



Report on the 31 March 2019 actuarial valuation

Prepared for The County Council of the City and County of Cardiff as
Administering Authority of the Cardiff and Vale of Glamorgan Pension Fund

Prepared by Aon

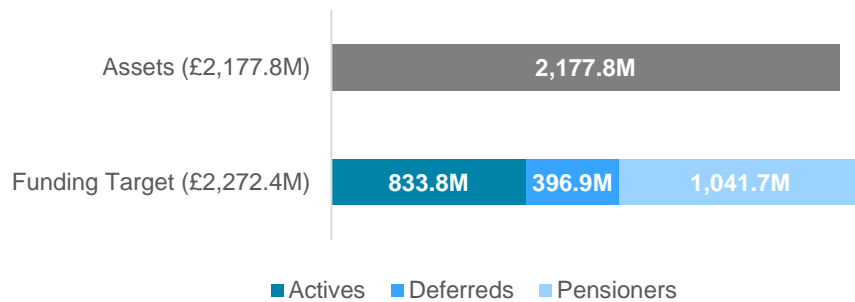
30 March 2020



At a glance

Past Service Position

There was a shortfall of £94.6M relative to the liabilities. The funding level was 96%.



Employer Contributions

% of Pensionable Pay	2019 valuation	2016 valuation
Primary rate	18.8%	16.6%
Secondary rate	2.7%*	6.4%
Total rate	21.5%	23.0%
Recovery period	17 years from 1 April 2020	20 years from 1 April 2017

* this includes an allowance for the possible costs of the McCloud case of 0.9% of pay

The contributions payable by each employer or group of employers may differ because they allow for each employer's or group's membership profile, funding target and funding level, recovery period and other parameters appropriate to their circumstances.

Shorthand

Funding level: the value of assets held by the Fund divided by the liabilities.

Funding target (liabilities): the level of assets determined by the Administering Authority as being appropriate to meet member benefits, assuming the Fund continues indefinitely.

Primary rate: the employer share of the cost of benefits being earned in future, expressed as a percentage of pensionable pay. The figure quoted is a weighted average of all employers' primary rates.

Pensionable pay: as defined in the Regulations in relation to post-2014 membership.

Recovery period: the period over which any surplus or shortfall is eliminated.

Secondary rate: the adjustment to the primary rate, expressed as a % of pensionable pay, needed to increase the funding level of the Fund as a whole to 100% over the recovery period, and includes the potential impact of the legislative uncertainties outlined in Further Information section c.

Shortfall (deficit) or Surplus: the difference between the value of assets and the aggregate funding target (value of the liabilities) for the Fund as a whole, where the value of assets is less/higher than the funding target. Individual employers may have a surplus or shortfall, and the total of these will equal to the shortfall or surplus for the Fund as a whole.

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Introduction

This actuarial valuation report is required by Regulation 62 of the Regulations. It summarises the results of the funding valuation of the Fund at as 31 March 2019, including the Rates and Adjustments Certificate which sets out the contributions payable by employers from 1 April 2020 to 31 March 2023.

Next steps

This report concludes the formal valuation process and draws together other pieces of work and advice. As required by Regulation 66 this report must be published and made available to the Secretary of State, current and prospective employers who contribute, or may become liable to make payments to the Fund.



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The report concentrates on the Fund's financial position at the valuation date. As time moves on, the Fund's finances will fluctuate. If you are reading this report sometime after the valuation date, the Fund's financial position could have changed significantly.

Shorthand

Fund: Cardiff and Vale of Glamorgan Pension Fund

Administering Authority: The County Council of the City and County of Cardiff, in its role as the Administering Authority of the Fund

Employers: Employers with employees participating in the Fund

Regulations: The Local Government Pension Scheme Regulations 2013 (and other Regulations as referenced in the Glossary)

Additional information

Section a in the Further Information section appended to this report sets out the legal framework within which the valuation has been completed.

The benefits valued are set out in the Regulations.

Throughout this report, assets and liabilities in respect of defined contribution additional voluntary contributions (or AVCs) have been excluded.

The funding targets, recovery periods and other parameters which apply to individual employers or groups of employers are set out in other advice papers.

Update since the previous valuation

Key results from the previous valuation as at 31 March 2016:

The Fund's assets were £1,653M and the past service liabilities were £1,953M, corresponding to a shortfall of £300M and a funding level of 85%.

The aggregate employer future service (primary) contribution rate was 16.6% of Pensionable Pay.

Employer contributions from 1 April 2017 were agreed to broadly restore the funding level to 100% over a period of up to 20 years as follows:

Year from 1 April	% of Pensionable Pay	Plus aggregate contribution amounts (£M)
2017	22.3%	£3.6M
2018	22.5%	£3.7M
2019	22.5%	£3.8M

For employers in surplus or where contributions were being stepped up (or down) the % of pay rate may have been lower (higher) than the primary contribution rate. Similarly, the aggregate contributions may have been higher or lower than the sum of theoretical employer secondary contributions where contribution changes were being stepped or otherwise smoothed in line with the Funding Strategy Statement (FSS). The recovery period shown is the maximum permitted. Individual employers may have a period less than this in line with the FSS.

In addition, employers pay contributions to meet additional strains arising on early retirement or due to increases in benefits. Members also paid contributions as required by the Regulations.

Financial development

The table below compares the key financial assumptions made at the previous valuation with what actually happened and the corresponding assumptions for the 2019 valuation.

	2016 assumption	2016-2019 experience	2019 assumption
Investment returns	4.6% p.a.	9.6% p.a. ⁽¹⁾	4.3% p.a.
CPI increases	2.0% p.a.	2.1% p.a. ⁽²⁾	2.1% p.a.
Pay growth	3.0% p.a. ⁽³⁾	2.9% p.a.	3.1% p.a. ⁽³⁾

(1) average figure, actual net returns were 21.3%, 3.4%, 5.1%

(2) average figure, actual increases were 1.0%, 3.0% and 2.4%

(3) plus a promotional pay scale

Notable changes since the previous valuation

Changes affecting funding are briefly described below:

- **Benefits / membership**

Responsibility for paying full CPI pension increases on GMPs passing to the Fund for members reaching State Pension Age (SPA) between 6 April 2016 and 5 April 2021.

The Government being denied leave to appeal the McCloud/Sargeant judgement followed by the Ministerial Statement on 15 July 2019, which is expected to lead to an extension of the final salary underpin in the LGPS.

Changes in the discount rate and longevity assumptions on which many of the Scheme-wide actuarial factors, including early and late retirement factors, are based.

- **Investment strategy**

The Fund has reviewed its investment strategy since the 2016 valuation and the revised long term asset allocation has been taken into account within this valuation. More information is set out in the Fund's Investment Strategy Statement.

- **Uncertainties over GMPs and benefit improvements**

There are a number of uncertainties over the future benefit structure of the LGPS, including GMP equalisation and indexation after 5 April 2021, the cost management process, and the remedy that may be agreed in relation to the McCloud/Sargeant case. Further explanation of these uncertainties is set out in Section c of the Further Information section.

Shorthand

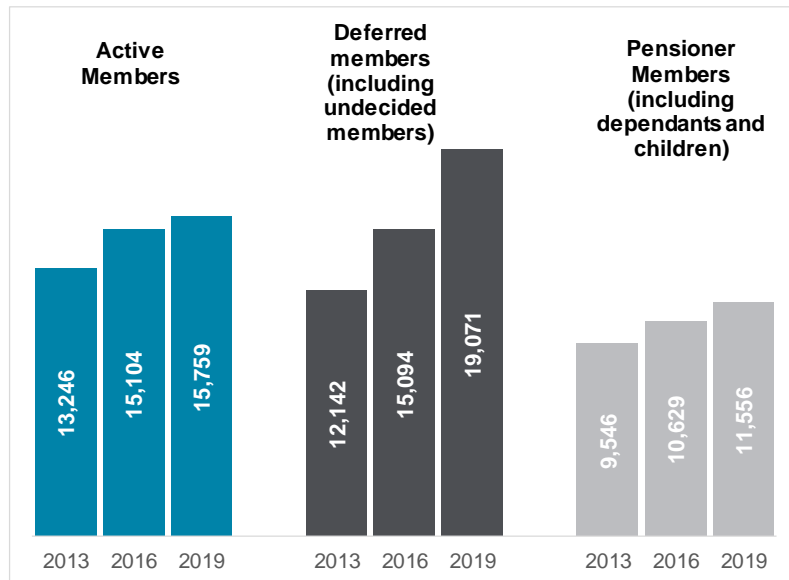
GMP: Guaranteed Minimum Pensions. These accrued to members between 1978 and 1997 due to the LGPS being contracted-out of the State Earnings Related Pension Scheme.

McCloud/Sargeant: Court cases involving the Judges' and Firefighters' Pension Schemes respectively which found that transitional protections granted to members within 10 years of pension age as part of the reforms to those schemes in 2015 constituted illegal age discrimination.

Cost management: The process of checking the cost of public sector schemes against a base cost, and making changes if the current assessed cost of the scheme is higher or lower than this base cost (there are different thresholds for changes being made under the HMT cost management process and the Scheme Advisory Board cost management process).

Membership data and benefits

Membership numbers are shown graphically below. Further details can be found in Section b of the Further Information section of this report.

