

West Midlands Integrated Transport Authority Pension Fund

Actuarial valuation as at 31 March 2016

Valuation report



Introduction

In accordance with Regulation 62 of the Local Government Pension Scheme (LGPS) Regulations 2013 (as amended), we have been asked by the West Midlands Combined Authority to prepare an actuarial valuation of the West Midlands Integrated Transport Authority Pension Fund (the Fund) as at 31 March 2016 as part of their role as the Administering Authority to the Fund.

The purpose of the valuation is to review the financial position of the Fund and to set appropriate contribution rates for each employer in the Fund for the period from 1 April 2017 to 31 March 2020. Contributions are set to cover any shortfall between the assumed cost of providing benefits built up by members at the valuation date and the assets held by the Fund and to also cover the cost of benefits that active members will build up in the future.

Following a detailed process of discussions, we provided a formal advice document which sets out the background to the valuation and explains the agreed underlying methods and assumptions derivation after these discussions had taken place, dated 23 February 2017.

This report summarises the results of the valuation and is addressed to the Administering Authority of the Fund. It is not intended to assist any user other than the Administering Authority in making decisions or for any other purpose and neither we nor Barnett Waddingham LLP accept liability to third parties in relation to this advice.

This advice is subject to and complies with Technical Actuarial Standards (TASs) issued by the Financial Reporting Council (namely, the Pensions TAS and generic TASs relating to reporting, data and modelling).

We would be pleased to discuss any aspect of this report in more detail.

Contents

1	Summary of results	3
2	Background to valuation approach.....	4
3	Results	6
4	Sensitivity analysis	12
5	Final comments	13
Appendix 1	Summary of membership data	14
Appendix 2	Actuarial assumptions	15
Appendix 3	Rates and Adjustments Certificate	23

1 Summary of results

A summary of the results of the valuation is as follows:

Funding position

Using the agreed assumptions, the Fund had assets sufficient to cover 82% of the accrued liabilities as at 31 March 2016.

Changes since 2013

The Public Sector Pensions Act 2013 and updated guidance from CIPFA have introduced and reinforced requirements to focus on securing **solvency** of the pension fund and **long-term cost efficiency**

Method and assumptions

The resulting method and assumptions are set out in Appendix 2 and we believe these are appropriate for the 31 March 2016 valuation.

Employer contributions

Individual employer contributions are set out in Appendix 3 in the Rates and Adjustment certificate to cover the period from 1 April 2017 to 31 March 2020.

The next actuarial valuation should be carried out with an effective date of 31 March 2019 and the contributions payable by the participating employers will be reviewed as part of that valuation.

2 Background to valuation approach

The purpose of the 2016 actuarial valuation is to set appropriate contribution rates for each employer in the Fund for the period from 1 April 2017 to 31 March 2020. This is required under regulation 62 of the LGPS Regulations. The Regulations for actuarial valuations have changed since the 2013 valuation and so has the context surrounding the valuation. Regulation 62 specifies four requirements that the actuary "must have regard to" and are detailed below:

- "the desirability of maintaining as nearly constant a primary rate as possible";
- "the current version of the administering authority's funding strategy statement";
- "the requirement to secure the solvency of the pension fund"; and
- "the long-term cost efficiency of the Scheme (i.e. the LGPS for England and Wales as a whole), so far as relating to the pension fund".

In addition, Regulation 25A of the The Local Government Pension Scheme (Transitional Provisions, Savings and Amendment) Regulations 2014 now enables recovery of exit payments from historic employers in the Fund which have not previously paid an exit payment to the Fund.

We have considered these changes when providing our advice and choosing the method and assumptions used and a number of reports and discussions have taken place with the Administering Authority before agreeing the final assumptions to calculate the results and set contribution rates. In particular:

- The formal advice report dated 23 February 2017 which provides information and results on a whole fund basis as well as more detailed background to the method and derivation of the agreed assumptions.
- The Funding Strategy Statement, recently updated to take account of new CIPFA guidance, which confirms the approach in setting employer contributions.

Note that not all these documents may be in the public domain.

The final assumptions have been agreed with the Administering Authority.

Membership data

A summary of the membership data used for the valuation is set out in Appendix 1.

The membership data has been checked for reasonableness and we have compared the membership data with information in the Fund accounts. While this should not be seen as a full audit of the data, we are happy that the data is sufficiently accurate for the purposes of the valuation.

