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INTRODUCTION

This report is addressed to the Administering Authority of the Clwyd 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').



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.

 MERCER

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.

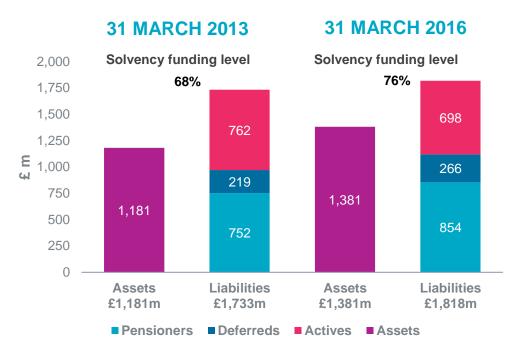
The principal elements of the funding strategy adopted for this actuarial valuation are as follows:

- Assumed rate of future CPI inflation 2.2% p.a., based on the yields available on gilts and indexlinked 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 2.0% 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 Depending on individual circumstances, some employers have made allowance for 1% p.a. over the four years to 31 March 2020, taking into account the government's policy on pay restraint in the public sector, and then 1.25% 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 1.75% p.a. for men and 1.5% p.a. for women.
- An average recovery period for making good any shortfall of 15 years. The FSS sets out the circumstances in which this might vary from one employer to another.

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 £437m against the Fund's solvency funding target. An alternative way of expressing the position is that the Fund's assets were sufficient to cover 76% 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 £552m, equivalent to a solvency funding level of 68%. The key reasons for the changes between the two valuations are considered in Section 4.

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.

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

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

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.

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. For the 31 March 2013 valuation, an allowance for 5% of members to opt for the 50:50 scheme was made for certain employers.

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).

	% of Pensionable Pay	
PRIMARY CONTRIBUTION RATE	31 March 2016	31 March 2013
Normal Contribution rate for retirement and death benefits	20.9	19.4
Allowance for administrative expenses	0.6	0.5
Total normal contribution rate	21.5	19.9
Average member contribution rate	6.2	6.1
Primary contribution rate	15.3	13.8

^{*} 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 15 years, and the total initial recovery payment (the "Secondary rate" for 2017/18) is approximately £51.5m in £ terms (which also includes allowance for some employers to phase in any increases and allowance for some employers to prepay three years contributions in April 2017).

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.

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.

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.

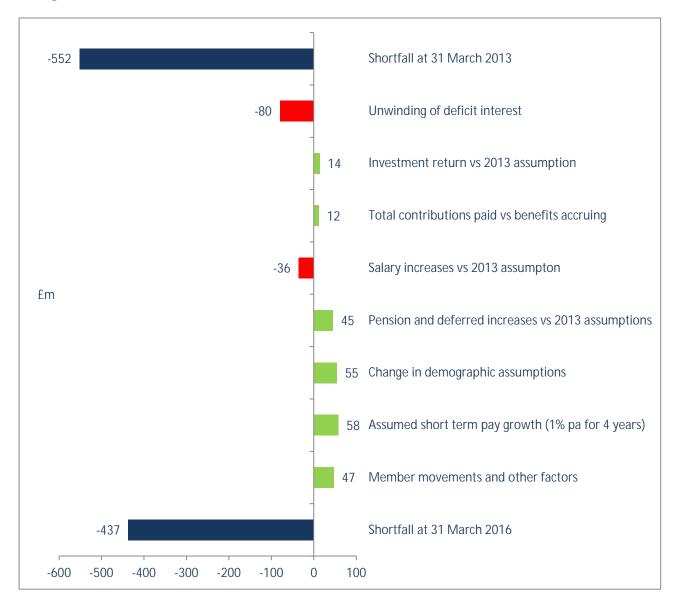
Over the three years to 31 March 2016 the net investment return on the Fund's assets has averaged 5.0% per annum, meaning that the average real return has been about 3.7% p.a.

The average Pensionable Salary increase for the Fund members who were in service for the whole of the inter-valuation period was 2.8% per annum.

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 £552m. The chart below sets out the main reasons for the change in the shortfall between 31 March 2013 and 31 March 2016.