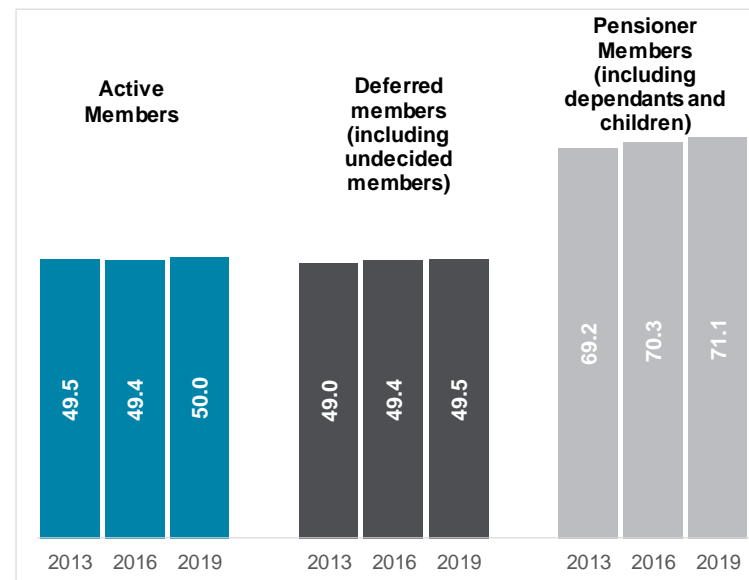


The deferred membership numbers include members who had yet to decide whether to take a refund of contributions.

We have carried out some general checks to satisfy ourselves that the information used for this valuation is broadly consistent compared with that used for the previous valuation and (where relevant) that shown in the Fund's Annual Report and Accounts.

However, the valuation results rely on the accuracy of the information supplied.

The value of liabilities is influenced by the average age of the members. The chart below shows average ages weighted by pension amounts.



Members' benefits are set out in the Regulations. Different benefits (and retirement ages) apply to membership before 1 April 2008, between 1 April 2008 and 31 March 2014, and after 31 March 2014.

Our valuation calculations make no allowance for:

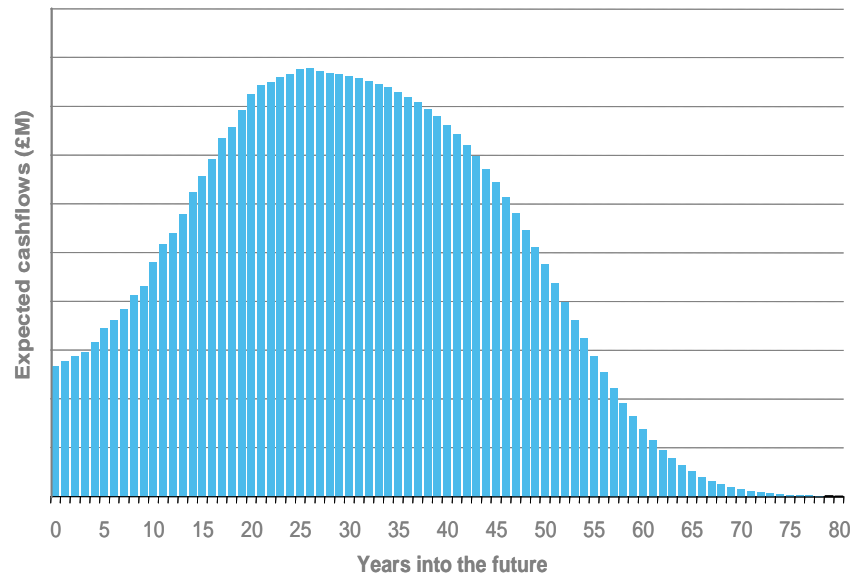
- indexation/equalisation of GMPs beyond the arrangements already in place
- any discretionary benefits
- any future changes to State Pension Age beyond those already announced / agreed.

Funding objectives

The Administering Authority's funding objective is to hold assets at least equal in value to the funding target (past service liabilities).

To calculate the past service liabilities and the cost to the employers of future benefit accrual, the benefits paid out by the Fund are estimated for each year into the future. The estimated benefit payments are then 'discounted back' to the valuation date using an agreed rate of interest known as the discount rate.

The chart below shows the cashflow pattern for a typical LGPS fund (based on past service benefits). Most cashflows are linked to future levels of salary growth and inflation.



The discount rate

The Funding Strategy Statement describes the approach used to set the funding target and hence the discount rates. The Administering Authority adopts different discount rates depending on employers' circumstances including the likelihood of exit and what would happen to the liabilities on exit.

Prudence in the valuation is achieved through the use of discount rates which have a materially better than evens chance of being achieved by the Fund's assets. Information on the level of prudence (or risk) in the funding strategy is contained in the Fund's Funding Strategy Statement and we have advised on this previously.

At the 2019 valuation there are 3 funding targets:

- **the scheduled and subsumption body funding target:** assumes indefinite future investment in assets similar to the Fund's holdings at the valuation date (allowing for any known or planned changes to the long-term investment strategy as appropriate).
- **the ongoing orphan funding target:** for admission bodies whose liabilities would be orphaned on exit, the discount rate has regard to the possibility that participation may cease and that the exit valuation would assume a low risk investment portfolio made up of long dated Government bonds (of appropriate nature and term) at cessation.
- **the low risk funding target:** for "orphaned" liabilities that relate to employers which have already exited the fund, and for any employers that have adopted a low risk approach which assumes a notional investment in government bonds.

Further information on the funding targets and an explanation of scheduled bodies, orphan bodies and subsumption bodies is given in the Glossary.

Investment strategy

The Administering Authority's investment strategy is set out in its Investment Strategy Statement. The overall investment objective of the Fund is to maximise investment returns and to minimise or at least stabilise future employer contributions over the long term within an acceptable level of risk.

The assets as at the valuation date are described in Section d of the Further Information section of this report.

Summary of assumptions

The table below summarises the key assumptions agreed with the Administering Authority at this and the previous valuation. The assumptions are used to calculate the past service liabilities, cost of future benefit accrual and contributions for the recovery plan. Further details of all of the assumptions are set out in Section e of the Further Information section of this report.

Assumptions	Previous valuation	This valuation
In-service discount rate		
<i>Scheduled and subsumption body funding target</i>	4.6% p.a.	4.3% p.a.
<i>Ongoing orphan funding target</i>	4.6% p.a.	4.3% p.a.
<i>Low risk funding target</i>	2.1% p.a.	1.3% p.a.
<i>Average in-service discount rate</i>	4.6% p.a.	4.3% p.a.
Left-service discount rate		
<i>Scheduled and subsumption body funding target</i>	4.6% p.a.	4.3% p.a.
<i>Ongoing orphan funding target</i>	2.5% p.a.	1.6% p.a.
<i>Low risk funding target</i>	2.1% p.a.	1.3% p.a.
<i>Average left-service discount rate</i>	4.3% p.a.	4.0% p.a.
Rate of revaluation of pension accounts and pension increases (on pension in excess of GMPs)	2.0% p.a.	2.1% p.a.
Pensionable Pay Increases	3.0% p.a.	3.1% p.a.
Post-retirement mortality assumption – base table (for retirements in normal health)	S2N tables with best-estimate scaling factors derived from experience analysis combined with postcode analysis	S2N tables with best-estimate scaling factors derived from experience analysis combined with postcode analysis

Post-retirement mortality assumption – future improvements	CMI 2014 core projections with long-term improvement rate of 1.5% p.a. for men and women	CMI 2018 core projections with $S_k=7.5$, $A=0.0$ and long-term improvement rate of 1.5% p.a. for men and women
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The longevity assumptions have been updated to reflect recent research, a Fund membership postcode analysis and the Fund's pensioner mortality experience using Aon's Demographic Horizons™ longevity model.

We show below the assumed life expectancies for current members resulting from these mortality assumptions:

Assumed life expectancy at age 65	Pensioner member aged 65		Active member aged 45	
	This valuation	Previous valuation	This valuation	Previous valuation
Men	22.1	22.9	23.1	23.9
Women	24.5	25.6	25.9	27.0

In our view these assumptions are appropriate for the purposes of the valuation and setting Employer contributions to the Fund.

Valuation method

As for the previous valuation, the past service liabilities have been calculated using the projected unit method. This method, with a one year control period, has also been used to calculate the cost of future benefits building up for most employers. The attained age method has been used for some employers who do not admit new employees to the Fund. The methods which apply to individual employers or groups of employers are set out in other advice papers.

Shared risks

Funding gains or losses arising from the following risks are pooled across all employers in the Fund:

Assumptions	Method
Cash sum on death in service	Shared in proportion to the payroll of active members
Dependants' pensions on death in service	Shared in proportion to the expected cost of dependants' pensions using the projected unit method
Ill health retirement	Shared in proportion to the expected cost of ill health retirements using the projected unit method (Tiers 1 & 2 only)

Past service results

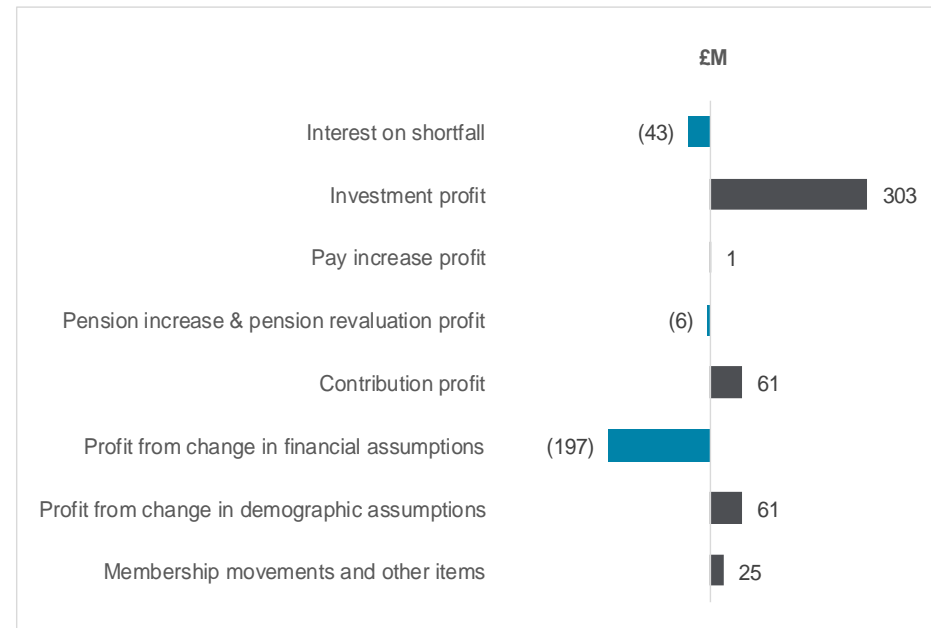
A comparison of the Fund's assets with the past service liabilities calculated using the assumptions described in the previous section is set out below.

