
5.3.7 Age different between members and their spouse	Males are three years older than their spouses	Males are three years older than their spouses

5. Actuarial assumptions subject to benchmarking (Cont'd)

5.3 Liability assumptions (demographic)

Assumption	Central Networks Group of the ESPS			WPD Group of the ESPS		
	Age	Withdrawal rate		Age	Withdrawal rate	
5.3.8 Rate of leaving contributory service in the pension scheme		Male	Female		Male	Female
	25	10.59%	10.74%	20	3.75%	7.50%
	30	6.36%	9.73%	25	3.21%	7.67%
	35	3.81%	5.94%	30	1.93%	6.95%
	40	2.59%	4.07%	35	1.16%	4.25%
	45	1.92%	2.78%	40	0.78%	2.91%
	50	1.24%	1.75%	45	0.58%	1.98%
	55	0.69%	1.15%	50	0.38%	1.25%
			55	0.21%	0.82%	
			60	0.09%	0.63%	
5.3.9 Rate of retirement on ill-health grounds	Age	Ill-health retirement rate		Age	Ill-health retirement rate	
		Male	Female		Male	Female
	25	0.01%	0.00%	20	0.00%	0.00%
	30	0.02%	0.02%	25	0.02%	0.00%
	35	0.03%	0.06%	30	0.03%	0.03%
	40	0.06%	0.12%	35	0.05%	0.09%
	45	0.10%	0.24%	40	0.09%	0.18%
	50	0.20%	0.35%	45	0.16%	0.36%
55	0.46%	0.83%	50	0.30%	0.52%	
			55	0.67%	1.24%	
			60	1.62%	2.36%	

5. Actuarial assumptions subject to benchmarking (Cont'd)

5.4 Other assumptions

Assumption	Central Networks Group of the ESPS		WPD Group of the ESPS	
	Age	Factor	Age	Factor
5.4.1 Lump sum conversion terms	55	30.25	55	27.34
	56	29.43	56	26.64
	57	28.61	57	25.92
	58	27.78	58	25.21
	59	26.95	59	24.49
	60	26.11	60	23.78
	61	25.29	61	23.08
	62	24.47	62	22.40
	63	23.66	63	21.72
	64	22.88	64	21.05
	65	22.11	65	20.36
5.4.2 Conversion of pension to a tax-free lump sum	No additional lump sum taken.			
5.4.3 Proportion of members who choose to take a cash equivalent transfer value	None			
5.4.4 Contributions method	Projected Unit Method with a 3-year control period.	Attained Age method.		
5.4.5 Scheme running costs	Paid as a % of pensionable salary (2.5%).	Paid as a % of pensionable salary (2.2%).		
5.4.6 PPF levies	Including in 6.4.5 above			
5.4.7 Additional asset return during recovery plan	0.25% p.a.			
5.4.8 Profile of deficit contributions	RPI-linked deficit contributions ending on 1 April 2022.	RPI-linked deficit contributions ending on 31 January 2023.		

*Source material and
supporting
information*

6

6. Source material and supporting information

6.1 Covenant, deficit and deficit recovery

Chart 2.1: Size of WPD’s pension liabilities

Source: ‘Scheme Funding Statistics’ (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes)

Other detail: The data shown in the chart uses data for schemes in Tranches 6, 7 and 8 in the survey. The chart shows the size of pension scheme by size of Technical Provisions recorded at the previous actuarial valuation. Note that due to the large difference in scheme size between the 90th percentile and 99th percentile the scale of the chart has been adjusted to aid the presentation of the survey data.

Chart 2.2: Size of WPD’s pensions deficit

Source: ‘Scheme Funding Statistics’ (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes)

Other detail: The chart shows the coverage of liabilities with assets for schemes in Tranche 8 in the survey. The measurement of liabilities is the price of buying annuities from an insurance company in order to remove distortions caused by pension schemes adopting different actuarial assumptions.

Chart 2.3: What is WPD’s ability to fund the deficit and make good any additional deficit volatility?

Source: ‘Scheme Funding Statistics’ (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes)

Other detail: The chart shows covenant rating used by the scheme trustees for schemes in Tranches 7 and 8 in the survey. A description of the covenant rating categories used by the Pensions Regulator is set-out below:

Covenant rating	Description
Strong	Very strong trading, cash generation and asset position relative to the size of the scheme and the scheme’s deficit. The employer has a strong market presence (or is a market leader) with good growth prospects for the employer and the market. The scheme has good access to trading and value if the employer is part of a wider group. Overall low risk of the employer not being able to support the scheme to the extent required in the short/medium term.

