Pensions Committee

2.00pm, Monday, 26 March 2018

2017 Actuarial Valuation for Lothian Pension Fund

Item number	5.5
Report number	
Executive/routine	
Wards	All
Council Commitments	Delivering a Council that works for all

Executive Summary

The Lothian Pension Fund is required by law to undertake an actuarial valuation once every three years. The pension fund's Actuary assesses the financial health of the pension fund and sets the employer contribution rates required for the next three years. The last actuarial valuation was undertaken as at 31 March 2014.

The actuarial valuation of the Lothian Pension Fund, based on data as at 31 March 2017, has been undertaken and the report from the Actuary is shown in full at Appendix 1.

Report

2017 Actuarial Valuation for Lothian Pension Fund

1. Recommendations

Committee is requested to:

1.1 Note the results of the 2017 Actuarial Valuation report for the Lothian Pension Fund.

2. Background

2.1 "The Local Government Pension Scheme (Scotland) Regulations 2014, Regulation 60 (1)" states that "each administering authority must obtain –

(a) an actuarial valuation of the assets and liabilities of each of its pension funds as at 31 March 2017 and on 31 March in every third year afterwards;

(b) a report by an actuary in respect of the valuation; and

(c) a rates and adjustments certificate prepared by an actuary".

2.2 Accordingly, the actuarial valuation of the Lothian Pension Fund, based on data as at 31 March 2017, must be completed by 31 March 2018.

2.3 The actuarial valuation of the pension fund has three main purposes:

- To assess whether the funding strategy and assumptions are appropriate;
- To assess the financial health of the pension fund; and
- To set the future rates of contributions payable by the employers.

2.4 On 28 September 2016, Pensions Committee approved "the continued use of the Contribution Stability Mechanism (CSM) for long-term secure employers within Lothian Pension Fund for the 2017 actuarial valuation".

2.5 At its meeting on 27 September 2017, Pensions Committee agreed "to adopt the proposed changes as the Fund progresses the 2017 actuarial valuation over the coming months". Such included requisite updates to reflect:

- Financial and demographic assumptions;
- Funding Strategy Statement revisions;
    - Affordability constraints – termination of membership
    - Employer Asset tracking (Unitisation of investments)
    - New investment strategy for employers with maturing liabilities.

2.6 A separate report on the revised Funding Strategy Statement is provided on this agenda.

3. Main report

3.1 The 2017 Actuarial Valuation report for Lothian Pension Fund, as submitted by the Actuary, is attached as Appendix 1. The report is marked as 'Draft' pending the formal approval of the Funding Strategy Statement which is also on Committee's agenda.

Funding Level - Summary

3.2 The table below summarises the financial position of the Fund at 31 March 2017 in respect of benefits earned by members up to this date.

Past Service Position	**2014**	**2017**
Past Service Liabilities £m	4,796	6,743
Market Value of Assets £m	4,379	6,598
Surplus / (Deficit) £m	(417)	(145)
Funding Level %	**91%**	**98%**

3.3 The results show that the Fund had not met its objective of holding sufficient assets to meet the full estimated current cost of past service benefits at 31 March 2017. The funding level, however, has increased from 91% at the previous valuation at 31 March 2014 to 98% at this valuation. The deficit has decreased from £417million at 31 March 2014 to £145million at 31 March 2017.

Analysis of change in solvency

3.4 The main reason for the change in funding level over the period was better than expected asset returns. A fall in real gilt yields has placed a higher value on the pension liabilities, serving to partially offset the effect of this.

3.5 The table below illustrates the various factors that have led to the change in the solvency position between the 2014 and 2017 valuations.

Analysis		**(£m)**
Surplus / deficit at 31 March 2014		**(417)**
Interest on surplus / (deficit)	(62)	
Investment returns greater than expected	1,506	
Contributions greater than cost of accrual	(6)	
Membership experience over the period	438	
Change in demographic assumptions	(43)	
Change in base mortality assumption	28	
Change in longevity improvements assumption	32	
Change in financial assumptions	(1,475)	
Impact of LGPS 50/50 take up	(31)	
Other experience items	(115)	
Surplus / deficit at 31 March 2017		**(145)**

3.6 Further comments on these Items is provided in the valuation report.

Employer Contribution Rates

3.7 The table below summarises the whole Fund Primary and Secondary Contribution Rates at this triennial valuation:

Primary Rate (% of pay)	Secondary Rate (£)		
1 April 2018 – 31 March 2021	2018/2019	2019/2020	2020/2021
31.8	-76,175,000	-76,293,000	-75,433,000

3.8 At the previous formal valuation at 31 March 2014, a different regulatory regime was in force. Therefore, a contribution rate that is directly comparable to the rates above is not provided.

3.9 Employer contribution rates have increased on average compared to the 2014 valuation of the Fund. Primary contributions have increased due to a reduction in future expected investment returns but this has been partially offset by the improved funding levels and hence reduced secondary contributions.

3.10 While these rates illustrate the position of the overall Fund, it should be noted that contribution rates are set for each employer level depending on their individual funding position. The minimum contributions to be paid by each employer from 1 April 2018 to 31 March 2021 are shown in the Rates and Adjustments Certificate in Appendix D of the Actuary's Report, included at Appendix 1.

4. Measures of success

4.1 The funding strategy should ensure that the Fund has sufficient assets to meet pension obligations in the long term. The minimum contribution rates payable by the employer are certified by the Fund's Actuary in accordance with the professional standards of the Institute and Faculty of Actuaries.

5. Financial impact

5.1 The funding strategy should ensure that the Fund has sufficient assets in the long term to meet its liabilities.

5.2 The results of the actuarial valuation have significant financial impact on the Fund's employers. The actuarial valuation sets the minimum contribution rates payable by the employer over the next 3 years.

6. Risk, policy, compliance and governance impact

6.1 The Lothian Pension Fund is required by law to undertake an actuarial valuation once every three years. Regular actuarial assessment of the Fund manages the risk of not meeting funding objectives.

7. Equalities impact

7.1 There are no equalities implications as a result of this report.

8. Sustainability impact

8.1 There are no adverse sustainability impacts arising from this report.

9. Consultation and engagement

9.1 The Pension Board, comprising employer and member representatives, is integral to the governance of the Fund and they are invited to comment on the relevant matters at Committee meetings.

9.2 Briefings on the draft results of the actuarial valuation were held for members of the Committee and Pension Board in October 2017 and February 2018. These included presentations by the Fund's Actuary.

9.3 Consultation with the Fund's employers has been undertaken on the proposed changes to the Funding Strategy Statement. The Actuary provided a presentation on the actuarial valuation at the Fund's annual employer seminar on 2 November 2017.

9.4 Further meetings and discussions were held with employers in late 2017 and early 2018 to consider the valuation in greater detail, particularly with those employers directly impacted by the changes to the funding approach.

10. Background reading/external references

10.1 None

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11. Appendices

Appendix 1: Actuarial Valuation 2017 Lothian Pension Fund

Appendix 1

Lothian Pension Fund

2017 Actuarial Valuation Report

March 2018

DRAFT

Richard Warden
Laura McInroy

Fellows of the Institute and Faculty of Actuaries
For and on behalf of Hymans Robertson LLP

Contents

Executive summary

We have carried out an actuarial valuation of the Lothian Pension Fund as at 31 March 2017. The results are presented in this report and are briefly summarised below.