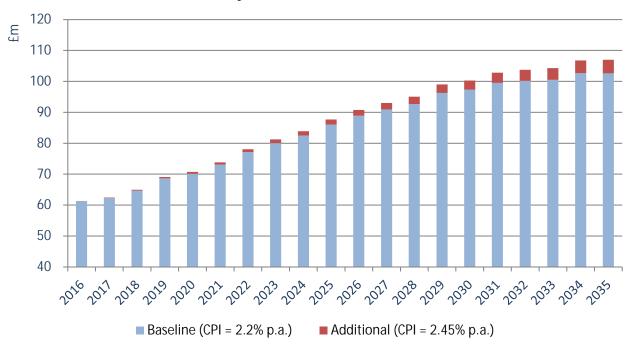
CASHFLOWS, RISKS AND ALTERNATIVE FUNDING POSITIONS

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 inflation were to be 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 higher inflation are projected to be £39m.

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 benefit cashflows



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 15 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 £401m, equivalent to a funding level of 80%.

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 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 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 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	-	437
Real investment return 0.25% lower than assumed	83	520
Pensionable Salary growth 0.25% higher than assumed	15	452
Members live one year longer than assumed	42	479
Growth assets fall by 25%	220	657

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 £2,683m, and the funding level would have reduced correspondingly to 51%. If the actuarial assumptions are borne out in practice, the projected funding level on this basis at the next actuarial valuation would be slightly higher 52%.

The value of the liabilities on the solvency funding target assumptions was £1,818m, which is £865m less than the value on the minimum risk basis. Over the lifetime of the Fund therefore the funding plan is making allowance for future investment returns of £865m over and above those available from the minimum risk investment portfolio.



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	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".
	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.
Inflation	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.
Pensionable Salary growth	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.
Life expectancy	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.

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	4.20% p.a.	4.60% p.a.
Price inflation (CPI)	2.20% p.a.	2.60% p.a.
Salary increases (short term)	1% p.a. for 4 years*	1% p.a. for 3 years
Salary increases (long term)	3.45% p.a.	4.10% p.a.
Pension increases in payment:	2.20% p.a.	2.60% p.a.

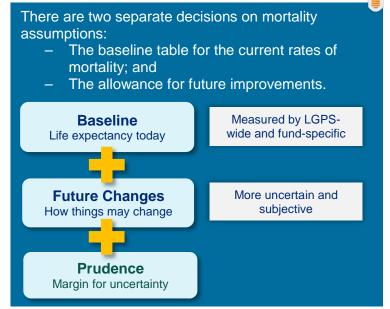
^{*} For the majority of employers.

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 future female dependants where the S2DA tables have been used. At the 2013 actuarial valuation the S1PA tables were used (S1DA tables for female dependants).

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
	Normal Health	99% males, 90% females	94% males, 93% females
Ammiliant	Dependant	130% males, 103% females	156% males, 106% females
Annuitant	III Health	99% males, 90% females with an age rating of +3 years in each case	94% males, 93% females with an age rating of +3 years in each case
	Future Dependant	118% males, 107% females	106% males, 98% females
0.44	Normal Health	99% males, 86% females	87% males, 82% females
Active	III Health	99% males, 86% females with an age rating of +4 years in each case	87% males, 82% females with an age rating of +4 years in each case
Deferred	All	124% males, 99% females	114% males, 102% females
Active / Deferred	Future Dependant	106% males, 98% females	99% males, 93% 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 1.75% p.a. long-term improvements trend for males and 1.5% for females. 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	22.8	
Life expectancy at 65 for a male aged 45 now	25.4	
Life expectancy for a female aged 65 now	25.4	
Life expectancy at 65 for a female aged 45 now	28.1	

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

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

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.

III health retirement

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	% retiring per annum
Age	Males	Females
35	0.02	0.02
45	0.07	0.05
55	0.29	0.22

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

Tier 1	Tier 2	Tier 3
75%	12.5%	12.5%

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.

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	% 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	% 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.



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. The accuracy of the data provided has been relied on. While reasonableness checks 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	16,199	15,070
Total Pensionable Salaries (£000s p.a.)	224,423	227,816
Average Pensionable Salary (£ p.a.)	13,854	15,117
Average age (pension weighted)	49.7	49.7

Deferred pensioners		
Number	14,030	11,660
Total deferred pensions revalued to valuation date (£000s p.a.)	14,940	11,640
Average deferred pension (£ p.a.)	1,065	998
Average age (pension weighted)	48.3	48.5

Pensioners		
Number	11,464	10,143
Total pensions payable (£000s p.a.)	53,762	47,122
Average pension (£ p.a.)	4,690	4,646
Average age (pension weighted)	70.3	69.8

The above pensioner figures include current dependant pensioners.