Benefits

Full details of the benefits being valued are as set out in the Regulations as amended and summarised on the LGPS [website](#) and the Fund's membership booklet. We have made no allowance for discretionary benefits.

Assets

Assets have been valued at a six month smoothed market value straddling the valuation date.

We have been provided with the audited Fund accounts for the years ending 31 March 2014, 31 March 2015 and 31 March 2016.

The market asset valuation as at 31 March 2016 was £466,210,000.

Buy-in asset valuation

We have assumed that the buy-in investment strategy is based on 100% gilts. Using information provided by the Fund we have placed a value on the buy-in as at 31 March 2016 assuming that the buy-in valuation covers the non-increasing part of the relevant members benefits.

We have calculated the value of the buy-in to be approximately £256,219,000 which is included in the asset value above.

Non buy-in asset valuation

In our calculations we have used a smoothing adjustment of 98.9% which results in a smoothed asset value of the non-buy in assets of £207,681,000.

Combining these assets results in a rounded asset value of £463,900,000. This differs to the amount set out in the 31 March 2016 accounts as we have updated the value placed on the buy-in due to updated data.

Investment strategy

The Fund's long-term investment strategy has been taken into consideration in the derivation of the assumptions used.

Pensioners and dependants as at 11 August 2011 who were employed by West Midlands Travel Limited were involved in a buy-in with Prudential Life Insurance Limited in April 2012. The insurer will meet part of the pension payments (the increases continue to be met by the Fund) relating to these members and the Fund

receives reimbursement of circa £17.5million p.a. This compares to an approximate payment of £24.5million p.a. paid out by the Fund.

As a result of the buy-in impacting the liabilities of only one of the underlying employers, each employer has their own investment strategy. The investment strategy for West Midlands Travel Limited is known as the "post-buy-in strategy" and the investment strategy for Preston Bus Ltd is known as the "non-buy-in strategy".

In 2015, the assets attributable to the Fund's two employers were unitised so that they are now separately identified.

Further details of these investment strategies are set out in an Investment Strategy Statement available on the Fund's website.

3 Results

Previous valuation

The previous valuation was carried out as at 31 March 2013 by Mercer. The results are summarised in the valuation report dated 31 March 2014 and show a funding level of 84% corresponding to a deficit of £86million. The funding position had been offset to allow for market changes to 31 December 2013 after the valuation date and the actual funding level as at 31 March 2013 before this adjustment was 76% corresponding to a deficit of £114million.

The average employer contribution was calculated to be 21.5% of Pensionable Pay in order to cover the cost of future benefits being built up by active members. This applied to West Midlands Travel Ltd only.

In practice, each employer paid their own contribution rate which will have been a combination of contributions to cover the cost of future benefits and contributions towards past service deficit which was agreed following consideration of available guarantees and affordability issues.

Shortfall between assets and liabilities

Using the assumptions summarised in Appendix 2, the results of the valuation are set out in the tables overleaf which show:

- The past service funding position which means how well funded the Fund was at the valuation date; and
- The primary rate for the whole Fund which is the primary rate for West Midlands Travel Limited as the only employer with active members in the Fund.

The primary and secondary rate of the individual employer contributions payable are set out in the Rates and Adjustment certificate in Appendix 3. These are based on the employer's own membership and experience.

In Appendix 3 we also disclose the sum of the secondary rates for the whole Fund for each of the three years beginning with 1 April 2017. The secondary rate is an adjustment to the primary rate each employer is required to pay.

Active members pay contributions to the Fund as a condition of membership in line with the rates required under the Regulations.

Past service funding position			
	31 March 2016		
	£000	£000	£000
	West Midlands Travel	Preston Bus	Fund
Smoothed asset value	190,800	16,881	207,681
Bulk annuity insurance buy-in	256,219	n/a	256,219
Past service liabilities			
Actives	78,365	-	78,365
Deferred pensioners	62,371	2,923	65,294
Pensioners	409,979	14,959	424,938
Total	550,715	17,882	568,597
Surplus (Deficit)	(103,696)	(1,001)	(104,697)
Funding level	81%	94%	82%

Primary rate	% of payroll
Total future service rate	32.0%
less Employee contribution rate	(6.9%)
Total	25.1%

There was a deficit of £105m the Fund at the valuation date, and the Fund's assets were sufficient to cover 82% of its liabilities.