Funding position

The table below summarises the funding position of the Fund as at 31 March 2014 and 31 March 2017:

Past Service Position	31 March 2014 (£m)	31 March 2017 (£m)
Past Service Liabilities	4,796	6,743
Market Value of Assets	4,379	6,598
Surplus / (Deficit)	(417)	(145)
Funding Level	**91%**	**98%**

The funding level has improved due to positive membership experience and better than anticipated investment returns. These have been partially offset by a reduction in future expected investment returns. Further details are set out in **Section 4**.

Contribution rates

The table below summarises the whole fund Primary and Secondary Contribution rates at this triennial valuation:

Primary Rate (% of pay)	Secondary Rate (£)		
1 April 2018 - 31 March 2021	2018/2019	2019/2020	2020/2021
31.8%	-76,175,000	-76,293,000	-75,433,000

At the previous formal valuation at 31 March 2014, a different regulatory regime was in force. Therefore a contribution rate that is directly comparable to the rates above is not provided.

Employer contribution rates have increased on average compared to the 2014 valuation of the Fund. Primary contributions have increased due to a reduction in future expected investment returns. Improvements in funding levels have reduced secondary contributions which has partially offset the effect of this. However, it should be noted that changes to contribution rates at employer level have been variable.

The Fund operates a Contribution Stability Mechanism (CSM) for larger open employers with long term funding horizons and a strong financial covenant. The CSM is to designed to provide greater certainty on contribution rates within specified parameters over the period of the mechanism whilst maintaining a target of full funding. The CSM that was introduced at the 2014 valuation was reviewed at this valuation and found to remain appropriate in relation to contribution rates over the three year period starting on 1 April 2018. A full review of the CSM will be carried out as part of the 2020 valuation.

The minimum contributions to be paid by each employer from 1 April 2018 to 31 March 2021 are shown in the Rates and Adjustments Certificate in **Appendix D**.

Please note the figures in the tables throughout this document have been rounded. As a result, the sum of figures within the tables may not add up due to rounding.

1 Introduction

City of Edinburgh Council ("the Administering Authority") has commissioned us to carry out a formal actuarial valuation of the Lothian Pension Fund ("the Fund") as at 31 March 2017 to fulfil its obligations under Regulation 60 of the Local Government Pension Scheme (Scotland) Regulations 2014 ("the Regulations"). Therefore, the totality of our advice in relation to this formal valuation has been addressed to the Administering Authority and it is the only intended user of this advice. All reliances, limitations and caveats, including 3rd party exclusions are set out in **Section 7** of this report.

The purpose of the actuarial valuation is to assess the value of the assets and liabilities of the Fund as at 31 March 2017 and to calculate the required rate of employers' contributions to the Fund for the period from 1 April 2018 to 31 March 2021. This report summarises the results of the valuation and the underlying advice provided to the Administering Authority throughout the valuation process.

This report is the culmination of various other communications which set out our advice in relation to the valuation, in particular:

- Our 2017 valuation toolkit which set out our proposed valuation methodology;
- Correspondence relating to data including the Data Report dated 5 March 2018;
- The Initial Results report dated 28 September 2017 which outlined the whole fund results and proposed valuation assumptions; and
- The Employer Results Schedules and Employer Results Report which set out our recommended employer contribution rates.

2 Valuation Approach

The valuation is a planning exercise for the Fund, to assess the monies needed to meet the benefits owed to its members as they fall due. As part of the valuation process the Fund reviews its funding strategy to ensure that an appropriate contribution plan and investment strategy is in place.

It is important to realise that the actual cost of the pension fund (i.e. how much money it will ultimately have to pay out to its members in the form of benefits) is unknown. This cost will not be known with certainty until the last benefit is paid to the last pensioner. The purpose of this valuation is to estimate what this cost will be, so that the Fund can then develop a funding strategy to meet it.

Setting the funding strategy for an open defined benefit pension fund such as the Lothian Pension Fund is complex. Firstly, the time period is very long; benefits earned in the LGPS today will be paid out over a period of the next 80 years or more and it remains open to new joiners and accrual of benefits. Secondly, the LGPS remains a defined benefit scheme so there are significant uncertainties in the final cost of the benefits to be paid. Finally, in order to reduce employer costs, the Lothian Pension Fund invests in a return seeking investment strategy which can result in high levels of asset volatility.

Such a valuation can only ever be an estimate as the future cannot be predicted with certainty. However, as actuaries, we can use our understanding of the Fund and the factors that affect it to set the pace of funding in conjunction with the Administering Authority. The pace of this funding can vary according to the level of prudence that is built into the valuation method and assumptions.

The approach to setting employer contribution rates is as follows:

Step 1: The Fund sets a funding target (or funding basis) which defines the target amount of assets to be held to meet the future cashflows. The assumptions underlying the funding target are discussed further in the next section. A measurement is made at the valuation date to compare the assets held with the funding target.

Step 2: The Fund sets the time horizon over which the funding target is to be reached

Step 3: The Fund sets contributions that aim to meet the funding target over the set time horizon.

For this valuation, as for the previous valuation, our calculations identify separately the expected cost of members' benefits in respect of scheme membership completed before the valuation date ("past service") and that which is expected to be completed after the valuation date ("future service").

Past service

The principal measurement here is the comparison of the funding position at the valuation date against the funding target. The market value of the Fund's assets as at the valuation date are compared against the value placed on the Fund's liabilities in today's terms (calculated using a market-based approach). By maintaining a link to the market in both cases, this helps ensure that the assets and liabilities are valued in a consistent manner. Our calculation of the Fund's liabilities also explicitly allows for expected future pay and pension increases. The assumptions used in the assessment of the funding position at the valuation date are detailed in the next section.

The funding level is the ratio of assets to liabilities at the valuation date. A funding level of less/more than 100% implies that there is a deficit/surplus in the Fund at the valuation date against the funding target.

Funding plans are set to eliminate any deficit (or surplus) over the set time horizon and therefore get back to a funding level of 100%. To do so, additional contributions may be required to be paid into the Fund; these contributions are known as the "secondary rate".

Future service

In addition to benefits that have already been earned by members prior to the valuation date, employee members will continue to earn new benefits in the future. The cost of these new benefits must be met by both employers and employees. The employers' share of this cost is known as the "primary rate".

For employers that continue to admit new entrants to the Fund, we have calculated the primary rate as the cost of benefits being earned by members over the year following the valuation, taking account of expected future salary increase until retirement. If new entrants are admitted to the Fund to the extent that the overall membership profile remains broadly unchanged (and if the actuarial assumptions are unchanged) then the future service rate should be reasonably stable. This funding method we have used is known as the Projected Unit Method.

However, some participating employers may have a policy of not admitting new entrants. In this case, the membership profile will inevitably begin to age. Under these circumstances, the Projected Unit Method is arguably no longer appropriate and will not promote sufficient stability in the future service rate. For these employers, we have adopted a funding method known as the Attained Age Method, which effectively looks at the cost of benefits that members will earn over the entirety of their remaining working lifetimes (rather than just the year following the valuation). Combining this primary rate with any secondary rate required to repay a deficit (or reduce a surplus) gives us the Employer's total contribution rate.