C ASSETS

The market value of the Fund's assets was £1,380,675,000 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 V. AT 31 MAR	
	%	£000s	%
Global Equities (includes Emerging & Frontier)	17%	202,826	14.7%
Private Equity	10%		
Private Equity		139,582	10.1%
Opportunistic		8,240	0.6%
Managed Account:	9%		
Hedge Funds		139,221	10.1%
Infrastructure	4%		
Infrastructure		27,351	2.0%
Timber and Agriculture		25,937	1.9%
Property	7%	109,233	7.9%
Multi Asset Credit	15%	170,331	12.3%
Cash	0%	15,034	1.1%
Current Assets/Liabilities	0%	353	0.0%
Tactical Allocation / Multi Strategy Funds	19%	227,037	16.4%
Liability Driven Investment	19%	315,530	22.9%
Total	100%	1,380,675	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 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/uksi/2013/2356/contents/made)

The Local Government Pension Scheme (Transitional Provisions, Savings and Amendment) Regulations 2014 (http://www.legislation.gov.uk/uksi/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	2014 £000s	YEAR ENDIN 2015 £000s	IG 31 MARCH 2016 £000s	Total £000s			
Fund at beginning of year	1,181,232	1,213,567	1,395,408	1,181,232			
Contributions to Fund:							
Employees	14,688	14,929	14,471	44,088			
Employers	54,207	61,750	60,842	176,799			
Transfer Values received	3,801	2,202	1,691	7,694			
Investment income	2,721	5,345	5,863	13,929			
Change in market value of investments	28,686	184,629	(4,706)	208,609			
EXPENDITURE	YEAR ENDING 31 MARCH						
EXPENDITORE	2014 £000s	2015 £000s	2016 £000s	Total £000s			
Pensions for members/ spouses/partners/dependants	46,885	50,338	52,922	150,145			
Retiring allowances and death gratuities	14,252	16,351	16,276	46,879			
Transfer Values paid	3,264	2,036	6,075	11,375			
Investment expenses	5,588	16,179	15,029	36,796			
Administration expenses	1,779	2,110	2,592	6,481			
Fund at end of year	1,213,567	1,395,408	1,380,675	1,380,675			

The details of the transactions have been obtained from the audited accounts for the Fund.



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	%
III Health Retirements	81	74	109
Withdrawals	2,883	2,798	103
Pensioner Deaths (lives)	951	754	126
Pensioner Deaths (£000 p.a. of pension)	3,174	2,692	118

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

Clwyd 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 15.3% 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 £51.8 million minus 0.1% of pensionable pay

2018/19 £18.1 million

2019/20 £18.2 million plus 0.1% 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. 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

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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)

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. Allowance for ill health retirements has been included in each employer's contribution rate, on the basis of the method and assumptions set out in the report.

Signature:

Signature:

Name: Paul Middleman Name: Laura Evans

Qualification: Fellow of the Institute **Qualification:** Fellow of the Institute

and Faculty of Actuaries and Faculty of Actuaries

Date of signing: 31 March 2017

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SCHEDULE TO THE RATES AND ADJUSTMENTS CERTIFICATE DATED 31 MARCH 2017

	Primary rate	imary rate Secondary rates		То	tal contribution rat	es	
Employer	2017/18 to 2019/20	2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
Councils							
Denbighshire County Council	15.2%	**£6,963,500	**£6,963,500	**£6,963,500	15.2% plus **£6,963,500	15.2% plus **£6,963,500	15.2% plus **£6,963,500
Flintshire County Council	15.2%	-0.3% plus **£9,985,400	**£9,985,400	0.3% plus **£9,985,400	14.9% plus **£9,985,400	15.2% plus **£9,985,400	15.5% plus **£9,985,400
Wrexham County Borough Council	15.4%	*£28,242,100	Nil	Nil	15.4% plus *£28,242,100	15.4%	15.4%
Other Scheme Employers							
Coleg Cambria	14.8%	*£3,346,200	Nil	Nil	14.8% plus *£3,346,200	14.8%	14.8%
Glyndwr University	15.0%	-1.7% plus £282,633 to 31 July. £604,533 from 1 August	£938,100	£970,500	13.3% plus £282,633 to 31 July 2017. 15.0% plus £604,533 from 1 August	15.0% plus £938,100	15.0% plus £970,500
North Wales Fire	14.7%	*£2,163,600	Nil	Nil	14.7% plus *£2,163,600	14.7%	14.7%
North Wales Valuation Tribunal	16.8%	**£33,390	**£34,560	**£35,750	16.8% plus **£33,390	16.8% plus **£34,560	16.8% plus **£35,750