Reconciliation to previous valuation

The key factors that have influenced the funding level of the Preston Bus over the intervaluation period are as follows:

Change in past service position - Preston Bus Ltd	
	£m
Surplus (Deficit) at 31 March 2013	(3.9)
Interest	(0.4)
Contribution profit	1.2
Asset returns v assumed return	1.0
Change in market conditions	(0.9)
Change in assumptions - demographic	(0.3)
Change in assumptions - financial (RPI/CPI gap)	(0.2)
Change in assumptions - financial (discount rate)	1.0
Inflation experience	0.8
Retirement experience	0.4
Mortality experience	0.4
Other experience	(0.1)
Surplus (Deficit) at 31 March 2016	(1.0)

The key factors that have influenced the funding level of the West Midlands Travel over the intervalation period are as follows:

Change in past service position - West Midlands Travel	
	£m
Surplus (Deficit) at 31 March 2013	(110)
Interest	(18)
Contributions paid over service cost	9
Asset returns v assumed return (excluding buy-in)	(2)
Change in market conditions	(15)
Change in assumptions - demographic	4
Change in assumptions - financial (RPI/CPI gap)	(8)
Change in assumptions - financial (discount rate)	33
Inflation experience	16
Retirement experience	(2)
Non-buy in pensioner mortality experience	(3)
Other experience	(8)
Surplus (Deficit) at 31 March 2016	(104)

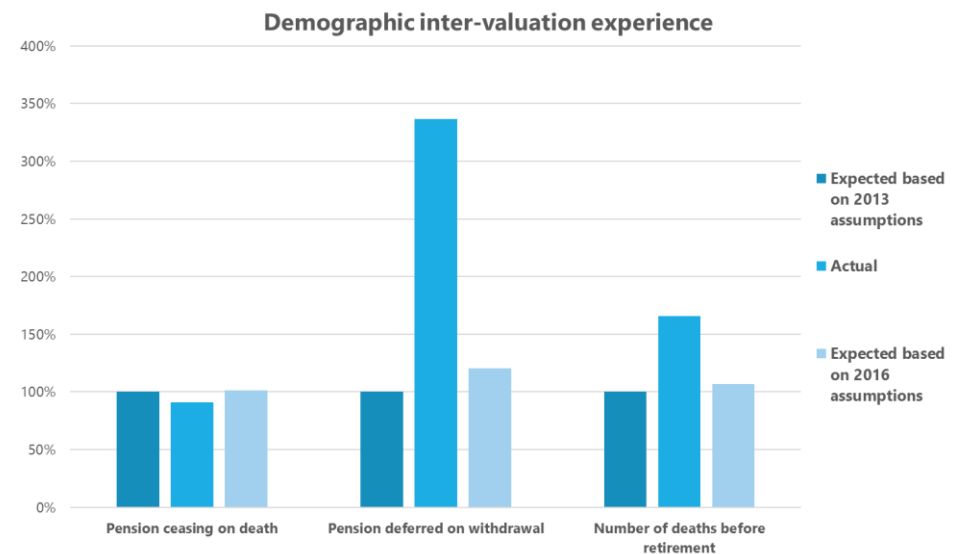
The demographic change in assumptions other than retirement and mortality is mainly made up of the change to the approach taken to ill health pensioner mortality assumption and the change to the early retirement assumption.

The table below sets out the change in future service contribution rate over the intervaluation period.

Change in future service contribution rate	
	% of payroll
Average employer rate at 31 March 2013	21.5%
Change in financial assumptions	4.0%
Change in demographic assumptions	(1.2%)
Other including membership experience	0.8%
Average employer rate at 31 March 2016	25.1%

Comparing experience with assumptions

A comparison of the actual demographic experience of members of the Fund over the intervaluation period, with that assumed by the assumptions adopted at the last valuation in 2013 is shown in the graph below. The graph also shows how the assumptions adopted for this valuation would have compared with those adopted at 2013.



As you can see from the graph there has been higher than assumed experience of members leaving the Fund during the intervaluation period (withdrawal experience). We understand that this is due to a high number of employees opting out of the Fund in March 2014.

Valuations on other bases

The liability value as set out in the previous section is known as the Fund's "funding target" and should be consistent with the Administering Authority's Funding Strategy Statement. However, as part of the valuation, we have also considered an estimate of the liabilities represented with all margins for prudence removed (the "neutral estimate").

Neutral estimate

The neutral basis is set with the main purpose of providing the Administering Authority an idea of the level of prudence contained within the funding basis. The neutral estimate represents our best estimate of the funding position, in other words, we believe that it is equally likely that the Fund will beat or miss the funding target based on the neutral assumptions derived.