	(£M)
Value of past service benefits for:	
Active members	833.8
Deferred members	396.9
Pensioner members	1,041.7
Value of liabilities	2,272.4
Value of assets	2,177.8
Past service surplus/(shortfall)	(94.6)
Funding Level	96%

The above results exclude any allowance for past service costs in respect of the McCloud judgement or cost management process.

The Fund has moved from a past service shortfall of £300M at 31 March 2016 to a past service shortfall of £95M at 31 March 2019.

The chart below shows the key reasons for the change in funding position, (the grey bars to the right of the chart are source of profit to the Fund and the blue bars to the left are source of loss).



Addressing the shortfall / allowing for the surplus

We have agreed with the Administering Authority that for individual employers the surplus / shortfall will be removed by reducing contributions payable / payment of additional contributions by the employers over a range of different recovery periods not exceeding 19 years.

Across the Fund as a whole, the secondary contributions required to remove the shortfall over a recovery period of 17 years (the average of the different recovery periods adopted) from 1 April 2020 are £5.7M pa increasing at 3.1% p.a., equivalent to approximately 1.8% of Pensionable Pay assuming the membership remains broadly stable and pay increases and other assumptions are as assumed.

In practice, different recovery periods apply to individual employers or groups of employers in the Fund. Contributions payable by each employer or group are set out in the Rates and Adjustments Certificate and reflect each employer's recovery period and funding position.

Secondary contributions allow for interest on the employer's surplus or shortfall between 31 March 2019 and 1 April 2020 as well as the difference between contributions payable and the cost of benefit accrual over 2019/20.

For some employers, contribution increases/reductions will be phased in over a number of years (or 'steps') as permitted by the Funding Strategy Statement in order to deliver greater stability of contributions.

Shorthand

Pensionable pay: as defined in the Regulations in relation to post-2014 membership.

Recovery period: the period over which any surplus or shortfall is eliminated.

Secondary contribution: the adjustment to the primary rate, expressed as a % of pensionable pay or as a £ amount, needed to eliminate a shortfall or surplus, provided the membership is broadly stable and pay increases and other assumptions are as assumed, together with an agreed further adjustment to reflect the legislative uncertainties outlined in Further Information section c.

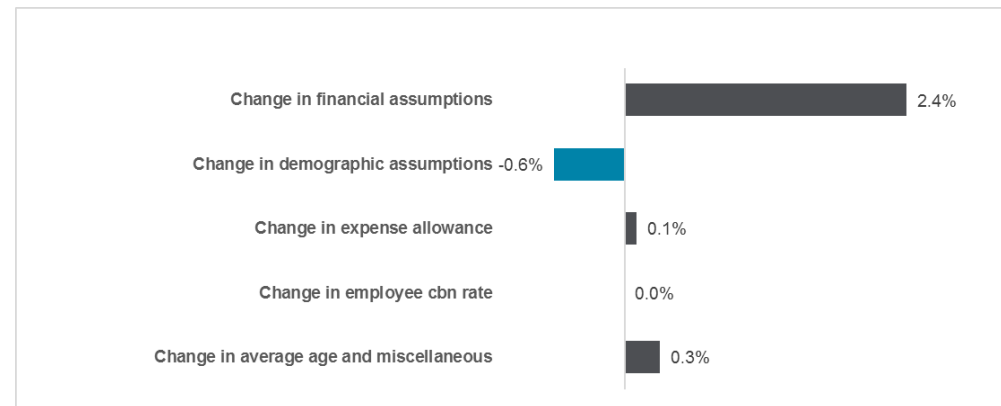
Future service results

The table below shows the aggregate cost to employers at the valuation date of benefits members will earn in future (the aggregate primary contribution rate) based on the funding assumptions. Contributions at the aggregate primary rate would be appropriate if the Fund had no surplus or shortfall.

	% Pensionable pay
Value of benefits building up (before McCloud/Cost Management)	24.4
Expected cost of death in service cash sum	0.2
Allowance for administration expenses	0.5
Less member contributions	(6.3)
2019 cost to employers (primary contribution rate)	18.8

The primary contribution rate has increased from 16.6% p.a. of Pensionable Pay as at 31 March 2016 to 18.8% p.a. of Pensionable Pay as at 31 March 2019.

The chart below shows the key reasons for the change in the primary contribution rate. The grey bars to the right are sources of increase in the primary rate and the blue bars to the left are sources of reduction.



In addition, we have allowed for an employer cost of 0.9% of pay for McCloud/Cost Management – see Section c of the Further Information section

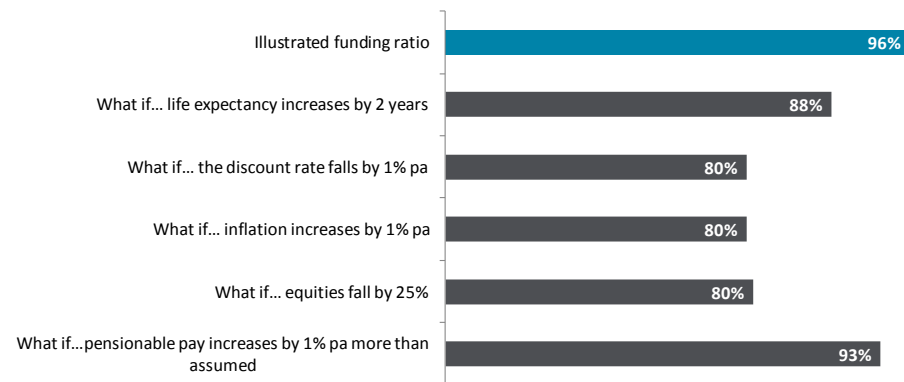
Risks and uncertainties

Key risks which could affect the Fund's future cashflows and funding position, include:

- Funding risk – that the value placed on the past service liabilities is set too low and contributions paid into the Fund prove insufficient to meet the payments as they fall due.
- Employer risk – that an employer is no longer able to meet its liabilities in the Fund, e.g. due to insolvency
- Investment risks – that investment returns are lower than allowed for in the valuation, and also that the assets are volatile and move out of line with the liabilities, so the funding position is not stable.
- Longevity risk – that Fund members live for longer than expected and pensions are therefore paid for longer resulting in a higher cost for the Fund.
- Inflation risk – that inflation is higher than expected, resulting in higher pension increases (and payments to pensioners) than allowed for in the valuation.
- Options for members (or other parties) – the risk that members exercise options resulting in unanticipated extra costs. For example, members could exchange less of their pension for a cash lump sum than allowed for in the valuation.
- Legislative/Regulatory risk – that changes to general and LGPS specific regulations, taxation, national changes to pension requirements, or employment law result in an increased cost of administration, investment or funding for benefits. We have made explicit allowance for known uncertainties as set out in Section c of the Further Information section.
- COVID-19 related risks – the current outbreak of the novel Coronavirus COVID-19 may impact adversely on the investments, on the ability of the Fund to realise future investment returns and on the Fund employers' covenant. (We have commented further on the impact of recent adverse market movements within the "Final comments" section of this report.)

- Other risks – issues relating to climate change and other environmental risks as well as long-term uncertainty around geopolitical, societal and technological shifts may also impact on the funding, investments and employers' covenant.

The chart below shows the approximate impact of a number of one-off step changes on the Fund's funding position (all other elements of the valuation basis being unchanged):



These are not intended to be "worst (or best) case scenarios" and could occur in combination rather than in isolation. Conversely, in practice, some of these changes may be partially offset by other changes, e.g., a reduction in the expected investment return or inflation might lead to a compensating change in asset values, or a change in asset values might lead to a compensating change in expected investment returns.

The Funding Strategy Statement sets out the key actions taken by the Administering Authority to mitigate the above risks.

Employer contribution rates

Contributions are set for employers, or groups of employers that take into account a number of factors including:

- Regulation 62 – which requires the Fund Actuary to have regard to
 - The existing and prospective liabilities
 - The desirability of maintaining as nearly a constant a primary contribution rate as possible
 - The Administering Authority's Funding Strategy Statement, and
 - The requirement to secure the solvency of the Fund and the long-term cost efficiency of the Scheme, so far as relating to the Fund.
- The results of the valuation.
- Any one-off contributions paid as documented in Section h of the Further Information section of this report.
- Any individual adjustments to the primary contribution rate by reason of any circumstances peculiar to that employer.
- Discussions between the Fund Actuary, the Administering Authority and employers, including the Administering Authority's view of the affordability of contributions, where relevant.
- The employer's (or group's) membership profile and funding level and, where relevant, assumptions and recovery periods specific to the employer's circumstances.

We have agreed with the Administering Authority that increases in contribution rates for some employers can be phased in as set out in the Funding Strategy Statement.

For certain employers which are in surplus, it has been agreed with the Administering Authority that the employer may use the surplus to support the payment of contributions to the Fund at a rate below the primary (future service) contribution rate.

Projections

We estimate that, by the next valuation, these contributions will have increased the funding level to about 97%, assuming the experience of the Fund between the two valuation dates is in line with the assumptions and the assumptions underlying the funding targets remain unchanged.