Benefits

The scheme rules and benefits are set out in the Regulations. For further details, please refer to the timeline regulations on http://www.scotlgpsregs.org/.

3 Assumptions

Due to the long term nature of the Fund, assumptions about the future are required to place a value of the benefits earned to date and the cost of benefits that will be earned in the future. These assumptions broadly fall into two categories – financial and demographic.

Financial assumptions

Financial assumptions relate to the **size** of members' benefits. For example, how members' pensions will increase over time. In addition, the financial assumptions also help us to estimate how much members' benefits will cost the Fund in today's money by making an assumption about the return on the Fund's investments in future.

Discount rate

In order to place a current value on the future benefit payments from the Fund, an assumption about future investment returns is required in order to "discount" future benefit payments back to the valuation date.

For a funding valuation such as this, the discount rate is required by the Regulations to incorporate a degree of prudence. The discount rate is set by taking into account the Fund's current and expected future investment strategy and, in particular, how this strategy is expected to outperform the returns from Government bonds over the long term. The additional margin for returns in excess of that available on Government bonds is called the Asset Outperformance Assumption (AOA).

The selection of an appropriate AOA is a matter of judgement and the degree of risk inherent in the Fund's investment strategy should always be considered as fully as possible. The Fund now operates three different investment strategies aimed at different employer groups:

1. Primary - a long-term investment strategy designed for open employers, aiming to maximise the investment return within reasonable and considered risk parameters and hence minimise the cost to the employer

2. Medium Risk - this strategy is being introduced from 1 April 2018, and is designed for closed employers where exit is likely to be in the medium to longer term. It will act as a transition between the Primary Strategy and the Lower Risk Strategy, with investments will be targeted to represent 50% allocation from both the Primary Strategy and the Lower Risk Strategy.

3. Lower Risk - this strategy was introduced from 1 April 2015. It is designed for closed employers which have a short expected duration in the Fund and invests only in index-linked Government bonds.

The Fund is satisfied that AOAs of 1.5% p.a., 0.75% p.a. and 0.0% p.a. respectively for these three strategies are prudent assumptions for the purposes of this valuation. This is the same as the AOAs used at the 2014 valuation for the Primary and Lower risk strategies (the Medium risk strategy was not in place at that time).

For the avoidance of doubt, the results shown in this report are based on an AOA of 1.5% p.a. The contribution rate for each employer is however calculated by reference to the relevant investment strategy.

Price inflation / benefit increases

Benefit increases are awarded in line with the Consumer Prices Index (CPI). As there continues to be no deep market for CPI linked financial instruments, the Fund derives the expected level of future CPI with reference to the Retail Prices Index (RPI).

Similar to previous valuations, the assumption for RPI is derived as the difference between the yield on long dated fixed interest and index-linked government bonds. In line with recent experience and projections by the Bank of England, CPI is assumed to be, on average, 1.0% p.a. lower than RPI over the long term (compared to 0.8% p.a. as at the 2014 valuation).

Salary increases

Due to the change to a CARE scheme from 2015, there is now a closed group of membership in the Fund with benefits linked to final salary. The run-off of this final salary linked liability was modelled, taking into account the short-term restrictions in public sector pay growth. The results of this modelling and analysis were reported in our "2017 valuation – Pay growth assumption" paper dated 8 September 2017. Based on the results of this modelling the Fund set a salary growth assumption of RPI plus 0.7% (compared to an assumption of 2.0% per annum for 2 years followed by 1.5% above RPI at the 2014 valuation).

A summary of the financial assumptions underpinning the target funding basis and adopted during the assessment of the liabilities of the Fund as at 31 March 2017 (alongside those adopted at the last valuation for comparison) are shown below.

Financial assumptions	31 March 2014	31 March 2017
Discount rate (p.a.)		
Return on long-dated gilts	3.5%	1.7%
Asset Outperformance Assumption*	1.5%	1.5%
Discount rate	**5.0%**	**3.2%**
Benefit increases (p.a.)		
Retail Prices Inflation (RPI)	3.5%	3.4%
Assumed RPI/CPI gap*	(0.8%)	(1.0%)
Benefit increase assumption (CPI)	**2.7%**	**2.4%**
Salary increases (p.a.)		
Retail Prices Inflation (RPI)	3.5%	3.4%
Increases in excess of RPI*	1.5%	0.7%
Salary increase assumption	**5.0%****	**4.1%**

**Applied arithmetically in 2014 and geometrically in 2017*
*** 2.0% p.a. for 2014/15 and 2015/16, reverting to 5.0% thereafter. Excludes promotional increases.*

Demographic assumptions

Longevity

The main demographic assumption to which the valuation results are most sensitive is that relating to the longevity of the Fund's members. The longevity assumptions result in the following typical future life expectancies from age 65 (figures for 2014 are shown for comparison):

	31 March 2014	31 March 2017
Male		
Pensioners	22.1 years	21.7 years
Non-pensioners	24.2 years	24.7 years
Female		
Pensioners	23.7 years	24.3 years
Non-pensioners	26.3 years	27.5 years

Further details of the longevity assumptions adopted for this valuation can be found in **Appendix B**. Note that the figures for non-pensioners assume they are aged 45 at the valuation date.

Other demographic assumptions

We are in the unique position of having a very large local authority data set from which to derive our other demographic assumptions. We have analysed the trends and patterns that are present in the membership of local authority funds and tailored our demographic assumptions to reflect LGPS experience. Details of the other demographic assumptions adopted by the Fund are set out in **Appendix B**.

Further comments on the assumptions

We are required to include a degree of prudence within the valuation. This has been achieved by explicitly allowing for a margin of prudence in the discount rate. All other proposed assumptions represent our “best estimate” of future experience. If the discount rate was chosen to be best estimate (i.e. to have a 50% probability the Fund’s investment strategy will outperform the chosen discount rate), the discount rate would be set at around 5.0% p.a.

4 Results

The Administering Authority has prepared a Funding Strategy Statement which sets out its funding objectives for the Fund. In broad terms, the main valuation objectives are to hold sufficient assets in the Fund to meet the assessed cost of members' accrued benefits on the target funding basis ("the Funding Objective") and to set employer contributions which ensure both the long term solvency and the long term cost efficiency of the Fund ("the Contribution Objective").

Funding Position Relative to Funding Target

In assessing the extent to which the Funding Objective was met at the valuation date, we have used the actuarial assumptions described in the previous section of this report for the target funding basis and the funding method also earlier described. The table below compares the value of the assets and liabilities at 31 March 2017. The 31 March 2014 results are also shown for reference.