For the assumptions used for the funding basis, it is appropriate to include a margin for prudence to protect against the risk of not meeting the funding target and to essentially build a cushion for future adverse experience.

The neutral estimate does not contain any margins for prudence.

The funding basis includes an allowance for prudence in the discount rate assumption only. The discount rate on the neutral basis is therefore 5.5% p.a. in respect of non-pensioner liabilities and liabilities relating to pensioner members with no insured benefits under West Midlands Travel, and 4.2% p.a. in respect of all liabilities relating to Preston Bus. All other assumptions are consistent with the ongoing funding basis.

The funding level on the neutral basis was 86%.

Projected future results

The progression of the funding level over time is influenced by a large number of factors, including the experience of the Fund's membership, the investment return achieved and the contributions paid.

We estimate that three years after the valuation date (i.e. at the next valuation) the funding position on a funding basis will be 84%. This allows for contributions to be paid as described in Appendix 3 and assumes that investment returns and other experience over the next three years is in line with the assumptions used for the valuation as set out in Appendix 2. Any additional contributions made by employers over and above those certified would produce a higher projected funding level.

4 Sensitivity analysis

Sensitivities to the liabilities

The results set out in this report are based on a particular set of assumptions. The actual cost of providing the benefits will depend on the actual experience, which could be significantly better or worse than assumed. The sensitivity of the results to some of the key assumptions is set out in the table below.

Sensitivity analysis - Past service funding position		Discount rate sensitivity		Inflation sensitivity		Mortality sensitivity	
		(-0.1%)		(+0.1%)		(use 1.25% long-term improvement rate)	
		£000	£000	£000	£000	£000	£000
Smoothed asset value		207,681	207,681	207,681	207,681	207,681	207,681
Bulk annuity insurance buy-in		256,219	256,219	256,219	256,219	256,219	256,219
Past service liabilities							
	Actives	78,365	79,737	79,772	77,573		
	Deferred pensioners	65,294	66,409	66,427	64,645		
	Pensioners	424,938	430,093	429,014	420,095		
	Total	568,597	576,239	575,214	562,313		
Surplus (Deficit)		(104,697)	(112,339)	(111,313)	(98,412)		
Funding level		82%	81%	81%	82%		

Sensitivities to the primary rate

The calculated primary rate required to fund benefits as they are earned from year to year will also be affected by the particular set of assumptions chosen. The sensitivity of the primary rate to changes in some key assumptions is shown below.

Sensitivity analysis - Primary rate		Discount rate sensitivity		Inflation sensitivity		Mortality sensitivity	
		% of payroll		(+0.1%)		(use 1.25% long-term)	
				% of payroll		% of payroll	
Total future service rate		32.0%	32.5%	32.5%	31.6%		
less Employee contribution rate		(6.9%)	(6.9%)	(6.9%)	(6.9%)		
Total primary rate		25.1%	25.6%	25.6%	24.7%		

5 Final comments

Funding Strategy Statement

The assumptions used for the valuation are documented in a revised Funding Strategy Statement agreed between the Fund Actuary and the Administering Authority.

Risks

There are many factors that affect the Fund's funding position and could lead to the Fund's funding objectives not being met within the timescales expected. Some of the key risks that could have a material impact on the Fund are:

- Employer covenant risk
- Investment risk
- Inflation risk
- Mortality risk
- Member options risk
- Legislative risk.

Sensitivity to some of these risks were set out in section 4. Please note that this is not an exhaustive list. Further information on these risks and more can be found in our initial results report and will be set out in greater detail in the Funding Strategy Statement.

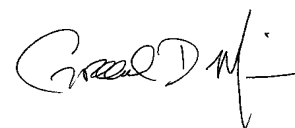
Rates and Adjustments Certificate

The contributions payable in respect of benefit accrual, expenses and any deficit contributions under each employer's recovery period have been set out in Appendix 3 in the Rates and Adjustments Certificate in accordance with Regulation 62 of the Regulations. In this certificate no allowance will be made for additional costs arising which need to be met by additional contributions by the employer such as non-ill health early retirements.

The contributions as set out in Appendix 3 in the Rates and Adjustments Certificate are set so that each employer's assets (including future contributions) are projected to be sufficient to cover the benefit payments for their members, on the assumptions set out in this report. Where there is currently a deficit for an individual employer, this is targeted in line with the Fund's Funding Strategy Statement. In addition, an allowance of £300,000 p.a. in total payable by the participating employers has been included towards administration expenses.