The aggregate Employer contributions certified for the 3 years from 1 April 2020 are as follows

Year from 1 April	% of pensionable pay	Plus total contribution amount (£M)
2020	20.9%	1.6
2021	20.9%	1.8
2022	20.9%	2.0

- The % of Pensionable Pay contributions shown in the above table are an average (weighted by Pensionable Pay) of the amounts certified for individual employers in each year.
- The annual contribution amounts are the aggregate of the additional contribution amounts certified for individual employers in each year.
- Payments to meet additional costs arising from early retirements and other increases in benefits are payable in addition.
- At the end of the period shown above, the annual contribution amounts for each employer or group are anticipated to increase by approximately 3.1% pa until the end of the relevant recovery period. Thereafter, aggregate contributions are anticipated to be in line with the future service contribution rate of that employer, subject to review at future actuarial valuations.

Final comments

Developments since the valuation date

- Market movements

We estimate that over the period between the valuation date and the date of signature of this report, the Fund's assets are likely to have fallen in value, with almost all of this decline occurring within March 2020 due to the emerging COVID-19 crisis. It is not yet clear to what extent there may be a compensating fall in liabilities through changes to discount rates (net of assumed inflation) but our view is that discount rate increases are unlikely to fully offset the effect of asset falls for employers subject to the scheduled and subsumption body funding target, i.e. overall the funding level is likely to have reduced. Whilst gilt yields have experienced considerable volatility in recent weeks, it is likely that the reduction in funding level will have been more significant for employers subject to a funding target where the discount rate is linked to gilt yields (i.e. the ongoing orphan funding target and the low risk funding target). Overall, we believe that market movements in the period since the valuation date will have led to a reduction in the funding level of the Fund as a whole and that the impact on employers' future service (primary) contribution rate will vary between employers depending, among other things, on which funding target the employer is subject to.

All the above means that if we were carrying out the valuation based on current conditions rather than as at 31 March 2019 (and assuming an unchanged level of risk in the funding strategy) it is likely that we would be recommending somewhat higher employer contributions. However bearing in mind the overall level of prudence in the funding strategy, the long-term nature of the Fund and the fact that a high percentage of the liabilities are backed by employers with tax-raising powers, we have agreed with the Administering Authority that certifying contributions based on market conditions at the valuation date, as has been the practice at previous valuations, remains appropriate. As market conditions continue to evolve, consideration could be given to revisiting contributions for employers that the Administering Authority believes are likely to becoming an exiting employer under Regulation 64(4) in advance of the next valuation.

The key results from this valuation are:

The Fund's assets were £2,177.8M and the past service liabilities £2,272.4M, corresponding to a shortfall of £94.6M and a funding level of 96%.

The primary contribution rate for the Fund as a whole is 18.8% p.a. of Pensionable Pay.

If the shortfall is removed over 17 years from 1 April 2020, and an allowance is made for McCloud / Cost Management equal to 0.9% of Pensionable Pay, the aggregate total employer contributions needed would be equivalent to 21.5% p.a.* of Pensionable Pay until 31 March 2037, reverting to the appropriate primary rate thereafter.

** if the membership remains broadly stable and pay increases and other assumptions are as assumed.*

- Employers joining or exiting since the valuation date

Contributions for employers joining since 31 March 2019 will be advised separately.

A revised Rates and Adjustments Certificate will have been prepared as necessary for employers exiting the Fund since 31 March 2019 where this has been requested by the Administering Authority.

Monitoring the Fund

In the light of the volatility inherent in situations where investments do not match liabilities, the Administering Authority monitors the financial position on a regular basis. It will also consider monitoring the position of individual employers, particularly those subject to the ongoing orphan funding target and those which may exit the Fund before 1 April 2023. Where appropriate and permitted by the Regulations, contributions for those employers may be amended before the next valuation due as at 31 March 2022.



Further information



Legal framework

It is a legal requirement to carry out a full valuation as at 31 March 2019

This report was commissioned by and is produced solely for the use of the Administering Authority.

It is produced in compliance with:

- Regulation 62 of the Local Government Pension Scheme Regulations 2013.
- The terms of the agreement between the Administering Authority and Aon Hewitt Limited, on the understanding that it is solely for the benefit of the addressee.

This report, and the work relating to it, complies with Technical Actuarial Standard 100: Principles for Technical Actuarial Work ('TAS 100') and Technical Actuarial Standard 300: Pensions ('TAS 300').

Unless prior written consent has been given by Aon Hewitt Limited, this report should not be disclosed to or discussed with anyone else unless they have a statutory right to see it.

We permit the Administering Authority to release copies of this report to the following parties only:

- Any employer which contributes to the Fund.
- The Ministry of Housing, Communities and Local Government.

We also permit the Ministry of Housing, Communities and Local Government to pass our report to the Government Actuary's Department in connection with their statutory duties. None of the above bodies has our permission to pass our report on to any other parties.

Notwithstanding such consent, Aon Hewitt Limited does not assume responsibility to anyone other than the addressee of this report.

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No recipients of the report other than the Administering Authority are permitted to reproduce, distribute or communicate any part of this report to any other party. Any third party using this report does so entirely at its own risk and no third party is entitled to rely on this report for any purpose whatsoever.

No decisions should be taken on the basis of this report by any party other than our client, The County Council of the City and County of Cardiff, and nothing in this report removes the need for readers to take proper advice in relation to their specific circumstances.

a



Membership data

The results in this report are based on membership data which is summarised below.

Active members	Number	Average age	Total pensionable salaries (2014 scheme definition) (£000 pa)	Total pre 2014 pension (£000 pa)	Total pre 2014 accrued lump sum (£000)	Total post 2014 pension (£000pa)	
2016	Male	4,825	44.2	102,337	16,420	27,431	3,856
	Female	10,279	44.5	149,726	21,274	31,287	5,485
	Total	15,104	44.4	252,063	37,694	58,718	9,341
2019	Male	4,825	44.8	116,528	13,751	22,409	9,652
	Female	10,934	45.5	178,081	17,898	25,871	14,055
	Total	15,759	45.3	294,609	31,649	48,280	23,707

Notes: The average ages shown in these tables are unweighted.

Pensionable pay is over the year to the valuation date, and includes annualised pay for new entrants during the year. Actual part-time pay is included for part-timers.

Post 2014 pension figures include the April 2019 (2016) revaluation.

b



Deferred members		Number	Average age	Total pension (£000 pa)	Total pre 2014 accrued lump sum (£000)
2016	Male	4,682	45.0	8,167	18,604
	Female	10,412	44.1	11,035	23,252
	Total	15,094	45.4	19,203	41,856
2019	Male	5,727	44.4	9,448	17,266
	Female	13,344	45.5	14,698	23,586
	Total	19,071	45.2	24,146	40,852

Notes: Averages ages are unweighted.

The deferred pension amounts shown above are at the valuation date and include the April 2019 revaluation (or 2016 revaluation where appropriate).

Included in the above, there were 5,794 (2,725 in 2016) members who are yet to decide whether to take a refund of contributions.

b



Pensioner members		Number	Average age	Total pension (£000 pa)	Average pension (£ pa)
2016	Male	4,140	70.5	35,072	8,471
	Female	4,984	70.6	19,889	3,991
	Dependants	1,505	75.0	4,832	3,211
	Total	10,629	71.2	59,793	5,625
2019	Male	4,357	71.3	38,385	8,810
	Female	5,599	71.0	24,032	4,292
	Dependants	1,600	73.7	5,229	3,268
	Total	11,556	71.5	67,646	5,854

Notes: The pension amounts shown above include the increase awarded in April of the appropriate year.

Average ages are unweighted.

The dependants data includes 58 (48 in 2016) members in receipt of a child's pension.

b



Uncertainties

Allowance for McCloud, Cost Management and GMP equalisation/indexation

Background on McCloud/Sargeant

Following a review of public service pension schemes by the Independent Public Services Pensions Commission led by Lord Hutton (the [Hutton Report](#)) UK public service pension schemes were reformed with effect from 1 April 2015 (1 April 2014 for the LGPS in England and Wales), with the objective of reducing the overall cost to the taxpayer and putting schemes on a more sustainable footing.

Reforms common to all the main public service pension schemes included: later retirement ages (State Pension Age in most cases), benefits based on career average earnings (so no longer being linked to 'final pay' at retirement), and tiered member contribution rates. The reforms also included transitional protections for members within 10 years of their Normal Pension Age on 1 April 2012. Generally, this was implemented by allowing those members to retain membership of the 'pre-reformed' schemes, whilst all other members were moved into the new arrangements (for a number of the schemes this was subject to a "tapering" approach for members who were close to the 10-year cut-off).

In relation to the LGPS in England and Wales, all members joined the new 2014 Scheme for membership after 1 April 2014, but members within 10 years of normal retirement were given an underpin (or 'better of both') promise, so their benefits earned after 1 April 2014 would be at least as valuable in terms of amount and when they could be drawn, as if they had remained in the 2008 Scheme.

In December 2018 the Government lost a Court of Appeal case (the 'McCloud/Sargeant' judgement) which ruled that the transitional protection arrangements, put in place when the judges' and firefighters' pension schemes were reformed, amounted to illegal age discrimination. The Government was subsequently denied leave to appeal the Court of Appeal's decision on 27 June 2019.

While the judgement was not in relation to the LGPS, the Government announced in a Written Ministerial Statement on 15 July 2019 "... as 'transitional protection' was offered to members of all the main public service pension schemes, the government believes that the difference in treatment will need to be remedied across all those schemes". The remedy is likely to differ by scheme depending on the transitional protections adopted.





In line with guidance issued by the Scheme Advisory Board (SAB) of the LGPS in England and Wales, we have discussed and agreed with the Administering Authority the allowance which should be made in this valuation for possible additional liabilities arising from the McCloud case.