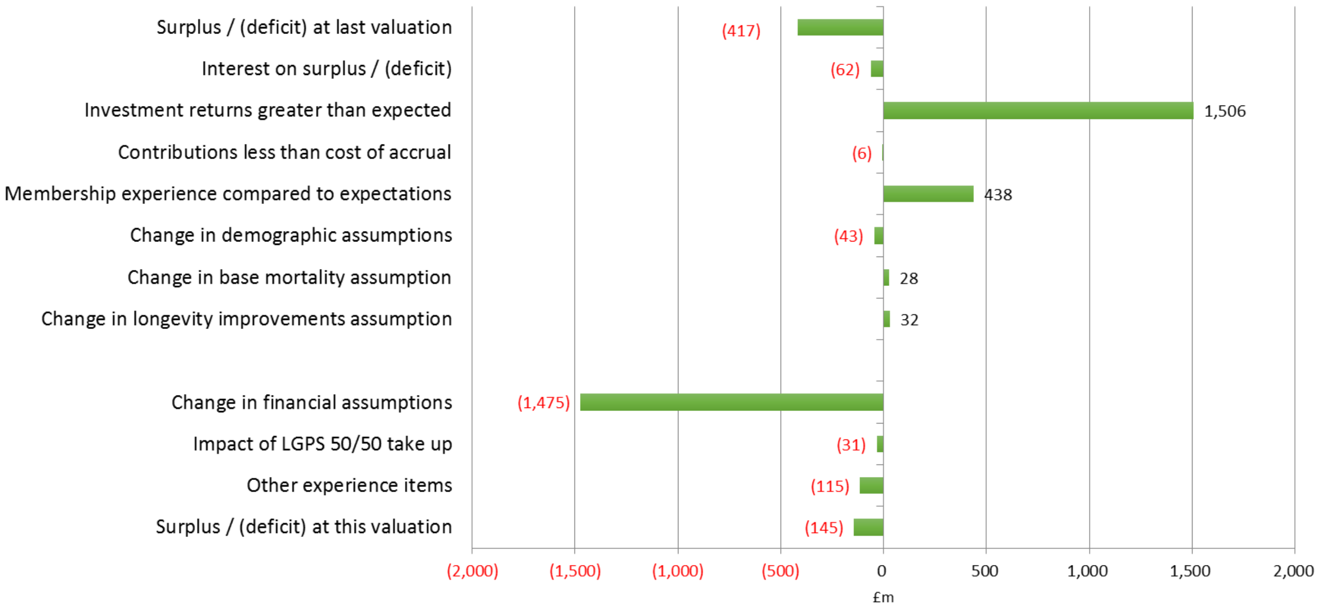
A funding level of 100% would correspond to the Funding Objective being met at the valuation date.

Valuation Date	31 March 2014	31 March 2017
Past Service Liabilities	**(£m)**	**(£m)**
Actives (CARE)	-	430
Actives (Final Salary)	2,276	2,695
Deferred Pensioners	564	944
Pensioners	1,956	2,674
Total Liabilities	**4,796**	**6,743**
Assets	**4,379**	**6,598**
Surplus / (Deficit)	**(417)**	**(145)**
Funding Level	**91%**	**98%**

The Funding Objective was not met: there was a shortfall of assets relative to the assessed cost of members' benefits on the target funding basis of £145m.

Summary of changes to the funding position

The chart below illustrates the factors that caused the changes in the funding position between 31 March 2014 and 31 March 2017:



Further comments on this chart are set out below:

- There is an interest loss of £62m. This is broadly three years of compound interest at 5.0% p.a. applied to the previous valuation deficit of £417m (and can be thought of as the investment return that would have been achieved on the extra assets the Fund would have held if fully funded).
- Investment returns being higher than expected since 2014 lead to a gain of £1,506m. This is roughly the difference between the actual three-year return (51.0%) and expected three-year return (15.8%) applied to the whole fund assets from the previous valuation of £4,379m, with a further allowance made for cashflows during the period.
- The impact of the change in demographic assumptions has been a loss of around £43m.
- The change in mortality assumptions (baseline and improvements) has given rise to a gain of £60m. .
- The change in financial conditions since the previous valuation has led to a loss of £1,475m. This is due to a decrease in the real discount rate between 2014 and 2017. This has partially been offset by the increase to 1.0% p.a. of the assumed gap between RPI and CPI and a reduction in the expected future salary growth for benefits linked to final salary.
- Membership experience over the 3 years has led to a gain of £406m. The most material items of membership experience have been:
    - Lower than expected salary increases leading to a gain of £229m
    - Lower than expected pension increases leading to gain of £176m
    - Lower than expected take up of the 50:50 scheme leading to a loss of £31m.

Projection of the funding position

The progression of the funding position will depend on various factors including future asset performance, economic conditions and membership movements. If the financial and demographic assumptions we have made at this valuation are borne out in practice, and there are no changes to the valuation assumptions, we project that the funding level at the 2020 valuation date will be 95%. This allows for contributions to be paid as detailed below.

Employer Contribution Rates

The Contribution Objective is achieved by setting employer contributions which are likely to be sufficient to meet both the cost of new benefits accruing and to address any funding surplus or deficit relative to the funding target over the agreed time horizon. A secondary objective is to maintain relatively stable employer contribution rates.

We have used the methodology set out in **Section 2** of this report as well as the Fund's Funding Strategy Statement to set employer contributions rates from 1 April 2018. These are set out in the Rates and Adjustments Certificate as set out in **Appendix D.**

The table below summarises the whole fund Primary and Secondary Contribution rates at this valuation. The Primary rate is the payroll weighted average of the underlying individual employer primary rates and the Secondary rate is the total of the underlying individual employer secondary rates, calculated in accordance with the Regulations and CIPFA guidance.

Primary Rate (% of pay)	Secondary Rate (£)		
1 April 2018 - 31 March 2021	2018/2019	2019/2020	2020/2021
31.8%	-76,175,000	-76,293,000	-75,433,000

The Primary rate also includes an allowance of 0.3% of pensionable pay for the Fund's expenses.

The Fund's "Common Contribution rate" as at 31 March 2014 was 23.1% of pay. However, it should be noted that the change in regulatory regime and guidance on contribution rates means that any direct comparison between the whole fund rate at 2017 and the 2014 Common Contribution Rate is not appropriate.

5 Risk Assessment

The valuation results depend critically on the actuarial assumptions that are made about the future of the Fund. If all of the assumptions made at this valuation were exactly borne out in practice then the results presented in this document would represent the true cost of the Fund as it currently stands at 31 March 2017.

However, no one can predict the future with certainty and it is unlikely that future experience will exactly match the assumptions. The future therefore presents a variety of risks to the Fund and these should be considered as part of the valuation process. In particular:

- The main risks to the financial health of the Fund should be **identified**.
- Where possible, the financial significance of these risks should be **quantified**.
- Consideration should be given as to how these risks can then be **controlled** or **mitigated**.
- These risks should then be **monitored** to assess whether any mitigation is actually working.

This section investigates the potential implications of the actuarial assumptions not being borne out in practice.

Set out below is a brief assessment of the main risks and their effect on the valuation past service funding position results.

Sensitivity of past service funding position results to changes in assumptions

The table below gives an indication of the sensitivity of the funding position to small changes in two of the main financial assumptions used:

Discount Rates (p.a.)	Benefit Increases (p.a.)			
	2.7%	2.4%	2.1%	
2.7%	(980) 87%	(655) 91%	(342) 95%	(Deficit) Funding Level
3.2%	(447) 94%	(145) 98%	145 102%	(Deficit) Funding Level
3.7%	45 101%	326 105%	595 110%	(Deficit) Funding Level

The valuation results are also very sensitive to unexpected changes in future longevity. All else being equal, if longevity improves in the future at a faster pace than allowed for in the valuation assumptions, the funding level will decline and the required employer contribution rates will increase.