This document has been prepared by us as the Fund Actuary and is addressed to the Administering Authority. Contributions have been set that in our opinion meet the regulatory requirements and the funding objectives set out in the Fund's Funding Strategy Statement.

The next formal valuation is due to be carried out as at 31 March 2019 however it has been agreed with the Fund that regular monitoring of the financial position of the Fund will be undertaken during the period leading up to the next formal valuation.



Graeme Muir
Barnett Waddingham LLP

Appendix 1 Summary of membership data

A summary of the membership data used in the valuation is as follows. The membership data from the previous valuation is also shown for comparison.

	Number		Pensionable pay				Average age	
	2016	2013	Total £000		Average £		2016	2013
			2016	2013	2016	2013		
Males	412	n/a	12,168	n/a	29,533	n/a	56.1	n/a
Females	20	n/a	586	n/a	29,281	n/a	53.0	n/a
Total	432	741	12,754	17,273	29,522	23,310	55.9	54.0

	Number		Annual pensions current				Average age	
	2016	2013	Total £000		Average £		2016	2013
			2016	2013	2016	2013		
Males	676	n/a	2,977	n/a	4,404	n/a	53.3	n/a
Females	153	n/a	368	n/a	2,407	n/a	52.4	n/a
Total	829	881	3,345	2,994	4,036	3,398	53.1	51.9

	Number		Annual pensions current				Average age	
	2016	2013	Total £000		Average £		2016	2013
			2016	2013	2016	2013		
Males	3,034	n/a	19,964	n/a	6,580	n/a	71.0	n/a
Females	264	n/a	721	n/a	2,731	n/a	71.1	n/a
Dependants	553	n/a	1,628	n/a	2,944	n/a	71.4	n/a
Total	3,851	3,609	22,313	23,081	5,794	6,395	71.0	68.6

The split of membership by employer at 31 March 2016 is set out below.

	Preston Bus	West Midlands Travel (non buy-in)	West Midlands Travel (Buy-in)
Actives	0	432	0
Deferreds	16	813	0
Pensioners	119	550	3,182
Total	135	1,795	3,182

- The undecideds are made up of individuals who have left active service but not yet retired and frozen members where there is unclaimed pension attached to these members.
- The numbers relate to the number of records and so will include members in receipt of, or potentially in receipt of, more than one benefit.
- Annual pensions are funded items only and include pension increases up to and including the 2016 pension increase order.
- Pensionable Pay is actual earnings.

In the table below we have set out the number of members who are assumed to reach retirement age over the period from 1 April 2016 to 31 March 2020 as required under the Rates and Adjustment Certificate.

Members may retire for a number of reasons including reaching normal retirement age, retiring through ill health or redundancy. The amounts set out in the table below are the new retirement benefit amounts, as at the current valuation date, that are assumed to come into payment in each of the intervaluation years.

Year to	Number of members	Retirement benefits £m's
31/03/2017	117	2
31/03/2018	102	2
31/03/2019	115	3
31/03/2020	84	2

Appendix 2 Actuarial assumptions

A summary of the assumptions adopted in the valuation is set out below:

Financial assumptions	31 March 2016	31 March 2013
Discount rate - West Midlands Travel Ltd		
Pre retirement (non pensioners)	4.5% p.a. derived using returns on individual asset classes combined with an allowance for prudence	5.5% p.a. (gilts plus AOA of 2.5% p.a.)
Post retirement (non pensioners)	As above	3.5% p.a. (gilts plus AOA of 0.5% p.a.)
Post retirement (non buy-in pensioners)	As above	3.5% p.a. (gilts plus AOA of 0.5% p.a.)
Post retirement (buy-in pensioners)	Based on 13 year yield, 1.9% p.a. (smoothed)	3.0% p.a. (gilt return assumption)
Buy-in asset valuation	Based on 13 year yield, 1.9% p.a. (smoothed)	2.5% p.a.
Discount rate - Preston Bus Ltd		
Pre retirement	2.8% p.a. derived using returns on individual asset classes combined with an allowance for prudence	5.0% p.a. (gilts plus AOA of 2.0% p.a.)
Post retirement	As above	3.0% p.a. (gilts plus AOA of 0% p.a.)
Retail Price inflation (RPI)	Based on 18 year yield, 3.2% p.a. (smoothed)	3.6% p.a.
Consumer Price inflation (CPI)	2.3% p.a. (deduction of 0.9% from RPI assumption)	2.6% p.a. (RPI minus 1%)
Pension increases on GMP	Funds will pay limited increases for members that have reached SPA by 6 April 2016, with the Government providing the remainder of the inflationary increase. For members that reach SPA after this date, we have assumed that Funds will be required to pay the entire inflationary increases	Funds pay statutory limited increases for all members
Salary inflation	2.3% p.a. (in line with CPI)	2.6% p.a. (in line with CPI)

