

HEALTH WEALTH CAREER

ACTUARIAL VALUATION REPORT

LONDON BOROUGH OF
WALTHAM FOREST
PENSION FUND

AS AT 31 MARCH 2016

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1

INTRODUCTION

This report is addressed to the Administering Authority of the London Borough of Waltham Forest Pension Fund (“the Administering Authority”) and is provided to meet the requirements of Regulation 62 of the Local Government Scheme Regulations 2013 (as amended) (“the Regulations”). It describes the factors considered by the Administering Authority when carrying out the actuarial valuation as at 31 March 2016 and the decisions reached as a result.

The purpose of the actuarial valuation is for the Administering Authority to determine:

- The expected cost of providing the benefits built up by members at the valuation date (the “liabilities”), and compare this against the funds held by the Fund (the “assets”).
- The contributions needed to cover the cost of the benefits that active members will build up in the future and other costs incurred in running the Fund (the ‘Primary Contribution Rate’).
- An appropriate plan for making up the shortfall if the Fund has less assets than liabilities. This plan will cover the amounts which will need to be paid (the ‘Secondary Contribution Rate’) and the timeframe over which they will be paid (‘the Recovery Period’).

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DATE

31 March 2017


This report uses various technical terms. These are explained in more detail in the explanatory boxes which appear throughout this report, and in the Glossary at Appendix I.

This report has been prepared in accordance with the version of the *Pensions Technical Actuarial Standard* current at the date this report is signed. It also complies with the relevant requirements of *Technical Actuarial Standards R: Reporting Actuarial Information*, *D: Data* and *M: Modelling*, where they apply to this report. These Standards are all issued by the Financial Reporting Council. The calculations referred to in the report use methods and assumptions appropriate for reviewing the financial position of the Fund and determining a contribution rate for the future. Mercer does not accept liability to any third party in respect of this report; nor do we accept liability to the Administering Authority if the information provided in this report is used for any purpose other than that stated. The report may be disclosed to members and others who have a statutory right to see it. It may also be disclosed to any participating employer and, if the Administering Authority and Mercer consent, it may be disclosed to other third parties.

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FUNDING STRATEGY – KEY ELEMENTS

Fundamental to the valuation results is the funding strategy adopted by the Fund. This funding strategy is set out in a specific document (the Funding Strategy Statement or FSS for short) which is one of the Administering Authority's key governance documents for the Fund. In essence, the FSS sets out an overview of the approach to be used for the actuarial valuation. Amongst other things it outlines the assumptions, both economic and demographic, to be used in calculating the value of the liabilities built up and the contributions required to correct any funding shortfall, and the contribution rate required to fund the benefits for future service. It also sets out the strategy for making good any funding shortfall, in particular how any shortfall is expected to be financed in terms of the balance between future contributions and future investment returns, and the period over which any shortfall is expected to be recovered.



The FSS is the Administering Authority's key governance document in relation to the actuarial valuation. It sets out the funding policies adopted, the actuarial assumptions used, and the timescales over which deficits will be paid off. Employers are consulted about the FSS as part of the actuarial valuation process.

The principal elements of the funding strategy adopted for this actuarial valuation are as follows:

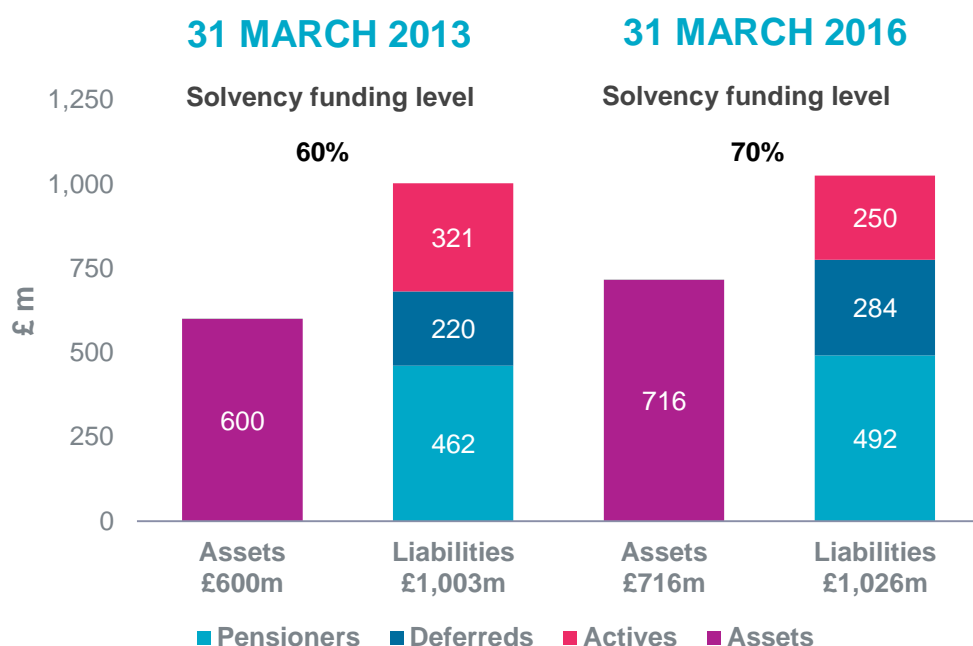
- Assumed rate of future CPI inflation – 2.2% p.a., based on the yields available on gilts and index-linked gilts of appropriate duration less an adjustment of 1% p.a. to allow for the difference between market-implied future RPI and estimated future CPI inflation.
- Real investment returns over and above CPI for past service – 2.2% p.a., based on the anticipated real returns achievable on the Fund's expected long-term investment strategy with a suitable margin for prudence.
- Real investment returns over and above CPI for future service – 2.75% p.a., based on the anticipated real returns achievable on future invested contributions.
- Future pay growth – 1% p.a. over the 4 years to April 2020, taking into account the government's policy on pay restraint in the public sector, and then 1.5% p.a. over and above CPI in the longer term.
- Baseline life expectancy based on a scheme-specific mortality study.
- Future mortality improvements based on the CMI 2015 model with a long-term improvement trend of 1.5% p.a.
- An average recovery period for making good any shortfall of approximately 20 years. The FSS sets out the circumstances in which this might vary from one employer to another.
- For certain employers, depending on covenant and as agreed with the Administering Authority, an allowance for additional investment returns during the recovery period of 0.7% p.a. over and above the investment returns used for calculating the past service liabilities.

3

KEY RESULTS OF THE FUNDING ASSESSMENT

SOLVENCY FUNDING POSITION

The table below compares the assets and liabilities of the Fund at 31 March 2016. Figures are also shown for the last valuation as at 31 March 2013 for comparison.



