



Plumbing & Mechanical Services (UK) Industry Pension Scheme

Actuarial Valuation as at 5 April 2023
Preliminary results

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10 May 2024

Overview

Purpose and users

This presentation has been prepared for the Trustee of the Plumbing & Mechanical Services (UK) Industry Pension Scheme. I have prepared it in my capacity as Scheme Actuary. Its purpose is to provide the Trustee with a brief overview of the preliminary 5 April 2023 actuarial valuation results, to be shared with the Employers of the Scheme. This presentation covers:

- The method and assumptions used to calculate the Scheme's draft technical provisions
- The recovery plan assumptions

Please note the limitations set out on pages 13-15.

Method and assumptions

The results in this presentation are based on the method and assumptions discussed at the Trustee Board meeting on 20 June 2023. As noted in our previous advice, these assumptions are based on the Trustee's view of covenant remaining broadly unchanged since the previous valuation.

Nicola MacKay

Scheme Actuary

Fellow of the Institute and Faculty of Actuaries

10 May 2024

Towers Watson Limited, a WTW company

Authorised and regulated by the Financial Conduct Authority



Scheme

Plumbing & Mechanical Services
(UK) Industry Pension Scheme

Trustee

Plumbing Pensions (UK) Limited

Employer

Plumbing Pensions Employers
Limited

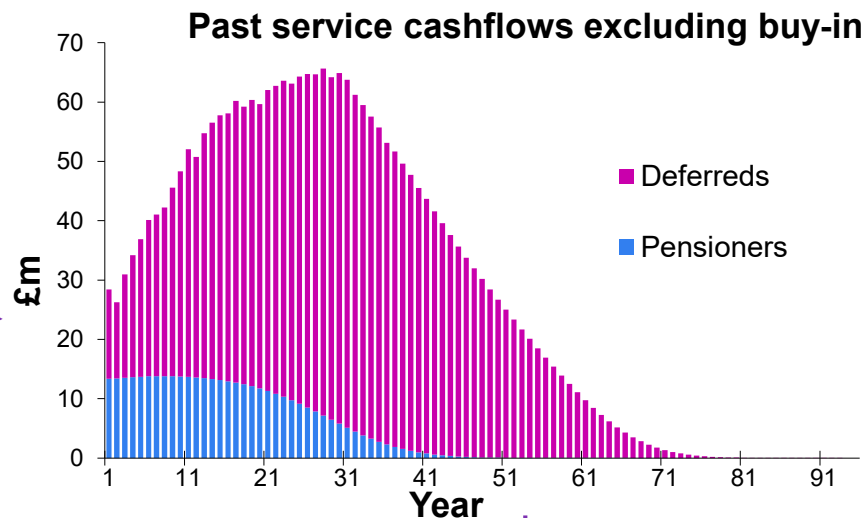
Preliminary technical provisions results

Membership data
See page 12 for a summary of the data at both this valuation and the previous valuation

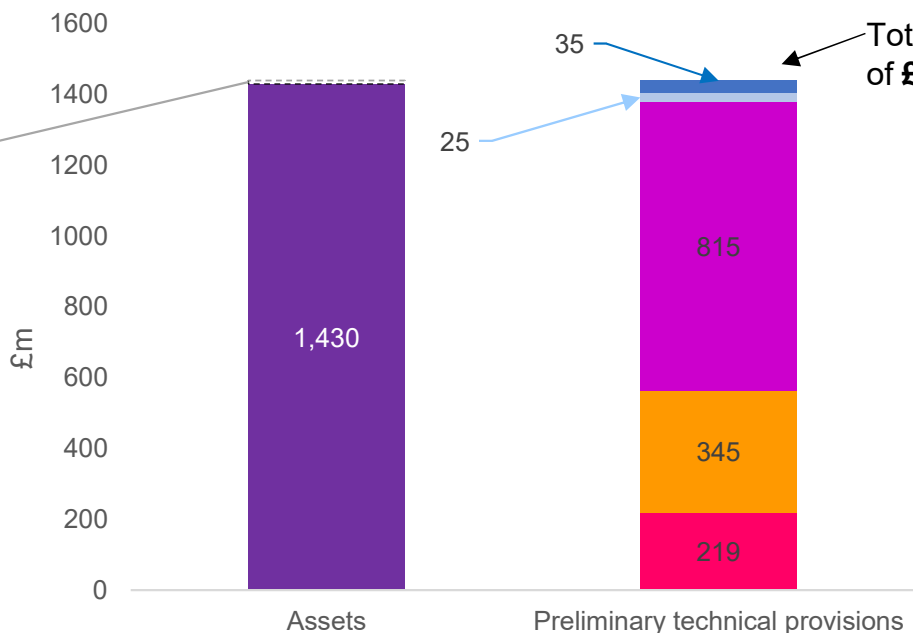
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Assumptions
See pages 7-8 for full details of assumptions

Used to produce expected Scheme cashflows



Deficit at 5 April 2023 of £9m, equivalent to a funding level of 99.4%
This compares to a deficit at the previous valuation of £31m and a funding level of 98.6%.