Mortality assumptions

Pre-retirement mortality – base table	Set with reference to GAD tables (as updated)	PA92 year of birth tables adjusted by 1 year to reflect the Fund’s membership profile															
Post-retirement mortality - base table	S2PA tables with a multiplier of 110% for current pensioners (both normal and ill-health) and future dependants 140% of the S2PMA tables for current male dependants and 120% of the S2DFA table for current female dependants	CMI Self-Administered Pension Schemes (SAPS) tables with scheme and member category specific adjustments															
		<table border="1"> <thead> <tr> <th>Type</th> <th>Base table</th> <th>Adjustment (M/F)</th> </tr> </thead> <tbody> <tr> <td>Normal health</td> <td>S1PA</td> <td>111%/103%</td> </tr> <tr> <td>Ill health</td> <td>S1PA</td> <td>Normal health + 3 years</td> </tr> <tr> <td>Dependants (current)</td> <td>S1PMA/S1DFA</td> <td>207%/126%</td> </tr> <tr> <td>Dependants (future)</td> <td>S1PMA/S1DFA</td> <td>113%/106%</td> </tr> </tbody> </table>	Type	Base table	Adjustment (M/F)	Normal health	S1PA	111%/103%	Ill health	S1PA	Normal health + 3 years	Dependants (current)	S1PMA/S1DFA	207%/126%	Dependants (future)	S1PMA/S1DFA	113%/106%
Type	Base table	Adjustment (M/F)															
Normal health	S1PA	111%/103%															
Ill health	S1PA	Normal health + 3 years															
Dependants (current)	S1PMA/S1DFA	207%/126%															
Dependants (future)	S1PMA/S1DFA	113%/106%															
Pre-retirement mortality - Allowance for improvements in life expectancy	2015 CMI model with a long-term rate of improvement of 1.5% p.a.	Medium cohort projections															
Post-retirement mortality - Allowance for improvements in life expectancy	2015 CMI model with a long-term rate of improvement of 1.5% p.a.	2013 CMI model with a long-term rate of improvement of 1.25% p.a.															

Other demographic assumptions

Partner age difference	Males are three years older than their spouse and females are three years younger than their spouse	Males are three years older than females												
Proportion married	85% of members have an eligible dependant at retirement or earlier death	85% of members have an eligible dependant at retirement or earlier death												
Allowance for withdrawals	Same as used by Government Actuary's Department when LGPS reforms were designed and based on analysis of incidence of death, retirement and withdrawal for Local Authority Funds	Active members are assumed to leave the Fund at the following sample rates:												
		<table border="1"> <thead> <tr> <th>Age</th> <th>Leaving p.a. (M)</th> <th>Leaving p.a. (F)</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>13.5</td> <td>14.92</td> </tr> <tr> <td>35</td> <td>3.39</td> <td>4.18</td> </tr> <tr> <td>45</td> <td>1.69</td> <td>2.59</td> </tr> </tbody> </table>	Age	Leaving p.a. (M)	Leaving p.a. (F)	25	13.5	14.92	35	3.39	4.18	45	1.69	2.59
Age	Leaving p.a. (M)	Leaving p.a. (F)												
25	13.5	14.92												
35	3.39	4.18												
45	1.69	2.59												
Promotional salary scale	Set with reference to GAD tables (as updated)	None												
Allowance for cash commutation	Members will commute pension at retirement to provide a lump sum of 50% of the additional maximum allowed under HMRC rules and this will be at a rate of £12 lump sum for £1 of pension	50% of retiring members will take maximum tax-free cash available and 50% will take the standard 3/80ths cash sum for pre April 2008 service												
Allowance for expenses	Expenses of administration are allowed for by each employer paying an explicit additional contribution. Investment expenses are met by an implicit assumption made in the derivation of the discount rate assumption	Expenses of administration are allowed for by each employer paying an explicit additional contribution. Investment expenses are met by an implicit assumption made in the derivation of the discount rate assumption												

Other demographic assumptions

Allowance for early retirements (non-ill health)

Each member retires at their weighted average "tranche retirement age" i.e. for each tranche of benefit, the earliest age they could retire with unreduced benefits plus 3 years for active members of WMTL and plus 2 years for deferred members of WMTL.