	Primary rate Secondary rates				Total contribution rates		
Employer	2017/18 to 2019/20	2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
Town and Community Coun	cils				_		
Acton Community Council	19.6%	Nil	Nil	Nil	19.6%	19.6%	19.6%
Argoed Community Council	29.3%	(£500)	(£500)	(£500)	29.3% less £500	29.3% less £500	29.3% less £500
Bagillt Community Council	13.3%	Nil	Nil	Nil	13.3%	13.3%	13.3%
Buckley Town Council	23.6%	(£100)	(£100)	(£100)	23.6% less £100	23.6% less £100	23.6% less £100
Caia Park Community Council	25.6%	(£3,300)	(£3,400)	(£3,500)	25.6% less £3,300	25.6% less £3,400	25.6% less £3,500
Cefn Mawr Community Council	17.0%	Nil	Nil	Nil	17.0%	17.0%	17.0%
Coedpoeth Community Council	24.4%	**£8,240	**£8,230	**£8,230	24.4% plus **£8,240	24.4% plus **£8,230	24.4% plus **£8,230
Connah's Quay Town Council	16.2%	(£11,800)	(£12,200)	(£12,600)	16.2% less £11,800	16.2% less £12,200	16.2% less £12,600
Denbigh Town Council	16.6%	Nil	Nil	Nil	16.6%	16.6%	16.6%
Gwernymynydd Community Council	30.5%	Nil	Nil	Nil	30.5%	30.5%	30.5%
Hawarden Community Council	20.2%	**£9,800	**£9,800	**£9,800	20.2% plus **£9,800	20.2% plus **£9,800	20.2% plus **£9,800
Hope Community Council	12.4%	Nil	Nil	Nil	12.4%	12.4%	12.4%
Marchwiel Community Council	19.2%	Nil	Nil	Nil	19.2%	19.2%	19.2%
Mold Town Council	17.4%	**£1,680	**£1,760	**£1,860	17.4% plus **£1,680	17.4% plus **£1,760	17.4% plus **£1,860

	Primary rate		Secondary rates		To	tal contribution rat	es
Employer	2017/18 to 2019/20	2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
Offa Community Council	23.0%	(£3,100)	(£3,200)	(£3,300)	23.0% less £3,100	23.0% less £3,200	23.0% less £3,300
Pen-y-ffordd Community Council	21.1%	Nil	Nil	Nil	21.1%	21.1%	21.1%
Prestatyn Town Council	19.0%	**£2,330	**£2,430	**£2,540	19.0% plus **£2,330	19.0% plus **£2,430	19.0% plus **£2,540
Rhos Community Council	17.1%	**£4,810	**£5,000	**£5,190	17.1% plus **£4,810	17.1% plus **£5,000	17.1% plus **£5,190
Rhyl Town Council	15.5%	£24,900	£24,900	£24,900	15.5% plus £24,900	15.5% plus £24,900	15.5% plus £24,900
Shotton Town Council	27.7%	(£200)	(£200)	(£200)	27.7% less £200	27.7% less £200	27.7% less £200
Other employers							
Bodelwyddan Castle Trust	19.4%	(£5,500)	(£5,700)	(£5,900)	19.4% less £5,500	19.4% less £5,700	19.4% less £5,900
Careers Wales	15.2%	£148,200	£153,300	£158,600	15.2% plus £148,200	15.2% plus £153,300	15.2% plus £158,600
Cartref Dyffryn Ceiriog	23.1%	**£15,070	**£15,570	**£16,060	23.1% plus **£15,070	23.1% plus **£15,570	23.1% plus **£16,060
Chartwells (Compass Group)	21.1%	(£1,300)	(£1,300)	(£1,300)	21.1% less £1,300	21.1% less £1,300	21.1% less £1,300
Civica	19.0%	£14,300	£14,800	£15,300	19% plus £14,300	19% plus £14,800	19% plus £15,300
Cymryd Rhan	19.4%	Nil	Nil	Nil	19.4%	19.4%	19.4%
Denbigh Youth Group	23.0%	(£800)	(£800)	(£800)	23% less £800	23% less £800	23% less £800
Freedom Leisure	18.6%	Nil	Nil	Nil	18.6%	18.6%	18.6%