Total technical provisions of £1,439m

- Expense reserve
- GMP equalisation
- Deferreds
- Pensioners (insured)
- Pensioners (non-insured)

Discount each year's cashflow back to the valuation date and sum to calculate technical provisions

Recovery plan

In order to meet the shortfall of £9m at the valuation date, the Trustee has agreed to rely on the outperformance of assets with no additional contributions needed from the Employer Company.

At the valuation date the best estimate expected return on the actual asset portfolio was gilts + 1.4% pa, and the best estimate return for the strategic asset allocation portfolio was gilts + 1.1% pa. These are 0.9% pa and 0.6% pa higher relative to the assumption used for the liabilities, respectively. To retain prudence in this assumption, the Trustee has proposed allowing for a smaller allowance for outperformance of 0.3% pa.

To cover a shortfall of £9m, assuming an outperformance on the assets of 0.3% pa, the timeframe would be approximately 3 years from the valuation date.

Supporting Material

Detailed results, assumptions, data / asset summaries and other information

Past service liabilities

£m	5 April 2020 technical provisions	Preliminary technical provisions at 5 April 2023	Solvency basis at 5 April 2023
Deferred pensioners	1,479	815	1,047
Pensioners and dependants (non-insured benefits)	188	219	231
Pensioners and dependants (insured benefits)	498	345	345
GMP equalisation	39	25	29
Expense reserve	42	35	36
Total liability	2,246	1,439	1,688
Total assets	2,215	1,430	1,430
Surplus / Deficit	(31)	(9)	(258)
Funding level (%)	99%	99.4%	84.7%

Assets and liabilities exclude AVCs.

Preliminary technical provisions financial assumptions

Assumption	5 April 2023	5 April 2020
Discount rate	Gilts+0.5%	Gilts+0.5%
RPI inflation	WTW gilt-based RPI Curve	WTW gilt-based RPI Curve
CPI inflation	RPI with a reduction of 1% pa to 2030 and 0% pa thereafter	RPI with a reduction of 1% pa to 2030 and 0.5% pa thereafter
Pension increases in deferment		
Credits accrued before 6 April 2004	CPI + 0.5% pa	RPI
Credits accrued after 5 April 2004	RPI	RPI
Credits accrued on the 2017 Benefits Scale	CPI	CPI
Pension increases in payment		
Credits accrued before 6 April 1997*	Nil	Nil
Credits accrued between 5 April 1997 and 5 April 2005	CPI capped at 5% pa, allowing for volatility using the Black model	CPI capped at 5% pa
Credits accrued after 5 April 2005	CPI capped at 2.5% pa, allowing for volatility using the Black model	CPI capped at 2.5% pa
<i>*GMPs attract statutory increases once in payment</i>		
Expenses	3% for the first £50m of liabilities, 2% for the next £50m of liabilities and 0.5% of liabilities above £100m, as well as a per member expense.	3% for the first £50m of liabilities, 2% for the next £50m of liabilities and 0.5% of liabilities above £100m, as well as a per member expense.
GMP equalisation	1.8% of total liabilities, including allowance for the pension benefits covered by the buy-in	

Preliminary technical provisions demographic assumptions

Assumption	5 April 2023	5 April 2020
Mortality - base table	SAPS 3 Heavy tables with a multiplier of 94% for males.	SAPS 3 Heavy tables with a multiplier of 94% for males.
	SAPS 3 Dependant tables with a multiplier of 104% for female non-pensioners use and 106% for female pensioners.	SAPS 3 Dependant tables with a multiplier of 104% for female non-pensioners use and 106% for female pensioners.
Mortality – future improvements	CMI 2018 projections with a 1.5% pa long-term trend applied from 2013 to 2019.	CMI 2018 projections with a 1.5% pa long-term trend applied from 2013 to 2019.
	CMI 2022 projections with a default smoothing parameter of 7.0, no initial addition parameter and long-term trend of 1.5% pa	CMI 2019 projections with a default smoothing parameter of 7.0, no initial addition parameter and long-term trend of 1.5% pa
Commutation	Members are assumed to commute 25% of their pension at retirement using updated factors, expected to be implemented in 2024	Members are assumed to commute 25% of their pension at retirement using the current factors
Family statistics	Proportion married at date of death or earlier retirement: 80%/70% for males/females respectively.	
	Age difference: Males assumed to be 3 years older than their spouse and females are assumed to be 2 years younger than their spouse.	