Covenant rating	Description
Tending to strong	Good trading, cash generation and asset position relative to the size of the scheme and deficits. Operates in a market with a reasonably positive outlook and the employer has a stable market share. Outlook is generally positive but medium-term risk of employer not being able to support the scheme and manage its risks.
Tending to weak	Concerns over employer strength relative to the size of the scheme and deficit and/or signs of significant decline, weak profitability or balance sheet concerns and/or high vulnerability to economic cycle. No immediate concerns over insolvency but potential risk of decline.
Weak	Employer is weak, to the degree that there are concerns over potential insolvency, or where the scheme is so large that, without fundamental change to the strength of the employer, it is unlikely ever to be in a position to adequately support the scheme.

Chart 2.4: Recovery Plan length

Source: ‘Scheme Funding Statistics’ (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes)

Other detail: The chart shows recovery plan lengths for schemes in Tranche 8 in the survey

¹ Tranche 6 – actuarial valuations with effective dates between 22 September 2010 and 21 September 2011

² Tranche 7 – actuarial valuations with effective dates between 22 September 2011 and 21 September 2012

³ Tranche 8 – actuarial valuations with effective dates between 22 September 2012 and 21 September 2013

6. Source material and supporting information (Cont'd)

6.2 Liability assumptions

Chart 3.1: Assumptions for life expectancy

Source: 'Scheme Funding Statistics' (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes).

Other detail: The chart shows life expectancy for males aged 45 for schemes in Tranche 8 in the survey.

Chart 3.2: Assumption for RPI pension increases

Source: 'PwC 2015 pension scheme funding survey' of 213 UK private sector defined benefit schemes with assets totaling c.£180bn .

Other detail: The chart shows adjustments to 'break-even' inflation. For this purpose 'break-even' inflation is calculated as the difference between the yields available on fixed-interest and index-linked Gilts.

Chart 3.3: Assumption for the proportion of members who will require a spouse's pension to be paid

Source: 'PwC 2015 pension scheme funding survey' of 213 UK private sector defined benefit schemes with assets totaling c.£180bn .

Chart 3.4: Assumption for how much pension will be exchanged for a lump sum on retirement

Source: 'PwC 2015 pension scheme funding survey' of 213 UK private sector defined benefit schemes with assets totaling c.£180bn .

Other detail: The WPD scheme assumption is that no pension is exchanged for a tax-free lump sum on retirement. However, WPD members automatically receive a tax-free lump sum at retirement as part of the scheme benefit design. To enable a like-for-like comparison with other pension schemes this automatic lump sum has been converted to a proportion of the tax-free maximum lump sum.

Chart 3.5: Terms of the exchange at retirement for converting pension into lump sum

Source: 'PwC 2015 pension scheme funding survey' of 213 UK private sector defined benefit schemes with assets totaling c.£180bn .

Other detail: The commutation factors shown are for pensions which increase in line with RPI.

The majority of pension schemes provide a spouse's pension which is a proportion of the member's pension before any allowance for a tax-free lump sum being paid. Schemes where the spouse's pension is, instead, a proportion of the pension in payment tend to apply higher lump sum conversion terms – and for these schemes an adjustment has been applied to enable a like-for-like comparison with other schemes.

6.3 Assumptions for future asset returns

Chart 4.1: Asset portfolio – degree to which it is growth orientated

Source: 'Scheme Funding Statistics' (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes).

Other detail: The chart shows data from Tranche 8 of the survey. For this purpose growth assets include the following asset classes: equities, property, commodities, hedge funds, below investment grade corporate bonds and any other assets reported to the Pensions Regulator as type 'other' .

Chart 4.2: Allowance for future asset returns in the deficit calculation

Source: 'Scheme Funding Statistics' (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes)

Other detail: The chart shows data from Tranche 8 of the survey. To produce this data, the Pensions Regulator has converted the discount rates used by pension schemes into an average discount rate which applies over the lifetime of the pension scheme (a 'single equivalent discount rate'). To enable a like-for-like comparison, the discount rates for the WPD schemes have also been converted to a single equivalent discount rate.

The discount rates in the chart are expressed as the discount rates that apply (on average) for the lifetime of the pension schemes in the survey and are expressed as a margin above the 20 year Gilt yield.

Chart 4.3: How prudent are discount rates compared to investment strategies?

Source: 'Scheme Funding Statistics' (May 2015) published by the Pensions Regulator (survey of c.6,000 UK defined benefit pension schemes).

Other detail: This chart has been produced by plotting a line of best fit through the data in Tranche 8 of the survey .

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