The liability value at 31 March 2016 shown in the table above is known as the Fund's "solvency funding target". The solvency funding target is calculated using assumptions that the Administering Authority has determined are appropriate having consulted with the actuary, and are also set out in the Administering Authority's Funding Strategy Statement (FSS).

The chart shows that **at 31 March 2016 there was a shortfall of £310m** against the Fund's solvency funding target. An alternative way of expressing the position is that the Fund's assets were sufficient to cover 70% of its liabilities – this percentage is known as the solvency funding level of the Fund.

At the previous valuation at 31 March 2013 the shortfall was £403m, equivalent to a solvency funding level of 60%. The key reasons for the changes between the two valuations are considered in Section 4.

Further details of the way in which the solvency funding target has been calculated are set out in Appendix A.

The LGPS Regulations require the contributions to be set so as to secure the Fund's solvency and long-term cost efficiency. In this context solvency means being able to meet the liabilities as and when they arise, with long-term cost efficiency meaning that contribution levels should not be set so as to give rise to additional costs at a later date. In practice, contribution levels have been set so as to target a solvency funding level of 100%, based on the funding parameters outlined in Section 2 above.

PRIMARY CONTRIBUTION RATE

The valuation looks at the normal employer contribution rate required to cover the cost of the benefits (including death benefits and expenses) that will be built up over the year after the valuation date (the “Primary Contribution Rate”). A summary of the assumptions used is provided in Appendix A.

The table below gives a breakdown of the Primary Contribution Rate at 31 March 2016 and also shows the corresponding rate at 31 March 2013 for comparison. In calculating the average Primary Contribution Rate we have not made any allowance for future members to opt for the 50:50 scheme.

Active members pay contributions to the Fund as a condition of membership in line with the rates required under the governing Regulations (see Appendix D).


PRIMARY CONTRIBUTION RATE	% of Pensionable Pay	
	31 March 2016	31 March 2013
Normal Contribution rate for retirement and death benefits	20.6	18.3
Allowance for administrative expenses	0.7	0.7
Total normal contribution rate	21.3	19.0
Average member contribution rate	6.3	6.5
Primary contribution rate	15.0	12.5

** In line with updated CIPFA guidance, the 2016 Primary Contribution Rate is the weighted average of the individual employer Primary Contribution Rates as derived based on their individual circumstances (e.g. whether or not they are closed to new entrants).*


CORRECTING THE SHORTFALL – SECONDARY CONTRIBUTION RATE

The funding objective as set out in the FSS is to achieve and maintain a solvency funding level of 100% of liabilities (the solvency funding target). In line with the FSS, where a shortfall exists at the effective date of the valuation a deficit recovery plan will be put in place which requires additional contributions to correct the shortfall (or contribution reductions to refund any surplus).

The FSS sets out the process for determining the recovery plan in respect of each employer. At this actuarial valuation the average deficit recovery period adopted is approximately 20 years, and the total initial recovery payment (the “Secondary rate” for 2017/18) is approximately £13.3m per annum in £ terms (which also includes allowance for some employers to phase in any increases and to prepay contributions).



The “Primary rate” of the employers’ contribution is the contribution rate required to meet the cost of the future accrual of benefits including ancillary, death in service and ill health benefits together with administration costs.



The “Secondary rate” of the employers’ contribution is an adjustment to the Primary rate to reflect any past service deficit or surplus, to arrive at the rate the employers are required to pay.

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EXPERIENCE SINCE LAST VALUATION

SUMMARY OF KEY INTER-VALUATION EXPERIENCE

The last actuarial valuation was carried out with an effective date of 31 March 2013. With effect from 1 April 2014 the scheme's benefit structure changed from a Final Salary Scheme to a Career Average Revalued Earnings (CARE) Scheme, and the 2013 actuarial valuation took these changes into account.

The average Pensionable Salary increase for the Fund members who were in service for the whole of the inter-valuation period was % per annum.

Pensions in payment (in excess of Guaranteed Minimum Pensions (GMPs)) were increased as guaranteed under the Fund as follows:

- April 2014 2.7%
- April 2015 1.2%
- April 2016 0%

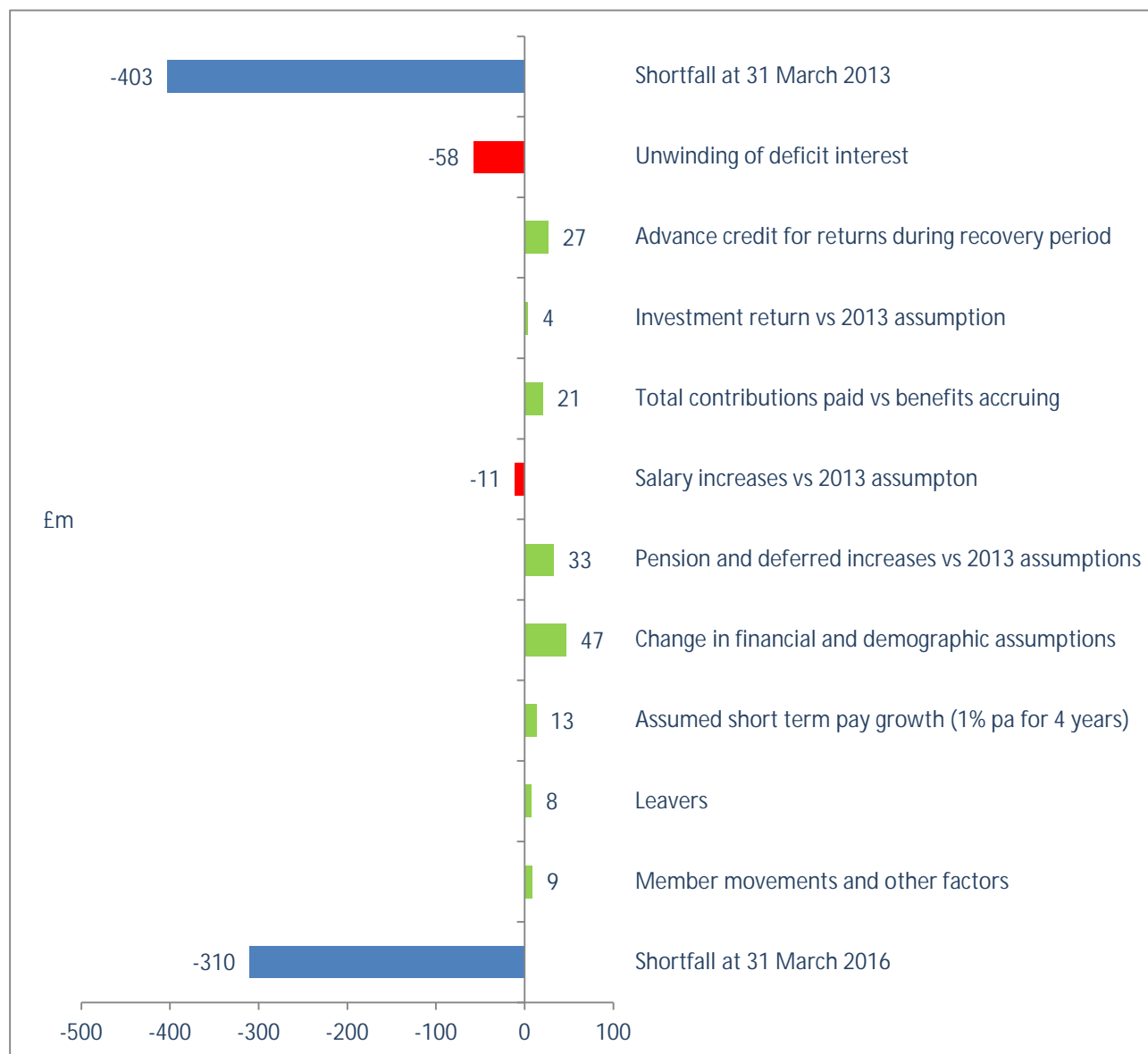
Over the intervaluation period, benefit inflation has averaged 1.3% p.a. Over the three years to 31 March 2016 the investment return on the Fund's assets has averaged 6.5% per annum, meaning that the average real return has been about 5.1% p.a.