It should be noted that since we provided our advice to the Administering Authority on the allowance to be made in this valuation, case management discussions have commenced for both the judges' and firefighters' schemes, as well as police via a similar case – the Aarons case which had previously been stayed behind the McCloud/Sargeant judgement. However, as at the date of this report, we do not have confirmed details of any benefit changes for the LGPS.

Cost management and McCloud/Sargeant

The design of the new public service schemes also included a cost control mechanism which was intended to protect employers from rising pension costs due to demographic and other factors. This mechanism includes both a floor and a cap on employer contributions and requires that if the cost, assessed by GAD in line with assumptions set by HM Treasury, is more than 2% of pay above or below the target level, member contributions and/or benefits must be amended to bring the cost for employers back to the target level.

The LGPS in England and Wales has a separate, additional cost management process which considers total costs and may recommend action if the cost has changed. Most assumptions are the same as those adopted for the HM Treasury process but there are some differences. We believe that an informal arrangement is in place such that any changes agreed as part of the SAB cost management process could be allowed for in determining whether any action is required in relation to the HMT process.

The cost management process considered changes in the cost of the LGPS between those assessed when the new benefit designs were implemented and 31 March 2016, and as the floor was breached it was expected that improvements to benefits or member contributions would be implemented with effect from 1 April 2019, and taken into account in this valuation when setting employer contributions from 1 April 2020.

However, following the Court of Appeal judgement in the McCloud case, the cost management process was paused in January 2019. It is not yet clear what the effect on the liabilities will be, but we believe the outcome will be one or other of the following:

- The McCloud changes mean the cost management floor has no longer been breached (in which case the additional liabilities are simply those due under the McCloud remedy)





- After allowing for the McCloud changes the cost management floor has still been breached (in which case the additional liabilities will be a combination of those due under McCloud and those that would be agreed under the re-started cost management process)

The McCloud changes, and their effect on the cost management process, and hence on the benefits and cost of the LGPS, are currently uncertain. However, any change is likely to increase the benefits payable from the Scheme, and therefore the cost of the Scheme. We set out below the allowance made for potential increases in benefits at this valuation as set out in previous advice papers.

It should be noted that since our calculations were carried out, the Fire Brigades' Union announced in December 2019 that it was considering mounting a legal challenge to Government's decision to pause the cost management process and to press for any cost management changes to be in addition to any remedy for McCloud/Sargeant. The Public and Commercial Services Union made a similar announcement in February 2020 with the two unions jointly seeking a judicial review. Whilst this presents the possibility of additional costs falling on employers, given the uncertainty over whether a judicial review will be granted and whether the unions will be successful, we have not revisited the allowance made in this valuation for McCloud and cost management.

Allowance for McCloud/Cost Management

Our advice, given in October 2019, showed the results of our calculation of the proposed allowance for McCloud. This calculation was based on the scheduled body funding assumptions and the following additional assumptions:

- the final salary underpin is extended to all members who were active members as at 1 April 2014
- as for the existing underpin, the underpin applies only to members' benefits on retirement (i.e. not on withdrawal from service before retirement, and not to the benefits of spouses or dependants)
- the underpin continues to apply for service until at least 31 March 2023 (i.e. till the end of the period covered by the Rates and Adjustments Certificate) for affected members

The past service cost has been converted to a % of pay calculated across the Fund as a whole using a 17 year recovery period.

It should be noted that the calculated cost is particularly sensitive to the real salary increase assumption (and to a lesser extent the withdrawal assumption) which was previously advised on for funding purposes and not for the purpose of estimating the possible cost of the McCloud judgement.





In addition, we recommended that the minimum allowance made for McCloud and cost management should be an increase of 0.9% of pay in the employer contribution rate (the average increase to employer costs that had been expected to apply under the cost management process if no McCloud remedy had been required).

We allowed for the same adjustment to individual employer contributions as calculated for the Fund as a whole, expressed as a % of pay. The adjustment has been set as a minimum of the 0.9% of pay expected from the cost management process.

Since our advice was given and the calculations carried out, the case management discussions which have taken place have led to the suggestion that for the LGPS the changes may mean:

- the application of the new underpin is restricted to fewer members than we have allowed for, i.e. only those who joined pre 2012 but of any age
- the application of the new underpin is time limited and may not apply to all membership until the end of the period covered by the Rates and Adjustments Certificate in 31 March 2023 (although the exact time period is subject to considerable uncertainty)
- the underpin is extended to benefits on withdrawal and to dependants, including possibly transfers out, which goes beyond what has been allowed for in the valuation
- there is a need to ensure the revised underpin is checked for all retirements since 2014 to avoid "reverse discrimination", again going beyond what has been allowed for in the valuation

As this information became available after the majority of contributions had been advised to employers, and there is still no certainty in relation to any benefit changes for the LGPS, we have not sought to review the allowance made. In general, if the underpin applies to pre 2012 joiners rather than pre 2014 joiners then this would reduce the cost, but extending the underpin to benefits on withdrawal, spouses and transfers would increase the cost, and it is not clear what the net effect would be. We will advise the Administering Authority of the expected effect of any changes once there is greater clarity on the precise details of those changes, and on whether contributions for employers should be revisited before the next formal valuation as at 31 March 2022, assuming this can be done within the regulatory provisions.

GMP indexation and equalisation

Guaranteed Minimum Pension (GMP) is a portion of pension that was accrued by individuals who were contracted out of the State Second Pension between 6 April 1978 and 5 April 1997. The rate at which GMP was accrued, and the date





it is payable, is different for men and women, meaning there is an inequality for male and female members who have GMP. This was a consequence of the State Pension itself being unequal at the time.

Prior to 6 April 2016 the LGPS was not required to pay any pension increases on GMPs accrued before April 1988 and was only required to pay limited increases on GMPs accrued after 1988 (CPI inflation capped at 3% p.a.). In return, the Additional Pension (AP) element of the State Pension included top-up payments to pensioners to give inflation protection on the GMP element where this was not provided by the LGPS. However, reforms were made to the State Pension system in April 2016 which scrapped AP and therefore removed the facility for central government to fully index the combined pension through AP.

In March 2016 the government introduced an 'interim solution' for public service schemes to pay full inflationary increases on GMPs for those reaching State Pension Age (SPA) between 6 April 2016 and 5 December 2018 to ensure members continued to receive full inflationary increases on their combined public service scheme and State pensions. This was allowed for in the 2016 valuation of the Fund. In January 2018 the interim solution was extended to individuals reaching SPA on or before 5 April 2021. Further, the Government has indicated that it is committed to continuing to compensate all members of public service pension schemes reaching SPA after 5 April 2021.

On 26 October 2018 the High Court ruled in the Lloyds Bank case that equalisation for the effect of unequal GMPs is required. The ruling confirmed that trustees have a duty "to equalise benefits for men and women so as to alter the result which is at present produced in relation to GMPs". We understand that the Government is exploring various options, including conversion of GMPs to Scheme benefits so there is still some uncertainty over how equalisation for GMPs will be achieved in the LGPS.

Allowance for GMP indexation

The results of this valuation allow for the extension of the interim solution to those reaching State Pension Age by 5 April 2021 as already required under legislation. However, they do not allow for the impact of potentially extending this interim solution indefinitely, providing full pension increases on GMPs for members reaching State Pension Age after 5 April 2021. Based on approximate calculations, at a whole of fund level the impact of providing full pension increases on GMPs for those members reaching State Pension Age after 5 April 2021 is an increase in past service liabilities of between 0.1% to 0.2% across the Fund as a whole.



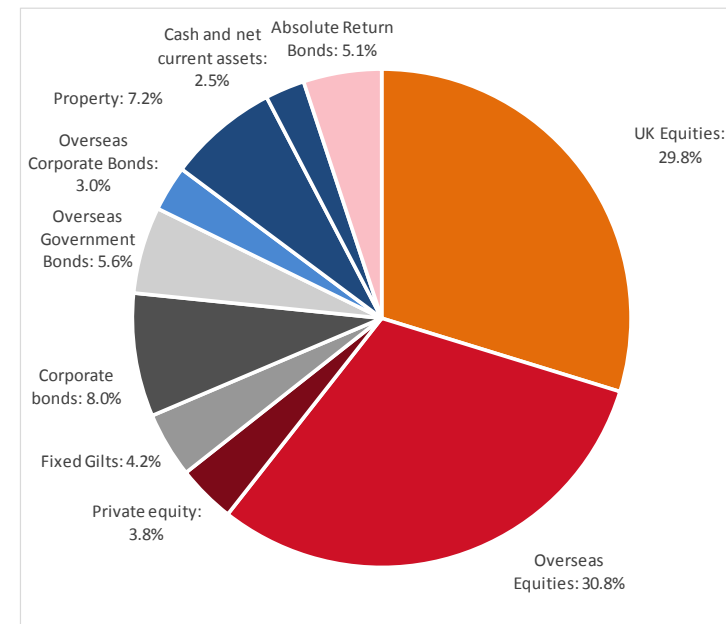


Assets

The audited accounts for the Fund for the year ended 31 March 2019 show the assets were £2,177.8M.

The chart shows how the balance of the assets of £2,177.8M is broadly invested at the valuation date.

For the purpose of modelling the required probability of funding success and hence deriving the discount rate to be adopted for the scheduled and subsumption body funding target as at 31 March 2019 we have allowed for the long term asset allocation as summarised in our paper titled “Actuarial valuation at 31 March 2019 – Assumptions Advice” and as set out in the Administering Authority’s Investment Strategy Statement.





Assumptions

Financial assumptions used to value the liabilities and assess contribution rates

In-service discount rate

Scheduled and subsumption body funding target	4.3% p.a.
Ongoing orphan funding target	4.3% p.a.
Low risk funding target	1.3% p.a.

Left-service discount rate

Scheduled and subsumption body funding target	4.3% p.a.
Ongoing orphan funding target	1.6% p.a.
Low risk funding target	1.3% p.a.