	Primary rate		Secondary rates		Total contribution rates		
Employer	2017/18 to 2019/20	2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
Wrexham Commercial	17.4%	(£1,600)	(£1,700)	(£1,800)	17.4% less	17.4% less	17.4% less
Services Wrexham Glyndwr Students'	2.00/	.			£1,600	£1,700	£1,800
Union	8.0%	Nil	Nil	Nil	8%	8%	8%

Former Employers	Contribution Payable (2017/20)
Llanasa Community Council	£221 per annum

Notes:

- 1. Cash payments in respect of £ lump sums marked * are payable by 30 April 2017. Cash payments in respect of £ lump sums marked ** are payable by 30 April of the year in which they are due. These amounts have been reduced to reflect this early payment;
- 2. 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:
 - a. Payments made in the April of the certified year will be reduced by 2.0% (i.e. the above amounts will be multiplied by 0.980)
 - b. 2018/19 payments made in April 2017 will be reduced by 6.0% (i.e. the above amounts will be multiplied by 0.940)
 - c. 2019/20 payments made in April 2017 will be reduced by 9.8% (i.e. the above amounts will be multiplied by 0.902)

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).

- 3. The percentages shown are percentages of pensionable pay and apply to all members, including those who are members under the 50:50 option under the LGPS from 1 April 2014;
- 4. The total contributions payable by each employer each year will be subject to a minimum of zero;

- 5. 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 shown in this certificate may be reallocated between the Scheme Employer and the new employer to reflect this, on advice from the actuary.
- 6. There are a number of additional employers who no longer had any active members within the Fund as at the valuation date. Any final contribution requirement for these employers will be assessed by the Fund in due course on the basis of actuarial advice.
- 7. The Fund has put in place the framework for an internal captive insurance arrangement in order to pool the risks associated with ill health retirement costs. The captive has been designed for employers that could be materially affected by the ill health retirement of one or more of their members. For those employers in the ill-health captive arrangement, allowance for ill health retirements has been included in each employer's contribution rate, on the basis of the method and assumptions set out in the report. The relevant employers will be notified separately of their participation. New employers entering the Fund who fall into this category would also be included. Details of the arrangement are set out in the FSS.

■ 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. The asset value is based on market values at the valuation date.

Administering Authority: the council with a statutory responsibility for running the Fund and that is responsible for all aspects of its management and operation.

Admission Bodies: A specific type of employer under the Local Government Pension Scheme (LGPS) who do not automatically qualify for participation in the Fund but are allowed to join if they satisfy the relevant criteria set out in the Regulations.

Benchmark: a measure against which fund performance is to be judged.

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.

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 differ 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.

Covenant: the assessed financial strength of the employer. A strong covenant indicates a greater ability (and willingness) to pay for pension obligations in the long run. A weaker covenant means that it appears that the employer may have difficulties meeting its pension obligations in full over the longer term or affordability constraints in the short term.

Deficit: the extent to which the value of the Fund's past service liabilities exceeds the value of the Fund's assets. This relates to assets and liabilities built up to date, and ignores the future build-up of pension (which in effect is assumed to be met by future contributions).

Deficit Recovery Period: the target length of time over which the current deficit is intended to be paid off. A shorter period will give rise to a higher annual contribution, and vice versa.

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 i.e. the liabilities. A higher discount means lower liabilities and vice versa.

Employer's Future Service Contribution Rate ("Primary 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.

Employing Bodies: any organisation that participates in the LGPS, including admission bodies and scheme employers.

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

Equity Protection: an insurance contract which provides protection against falls in equity markets. Depending on the pricing structure, this may be financed by giving up some of the upside potential in equity market gains.

Flightpath: a framework that defines a de-risking process whereby exposure to growth assets is reduced as and when it is affordable to do so i.e. when "triggers" are hit, whilst still expecting to achieve the overall funding target.

Funding or Solvency 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 and risks to the Fund.

Government Actuary's Department ("GAD"): the GAD is responsible for providing actuarial advice to public sector clients. GAD is a non-ministerial department of HM Treasury.

Guarantee / Guarantor: a formal promise by a third party (the guarantor) that it will meet any pension obligations not met by a specified employer. The presence of a guarantor will mean, for instance, that the Fund can consider the employer's covenant to be as strong as its guarantor's.

Hedging: a strategy that aims to reduce funding volatility. This is achieved by investing in assets that capture levels of yields based on agreed trigger levels so the assets mimic the change in liabilities.

Hedge Ratio: The level of hedging in place as a percentage of the liabilities. This can be in relation to interest rates, inflation rates or real rates of return.