Preliminary solvency financial assumptions

Assumption	5 April 2023 solvency
Discount rate	Non-pensioners: Gilts-0.25% Pensioners: Gilts+0.25%
RPI inflation	WTW gilt-based RPI Curve
CPI inflation	RPI with a reduction of 0.7% pa to 2030 and 0% pa thereafter
Pension increases in deferment	
Credits accrued before 6 April 2004	CPI + 0.5%
Credits accrued after 5 April 2004	RPI
Credits accrued on the 2017 Benefits Scale	CPI
Pension increases in payment	
Credits accrued before 6 April 1997*	Nil
Credits accrued between 5 April 1997 and 5 April 2005	CPI capped at 5% pa
Credits accrued after 5 April 2005	CPI capped at 2.5% pa
<i>*GMPs attract statutory increases once in payment</i>	
Expenses	3% for the first £50m of liabilities, 2% for the next £50m of liabilities and 0.5% of liabilities above £100m, as well as a per member expense.
GMP equalisation	1.8% of total liabilities, including allowance for the pension benefits covered by the buy-in

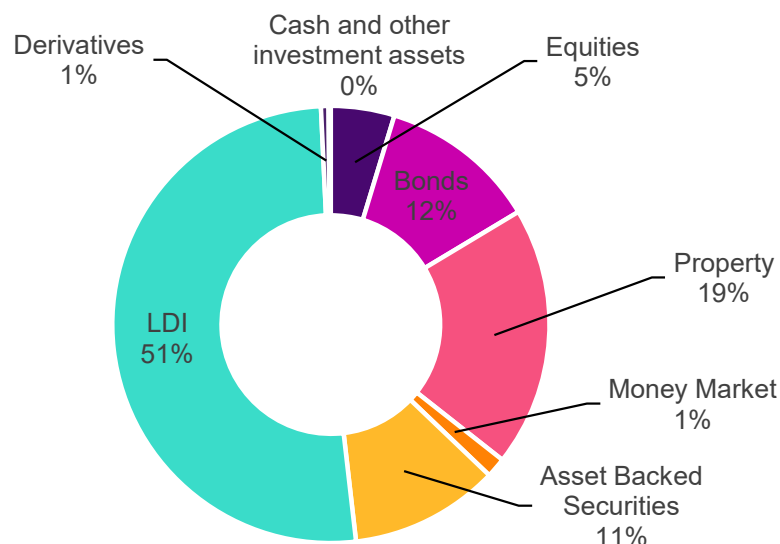
Preliminary solvency demographic assumptions

Assumption	5 April 2023 solvency
Mortality - base table	SAPS 3 Heavy tables with a multiplier of 98% for males.
	SAPS 3 Dependant tables with a multiplier of 108% for female non-pensioners use and 110% for female pensioners.
Mortality – future improvements	CMI 2018 projections with a 1.5% pa long-term trend applied from 2013 to 2019.
	CMI 2021 projections with a default smoothing parameter of 7.5, no initial addition parameter and long-term trend of 1.5% pa
Commutation	No allowance
Family statistics	Proportion married at date of death or earlier retirement: 80%/70% for males/females respectively. Age difference: Males assumed to be 3 years older than their spouse and females are assumed to be 2 years younger than their spouse.