Rate of Pensionable Pay increases (service up to 31 March 2014 only) (in addition to promotional increases)	3.1% p.a.
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Rate of CPI price inflation	2.1% p.a.
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Rate of revaluation of pension accounts	2.1% p.a.
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Rate of pension increases

- on non GMPs and GMP for those reaching SPA between 6 April 2016 and 5 April 2021	2.1% p.a.
- on post 88 GMPs	1.9% p.a.

Administration expenses	0.5% of Pensionable Pay p.a.
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Demographic assumptions used to value the liabilities and assess contribution rate

Pre-retirement base mortality	Males: 30% of Standard SAPS S2N tables Females: 30% of Standard SAPS S2N tables
Post-retirement base mortality	Current normal health pensioners: Males: 100% of Standard SAPS S2N tables Females: 95% of Standard SAPS S2N tables Dependants of current pensioners: Males: 105% of Standard SAPS S2N tables Females: 105% of Standard SAPS S2N tables Actives and deferreds retiring in normal health: Males: 110% of Standard SAPS S2N tables Females: 100% of Standard SAPS S2N tables Dependants of current actives and deferreds: Males: 115% of Standard SAPS S2N tables Females: 120% of Standard SAPS S2N tables Current dependants: Males: 100% of Standard SAPS S2N tables Females: 110% of Standard SAPS S2N tables Pensioners retiring in ill-health: Males: 100% of Standard SAPS S2I tables Females: 105% of Standard SAPS S2I tables
Improvements to mortality	An allowance for improvements between 2007 and 2019 and for future improvements in line with the CMI 2018 Mortality Projections Model with s_k of 7.5 and parameter A of 0.0 assuming a long-term annual rate of improvement in mortality rates of 1.5% pa for men and women.



Promotional salary increases	Allowance has been made for age-related promotional increases based on analysis of actual experience of the fund (see sample rates below).	
Withdrawals	Allowance has been made for withdrawals from service based on analysis of actual experience of the fund (see sample rates below). On withdrawal, members are assumed to retain a deferred pension in the Fund.	
Retirement age	Members were assumed to retire at the following ages:	
	Member group	Assumed age at retirement
	Active members with protected Rule of 85 age (joined LGPS before 1 October 2006 and attained age 60 before 1 April 2020)	Age 63
	Members who joined before 1 October 2006 and have a rule of 85 age of 60	Age 63
	Members who joined before 1 October 2006 and have a rule of 85 age of greater than 60, and members who joined before 1 April 2014 but after 1 October 2006	Age 65
	Members who joined after 31 March 2014	State Pension Age (or age 65 if higher)
	Any part of a member's pension payable from a later age than the assumed retirement age will be reduced.	



Retirement cash sum

Each member is assumed to surrender pension on retirement, such that the total cash received is 80% of the permitted maximum. This figure is based on analysis of actual levels of commutation of pension experienced by the fund.

Family details

Each man was assumed to be three years older than his wife/partner.

80% of non-pensioners were assumed to be married or have a spouse, civil partner or co-habitee ('partner') at retirement or earlier death.

80% of pensioners were assumed to be married or have a partner at age 65.

No allowance for children's pensions.

Retirement due to ill-health

Allowance has been made for retirements due to ill-health based on actual experience of the Fund (see below). Proportions assumed to fall into the different benefit tiers are:

Tier 1	80%
Tier 2	15%
Tier 3	5%

Take up of 50:50 scheme

All members are assumed to remain in the scheme they are in at the date of the valuation.

Discretionary benefits

No allowance



Sample rates

The table below illustrates the proposed allowance for withdrawals from service, ill-health retirement and promotional pay increases at sample ages.

Current age	Percentage promotional pay increase over year	Percentage leaving the Fund each year as a result of withdrawal from service	Percentage leaving the Fund each year as a result of ill-health retirement
20	4.6	9.2	0.00
25	3.6	8.2	0.03
30	1.2	7.2	0.05
35	1.3	6.2	0.08
40	0.0	5.2	0.12
45	0.0	4.2	0.19
50	0.0	3.2	0.26
55	0.0	2.2	0.54
60	0.0	1.2	0.82
65	0.0	0.2	0.00





Membership experience

As required by the Regulations, the demographic assumptions used in valuing the liabilities of the Fund are set out in Further Information section e, above. The demographic assumptions have been informed by an analysis of membership experience including experience since the last valuation of the Fund up to the effective date of our analysis, as well as recent research and other relevant factors, such as a membership postcode analysis for death after retirement assumptions.

For death after retirement the experience analysis was undertaken for the period 1 April 2010 to 31 March 2018. For withdrawal rates and ill health retirement rates our analysis was undertaken for the period 1 April 2014 to 31 March 2018.

The table below shows a comparison of expected membership movements measured by pension amount based on the assumptions adopted for the 2019 valuation with observed membership movements for death after retirement (in normal and ill health), withdrawal rates and rates of ill health retirement. The figures are based on our full experience analysis pro-rated for a 3 year period for ease of comparison.

Type of exit	Men (£000 of pension)	Women (£000 of pension)
Death after retirement in normal health (current pensioners)		
Actual	1,740	1,418
Expected	1,760	1,397
Death after retirement in ill health		
Actual	780	395
Expected	723	354
Withdrawals (including refunds)		
Actual	2,585	3,947
Expected	2,711	3,815
Ill-health retirements		
Actual	352	349
Expected	286	346





Dashboard

Following the review by the Government Actuary's Department of all LGPS valuations as at 31 March 2016 under section 13 of the Public Service Pensions Act 2013, a standard "dashboard" has been added to the report on the valuation to aid comparison between valuation reports for different LGPS funds.

Past service funding position – local funding basis

Funding level (assets/liabilities)	96%
Funding level (change since last valuation)	11%
Asset value used at the valuation	£2,177.8m
Value of liabilities	£2,272.4m
Surplus (deficit)	(£94.6m)
Discount rate(s)	1.30% - 4.30% p.a.
Assumed pension increases (CPI)	2.10% p.a.
Method of derivation of discount rate, plus any changes since previous valuation	The Funding Strategy Statement describes the approach used to set the funding target and hence the discount rates. The Administering Authority adopts different discount rates depending on employers' circumstances including the likelihood of exit and what would happen to the liabilities on exit.

Assumed life expectancies at age 65 (for those retiring in normal health):

- Average life expectancy for current pensioners - men currently age 65 22.1 years
- Average life expectancy for current pensioners - women currently age 65 24.5 years





▪ Average life expectancy for future pensioners (current actives) - men currently age 45	23.1 years
▪ Average life expectancy for future pensioners (current actives) - women currently age 45	25.9 years

Past service funding position – SAB basis (for comparison purposes only)

Market value of assets	£2,177.8m
Value of liabilities	£2,089.9m
Funding level on SAB basis (assets/liabilities)	104%
Funding level on SAB basis (change since last valuation)	11%

Contribution rates payable

Primary contribution rate	18.8% of pay
Secondary contribution rate (cash amounts in each year in line with CIPFA guidance):	
▪ Secondary contribution rate 2020/21	£7.999m
▪ Secondary contribution rate 2021/22	£8.446m
▪ Secondary contribution rate 2022/23	£8.914m
Giving total expected contributions:	
▪ Total expected contributions 2020/21 (£ figure based on assumed payroll of £309.9m)	£66.253m
▪ Total expected contributions 2021/22 (£ figure based on assumed payroll of £319.5m)	£68.505m
▪ Total expected contributions 2022/23 (£ figure based on assumed payroll of £329.4m)	£70.835m
Average employee contribution rate (% of pay)	6.3%
Employee contribution rate (£ figure based on assumed payroll of £309.9m)	£19.5m



g

Additional information

Percentage of liabilities relating to employers in deficit with deficit recovery periods of longer than 20 years	0%
Percentage of total liabilities that are in respect of Tier 3 employers	7%



Additional contributions paid before 31 March 2020

We understand that certain Employers have paid additional shortfall contributions in the year ending 31 March 2020 beyond those certified. We have taken these into account in assessing the contributions required for the period after 1 April 2020 as set out within the Rates and Adjustments Certificate.

The following Employers have paid additional shortfall contributions to the Fund over 2019/20 beyond those certified:

Employer	Amount paid	Date paid
Mirus-Wales	£214,000	20 March 2020

Note: This payment reflects the discounted value of the monetary shortfall contributions which would otherwise have been certified for the Employer for the period from 1 April 2020 to 31 March 2023.

h



Rates and Adjustments Certificate

Actuarial certificate given for the purposes of Regulation 62 of the Local Government Pension Scheme Regulations 2013.

In accordance with Regulation 62 of the Local Government Pension Scheme Regulations 2013 ('the 2013 Regulations'), we certify that contributions should be paid by employers at the following rates for the period 1 April 2020 to 31 March 2023.

- Primary contribution rates for individual employers (or groups of employers) as shown below. The primary rate for the whole Fund, calculated as a weighted average of the employers' individual rates, is 18.8% of Pensionable Pay.
- Individual adjustments (i.e. secondary contribution rates) which, when added to or subtracted from the primary rate, produce the following minimum employer contribution rates.

Regulation 62(8) requires a statement to be made of the assumptions on which the certificate is given as regards the number of members, and the associated amount of liabilities arising, who will become entitled to payment of pensions under the LGPS regulations during the period covered by the certificate. These assumptions can be found in section e of the Further Information section of the formal report on the valuation as at 31 March 2019. They include assumptions relating to the members who are expected to become entitled to payment of pensions via normal retirement and ill health retirement. In practice members will also become entitled to payment of pensions via early retirement for reasons of redundancy or efficiency reasons as well as on voluntary early retirement, for which no assumption has been made.