The proposed valuation assumption assumes that in the longer term mortality rates will fall at a rate of 1.25% each year. The more prudent assumption shown in the table below for sensitivity analysis assumes that mortality rates will fall at a rate of 1.5% each year in the longer term.

	1.25% long term rate of improvement	1.5% long term rate of improvement
(Deficit) Funding Level	(145) 98%	(223) 97%

This is not an exhaustive list of the assumptions used in the valuation. For example, changes to the assumed level of withdrawals and ill health retirements will also have an effect on the valuation results.

Note that the tables show the effect of changes to each assumption in isolation. In reality, it is perfectly possible for the experience of the Fund to deviate from more than one of our assumptions simultaneously and so the precise effect on the funding position is therefore more complex. Furthermore, the range of assumptions shown here is by no means exhaustive and should not be considered as the limits of how extreme experience could actually be.

Sensitivity of contribution rates to changes in assumptions

The employer contribution rates are dependent on a number of factors including the membership profile, current financial conditions, the outlook for future financial conditions, and demographic trends such as longevity. Changes in each of these factors can have a material impact on the contribution rates (both primary and secondary rates). We have not sought to quantify the impact of differences in the assumptions because of the complex interactions between them.

Funding risks

Employers participating in the Fund are exposed to a number of risks. These include, but are not limited to:

- Market risks – these include investment returns being less than anticipated or liabilities increasing more than expected due to changes in market conditions underlying the financial assumptions (e.g. inflation or pay increases above that assumed in **Section 3**).
- Demographic risks – these include anything that affects the timing or type of benefits (e.g. members living longer than anticipated, fewer members opting into the 50/50 option, etc.). In particular, early retirement on ill-health grounds can result in significant funding strains.
- Regulatory risks – changes in the Regulations could materially affect the benefits that members become entitled to. It is difficult to predict the nature of any such changes but it is not inconceivable that they could affect not just the cost of benefits earned after the change but could also have a retrospective effect on the past service position.
- Administration and Governance risks – failures in administration processes can lead to incorrect actuarial calculations. For example, where membership data is not up to date (e.g. leaver forms not being submitted in a timely matter) material inaccuracies in respect of the level of deficit and contributions may occur at future valuations
- Environmental risks – i.e. risks relating to environmental changes, and their impact on Fund employers and investments: such risks exist and may prove to be material. Given the lack of relevant quantitative information available specifically relevant to the Fund, we have not explicitly incorporated such risks in our advice on the 2017 valuation. The Administering Authority and the Employers may wish to seek direct advice on these risks.

Investment risk

The Fund holds some of its assets in return seeking assets such as equities to help reduce employers' costs. However, these types of investments can result in high levels of asset volatility. Therefore, there is a risk that future investment returns are below expectations and the funding target is not met. This will require additional contributions from employers to fund any deficit.

Whilst the Fund takes steps to ensure that the level of investment risk is managed and monitored via strategy reviews and performance monitoring, it can never be fully mitigated.

Managing the risks

Whilst there are certain things, such as the performance of investment markets or the life expectancy of members, that are not directly within the control of the pension fund, that does not mean that nothing can be done to understand them further and to mitigate their effect. Although these risks are difficult (or impossible) to eliminate, steps can be taken to manage them.

Ways in which some of these risks can be managed could be:

- Set aside a specific reserve to act as a cushion against adverse future experience (possibly by selecting a set of actuarial assumptions that are deliberately more prudent).
- Take steps internally to monitor the decisions taken by members (e.g. 50:50 scheme take-up, commutation) and employers (e.g. relating to early / ill health retirements or salary increases) in a bid to curtail any adverse impact on the Fund.
- Pooling certain employers together at the valuation and then setting a single (pooled) contribution rate that they will all pay. This can help to stabilise contribution rates (at the expense of cross-subsidy between the employers in the pool during the period between valuations). The Fund currently has a pool for small open Community Admission Bodies.
- Carrying out a review of the future security of the Fund's employers (i.e. assessing the strength of employer covenants) and ultimately their ability to continue to pay contributions or make good future funding deficits. The Fund carried this out as part of the 2017 valuation.
- Undertake an asset-liability modelling exercise that investigates the effect on the Fund of possible investment scenarios that may arise in the future. An assessment can then be made as to whether long term, secure employers in the Fund can stabilise their future contribution rates (thus introducing more certainty into their future budgets) without jeopardising the long-term health of the Fund. The Fund carried out such an exercise at the 2014 valuation, and has set up a contribution stability mechanism for long term and secure employers. It was reviewed and found to remain fit for purpose at the 2017 valuation, with the next full modelling exercise being due at the 2020 valuation.
- Managing ill health liabilities e.g. via ill health "budgets" or external insurance, to mitigate the risk of an ill health retirement impacting on solvency and funding level of an individual employer where appropriate.
- Monitoring different employer characteristics in order to build up a picture of the risks posed. Examples include membership movements, cash flow positions and employer events such as cessations. The Fund carries out quarterly membership monitoring.
- Regularly reviewing the Fund's membership data to ensure it is complete, up to date and accurate.

6 Related issues

The Fund's valuation operates within a broader framework, and this document should therefore be considered alongside the following:

- the Funding Strategy Statement, which in particular highlights how different types of employer in different circumstances have their contributions calculated;
- the Statement of Investment Principles (e.g. the discount rate must be consistent with the Fund's asset strategy);
- the general governance of the Fund, such as meetings of the Pensions Committee, decisions delegated to officers, the Fund's business plan, etc;
- the Fund's risk register;
- the information the Fund holds about the participating employers.

Further recommendations

Valuation frequency

Under the provisions of the LGPS regulations, the next formal valuation of the Fund is due to be carried out as at 31 March 2020. In light of the uncertainty of future financial conditions, we recommend that the financial position of the Fund (and for individual employers in some cases) is monitored by means of interim funding reviews. This will give early warning of changes to funding positions and possible revisions to funding plans.

Investment strategy and risk management

We recommend that the Administering Authority continues to regularly review its investment strategy and ongoing risk management programme.

New employers joining the Fund

Any new employers or admission bodies joining the Fund should be referred to the Fund Actuary to assess the required level of contribution. If members are transferring from a ceding employer, that employer's rate may also need to be reviewed depending on the numbers involved. Please see Appendix A of the Funding Strategy Statement for further details regarding the Fund's admission policy.

Additional payments

Employers may make voluntary additional contributions to recover any funding shortfall over a shorter period, subject to agreement with the Administering Authority and after receiving the relevant actuarial advice.

Further sums should be paid to the Fund by employers to meet the capital costs of any unreduced early retirements, reduced early retirements before age 60 and/or augmentation (i.e. additional membership or additional pension) using the methods and factors issued by me from time to time or as otherwise agreed.

In addition, payments may be required to be made to the Fund by employers to meet the capital costs of any ill-health retirements that exceed those allowed for within our assumptions.

Cessations and bulk transfers

Any employer who ceases to participate in the Fund should be referred to us in accordance with Regulation 62 of the Regulations.