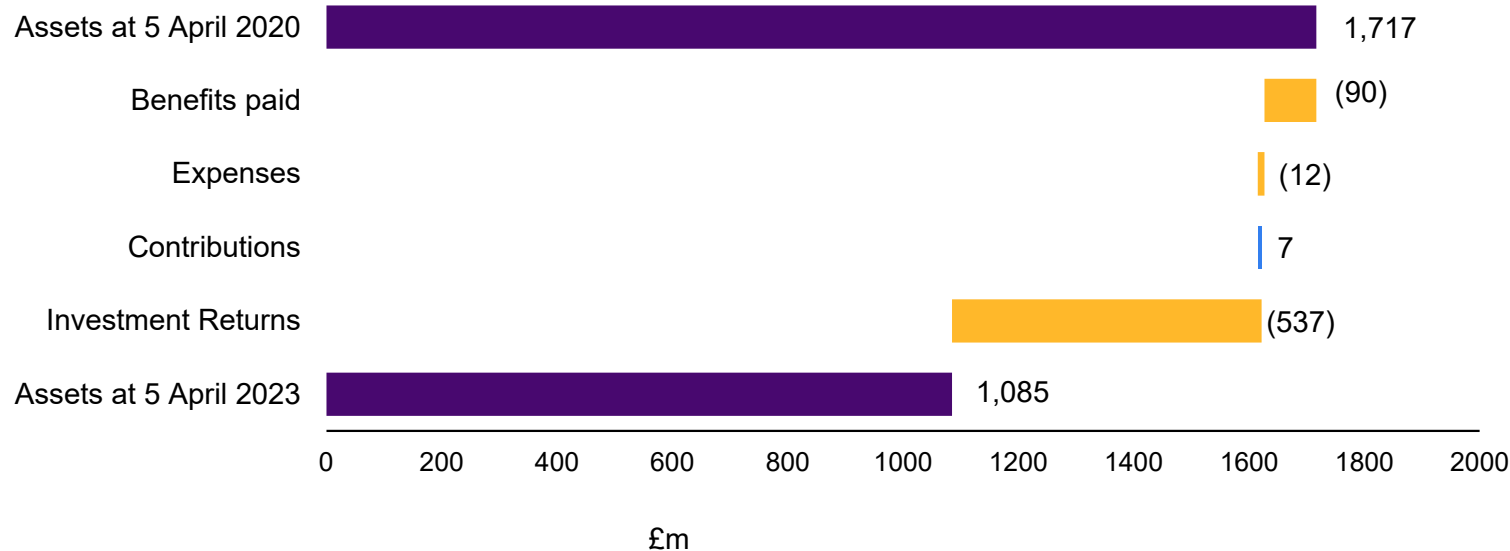
Scheme assets

Asset data and allocation as at 5 April 2023

- We have been provided with an audited asset value as at 5 April 2023 of £1,430m (excluding AVCs).
- The chart opposite provides a breakdown of the Scheme's assets between the main asset classes (excluding buy-in and AVCs).



Reconciliation with the previous valuation (excluding buy-in and AVCs)



Membership data

	Number	5 April 2023			5 April 2020		
		Males	Females	Total	Males	Females	Total
Number of members	Non-pensioners	16,714	868	17,582	19,435	990	20,425
	Pensioners and Dependants	10,080	3,431	13,511	9,607	3,395	13,002
	Total	26,794	4,299	31,093	29,042	4,385	33,427

	£m	5 April 2023			5 April 2020		
		Males	Females	Total	Males	Females	Total
Pension credits or pension	Non-pensioners	48.8	1.9	50.7	50.8	2.0	52.8
	Pensioners and Dependants	36.0	7.1	43.1	32.7	6.3	39.0

	Years	5 April 2023			5 April 2020		
		Males	Females	All	Males	Females	All
Average ages	Non-pensioners	54	52	54	53	51	53
	Pensioners and Dependants	73	75	73	72	74	72

Notes on data tables:

- Figures in respect of dependants exclude children.
- Average ages are weighted by amount.
- Data extract was provided on 28 April 2023.

Compliance and limitations

Technical Actuarial Standards

The technical actuarial work involved in the preparation of this presentation, when taken together with the technical actuarial work involved in the preparation of the presentation described below, complies with the Financial Reporting Council's Technical Actuarial Standards TAS 100 and TAS 300.

- Actuarial Valuation as at 5 April 2023 - Preliminary results, dated 19 September 2023

This presentation was commissioned by the Trustee, the sole 'user' of this communication and whose decisions this is intended to inform.

The funding of the Scheme is subject to a number of risks and it is not possible to make an allowance for all such risks in providing our advice. In preparing this communication, and in confirming compliance with TAS100, I have considered what I have judged to be the material matters and risks relevant to and which could influence the decision (as stated above) for which this communication has been prepared. These relevant material matters and risks are described in the communication. We would be happy to extend the scope of our work so as to consider any further matters or risks that you consider may be relevant to and/or may influence your decision. There may be further risks not covered in our advice that may affect outcomes, but (for example) which we would expect have either a low likelihood of occurrence or are already implicitly allowed for when setting the assumptions affecting the work, and so are such that they are unlikely, in our view, to affect the decision described above.

Disclaimer and Limitations

This presentation is provided to the Trustee solely for its use, for the specific purpose indicated. It may not be modified without Towers Watson Limited's prior written permission. It may not be disclosed to any other party without Towers Watson Limited's prior written permission, except as may be required by law. A copy of this presentation may be shared with the Employer in its entirety, under the terms of our disclaimer and release letter date 21 July 2023.