The outcomes from the valuation are determined both by the assumptions adopted for the future, and the Fund's historic experience relative to assumptions made in the past. In this section we consider the effect of the Fund's experience over the last three years.

REASONS FOR THE CHANGE IN FUNDING POSITION SINCE THE LAST ACTUARIAL VALUATION

The shortfall at the last valuation date was £403m. The chart below sets out the main reasons for the change in the shortfall between 31 March 2013 and 31 March 2016.



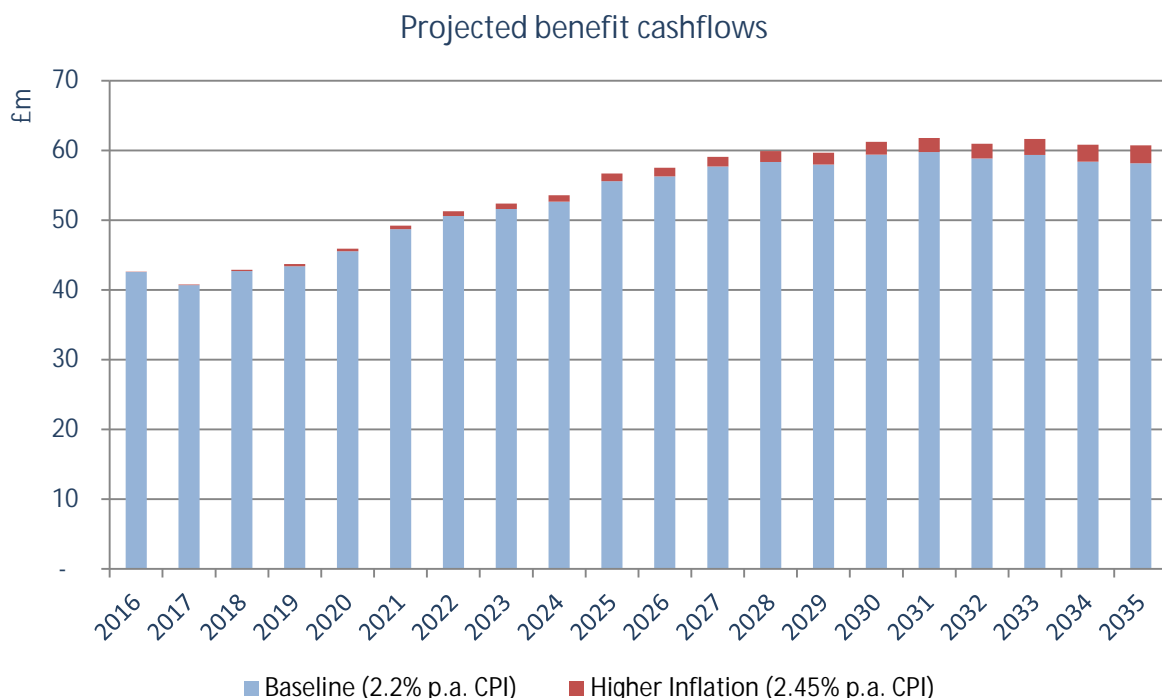
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CASHFLOWS, RISKS AND ALTERNATIVE FUNDING POSITIONS

BENEFIT CASHFLOWS

The projected benefit cashflows which result from applying the past service assumptions as set out in Section 2 are shown in the chart below. The additional red elements set out how those projected benefit cashflows would change if we were to assume inflation of 0.25% p.a. higher than the assumption of 2.2% p.a. used for the actuarial valuation. Over the 20 years following the valuation date, the extra benefit payments which would result from the extra 0.25% p.a. inflation assumption are projected to be £24m.

The actuarial valuation process is principally concerned with projecting all the benefit cashflows into the future, and then converting them into present day values by discounting them to allow for assumed future investment returns. The chart shows those projected cashflows, and also illustrates how sensitive they are to the future inflation assumption.



PROJECTED FUNDING POSITION AT NEXT ACTUARIAL VALUATION

As part of this valuation, the Administering Authority has set an average recovery plan to pay off the shortfall of approximately 20 years. The next actuarial valuation will take place with an effective date of 31 March 2019. If experience up to that date is in line with the assumptions made for this current actuarial valuation and contributions are paid at the agreed rates or amounts, the shortfall at 31 March 2019 would be £294m, equivalent to a funding level of 74%.

MATERIAL RISKS FACED BY THE FUND

The Fund is subject to some potentially material risks that are, to an extent, outside the Administering Authority's control, but could affect the funding level. Any material worsening of the funding level will mean more contributions are needed (either at an increased rate or at the same rate over a longer period) to be able to provide the benefits built up in the Fund – unless experience acts in other ways to improve the funding level. Examples of such risks, and how the Administering Authority manages them, are:

- If an Employer becomes unable to pay contributions or to make good deficits in the future, the Fund's assets will be lower than expected and the funding level will be worse than expected. The Administering Authority regularly monitors the financial strength of the Employers so that actions can be taken to mitigate (but not fully remove) the risk.
- If future investment returns on assets are lower than assumed in the valuation, the Fund's assets will be lower, and the funding level worse, than expected. The Administering Authority has a process in place to monitor investment performance quarterly, and it reviews the Fund's investment strategy alongside each actuarial valuation.
- If improvements in life expectancy are greater than assumed, the cost of benefits will increase because members are living longer than expected. This will mean the funding level will be worse than expected. The Administering Authority regularly reviews the Fund's experience and ensures that the assumptions it makes about members' life expectancy take the most recent information available into account.
- If members make decisions about their options which increase the Fund's liabilities, the funding level will be worse than expected. An example would be if members commute less possible pension for cash, than is being assumed. The Administering Authority reviews the Fund's experience at each valuation to ensure that their treatment of member options remains appropriate.