Ill Health Captive: this is a notional fund designed to immunise certain employers against excessive ill health costs in return for an agreed insurance premium.

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

Letting Employer: an employer that outsources part of its services/workforce to another employer, usually a contractor. The contractor will pay towards the LGPS benefits accrued by the transferring members, but ultimately the obligation to pay for these benefits will revert to the letting employer.

Liabilities: the actuarially calculated present value of all benefit entitlements i.e. scheme cashflows of all members of the Fund, built up to date or in the future. The liabilities in relation to the benefit entitlements earned up to the valuation date are compared with the present market value of Fund assets to derive the deficit and funding/solvency level. Liabilities can be assessed on different set of actuarial assumptions depending on the purpose of the valuation.

LGPS: the Local Government Pension Scheme, a public sector pension arrangement put in place via Government Regulations, for workers in local government. These Regulations also dictate eligibility (particularly for Scheduled Bodies), members' contribution rates, benefit calculations and certain governance requirements.

Maturity: a general term to describe a Fund (or an employer's position within a Fund) where the members are closer to retirement (or more of them already retired) and the investment time horizon is shorter. This has implications for investment strategy and, consequently, funding strategy.

Members: The individuals who have built up (and may still be building up) entitlement in the Fund. They are divided into actives (current employee members), deferreds (ex-employees who have not yet retired) and pensioners (ex-employees who have now retired, and dependants of deceased exemployees).

Minimum Risk Funding Basis: more cautious funding basis than the existing valuation basis. The relevant discount rate used for valuing the present value of liabilities is based on the yields from Government Bonds or Swaps.

Orphan Liabilities: liabilities in the Fund for which there is no sponsoring employer within the Fund. Ultimately orphan liabilities must be underwritten by all other employers in the Fund.

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.

Percentiles: relative ranking (in hundredths) of a particular range. For example, in terms of expected returns a percentile ranking of 75 indicates that in 25% of cases, the return achieved would be greater than the figure, and in 75% cases the return would be lower.

Phasing/Stepping of Contributions: when there is an increase/decrease in an employer's long term contribution requirements, the increase in contributions can be gradually stepped or phased in over an agreed period. The phasing/stepping can be in equal steps or on a bespoke basis for each employer.

Pooling: employers may be grouped together for the purpose of calculating contribution rates, (i.e. a single contribution rate applicable to all employers in the pool). A pool may still require each individual employer to ultimately pay for its own share of deficit, or (if formally agreed) it may allow deficits to be passed from one employer to another.

Prepayment: the payment by employers of contributions to the Fund earlier than that certified by the Actuary. The amount paid will be reduced in monetary terms 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.

Profile: the profile of an employer's membership or liability reflects various measurements of that employer's members, i.e. current and former employees. This includes: the proportions which are active, deferred or pensioner; the average ages of each category; the varying salary or pension levels; the lengths of service of active members vs their salary levels, etc.

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 and Guidance requires the assumptions adopted for an actuarial valuation to be prudent.

Rates and Adjustments Certificate: a formal document required by the LGPS Regulations, which must be updated at least every three years at the conclusion of the formal valuation. This is completed by the actuary and confirms the contributions to be paid by each employer (or pool of employers) in the Fund for the three year period until the next valuation is completed.

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.

Scheduled Bodies: types of employer explicitly defined in the LGPS Regulations, whose employers must be offered membership of their local LGPS Fund. These include Councils, colleges, universities, police and fire authorities etc, other than employees who have entitlement to a different public sector pension scheme (e.g. teachers, police and fire officers, university lecturers).

Scheme Employers: employers that have the statutory right to participate in the LGPS. These organisations (set out in Part 1 of Schedule 2 of the 2013 Regulations) would not need to designate eligibility, unlike the Part 2 Scheme Employers.

Section 13 Valuation: in accordance with Section 13 of the Public Service Pensions Act 2014, the Government Actuary's Department (GAD) have been commissioned to advise the Department for Communities and Local Government (DCLG) in connection with reviewing the 2016 LGPS actuarial valuations. All LGPS Funds therefore will be assessed on a standardised set of assumptions as part of this process.

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.

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 accrued liabilities at the valuation date assessed on the ongoing concern basis.

Valuation Funding Basis: the financial and demographic assumptions used to determine the employer's contribution requirements. The relevant discount rate used for valuing the present value of liabilities is consistent with an expected rate of return of the Fund's investments. This includes an expected out-performance over gilts in the long-term from other asset classes, held by the Fund.

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

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