Employer	Employer code	Primary Contribution rate (% p.a. Pensionable Pay)	Secondary contribution (% p.a. Pensionable Pay and £s) Year commencing 1 April			Total contributions (% p.a. Pensionable Pay and £s) Year commencing 1 April		
			2020	2021	2022	2020	2021	2022
Employers where the Scheduled and subsumption body funding target applies								
The County Council of the City and County of Cardiff	60	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
Cardiff City Transport	10	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
App Cleaning Limited (St Teilo's School)	77	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
A&R Cleaning (Lansdowne School)	81	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%



Employer	Employer code	Primary Contribution rate (% p.a. Pensionable Pay)	Secondary contribution			Total contributions		
			(% p.a. Pensionable Pay and £s) Year commencing 1 April			(% p.a. Pensionable Pay and £s) Year commencing 1 April		
			2020	2021	2022	2020	2021	2020
App Cleaning Limited (Grangetown Primary School)	84	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
Circle IT (Eastern High School)	85	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
Glen Cleaning (Eastern High School)	91	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
A&R Cleaning (Gabalfa Primary School)	94	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
A&R Cleaning (Greenway Primary School)	95	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
A&R Cleaning (Trowbridge Primary School)	96	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
A&R Cleaning (Whitchurch Primary School)	97	18.1%	2.6%	2.6%	2.6%	20.7%	20.7%	20.7%
Vale of Glamorgan Council	61	18.8%	2.4%	2.4%	2.4%	21.2%	21.2%	21.2%
Glen Cleaning (Barry Comprehensive School)	78	18.8%	2.4%	2.4%	2.4%	21.2%	21.2%	21.2%
Glen Cleaning (Llandough Primary)	82	18.8%	2.4%	2.4%	2.4%	21.2%	21.2%	21.2%
Circle IT (Cowbridge)	83	18.8%	2.4%	2.4%	2.4%	21.2%	21.2%	21.2%
Glen Cleaning (Gladstone Primary School)	93	18.8%	2.4%	2.4%	2.4%	21.2%	21.2%	21.2%
Greenwich Leisure Limited (GLL)	80	18.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%
National Trust (Dyffryn)	73	20.7%	0.0%	0.0%	0.0%	20.7%	20.7%	20.7%
Cardiff And Vale College	71	16.6%	1.0%	1.0%	1.0%	17.6%	17.6%	17.6%
Cardiff Metropolitan University (UWIC)	72	16.6%	1.0%	1.0%	1.0%	17.6%	17.6%	17.6%
St David's 6th Form College	41	16.6%	1.0%	1.0%	1.0%	17.6%	17.6%	17.6%
Barry Town Council	9	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%



Employer	Employer code	Primary Contribution rate (% p.a. Pensionable Pay)	Secondary contribution (% p.a. Pensionable Pay and £s) Year commencing 1 April			Total contributions (% p.a. Pensionable Pay and £s) Year commencing 1 April		
			2020	2021	2022	2020	2021	2020
Cowbridge Town Council	6	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Lisvane Community Council	74	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Llantwit Major Council	7	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Penarth Town Council	8	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Penllyn Community Council	76	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Pentyrch Community Council	56	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Radyr & Morganstown Community Council	65	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Wenvoe Community Council	75	18.5%	0.9%	0.9%	0.9%	19.4%	19.4%	19.4%
Stanwell School	22	20.1%	0.9%	0.9%	0.9%	21.0%	21.0%	21.0%
Employers where the Ongoing orphan funding target applies								
Adult Learning Wales	26	32.8%	(3.9%)	(2.0%)	(0.1%)	28.9%	30.8%	32.7%
Cardiff Business Technology Centre	27	33.9%	(5.3%)	(3.2%)	(1.0%)	28.6%	30.7%	32.9%
Cardiff University (UWC)	28	33.9%	0.9% plus £996,000	0.9% plus £996,000	0.9% plus £996,000	34.8% plus £996,000	34.8% plus £996,000	34.8% plus £996,000
Careers Wales Cardiff and Vale Ltd	30	32.5%	(13.8%)	(12.4%)	(11.0%)	18.7%	20.1%	21.5%
Children in Wales	31	33.3%	(0.5%)	0.9% plus £9,000	0.9% plus £29,200	32.8%	34.2% plus £9,000	34.2% plus £29,200
Colleges Wales	32	30.5%	(1.2%)	(0.2%)	0.9%	29.3%	30.3%	31.4%
Design Commission for Wales	33	31.9%	(5.8%)	(3.5%)	(1.3%)	26.1%	28.4%	30.6%
Mirus-Wales	34	31.3%	0.9%	0.9%	0.9%	32.2%	32.2%	32.2%
National Eisteddfod of Wales	35	31.8%	(5.9%)	(5.5%)	(5.1%)	25.9%	26.3%	26.7%



Employer	Employer code	Primary Contribution rate (% p.a. Pensionable Pay)	Secondary contribution (% p.a. Pensionable Pay and £s) Year commencing 1 April			Total contributions (% p.a. Pensionable Pay and £s) Year commencing 1 April		
			2020	2021	2022	2020	2021	2020
One Voice Wales	36	29.4%	0.9% plus £1,300	0.9% plus £2,800	0.9% plus £4,400	30.3% plus £1,300	30.3% plus £2,800	30.3% plus £4,400
Play Wales	37	33.6%	(2.1%)	(0.6%)	0.9%	31.5%	33.0%	34.5%
Sport Wales	38	31.9%	0.9% plus £636,000	0.9% plus £716,000	0.9% plus £801,000	32.8% plus £636,000	32.8% plus £716,000	32.8% plus £801,000
Wales Council for Voluntary Action	40	33.7%	0.9% plus £7,000	0.9% plus £72,000	0.9% plus £140,000	34.6% plus £7,000	34.6% plus £72,000	34.6% plus £140,000
Employers where the Low risk funding target applies								
Public Services Ombudsman (Wales)	64	37.7%	(37.7%)	(37.7%)	(37.7%)	0.0%	0.0%	0.0%
Total		18.8%	2.1% plus £1,640,300	2.1% plus £1,795,800	2.1% plus £1,970,600	20.9% plus £1,640,300	20.9% plus £1,795,800	20.9% plus £1,970,600

The contributions shown above represent the minimum contributions to be paid by each employer. Employers may choose to pay additional contributions from time to time subject to the Administering Authority's agreement.

Where payments due from an employer are expressed as monetary amounts, the amounts payable by that employer may be adjusted to take account of any amounts payable, in respect of a surplus or shortfall to which those monetary payments relate, by new employers created after the valuation date which have been credited with proportions of the assets and liabilities of the relevant employer.

Additional contributions may be required in respect of any additional liabilities that arise under the provisions of Regulations 30, 31, 35 and 38 of the 2013 Regulations and employers will be notified of such contributions separately by the Administering Authority.

Additional contributions may be payable by any employers which have ceased to participate in the Fund since 31 March 2019 and these will be certified separately.

Contribution rates for Employers commencing participation in the Fund after 31 March 2019 will be advised separately.



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Glossary

Active member	A person who is employed by an employer participating in the Fund, and is paying (or is treated as paying) contributions to the Fund (includes certain members temporarily absent, e.g. due to family leave or sickness).
Admission body	An employer admitted to the Fund under an admission agreement.
Attained age method	This is one of the methods used by actuaries to calculate a contribution rate to the Fund. This method calculates the present value of the benefits expected to accrue to members over their expected remaining membership of the Fund expressed as a percentage of their expected future pensionable pay. It allows for projected future increases to pay or revaluation as appropriate through to retirement or date of leaving service. The method is based on the current membership and takes no account of the possibility of further members joining the Fund. If there are no new members, this method would be expected to result in a stable contribution rate, once surpluses or shortfalls are taken into account, and if all the other assumptions are borne out. However, if more members join the Fund to replace older leavers, the contribution rate can be expected to fall.
Consumer prices index (CPI)	This is the price inflation index that increases to pensions and deferred pensions paid by the Fund are currently based on. It is published every month by the Office of National Statistics.
Deferred member	A former employee who has left active membership, but has not yet received any benefits from the Fund and is prospectively entitled to receive a deferred pension from his/her normal pension age.
Discount rate	Expected future investment returns calculated with reference to an assumed investment strategy and level of prudence. The discount rate is used to translate the estimated future benefit payments from the Fund into a single figure which represents the amount needed to be held today to provide them.
Fund actuary	The actuary to the Fund, who provides actuarial advice to the Administering Authority including carrying out the actuarial valuation contained in this report.



Funding level (or funding ratio)	This is the ratio of the value of assets to the Funding Target.
Funding objective	To hold sufficient and appropriate assets to cover the Funding Target.
Funding Strategy Statement	A document prepared by the Administering Authority in accordance with the Regulations which sets out the funding strategy adopted for the Fund. The Fund Actuary must have regard to this statement in preparing this actuarial valuation.
Funding target	An assessment of the present value of the benefits that will be paid from the Fund in the future, normally based on pensionable service prior to the valuation date. Under the current Funding Strategy Statement the funding target is equal to the past service liabilities calculated using a prudent set of assumptions.
Future service contribution rate	The contribution rate (expressed as a percentage of Pensionable Pay) required to meet the cost of benefits which will accrue to members in future. This is also known as the primary contribution rate.
Guaranteed minimum pensions (GMPs)	Most schemes that were contracted out of the State Earnings Related Pension Scheme (SERPS) before April 1997 have to provide a pension for service before that date at least equal to the Guaranteed Minimum Pension (GMP). This is approximately equal to the SERPS pension that the member would have earned had the Fund not been contracted out. GMPs ceased to accrue on 6 April 1997 when the legislation changed.
Long-term cost efficiency	<p>This is not defined in the Regulations but further explanation can be found in the Cipfa guidance 'Preparing and Maintaining a Funding Strategy Statement', dated September 2016:</p> <p>The notes to the Public Service Pensions Act 2013 state:</p> <p>Long-term cost-efficiency implies that the rate must not be set at a level that gives rise to additional costs. For example, deferring costs to the future would be likely to result in those costs being greater overall than if they were provided for at the time.</p> <p>The rate of employer contributions shall be deemed to have been set at an appropriate level to ensure long-term cost efficiency if the rate of employer contributions is sufficient</p>



to make provision for the cost of current benefit accrual, with an appropriate adjustment to that rate for any surplus or shortfall in the fund.