SENSITIVITY OF FUNDING POSITION TO CHANGES IN KEY ASSUMPTIONS

The value placed on the Fund's liabilities is critically dependent on the assumptions used to carry out the calculations. If future experience differs from the assumptions the Administering Authority has used after consulting with the Employers, then the projected future funding level will be different from the level described above.

To illustrate how sensitive the funding level is to experience being different from assumed, the table below shows how the valuation results at 31 March 2016 would have differed given small changes in the key assumptions.

ASSUMPTION CHANGE	CHANGE IN SHORTFALL AT 31 MARCH 2016 (£M)	RESULTANT SHORTFALL AT 31 MARCH 2016 (£M)
Original solvency funding position	-	310
Real investment return 0.25% lower than assumed	41	351
Pensionable Salary growth 0.25% higher than assumed	5	315
Members live one year longer than assumed	25	335
Growth assets fall by 25%	146	456

MINIMUM RISK FUNDING POSITION

In assessing the value of the Fund's liabilities (the solvency funding target), allowance has been made for investment returns as described in Appendix A, taking into account the investment strategy adopted by the Fund, as set out in the Fund's Investment Strategy Statement (ISS).

It is not possible to construct a portfolio of investments which produces a stream of income exactly matching the expected liability outgo. However, it is possible to construct a portfolio which closely matches the liabilities and represents the minimum risk investment position. Such a portfolio would consist mainly of a mixture of long-term index-linked and fixed interest gilts. Investment of the Fund's assets in line with the minimum risk portfolio would minimise fluctuations in the Fund's ongoing funding level between successive actuarial valuations.

If, at the valuation date, the Fund had been invested in this portfolio, then in carrying out the valuation it would not be appropriate to make any allowance for out-performance of the Fund investments. In this event the value of the liabilities would have increased substantially, to £1,507m, and the funding level would have reduced correspondingly to 48%. If the actuarial assumptions are borne out in practice, the projected funding level on this basis at the next actuarial valuation would be slightly lower at 47%.

The value of the liabilities on the solvency funding target assumptions was £1,026m, which is £481m less than the value on the minimum risk basis. Over the lifetime of the Fund, the funding plan is therefore making allowance for future investment returns of £481m over and above those available from the minimum risk investment portfolio.

APPENDICES

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A

ASSUMPTIONS

HOW THE BENEFITS ARE VALUED

In order to calculate the liabilities, there is a need to make assumptions about various factors that affect the cost of the benefits provided by the Fund – for example, how long members will live, or the future level of inflation. The table below explains the key assumptions being made in the valuation.

ASSUMPTION	WHY IT IS IMPORTANT AND HOW IT IMPACTS ON THE LIABILITIES
Discount rate	<p>The majority of benefits in a pension fund are paid many years in the future. In the period before the benefits are paid, the Administering Authority invests the funds held by the Fund with the aim of achieving a return on those funds. When calculating how much money is needed now to make these benefit payments, it is appropriate to make allowance for the investment return that is expected to be earned on these funds. This is known as “discounting”.</p> <p>The higher the investment return achieved, the less money needs to be set aside now to pay for benefits. The calculation reflects this by placing a lower value on the liabilities if the “discount rate” is higher.</p>
Inflation	<p>Pensions in payment increase in line with price inflation. Salary growth is also normally linked to price inflation in the long term. A higher inflation assumption will, all other things being equal, lead to a higher value being placed on the liabilities.</p>
Pensionable Salary growth	<p>Benefits earned prior to 1 April 2014 for active members are based on their salaries immediately before retirement, so it is necessary to make an assumption about future Pensionable Salary growth. The higher this assumption, the higher the value placed on the liabilities for active members.</p>
Life expectancy	<p>Pensions are paid while the member (and potentially their spouse or partner) is alive. The longer people live, the greater is the cost of providing a pension. Allowing for longer life expectancy therefore increases the liabilities.</p>

The liabilities of the Fund are calculated by projecting forward all of the future benefit cash flows and discounting them back to the effective date of the valuation, using these assumptions. For example, the liability for a single pensioner is calculated by estimating the amount of each pension payment they will receive in the future, multiplying by the probability that the member will still be alive by the date of each payment, and then discounting each payment back to the effective date of the valuation; and then summing up all of these discounted amounts. The liabilities for the whole Fund are calculated by summing the liabilities for each of the individual members.

FINANCIAL ASSUMPTIONS USED TO CALCULATE THE SOLVENCY FUNDING TARGET

The table below summarises the key financial assumptions used in the calculation of the solvency funding target and those used for the 31 March 2013 actuarial valuation.

FINANCIAL ASSUMPTIONS	31 March 2016	31 March 2013
Discount rate	4.4% p.a.	4.6% p.a.
Price inflation (CPI)	2.2% p.a.	2.6% p.a.
Salary increases (short term)	1% p.a. for 4 years	1% p.a. for 3 years
Salary increases (medium term)	n/a	2.6% p.a. for 3 years
Salary increases (long term)	3.7% p.a.	4.1% p.a.
Pension increases in payment:	2.2% p.a.	2.6% p.a.

DEMOGRAPHIC ASSUMPTIONS USED

Post-retirement Mortality

Mortality (or life expectancy) tables are typically made up of three elements: a baseline table (equivalent to the expected current mortality), an allowance for future improvements, and a margin for prudence. Very few pension funds are large enough for them to be able to determine a bespoke set of baseline assumptions based purely on the fund's own membership experience. Typically, the life expectancy assumptions are set by benchmarking a fund's membership profile and mortality experience against larger external datasets. For this actuarial valuation, we have benchmarked the Fund's membership profile and experience against the "S2 tables" published by the CMI. We have applied weightings and age ratings as appropriate to adjust the standard tables so as to arrive at assumptions which are appropriate for the Fund. We have generally used the S2PA tables, other than for female dependants where the S2DA tables have been used. At the 2013 actuarial valuation the S1PA tables were used (S1DA tables for female dependants).

There are two separate decisions on mortality assumptions:

- The baseline table for the current rates of mortality; and
- The allowance for future improvements.

Baseline
Life expectancy today

Measured by LGPS-wide and fund-specific

Future Changes
How things may change

More uncertain and subjective

Prudence
Margin for uncertainty

The weightings and age ratings applied to the above are set out in the table below.