Any bulk movement of scheme members:

- involving 10 or more scheme members being transferred from or to another LGPS fund, or
- involving 2 or more scheme members being transferred from or to a non-LGPS pension arrangement;

should be referred to us to consider the impact on the Fund.

Please refer to Appendices B and C of the Funding Strategy Statement for further details regarding the policies on cessations and bulk transfers.

7 Reliances and limitations

Third parties

This document has been prepared for the sole use of City of Edinburgh Council in its role as Administering Authority of the Fund and not for any other third party. Hymans Robertson LLP makes no representation or warranties to any third party as to the accuracy or completeness of this report. This report will therefore not address the particular interests or concerns of any such third party.

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Component reports

As set out in **Section 1** and **Section 6**, the totality of our advice pertaining to the valuation is set out over a number of component communications and complies with the various professional and regulatory requirements related to public sector actuarial valuations in Scotland. The reliances, limitations and caveats within this report and each component report apply equally across the totality of our advice.

Model limitations

The models used to calculate the assets, liabilities, contribution rates and the level of indemnity make some necessary simplifying assumptions. I do not consider these simplifications to be material and I am satisfied that they are appropriate for the purposes described in this report.

Limited purpose

This document has been prepared to fulfil the statutory obligations of the Administering Authority to carry out a formal actuarial valuation. None of the figures should be used for accounting purposes (e.g. under FRS102 or IAS19) or for any other purpose (e.g. a termination valuation under Regulation 62).

Reliance on data

The results of the valuation are dependent on the quality of the data provided to us by the Administering Authority for the specific purpose of this valuation. We have previously issued a separate report confirming that the data provided is fit for the purposes of this valuation and have commented on the quality of the data provided. The data used in our calculations is as per our report of 5 March 2018.

Actuarial standards

The following Technical Actuarial Standards[1] are applicable in relation to this report and have been complied with:

- TAS 100 – Principles for technical actuarial work;
- TAS 300 – Pensions.

No material deviations have been made from the above actuarial standards.

[1] Technical Actuarial Standards (TASs) are issued by the Financial Reporting Council (FRC) and set standards for certain items of actuarial work, including the information and advice contained in this report.

Compliance statement

The totality of our advice complies with the Regulations as they pertain to actuarial valuations.

Richard Warden

Fellow of the Institute and Faculty of Actuaries

For and on behalf of Hymans Robertson LLP

14 March 2018

Laura McInroy

Fellow of the Institute and Faculty of Actuaries

For and on behalf of Hymans Robertson LLP

14 March 2018

Appendix A: Data

This section contains a summary of the membership, investment and accounting data provided by the Administering Authority for the purposes of this valuation (the corresponding membership and investment data from the previous valuation is also shown for reference). For further details of the data, and the checks and amendments performed in the course of this valuation, please refer to our separate data report.

Membership data – whole fund

Employee members

	31 March 2014		31 March 2017		
	Number	Pensionable Pay* (£000)	Number	Pensionable Pay* (£000)	CARE Pot (£000)
Total employee membership	31,536	648,929	32,010	669,426	24,911

*actual pay (not full-time equivalent)

Deferred pensioners

	31 March 2014		31 March 2017	
	Number	Deferred pension (£000)	Number	Deferred pension (£000)
Total deferred membership	17,094	32,444	18,383	41,772

The figures above also include any “frozen refunds” and “undecided leavers” members at the valuation date.

Current pensioners, spouses and children

	31 March 2014		31 March 2017	
	Number	Pension (£000)	Number	Pension (£000)
Members	20,143	115,476	22,483	135,803
Dependants	3,750	10,645	3,660	11,288
Children	162	319	166	351
Total pensioner members	**24,055**	**126,440**	**26,309**	**147,442**

Note that the membership numbers in the table above refer to the number of records provided to us and so will include an element of double-counting in respect of any members who are in receipt (or potentially in receipt of) more than one benefit.

Membership Profile	Average Age (years)		FWL (years)	
	2014	2017	2014	2017
Employees (CARE)	-	48.3	12.1	14.7
Employees (Final Salary)	51.1	50.9		
Deferred Pensioners	50.3	50.2	-	-
Pensioners	66.6	66.7	-	-

The average ages are weighted by liability.

The expected future working lifetime (FWL) indicates the anticipated length of time that the average employee member will remain as a contributor to the Fund. Note that it allows for the possibility of members leaving, retiring early or dying before retirement.

Assets at 31 March 2017

As the Fund tracks employer asset values on a monthly basis using actual cashflows, the asset values at 31 March 2017 are on a 'cash' basis. This is different to the basis used to prepare the Fund's Annual Report and Accounts (which is on an 'accruals' basis). Therefore the asset value at 31 March 2017 will not match that disclosed in the Fund's Annual Report and Accounts. The figures below are based on the Fund's Annual Report and Accounts and have been used to check the monthly data submitted for the purpose of asset tracking.

A summary of the Fund's assets provided by the Administering Authority (excluding members' money-purchase Additional Voluntary Contributions) as at 31 March 2017 is as follows:

Asset class	31 March 2017 (Market Value) (£000)	Allocation %
UK equities	251,423	4%
UK fixed interest gilts	159,307	2%
UK corporate bonds	0	0%
UK index-linked gilts	505,109	8%
Overseas equities*	4,804,037	72%
Overseas bonds**	235,908	4%
Property	452,612	7%
Cash and net current assets	187,034	3%
Total	**6,595,430**	**100%**

**Includes Private Equity, Infrastructure and Commodities*

*** Includes Private Debt and Timber*

Accounting data – revenue account for the three years to 31 March 2017

Consolidated accounts (£000)	Year to			
	31 March 2015	30 March 2016	31 March 2017	Total
Income				
Employer - normal contributions	136,379	140,376	140,884	417,639
Employer - additional contributions	11	16	24	51
Employer - early retirement and augmentation strain contributions	6,047	19,480	12,827	38,354
Employee - normal contributions	41,526	42,061	41,954	125,541
Employee - additional contributions	817	739	624	2,180
Transfers In Received (including group and individual)	6,452	2,780	5,536	14,768
Other Income	0	0	0	0
Total Income	**191,232**	**205,452**	**201,849**	**598,533**
Expenditure				
Gross Retirement Pensions	128,701	133,624	141,778	404,103
Lump Sum Retirement Benefits	31,456	46,315	48,895	126,666
Death in Service Lump sum	3,593	5,336	6,384	15,313
Death in Deferment Lump Sum	0	0	0	0
Death in Retirement Lump Sum	0	0	0	0
Gross Refund of Contributions	830	936	976	2,742
Transfers out (including bulk and individual)	5,580	6,075	11,098	22,753
Fees and Expenses	1,780	1,743	1,895	5,418
Total Expenditure	**171,940**	**194,029**	**211,026**	**576,995**
Net Cashflow	**19,292**	**11,423**	**-9,177**	**21,538**
Assets at start of year	**4,377,536**	**5,106,232**	**5,434,014**	**4,377,536**
Net cashflow	**19,292**	**11,423**	**-9,177**	**21,538**
Change in value	**709,404**	**316,359**	**1,170,593**	**2,196,356**
Assets at end of year	**5,106,232**	**5,434,014**	**6,595,430**	**6,595,430**
Approximate rate of return on assets	**16.2%**	**6.2%**	**21.6%**	**50.0%**

Note that the figures above are based on the Fund accounts provided to us for the purposes of this valuation, which were fully audited at the time of our valuation calculations.