Unless otherwise specifically agreed in writing neither I nor Towers Watson Limited assumes any responsibility, duty of care or liability to any third party who may gain access to a copy of this document and any such reliance they place on it is entirely at their own risk. This presentation is not intended by Towers Watson Limited to form a basis of any decision by the Employer or another third party to do or omit to do anything.

Compliance and limitations

Data	<p>The membership data at 5 April 2023 was provided by the Scheme's administrators, Plumbing Pensions (UK) Administration Limited, on 28 April 2023.</p> <p>The Trustee bears the primary responsibility for the accuracy of the information provided, but will, in turn, have relied on others for the maintenance of accurate data. Even so it is the Trustee's responsibility to ensure the adequacy of these arrangements.</p> <p>I am aware that the Trustee is currently completing a benefit audit for pensioner members, and initial analysis suggests there are a significant number of discrepancies to be resolved. At this stage, due to the uncertainty relating to the latter group, no reserve has been included in the technical provisions.</p> <p>I have taken reasonable steps to satisfy myself that the data provided is of adequate quality for the purposes of the valuation, including carrying out basic tests to detect obvious inconsistencies. Other than in relation to the exercise noted above, these checks have given me no reason to doubt the correctness of the information supplied. It is not possible, however, for me to confirm that the detailed information provided, including that in respect of individual members and the asset details, is correct.</p>
Scheme benefits	<p>We have valued the contractual benefits accrued for service completed prior to the valuation date calculated in accordance with the Scheme Rules.</p> <p>No allowance has been made for the future award of any discretionary benefits or discretionary increases to benefits. Allowance has been made for any discretionary benefits awarded prior to the valuation date and reflected in the membership data provided to us for the purposes of the valuation.</p>
Subsequent developments	<p>This presentation is based on information available to me as at 8 August 2023 and takes no account of subsequent developments after that date.</p>

Model limitations

	Purpose	Limitations
<p>Setting of pension increase assumptions where caps or floors apply to the annual pension increase</p>	<p>The post-retirement pension increase assumptions suggested in this presentation are based on the stated inflation assumption and allow for the effect of pension increase caps and floors and inflation volatility using the Black model, a recognised externally-developed model used in many different applications. This models the level of inflation over future years as restricted by the Scheme’s caps and floors, in order to determine a suitable pension increase assumption.</p>	<p>The inflation volatility assumption used is taken from the WTW Investment Model and is subject to the same limitations as that model as set out below. The Black model is a mathematical formula used to approximate financial market movements but is subject to various limitations and, while there is no material bias in the model, there are limitations (for example, it has been shown to under-estimate the probability of extreme market movements).</p>
<p>WTW Investment Model</p>	<p>The WTW Investment Model is designed to model the level and volatility of future returns from different asset classes and their inter-relationship. By projecting future outcomes based on a large number of sample scenarios, a distribution of possible investment returns is obtained over the time period selected. This distribution can help in determining appropriate assumptions about future investment returns for various purposes, for example by estimating the probability of particular levels of investment returns being achieved on a particular portfolio of assets over a particular period.</p> <p>The investment and economic assumptions underlying the WTW Investment Model have been chosen based on a blend of economic theory, historical analysis and the views of investment industry academics and practitioners (including those of WTW) and are reviewed on a quarterly basis.</p> <p>Our opinions and return forecasts are not intended to imply, nor should be interpreted as conveying, any form of guarantee or assurance by WTW of the future performance of the asset classes in question, either favourable or unfavourable. The assumptions are simplified in that they have been determined as ‘flat’ amounts (i.e. they do not vary to reflect anticipated changes in economic circumstances over the projection period).</p>	<p>The WTW Investment Model is designed to model the level and volatility of future returns from different asset classes and their inter-relationship. By projecting future outcomes based on a large number of sample scenarios, a distribution of possible investment returns is obtained over the time period selected. This distribution can help in determining appropriate assumptions about future investment returns for various purposes, for example by estimating the probability of particular levels of investment returns being achieved on a particular portfolio of assets over a particular period.</p> <p>The investment and economic assumptions underlying the WTW Investment Model have been chosen based on a blend of economic theory, historical analysis and the views of investment industry academics and practitioners (including those of WTW) and are reviewed on a quarterly basis.</p> <p>Our opinions and return forecasts are not intended to imply, nor should be interpreted as conveying, any form of guarantee or assurance by WTW of the future performance of the asset classes in question, either favourable or unfavourable. The assumptions are simplified in that they have been determined as ‘flat’ amounts (i.e. they do not vary to reflect anticipated changes in economic circumstances over the projection period).</p>