Current Status	Retirement Type	2016 weighting/rating	2013 weighting/rating
Annuitant	Normal Health	102% males, 91% females	97% males, 97% females
	Dependant	132% males, 107% females	153% males, 110% females
	Ill Health	102% males, 91% females with an age rating of +3 years in each case	97% males, 97% females with an age rating of +3 years in each case
Active	Normal Health	102% males, 91% females	97% males, 97% females
	Ill Health	102% males, 91% females with an age rating of +4 years in each case	97% males, 97% females with an age rating of +4 years in each case
Deferred	All	102% males, 91% females	97% males, 97% females
All	Future Dependant	114% males, 105% females	113% males, 101% females

A weighting applied to an actuarial table has the effect of increasing or reducing the chance of survival at each age, which increases or reduces the corresponding life expectancy. Similarly, an age rating applied to an actuarial table has the effect of assuming that beneficiaries have a life expectancy equal to those older (or younger) than their actual age.

Future improvements are assumed to follow the CMI 2015 model with a 1.5% p.a. long-term improvements trend. At the 2013 actuarial valuation the CMI 2012 model with a 1.5% p.a. long-term improvements trend was used.

The mortality assumptions used for the 31 March 2016 valuation result in the following life expectancies.

	Years
Life expectancy for a male aged 65 now	22.3
Life expectancy at 65 for a male aged 45 now	24.5
Life expectancy for a female aged 65 now	25.3
Life expectancy at 65 for a female aged 45 now	27.6


Pre-retirement Mortality

The following mortality tables (together with any appropriate weightings and age ratings) have been adopted for mortality rates in the period up to retirement.

	31 March 2016	31 March 2013
Base Table	DxL08 tables with adjustments of 80% (male) 50% (female) to reflect the Fund's membership profile	AC00 tables with adjustments of 73% (male) and 60% (female) to reflect the Fund's membership profile
Allowance for Future Improvements	CMI_2015 [1.5%]	N/A

Commutation

It has been assumed that, on average, 50% of retiring members will take the maximum tax-free cash available at retirement and 50% will take a 3/80ths cash sum (the standard for pre April 2008 service). Members have the option to commute part of their pension at retirement in return for a lump sum at a rate of £12 cash for each £1 per annum of pension given up.




Retirement lump sums are less costly for the Fund to provide than the alternative pension, as members receive only £12 of each £1 p.a. of pension given up. If members take the cash sum option at a higher rate than has been assumed then this will normally lead to an improvement in the funding level.

Early retirement

For those members who are entitled to receive their accrued benefits (or part of those benefits) prior to the Fund's normal pension age, a proportion of the active membership is assumed to retire in normal health prior to age 65, as set out below:

	% retiring per annum	
Age	Males	Females
60	10	20
61	8	15
62	8	15
63	8	15
64	8	15
65	100	100




If members take early retirement to a greater extent than has been assumed then this will typically lead to a worsening of the funding level. This is because many members are able to take substantial parts of their benefits from age 60 without them being reduced for early payment.

The appropriate early retirement factors applied to the relevant tranche of benefits are in line with GAD guidance.

Ill health retirement

For certain employers, a small proportion of the active membership has been assumed to retire owing to ill health. As an example of the rates assumed, the following is an extract from the decrement table used:

	% retiring per annum	
Age	Males	Females
35	0.03	0.02
45	0.07	0.07
55	0.31	0.27



The level of ill-health retirement benefit provided for a member falls into one of three "tiers", depending on whether and when the member might be expected to resume gainful employment. Tier 1, for example, is on the basis that the member is unlikely to be able to do so before Normal Pension Age. Full details are set out in the LGPS Regulations.


The proportion of ill health early retirements falling into each tier category, split by males and females, has been assumed to be as set out below:

	Tier 1	Tier 2	Tier 3
Male and Female	75%	12.5%	12.5%

Withdrawal

This assumption relates to those members who leave the scheme with an entitlement to a deferred pension or transfer value. It has been assumed that active members will leave the Scheme at the following sample rates:

	% leaving per annum	
Age	Males	Females
25	20.25	22.38
35	5.09	6.27
45	2.54	3.89




In relation to pre 2014 benefits, deferred benefits tend to be less costly for the Fund to provide than if the member had remained in the Fund until retirement. If the number of members leaving the Fund is greater than expected then this will typically lead to a slight improvement in the funding level.

Partners' and Dependants' Proportions

It has been assumed that the proportions of members below will on death give rise to a dependant's pension (spouse's and partner's), and that spouses/partners of female (male) members are three years older (younger), on average than the member.

	% spouse/partner	
Age	Males	Females
25	43	46
35	69	60
45	72	60
55	74	60
65	76	55



If more members than assumed have partners then this will lead to an increase in the number of dependants pensions coming into payment over and above that expected. This would lead to a worsening of the funding level.

ASSUMPTIONS USED TO CALCULATE THE PRIMARY CONTRIBUTION RATE

The cost of future accrual (the Primary Contribution Rate) has been calculated using the same actuarial assumptions as used to calculate the solvency funding target and recovery plan as set out above except that the financial assumptions adopted are as described below.

The financial assumptions for assessing the future service contribution rate should take account of the fact that contributions will be invested in market conditions applying at future dates, which are unknown at the effective date of the valuation, and which are not directly linked to market conditions at the valuation date.

The financial assumptions in relation to future service (i.e. the Primary Contribution Rate) are not specifically linked to investment conditions as at the valuation date itself, and are based on an overall assumed real return (i.e. return in excess of price inflation) of 2.75% per annum. This represents a reduction of 0.25% per annum compared to the 2013 valuation, which increases the estimated cost of providing LGPS benefits. With a long term average assumption for price inflation of 2.2% per annum, this gives rise to an overall discount rate of 4.95% p.a.

ASSUMPTIONS USED TO CALCULATE THE CONTRIBUTIONS PAYABLE UNDER THE RECOVERY PLAN

Investment return on existing assets and future contributions

For certain employers, when determining contributions payable to recover the shortfall, an overall additional return of 0.7% per annum has been built into the recovery plan assumptions, reflecting the underlying investment strategy of the scheme and, in particular, including the assets of the scheme that underlie the pensioner as well as the non-pensioner liabilities.

This is equivalent to an assumed real investment returns over and above CPI of 2.9% p.a.

The investment return assumed for the contributions under the recovery plan is taken to apply throughout the recovery period. As a result, any change in investment strategy which would act to reduce the expected future investment returns could invalidate these assumptions and therefore the funding strategy.

The above variation to assumptions in relation to the recovery plan can only be applied for those employers which the Administering Authority deems to be of sufficiently high covenant to support the anticipation of investment returns, based on the current investment strategy, over the entire duration of the recovery period. No such variation in the assumptions will apply in any case to any employer which does not have a funding shortfall at the valuation (and therefore for which no recovery plan is applicable).