Appendix B: Assumptions

Financial assumptions

Financial assumptions	31 March 2014 (% p.a.)	31 March 2017 (% p.a.)
Discount rate	5.0%	3.2%
Retail Price inflation	3.5%	3.4%
Pay increases*	5.0%**	4.1%
Pension increases:		
pension in excess of GMP	2.7%	2.4%
post-88 GMP	2.7%	2.4%
pre-88 GMP	0.0%	0.0%
Revaluation of deferred pension	2.7%	2.4%
Revaluation of accrued CARE pension	2.7%	2.4%
Expenses	0.3%	0.3%

**An allowance is also made for promotional pay increases (see table below).*

*** 2.0% p.a. for 2014/15 and 2015/16, reverting to 5.0% p.a. thereafter.*

Longevity assumptions

As the fund is a member of Club Vita, the baseline longevity assumptions are a bespoke set of Vita Curves that are tailored to fit the membership profile of the Fund. These curves are based on the data the Fund has provided us with for the purposes of this valuation. Full details of these are available on request.

We have also allowed for future improvements in mortality based on the CMI 2016 model with an allowance for smoothing of recent mortality experience and a long term rate of improvement of 1.25% p.a..

Other demographic valuation assumptions

Retirements in normal health	We have adopted the retirement age pattern assumption as specified by the Scheme Advisory Board in England & Wales for preparing their Key Performance Indicators. Further details about this assumption are available on request.
Retirements in ill health	Allowance has been made for ill-health retirements before Normal Pension Age (see table below).
Withdrawals	Allowance has been made for withdrawals from service (see table below).
Family details	A varying proportion of members are assumed to be married (or have an adult dependant) at retirement or on earlier death. For example, at age 60 this is assumed to be 90% for males and 85% for females. Husbands are assumed to be 3 years older than wives.

Commutation	50% of future retirements elect to exchange pension for additional tax free cash up to HMRC limits for service to 1 April 2009 (equivalent 75% for service from 1 April 2009).
50:50 option	0.0% of members will choose the 50:50 option.

The tables below show details of the assumptions actually used for specimen ages. The promotional pay scale is an annual average for all employees at each age. It is in addition to the allowance for general pay inflation described above. For membership movements, the percentages represent the probability that an individual at each age leaves service within the following twelve months. The abbreviations FT and PT refer to full-time and part-time respectively.

Males

Age	Salary Scale	Incidence per 1000 active members per annum						
		Death Before Retirement	Withdrawals		Ill Health Tier 1		Ill Health Tier 2	
		FT & PT	FT	PT	FT	PT	FT	PT
20	105	0.27	96.58	223.33	0.00	0.00	0.00	0.00
25	117	0.27	63.79	147.52	0.15	0.02	0.13	0.02
30	131	0.32	45.25	104.64	0.28	0.04	0.23	0.03
35	144	0.38	35.35	81.74	0.55	0.18	0.46	0.15
40	150	0.64	28.44	65.77	0.83	0.30	0.69	0.24
45	157	1.07	23.28	53.82	1.32	0.59	1.09	0.49
50	162	1.72	18.03	41.69	2.48	1.38	2.59	1.45
55	162	2.68	17.32	40.05	7.77	5.17	4.67	3.11
60	162	4.83	15.43	35.67	13.21	9.05	3.87	2.65
65	162	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Females

Age	Salary Scale	Incidence per 1000 active members per annum						
		Death Before Retirement	Withdrawals		Ill Health Tier 1		Ill Health Tier 2	
		FT & PT	FT	PT	FT	PT	FT	PT
20	105	0.14	76.49	129.80	0.00	0.00	0.00	0.00
25	117	0.14	51.45	87.32	0.19	0.16	0.15	0.13
30	131	0.21	43.12	73.18	0.25	0.21	0.21	0.18
35	144	0.34	37.19	63.11	0.48	0.40	0.40	0.33
40	150	0.55	30.93	52.49	0.72	0.60	0.60	0.50
45	157	0.89	25.46	43.21	0.96	0.80	0.79	0.66
50	162	1.30	19.40	32.93	1.76	1.44	1.84	1.51
55	162	1.71	18.15	30.80	6.43	5.22	3.87	3.14
60	162	2.19	14.59	24.76	13.55	10.94	3.97	3.20
65	162	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Appendix C: Events since valuation date

Post-valuation events

These valuation results are in effect a snapshot of the Fund as at 31 March 2017. Since that date, various events have had an effect on the financial position of the Fund. Whilst we have not explicitly altered the valuation results to allow for these events, a short discussion of these "post-valuation events" can still be beneficial in understanding the variability of pension funding.

In the period from the valuation date to end February 2018, asset returns have been better than expected which improves the Fund's funding position. This has been mostly offset by a fall in yields which places a higher value on the past service liabilities. Overall, the funding position at end February 2018 is expected to be broadly similar to that at 31 March 2017. It should be noted that the above is for information only: the figures in this report have all been prepared using membership data, audited asset information and market-based assumptions all as at 31 March 2017. In particular, we do not propose amending any of the contribution rates listed in the Rates and Adjustments Certificate on the basis of these market changes.

Appendix D: Rates and adjustments certificate

In accordance with regulation 60(4) of the Regulations we have made an assessment of the contributions that should be paid into the Fund by participating employers for the period 1 April 2018 to 31 March 2021 in order to maintain the solvency of the Fund.

The method and assumptions used to calculate the contributions set out in the Rates and Adjustments certificate are detailed in the Funding Strategy Statement dated March 2018 and our report on the actuarial valuation dated 14 March 2018.

Regulation 60(8) requires a statement of the assumptions on which the certificate is given regarding the number of members, and the associated of liabilities arising, who will become entitled to payment of pensions under the regulations of the LGPS. These assumptions can be found in Appendix B of the 31 March 2017 formal valuation report dated 14 March 2018. These assumptions cover members who become entitled to payment of pension via normal retirement and ill health retirement. Further members will become entitled due to involuntary early retirement (for redundancy and efficiency reasons) for which no allowance has been made.

The required minimum contribution rates are set out below.