The future service rate has been calculated using the retirement assumption above plus 1 year rather than 3 years for active members.

Active members

Some members are entitled to receive their benefits (or a part of their benefits) unreduced from an age prior to the Fund's normal pension age under the "Rule of 85" provisions of the Regulations. This age will be at some point between ages 60 and 65, depending on the length of a member's pensionable service. The calculations allow for a proportion of the relevant active members to retire in normal health prior to age 65 in certain proportions as set out in the 2013 valuation report.

For post April 2008 service and service that is not subject to the "rule of 85" provisions, it is assumed that the earliest age at which unreduced benefits become an entitlement is 65, except where a member was protected status under the transitional provisions where it will be the member's protected age. For post 1 April 2014 service it was assumed that the earliest age at which members will be entitled to receive their unreduced benefits will be their State Retirement Age. Where their State Retirement Age is greater than the post 2008 assumed retirement age, early retirement factors are applied in line with the standard Scheme factors produced by the Government Actuary's Department.

Deferred members

Deferred members retire at their earliest retirement age for receiving unreduced benefits. For pre 1 April 2008 service, the retirement age will be at some point between ages 60 and 65 depending on the length of a member's pensionable service and taking into account the "Rule of 85" provisions of the Regulations. For post 1 April 2008 service the retirement age will be 65, except for those members who have protected status under the transitional provisions.

Other demographic assumptions

Allowance for early retirements (ill health)	Additional capital contributions will be paid by the employer in respect of the cost of these retirements	Additional capital contributions will be paid by the employer in respect of the cost of these retirements
Allowance for 50:50 membership	Based on members' current section	No allowance
Allowance for discretionary benefits	No allowance	No allowance

Demographic assumptions – sample rates

The following tables set out some sample rates of the demographic assumptions used in the calculations. These are the same as those used by the Government Actuary's Department (GAD) when LGPS reforms were designed and based on analysis of incidence of death retirement and withdrawal for Local Authority Funds saved here: <http://www.lgpsregs.org/index.php/dclg-publications/dclg-other>

Allowance for ill health early retirements (GAD table b6.1)

A small proportion of members are assumed to retire early due to ill health. In the table below we set out an extract of some sample rates from the decrement table used:

Age	Leaving p.a. (M)	Leaving p.a. (F)
25	0.01%	0.00%
30	0.01%	0.01%
35	0.02%	0.02%
40	0.05%	0.03%
45	0.10%	0.07%
50	0.20%	0.15%
55	0.41%	0.33%
60	0.84%	0.71%
65	1.72%	1.53%

The proportion of ill health early retirements falling into each tier category has been assumed to be as follows for both males and females:

Tier 1	Tier 2	Tier 3
75%	15%	10%

Death before retirement for all members (GAD table b8)

A small number of members are assumed to die before reaching retirement age. In the table below we set out an extract of some sample unweighted rates from the decrement table used:

Age	Males	Females
25	0.03%	0.01%
30	0.04%	0.02%
35	0.05%	0.02%
40	0.06%	0.03%
45	0.09%	0.05%
50	0.13%	0.08%
55	0.21%	0.13%
60	0.32%	0.20%
65	0.51%	0.30%

Allowance for withdrawals (GAD table b7)

This assumption is regarding active members who leave service to move to deferred member status or take a transfer out but do not yet retire. Active members are assumed to leave service at the following sample rates:

Age	Leaving p.a. (M)	Leaving p.a. (F)
25	8.10%	9.08%
30	6.38%	7.20%
35	5.02%	5.71%
40	3.95%	4.53%
45	3.11%	3.59%
50	2.44%	2.85%
55	1.92%	2.26%
60	1.51%	1.79%
65	1.19%	1.42%

Promotional salary scale (using GAD table b9)

In addition to the assumption made about annual salary increases, we have also included an allowance for a promotional salary scale which applies at each age and some sample rates are set out in the table below:

Age	Males	Females
25	1.0368	1.0165
30	1.1177	1.0526
35	1.1741	1.0820
40	1.2137	1.1033
45	1.2472	1.1040
50	1.2715	1.1043
55	1.2716	1.1044
60	1.2717	1.1045

Appendix 3 Rates and Adjustments Certificate

Regulatory background

In accordance with Regulation 62 of the Local Government Pension Scheme Regulations we have made an assessment of the contributions that should be paid into the Fund by participating employers for the period 1 April 2017 to 31 March 2020.