B

SUMMARY MEMBERSHIP DATA

The membership data is summarised in the table, with figures at the previous valuation shown for comparison.

Data in relation to members of the Fund were supplied by the Fund's administrator on behalf of the Administering Authority. For a substantial proportion of the deferred membership who were originally recorded as active members but were subsequently identified as being historical leavers, we have had to estimate deferred benefits. To the extent that the actual position differs, there will be an effect at the next valuation on the liabilities and contribution rate outcomes.

With regard to the rest of the data, the accuracy of the data provided has been relied upon. While reasonableness checks on the data have been carried out, they do not guarantee the completeness or the accuracy of the data. Consequently Mercer does not accept any liability in respect of its advice where it has relied on data that is incomplete or inaccurate.

	31 March 2016	31 March 2013
Active members		
Number	6,022	6,298
Total Pensionable Salaries (£000s p.a.)	113,104	112,741
Average Pensionable Salary (£ p.a.)	18,782	17,901
Average age (pension weighted)	51.3	51.0

Deferred pensioners		
Number	8,036	4,245
Total deferred pensions revalued to valuation date (£000s p.a.)	14,936	10,946
Average deferred pension (£ p.a.)	1,859	2,579
Average age (pension weighted)	52.1	51.2

Pensioners		
Number	6,919	6,344
Total pensions payable (£000s p.a.)	32,747	29,195
Average pension (£ p.a.)	4,733	4,602
Average age (pension weighted)	71.4	70.0

The above pensioner figures include current dependant pensioners.

C

ASSETS

The market value of the Fund's assets was £716,495,000 on the valuation date.

The Administering Authority's investment strategy is to proportion the Fund's assets by asset class as shown in the table below. The actual distribution of assets will vary over time due to changes in financial markets. The table also shows the distribution of assets at the valuation date.

	INVESTMENT STRATEGY	ACTUAL MARKET VALUE OF ASSETS AT 31 MARCH 2016	
	%	£000s	%
UK equities	35.4%	307,893	43.0%
Overseas equities	23.6%	174,773	24.4%
Hedge funds	5.0%	13,569	1.9%
Infrastructure	10.0%	48,012	6.7%
Property	8.0%	55,442	7.7%
Cash	0.0%	22,101	3.1%
Current assets/liabilities	0.0%	(16,888)	(2.4%)
Global Fixed Interest	15.0%	109,337	15.3%
Other Alternative Opportunities	3.0%	2,256	0.3%
Total	100.0%	716,495	100.0%

The Administering Authority also holds additional voluntary contributions (AVCs) which are separately invested. These assets have been excluded from the market value shown as they exactly match the value of the benefits they cover.

The details of the assets at the valuation date and the financial transactions during the inter-valuation period have been obtained from the audited accounts for the Fund.

D

SCHEME BENEFITS

The benefits valued within our calculations are those in force at the effective date of the valuation. Full details of these can be found in the Local Government Pension Scheme Regulations 2013 (as amended):

The Local Government Pension Scheme Regulations 2013
(<http://www.legislation.gov.uk/ukxi/2013/2356/contents/made>)

The Local Government Pension Scheme (Transitional Provisions, Savings and Amendment) Regulations 2014 (<http://www.legislation.gov.uk/ukxi/2014/525/contents/made>)

The direction by the Treasury dated 5 April 2016 under Section 59A of the Social Security Pensions Act 1975 (<http://www.lgpsregs.org/images/OtherGuidance/HMTDirectionApr2016.pdf>)

We have made no allowance for other changes which may be introduced in the future. The Fund is also responsible for paying and, where appropriate, recharging to employers the benefits arising from the award of compensatory added years (CAY) of service on premature retirement. Unless these CAY benefits have been converted into “funded” benefits, they are normally recharged to the relevant employer (together with associated pension increases), and so are excluded from the valuation.

The benefits that will emerge from money purchase AVCs paid by members, and SCAVCs paid by employers, and the corresponding invested assets in respect of these AVCs and SCAVCs, have been excluded from the valuation.

UK and European law requires pension schemes to provide equal benefits to men and women in respect of service after 17 May 1990 (the date of the “Barber” judgement) and this includes providing equal benefits accrued from that date to reflect the differences in GMPs. There is no consensus or legislative guidance as to what adjustments have to be made to scheme benefits to correct these inequalities for ongoing schemes (i.e. for schemes other than those which are in the Pension Protection Fund). The valuation makes no allowance for removal of these inequalities. It is consequently possible that additional funding will be required for equalisation once the law has been clarified. It is recommended that the Administering Authority seek further professional advice if it is concerned about this issue.



SUMMARY OF INCOME AND EXPENDITURE

INCOME	YEAR ENDING 31 MARCH			Total £000s
	2014 £000s	2015 £000s	2016 £000s	
Fund at beginning of year	599,787	661,016	742,177	599,787
Contributions to Fund:				
Employees	6,860	7,194	7,232	21,286
Employers	30,367	32,385	32,009	94,761
Transfer Values received	3,404	1,457	1,675	6,536
Investment income	9,399	9,897	11,264	30,560
Change in market value of investments	58,531	77,316	(25,920)	109,927

EXPENDITURE	YEAR ENDING 31 MARCH			Total £000s
	2014 £000s	2015 £000s	2016 £000s	
Pensions for members/ spouses/partners/dependants	30,208	31,701	32,217	94,126
Retiring allowances and death gratuities	6,269	6,151	6,163	12,420
Withdrawals	4	16	64	84
Transfer Values paid	2,354	1,338	4,355	8,047
Investment expenses	7,480	6,972	8,006	22,458
Administration expenses	1,017	910	1,137	3,064
Fund at end of year	661,016	742,177	716,495	716,495

The details of the assets at the valuation date and the financial transactions during the inter-valuation period have been obtained from the audited accounts for the Fund.

F

ANALYSIS OF MEMBERSHIP EXPERIENCE

The analysis below compares the actual experience over the 3 year period with the assumptions used for the 2016 valuation.

	ACTUAL	EXPECTED	%
Withdrawals	788	857	92
Pensioner Deaths (lives)	2,061	1,814	114
Pensioner Deaths (£000 p.a. of pension)	431	550	78

Note that actual withdrawals can include members moving to another LGPS Fund, bulk transfers and also transfers under the special transfer club terms.



RATES AND ADJUSTMENTS CERTIFICATE ISSUED IN ACCORDANCE WITH REGULATION 62

NAME OF FUND

London Borough of Waltham Forest Pension Fund

PRIMARY CONTRIBUTION RATE

I hereby certify that, in my opinion, the primary rate of the employers' contribution for the whole Fund for each of the three years beginning 1 April 2017 is 15.0% of pensionable pay.