In assessing whether the above condition is met, the Government Actuary's Department (GAD) may have regard to the following considerations:

- the implied average shortfall recovery period
- the investment return required to achieve full funding over different periods, e.g. the recovery period
- if there is no shortfall, the extent to which contributions payable are likely to lead to a shortfall arising in the future

the extent to which the required investment return above is less than the administering authority's view of the expected future return being targeted by a fund's investment strategy, taking into account changes in maturity/strategy as appropriate

Low risk funding target

Funding target used for already orphaned liabilities in the Fund. The discount rate is based on the yield on long-dated fixed interest gilts at a duration appropriate for the Fund's liabilities.

Ongoing orphan employer

This is an employer whose participation in the Fund may cease at some future point in time, after which it is expected that the Administering Authority will have no access to future contributions from that employer for the employer's liabilities in the Fund once any liability on exit has been paid. On exit the employer's liabilities will become 'orphaned liabilities' in the Fund.

Ongoing orphan funding target

For active employers whose liabilities are expected to be orphaned on exit, the Administering Authority will have regard to the potential for participation to cease (or for the body to have no contributing members), the potential timing of such exit, and any likely change in notional or actual investment strategy as regards the assets held in respect of the body's liabilities at the date of exit (i.e. whether the liabilities will become 'orphaned' or a guarantor exists to subsume the notional assets and liabilities). This is known as the ongoing orphan funding target.



Typically, employers which will ultimately give rise to orphaned liabilities will have a discount rate which is based on the yield on long-dated fixed interest gilts at a duration appropriate for the Fund's liabilities plus an asset out-performance assumption (typically this addition will be different when applied to liabilities in relation to members still in service and to those who have left service).

The in-service discount rate has been set equal to that adopted for the scheduled and subsumption body funding target.

The addition for the left service discount rate reflects market expectations of the possible future increase in the gilt yield curve over the next five years.

Orphan/orphaned liabilities	Liabilities in the fund for which no currently contributing employer has responsibility.
Past service liabilities	This is the present value of the benefits to which members are entitled based on benefits accrued to the valuation date, assessed using the assumptions agreed for each employer between the Administering Authority and the Fund Actuary. It allows for projected future increases to pay or revaluation as appropriate through to retirement or date of leaving service.
Pensioner member	An individual who is receiving a pension from the Fund, including dependants of former active, deferred or pensioner members.
Present value	Actuarial valuations involve projections of pay, pensions and other benefits into the future. To express the value of the projected benefits in terms of a cash amount at the valuation date, the projected amounts are discounted back to the valuation date by a discount rate. This value is known as the present value. For example, if the discount rate was 4% a year and if we had to pay a cash sum of £1,040 in one year's time the present value would be £1,000.
Primary rate of employer's contribution	This is not defined in the Regulations but further explanation can be found in the Cipfa guidance Preparing and Maintaining a Funding Strategy Statement, dated September 2016:



The primary rate for each employer is that employer's future service contribution rate, which is the contribution rate required to meet the cost of the future accrual of benefits, expressed as a percentage of pensionable pay, ignoring any past service surplus or shortfall but allowing for any employer-specific circumstances, such as the membership profile of that employer, the funding strategy adopted for that employer (including any risk-sharing arrangements operated by the administering authority), the actuarial method chosen and/or the employer's covenant.

The primary rate for the whole fund is the weighted average (by payroll) of the individual employers' primary rates.

Projected unit method	One of the common methods used by actuaries to calculate a contribution rate to a fund. This method calculates the present value of the benefits expected to accrue to members over a control period (often one year) following the valuation date. The present value is usually expressed as a percentage of the members' pensionable pay. It allows for projected future increases to pay or revaluation as appropriate through to retirement or date of leaving service. Provided that the distribution of members remains stable with new members joining to take the place of older leavers, the contribution rate calculated can be expected to remain stable, if all the other assumptions are borne out. If there are no new members however, the average age will increase and the contribution rate can be expected to rise.
Prudent	Prudent assumptions are such that the actual outcome is considered to be more likely to overstate than understate the amount of money actually required to meet the cost of the benefits.
Rates and adjustments certificate	A certificate required at each actuarial valuation by the Regulations, setting out the contributions payable by employers for the 3 years from the 1 April following the valuation date.
Recovery period	The period over which any surplus or shortfall is to be eliminated.



Recovery plan

Where a valuation shows a funding surplus or shortfall against the past service liabilities, a recovery plan sets out how the Administering Authority intends to meet the funding objective.

Regulations

The statutory regulations setting out the contributions payable to, and the benefits payable from, the Local Government Pension Scheme and how the Funds are to be administered. They currently include the following sets of regulations:

- 1997 Regulations - Local Government Pension Scheme Regulations 1997
- Administration Regulations - Local Government Pension Scheme (Administration) Regulations 2008
- Benefits Regulations - Local Government Pension Scheme (Benefits, Membership, and Contributions) Regulations 2007
- Transitional Regulations - Local Government Pension Scheme (Transitional provisions) 1997
- 2013 Regulations - Local Government Pension Scheme Regulations 2013
- 2014 Transitional Regulations - Local Government Pension Scheme (Transitional Provisions, Savings and Amendment) Regulations 2014

Scheduled body

Bodies which participate in the Fund under Schedule 2 Part 1 of the 2013 Regulations.

Scheduled and subsumption body funding target

For secure Scheduled Bodies whose participation in the Fund is considered by the Administering Authority to be indefinite and Admission Bodies with a subsumption commitment from such Scheduled Bodies, the Administering Authority assumes indefinite investment in a broad range of assets of higher risk than risk free assets. This is known as the scheduled and subsumption body funding target.

Secondary rate of the employers' contribution

This is not defined in the Regulations but further explanation can be found in the Cipfa guidance 'Preparing and Maintaining a Funding Strategy Statement', dated September 2016:

The secondary rate is an adjustment to the primary rate to arrive at the rate each employer is required to pay. It may be expressed as a percentage adjustment to the



primary rate, and/or a cash adjustment in each of the three years beginning with 1 April in the year following that in which the valuation date falls. The secondary rate is specified in the rates and adjustments certificate. For any employer, the rate they are actually required to pay is the sum of the primary and secondary rates.

The Fund Actuary is required to also disclose the secondary rates for the whole scheme in each of the three years beginning with 1 April in the year following that in which the valuation date falls. These should be calculated as a weighted average based on the whole scheme payroll in respect of percentage rates and as a total amount in respect of cash adjustments. The purpose of this is to facilitate a single net rate of contributions expected to be received over each of the three years that can be readily compared with other rates and reconciled with actual receipts.

Shortfall

Where the assets are less than the Funding Target, the shortfall is the Funding Target less the value of assets.

Shortfall contributions

Additional contributions payable by employers to remove the shortfall by the end of the recovery period.

Solvency

This is not defined in the Regulations but further explanation can be found in the CIPFA guidance Preparing and Maintaining a Funding Strategy Statement, dated September 2016:

The notes to the Public Service Pensions Act 2013 state that solvency means that the rate of employer contributions should be set at “such level as to ensure that the scheme’s liabilities can be met as they arise”. It is not regarded that this means that the pension fund should be 100% funded at all times. Rather, and for the purposes of Section 13 of the Public Service Pensions Act 2013, the rate of employer contributions shall be deemed to have been set at an appropriate level to ensure solvency if:

- the rate of employer contributions is set to target a funding level for the whole fund (assets divided by liabilities) of 100% over an appropriate time period and using appropriate actuarial assumptions; and either



- employers collectively have the financial capacity to increase employer contributions, and/or the fund is able to realise contingent assets should future circumstances require, in order to continue to target a funding level of 100%; or
- there is an appropriate plan in place should there be, or if there is expected in future to be, no or a limited number of fund employers, or a material reduction in the capacity of fund employers to increase contributions as might be needed.

If the conditions above are met, then it is expected that the fund will be able to pay scheme benefits as they fall due.

State pension age (SPA)

Age at which State pensions are payable. Current legislation specifies the following ages:

- Currently age 65 for men; transitioning to age 65 for women by 2018.
- Current legislation transitions State Pension Age for both men and women to age 68 by 2046, as follows:
 - to age 66 by 2020
 - to age 67 by 2028
 - to age 68 by 2046

Strains

These represent the cost of additional benefits granted to members under a discretion of the employer or the Administering Authority. They include the cost of providing enhanced benefits on retirement or redundancy.

Subsumption and subsumption body

An employer which is not a secure long term Scheduled Body and where the Administering Authority has obtained an undertaking from a related employer that, if and when the employer exits the Fund, they will be a source of future funding should any funding shortfalls emerge on the original employer's liabilities after exit.

In this document the process of taking on the responsibility for future funding at the point of exit is known as 'subsumption' of an employer's liabilities. The employer whose liabilities will be (or are being) subsumed is referred to as a subsumption body.

**Surplus**

Where the assets are more than the Funding Target, the surplus is the value of assets less the Funding Target.

Transfer value

Members generally have a legal right to transfer their benefits to another pension arrangement before they retire. In taking a transfer, members give up their benefits in a fund, and a sum of money (called the transfer value) is paid into another approved pension fund. This is used to provide pension benefits on the terms offered in that fund.

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About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

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