The method and assumptions used to calculate the contributions set out in the Rates and Adjustments certificate are detailed in the Funding Strategy Statement and our report on the actuarial valuation dated March 2017.

The primary rate of contribution as defined by Regulation 62(5) for each employer for the period 1 April 2017 to 31 March 2020 is set out in the table overleaf. The primary rate is the employer's share of the cost of benefits accruing in each of the three years beginning 1 April 2017. In addition each employer pays a secondary contribution as required under Regulation 62(7) set to pay off any funding deficit. The secondary rate combined with the primary rate results in the following minimum total contributions as set out below. This secondary rate is based on their particular circumstances and so individual adjustments are made for each employer.

Primary and secondary rate summary

The primary rate for the whole Fund is the weighted average (by payroll) of the individual employers' primary rates, and is 25.1% of payroll. As West Midlands Travel Limited is the only active member employer in the Fund, this is their primary rate.

The sum of the employers' secondary rates in each of the three years in the period 1 April 2017 to 31 March 2020 is set out in the table below. As there is only one active employer and the Fund is closed to new entrants, we have only included this sum as a total monetary amount in each year as expressing this as a percentage of payroll is inappropriate with a reducing payroll.

Secondary contributions	2017/18	2018/19	2019/20
Total monetary amounts	£7,625,000	£7,792,900	£7,639,700

West Midlands Travel Limited - Schedule to the Rates and Adjustment Certificate

Employer code	Employer name	Primary rate (% pay)	Secondary rate (% pay plus monetary adjustment)			Total contributions (% pay plus monetary adjustment)		
			2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
81	West Midlands Travel Ltd	25.1%	£7,300,000	£7,467,900	£7,639,700	25.1% plus £7,300,000	25.1% plus £7,467,900	25.1% plus £7,639,700

Notes to the contribution schedule

Employers may pay further amounts at any time and future periodic contributions, or the timing of contributions, may be adjusted on a basis approved by us as the Fund Actuary. The administering authority, with advice from us as the Fund Actuary may allow some or all of these contributions to be treated as a prepayment and offset against future certified contributions.

The certified contributions include an allowance for expenses and the expected cost of lump sum death benefits but exclude early retirement strain and augmentation costs which are payable by participating employers in addition.

Employer specific notes

The monetary amounts are usually payable in 12 monthly instalments throughout the relevant year unless agreed by the Administering Authority and an individual employer. In particular, we understand that, the Administering Authority has agreed a schedule with the employer based on the secondary rate adjustment being paid in two parts each year, half to be paid at the start of July each year and half to be paid at the start of January each year. Therefore the first payment of the secondary rate is expected to be paid at the start of July 2017.

The contributions set out in the above schedule include contributions towards a total sum of £300,000 p.a. payable across the Fund in respect of administration expenses.

The contributions have taken into consideration the support of the Group guarantee which has been extended following discussions as part of the valuation process. The contributions certified are conditional on the guarantee remaining in place for the employer relating to its participation in the Fund.

Preston Bus Limited - Schedule to the Rates and Adjustment Certificate

Employer code	Employer name	Primary rate (% pay)	Secondary rate (% pay plus monetary adjustment)			Total contributions (% pay plus monetary adjustment)		
			2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
			147	Preston Bus Limited	0.0%	£325,000	£325,000	£0

Notes to the contribution schedule

Employers may pay further amounts at any time and future periodic contributions, or the timing of contributions, may be adjusted on a basis approved by us as the Fund Actuary. The administering authority, with advice from us as the Fund Actuary may allow some or all of these contributions to be treated as a prepayment and offset against future certified contributions.

The certified contributions include an allowance for expenses and the expected cost of lump sum death benefits but exclude early retirement strain and augmentation costs which are payable by participating employers in addition.

The monetary amounts are payable in 12 monthly instalments throughout the relevant year unless agreed by the Administering Authority and an individual employer.

Employer specific notes

The contributions set out in the above schedule include contributions to the Fund towards administration expenses.

The contributions certified above are based on the Fund Actuary's and Administering Authority's analysis of the financial covenant of the employer and their reasonable affordability.