The primary rate of contribution for each employer for the three year period beginning 1 April 2017 is set out in the attached schedule.

SECONDARY CONTRIBUTION RATE

I hereby certify that, in my opinion, the secondary rate of the employer's contribution for the whole Fund for each of the three years beginning 1 April 2017 is as follows:

2017/18	£8.1 million plus 4.6% of pensionable pay
2018/19	£8.0 million plus 4.6% of pensionable pay
2019/20	£8.0 million plus 4.6% of pensionable pay

The secondary rate of contribution for each employer for each of the three years beginning 1 April 2017 is set out in the attached schedule.

CONTRIBUTION AMOUNTS PAYABLE

The total contribution payable for each employer is the total of the primary and secondary rates as detailed in the attached schedule. Contributions will be paid monthly in arrears with each payment normally being due by the 19th of the following month (or the 22nd if paid electronically) unless otherwise noted in the schedule.

FURTHER ADJUSTMENTS

A further individual adjustment shall be applied in respect of each non-ill health early retirement occurring in the period of three years covered by this certificate (and for certain employers an individual adjustment shall also be applied for ill-health retirements). This further individual adjustment will be calculated in accordance with methods agreed from time to time between the Fund's Actuary and the Administering Authority.

The contributions set out in the attached schedule represent the minimum contribution which may be paid by each employer in total over the 3 years covered by the certificate. Additional contributions or a different pattern of contributions may be paid if requested by the employer concerned at the sole discretion of the Administering Authority as agreed with the Actuary. The total contributions payable by each employer will be subject to a minimum of zero.

The individual employer contributions may be varied as agreed by the Actuary and Administering Authority to reflect any changes in contribution requirements as a result of any benefit costs being

insured with a third party or parties including where the third party or parties participate in the Fund.

In cases where an element of an existing Scheme employer's deficit is transferred to a new employer on its inception, the Scheme employer's deficit recovery contributions, as shown on the schedule to this Certificate in Appendix H, may be reallocated between the Scheme employer and the new employer to reflect this, on advice of the Actuary and as agreed with the Administering Authority so that the total payments remain the same overall.

The Administering Authority and employer with advice from the Fund's Actuary can agree that contributions payable under this certificate can be sourced under an alternative financing arrangement which provides the Fund with equivalent cash contributions.

REGULATION 62(8)

For all employers, no allowance for non-ill health early retirements has been made in determining the results of the valuation, on the basis that the costs arising will be met by additional contributions. For some employers, (as shown on the schedule to this Certificate in Appendix H) an allowance for ill health retirements has been included in the employer's contribution rate, on the basis of the method and assumptions set out in the report. For those employers without an allowance for ill health retirements, the costs associated with such retirements will also be met by additional contributions.

Signature:



Signature:



Name:

Ian Kirk

Name:

Helen Pryor

Qualification:

Fellow of the Institute
and Faculty of Actuaries

Qualification:

Fellow of the Institute
and Faculty of Actuaries

Date of signing:

31 March 2017



SCHEDULE TO THE RATES AND ADJUSTMENTS CERTIFICATE DATED 31 MARCH 2017

Employer (Number)	Notes	Primary rate 2017/18 to 2019/20	Secondary rates			Total Contribution rates		
			2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
Major Scheme Employer								
LB Waltham Forest (107)	1	14.7%	£7,415,500	£7,365,900	£7,316,500	14.7% plus £7,415,500	14.7% plus £7,365,900	14.7% plus £7,316,500
Other Scheme Employers								
Highams Park School (347)		14.2%	£44,900	£46,600	£48,300	14.2% plus £44,900	14.2% plus £46,600	14.2% plus £48,300
Hillyfield Academy (424)		13.4%	£24,300	£25,200	£26,100	13.4% plus £24,300	13.4% plus £25,200	13.4% plus £26,100
Leyton Sixth Form College (362)		12.5%	£36,100	£37,400	£38,800	12.5% plus £36,100	12.5% plus £37,400	12.5% plus £38,800
Roger Ascham (382)		15.2%	£13,100	£13,600	£14,100	15.2% plus £13,100	15.2% plus £13,600	15.2% plus £14,100
Sir George Monoux College (339)	2	13.0%	£50,400	£50,100	£49,700	13.0% plus £50,400	13.0% plus £50,100	13.0% plus £49,700

Employer (Number)	Notes	Primary rate 2017/18 to 2019/20	Secondary rates			Total Contribution rates		
			2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
Waltham Forest College (322)		14.9%	£448,300	£464,900	£482,100	14.9% plus £448,300	14.9% plus £464,900	14.9% plus £482,100
Walthamstow Academy (301)		11.4%	£4,700	£4,900	£5,100	11.4% plus £4,700	11.4% plus £4,900	11.4% plus £5,100
Walthamstow Primary Academy (443)		11.4%	Nil	Nil	Nil	11.4%	11.4%	11.4%
Yardley Academy (410)		16.5%	£21,900	£22,700	£23,500	16.5% plus £21,900	16.5% plus £22,700	16.5% plus £23,500
Admitted Bodies								
AMEY (436)		22.0%	Nil	Nil	Nil	22.0%	22.0%	22.0%
Atlas Cleaning (TBC)	5	15.2%	Nil	Nil	Nil	15.2%	15.2%	15.2%
Community Transport Plus 2 (327)		21.7%	(£9,000)	(£9,300)	(£9,600)	21.7% less £9,000	21.7% less £9,300	21.7% less £9,600
Family Mosaic (337)		16.8%	(£2,900)	(£3,000)	(£3,100)	16.8% less £2,900	16.8% less £3,000	16.8% less £3,100
JB Riney (430)		20.5%	-13.0%	-13.0%	-13.0%	7.5%	7.5%	7.5%
Kier (May Gurney) (370)		15.6%	(£22,700)	(£23,500)	(£24,400)	15.6% less £22,700	15.6% less £23,500	15.6% less £24,400
Kier Facilities (356)		20.6%	(£400)	(£400)	(£400)	20.6% less £400	20.6% less £400	20.6% less £400

Employer (Number)	Notes	Primary rate 2017/18 to 2019/20	Secondary rates			Total Contribution rates		
			2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
Kier Waste (357)		19.9%	(£29,500)	(£30,600)	(£31,700)	19.9% less £29,500	19.9% less £30,600	19.9% less £31,700
London Quadrant (364)		16.7%	£9,800	£10,200	£10,600	16.7% plus £9,800	16.7% plus £10,200	16.7% plus £10,600
Orient Regeneration Trust Ltd (376)		19.9%	£78,300	£81,200	£84,200	19.9% plus £78,300	19.9% plus £81,200	19.9% plus £84,200
Lloyds Park (TBC)	5	17.4%	Nil	Nil	Nil	17.4%	17.4%	17.4%
Urbaser (397)		18.9%	(£13,500)	(£14,000)	(£14,500)	18.9% less £13,500	18.9% less £14,000	18.9% less £14,500
Pooled Group								
Schools Group (and Academies) (999)	4	15.3%	12.8%	12.8%	12.8%	28.1%	28.1%	28.1%

The following employers exited the Fund after 31 March 2016 and a termination assessment will be carried out in due course, with any additional contributions due to the Fund being notified to the employers separately.

Employer
Harrison Catering (Frederick Bremer)
Caterlink (Mayville Academy)

Notes

1. Cash payments in respect of £ lump sums are payable by 30 April 2017. These amounts have been reduced to reflect the early payment. This employer has also agreed with the Administering Authority to prepay % based contributions (including employee contributions) to the Fund prior to 30 April 2017 based on the reductions set out in note 3 below.
2. Cash payments in respect of £ lump sums were paid into the Fund prior to 31 March 2017. These amounts have been reduced to reflect the early payment.
3. With the agreement of the Administering Authority employers may also opt to pay any other element of their employer contributions early, with either all three years being paid in April 2017 or payment being made in the April of the year in question. The cash amounts payable will be reduced in return for this early payment as follows:
 - Payments made in the April of the certified year will be reduced by 2.1% (i.e. the above amounts will be multiplied by 0.979)
 - 2018/19 payments made in April 2017 will be reduced by 6.3% (i.e. the above amounts will be multiplied by 0.937)
 - 2019/20 payments made in April 2017 will be reduced by 10.2% (i.e. the above amounts will be multiplied by 0.898)

Where % contributions are being paid in advance, for these cases the employer will need to estimate in advance the pensionable pay for the entire period and a balancing adjustment to reflect the actual pensionable pay over the period would be made at the end of the period (no later than 19th April or 22nd April as appropriate following the year end).

4. The Primary Contribution rate includes an allowance for ill-health retirements. A further individual adjustment therefore will not apply in respect of each ill health early retirement occurring in the period of the Rates and Adjustments Certificate.
5. These employers were admitted to the Fund after 31 March 2016.
6. Where there is a £ deduction to the primary rate due to an employer being in surplus, the total annual contributions payable by each employer will be subject to a minimum of zero.

GLOSSARY

Actuarial Valuation: an investigation by an actuary into the ability of the Fund to meet its liabilities. For the LGPS the Fund Actuary will assess the funding level of each participating employer and agree contribution rates with the administering authority to fund the cost of new benefits and make good any existing deficits as set out in the separate Funding Strategy Statement.

Best Estimate Assumption: an assumption where the outcome has a 50/50 chance of being achieved.

Bonds: loans made to an issuer (often a government or a company) which undertakes to repay the loan at an agreed later date. The term refers generically to corporate bonds or government bonds (gilts).

Career Average Revalued Earnings Scheme (CARE): with effect from 1 April 2014, benefits accrued by members in the LGPS take the form of CARE benefits. Every year members will accrue a pension benefit equivalent to 1/49th of their pensionable pay in that year. Each annual pension accrued receives inflationary increases (in line with the annual change in the Consumer Prices Index) over the period to retirement.

Corporate Bond Basis: an approach where the discount rate used to assess the liabilities is determined based on the market yields of high quality corporate bond investments (usually at least AA rated) based on the appropriate duration of the liabilities being assessed. This is usually adopted when an employer is exiting the Fund.

CPI: acronym standing for “Consumer Prices Index”. CPI is a measure of inflation with a basket of goods that is assessed on an annual basis. The reference goods and services differs from those of RPI. These goods are expected to provide lower, less volatile inflation increases. Pension increases in the LGPS are linked to the annual change in CPI.

Deficit: the extent to which the value of the Fund’s past service liabilities exceeds the value of the Fund’s assets.

Discount Rate: the rate of interest used to convert a cash amount e.g. future benefit payments occurring in the future to a present value.

Employer Covenant: the degree to which an employer participating in an occupational pension scheme is willing and able to meet the funding requirements of the scheme.

Employer's Future Service Contribution Rate: the contribution rate payable by an employer, expressed as a % of pensionable pay, as being sufficient to meet the cost of new benefits being accrued by active members in the future. The cost will be net of employee contributions and will include an allowance for the expected level of administrative expenses.

Equities: shares in a company which are bought and sold on a stock exchange.

Solvency/Funding Level: the ratio of the value of the Fund's assets and the value of the Fund's liabilities expressed as a percentage.

Funding Strategy Statement: This is a key governance document that outlines how the administering authority will manage employer's contributions to the Fund.

Solvency Funding Target: an assessment of the present value of benefits to be paid in the future. The desired funding target is to achieve a solvency level of a 100% i.e. assets equal to the past service liabilities assessed on the ongoing concern basis.

Investment Strategy: the long-term distribution of assets among various asset classes that takes into account the Funds objectives and attitude to risk.

Past Service Liabilities: this is the present value of the benefits accrued by members up to the valuation date. It is assessed based on a set of assumptions agreed between the Administering Authority and the Actuary.

Prepayment: the payment by employers of contributions to the Fund earlier than that certified by the Actuary. The amount paid will be reduced compared to the certified amount to reflect the early payment.

Present Value: the value of projected benefit payments, discounted back to the valuation date.

Primary rate of the employers' contribution: the contribution rate required to meet the cost of the future accrual of benefits including ancillary, death in service and ill health benefits together with administration costs. It is expressed as a percentage of pensionable pay, ignoring any past service surplus or deficit, but allowing for any employer-specific circumstances, such as its membership profile, the funding strategy adopted for that employer, the actuarial method used 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.

Prudent Assumption: an assumption where the outcome has a greater than 50/50 chance of being achieved i.e. the outcome is more likely to be overstated than understated. Legislation requires the assumptions adopted for an actuarial valuation to be prudent.

Real Return or Real Discount Rate: a rate of return or discount rate net of CPI inflation.

Recovery Plan: a strategy by which an employer will make up a funding deficit over a specified period of time ("the recovery period", as set out in the Funding Strategy Statement).

Secondary rate of the employers' contribution: an adjustment to the Primary rate to reflect any past service deficit or surplus, to arrive at the rate each employer is required to pay. The Secondary rate may be expressed as a percentage adjustment to the Primary rate, and/or a cash adjustment in each of the three years beginning 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.

Secondary rates for the whole fund in each of the three years shall also be disclosed. These will be calculated as the weighted average based on the whole fund payroll in respect of percentage rates and as a total amount in respect of cash adjustments.

50/50 Scheme: in the LGPS, active members are given the option of accruing a lower benefit in the 50/50 Scheme, in return for paying a lower level of contribution.

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