Employer code	Employer/Pool name	Primary Rate (%) 1 April 2018 - 31 March 2021	Minimum Contributions for the Year Ending					
			Secondary Rate			Total Contribution Rate		
			2018/2019	2019/2020	2020/2021	2018/2019	2019/2020	2020/2021
Scheduled Bodies (Main Investment Strategy)								
The City of Edinburgh Council	The City of Edinburgh Council	31.8%	-11.2% plus £3,064,300	-10.7% plus £3,064,300	-10.2% plus £3,064,300	20.6% plus £3,064,300	21.1% plus £3,064,300	21.6% plus £3,064,300
Midlothian Council	Midlothian Council	31.7%	-11.0% plus £339,500	-10.5% plus £339,500	-10.0% plus £339,500	20.7% plus £339,500	21.2% plus £339,500	21.7% plus £339,500
East Lothian Council	East Lothian Council	32.0%	-11.1% plus £503,300	-10.6% plus £503,300	-10.1% plus £503,300	20.9% plus £503,300	21.4% plus £503,300	21.9% plus £503,300
West Lothian Council	West Lothian Council	31.9%	-11.4% plus £404,100	-10.9% plus £404,100	-10.4% plus £404,100	20.5% plus £404,100	21.0% plus £404,100	21.5% plus £404,100
8	Heriot-Watt University	32.2%	-11.1% plus £385,900	-10.6% plus £385,900	-10.1% plus £385,900	21.1% plus £385,900	21.6% plus £385,900	22.1% plus £385,900
105	West Lothian College	31.5%	-12.7%	-12.2%	-11.7%	18.8%	19.3%	19.8%
109	Edinburgh College	30.2%	-12.4% plus £229,900	-12.4% plus £229,900	-12.4% plus £229,900	17.8% plus £229,900	17.8% plus £229,900	17.8% plus £229,900
134	Lothian Valuation Joint Board	32.8%	-11.4% plus £3,100	-11.0% plus £3,100	-11.0% plus £3,100	21.4% plus £3,100	21.8% plus £3,100	21.8% plus £3,100
135	Scottish Water (See Note 1)	30.9%	-11.2%	-10.7%	-10.2%	19.7%	20.2%	20.7%
155	Visit Scotland	29.1%	-13.9% plus £75,500	-13.9% plus £75,500	-13.9% plus £75,500	15.2% plus £75,500	15.2% plus £75,500	15.2% plus £75,500
209	SESTRAN	27.7%	-8.7% plus £10,500	-8.2% plus £10,500	-8.2% plus £10,500	19.0% plus £10,500	19.5% plus £10,500	19.5% plus £10,500
899	Scottish Fire and Rescue Service	31.7%	-12.2%	-11.7%	-11.2%	19.5%	20.0%	20.5%
Scottish Police Authority	Scottish Police Authority	32.2%	-13.5% plus £119,100	-13.1% plus £119,100	-12.8% plus £119,100	18.7% plus £119,100	19.1% plus £119,100	19.4% plus £119,100
Transferee Admission Bodies (Main Investment Strategy)								
139	CGI	34.3%	-2.3%	-1.9%	-1.4%	32.0%	32.4%	32.9%
140	Dacoll	34.7%	-2.1%	-1.1%	£100	32.6%	33.6%	34.7% plus £100
165	Amey Services	34.6%	-34.6%	-34.6%	-34.6%	-	-	-
178	Morrison Facilities Services	35.0%	-35.0%	-35.0%	-35.0%	-	-	-
200	Forth & Oban Ltd	33.0%	-18.0%	-18.0%	-18.0%	15.0%	15.0%	15.0%
207	LPFE Limited	30.5%	-6.7%	-3.4%	-0.1%	23.8%	27.1%	30.4%
212	Skanska	36.7%	£1,500	£1,500	£1,500	36.7% plus £1,500	36.7% plus £1,500	36.7% plus £1,500
214	NSL Services Group	35.8%	-35.8%	-35.8%	-35.8%	-	-	-
220	Mitie PFI CEC PP2	35.6%	-35.6%	-35.6%	-35.6%	-	-	-
222	Compass-Chartwell	35.5%	-35.5%	-35.5%	-35.5%	-	-	-
224	BaxterStorey	35.7%	-35.7%	-35.7%	-35.7%	-	-	-
225	Bellrock	34.0%	-2.7%	-2.7%	-2.7%	31.3%	31.3%	31.3%
Small Open Community Admission Bodies Pool (Main Investment Strategy)								
46	Museums Galleries Scotland	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
64	Citadel Youth Centre	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
87	Family Advice & Information Resource	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
90	Handicabs (Lothian) Limited	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
113	Weslo Housing Management	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
117	Scottish Schools Education Research	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
118	Royal Edinburgh Military Tattoo	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
119	Family and Community Development West Lothian	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
121	Edinburgh Development Group	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
123	Scottish Adoption Agency	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
143	First Step	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
147	Melville Housing Association	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
154	St Andrew's Children's Society Limited	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
156	Canongate Youth Project	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
172	Homes for Life Housing Partnership	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
174	Capital City Partnership	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
196	HWU Students Association	31.6%	-10.9%	-9.6%	-8.4%	20.7%	22.0%	23.2%
Other Open Community Admission Bodies (Main Investment Strategy)								
15	Newbattle College	32.0%	-13.1%	-13.1%	-13.1%	18.9%	18.9%	18.9%
21	Audit Scotland	30.5%	-12.8% plus £76,800	-12.3% plus £76,800	-11.8% plus £76,800	17.7% plus £76,800	18.2% plus £76,800	18.7% plus £76,800
28	Convention of Scottish Local Authorities	30.2%	-4.8%	-3.5%	-2.3%	25.4%	26.7%	27.9%
30	Queen Margaret University	30.9%	-11.9% plus £31,900	-11.4% plus £31,900	-10.9% plus £31,900	19.0% plus £31,900	19.5% plus £31,900	20.0% plus £31,900
36	Barony Housing Association Ltd	33.0%	-15.3%	-15.3%	-15.3%	17.7%	17.7%	17.7%
51	Edinburgh Napier University	30.6%	-11.4% plus £166,000	-10.9% plus £166,000	-10.4% plus £166,000	19.2% plus £166,000	19.7% plus £166,000	20.2% plus £166,000
91	EDI Group (see Note 2)	32.1%	£566,800	-	-	32.1% plus £566,800	-	-
133	Children's Hospice Association Scotland	30.7%	-15.5%	-15.0%	-14.5%	15.2%	15.7%	16.2%
157	West Lothian Leisure	31.0%	-16.3%	-16.3%	-16.3%	14.7%	14.7%	14.7%
210	Improvement Service	29.5%	-12.3% plus £27,200	-12.3% plus £27,200	-12.3% plus £27,200	17.2% plus £27,200	17.2% plus £27,200	17.2% plus £27,200
218	Scottish Futures Trust	29.7%	-11.9% plus £81,000	-11.9% plus £81,000	-11.9% plus £81,000	17.8% plus £81,000	17.8% plus £81,000	17.8% plus £81,000
219	Enjoy East Lothian	30.2%	-16.1%	-15.6%	-15.1%	14.1%	14.6%	15.1%
223	Children's Hearing Scotland	29.7%	-14.9% plus £19,400	-14.9% plus £19,400	-14.9% plus £19,400	14.8% plus £19,400	14.8% plus £19,400	14.8% plus £19,400
CABs with Ongoing Cessation Agreement (Main Investment Strategy)								
159	Edinburgh Leisure	34.8%	-14.0%	-11.6%	-9.3%	20.8%	23.2%	25.5%
170	Into Work	36.7%	-36.7%	-36.7%	-36.7%	-	-	-
171	Edinburgh World Heritage Trust (see Note 3)	37.8%	-9.8% plus £3,800	-	-	28.0% plus £3,800	-	-
193	Health in Mind	36.6%	-22.9%	-22.9%	-22.9%	13.7%	13.7%	13.7%
217	Scottish Legal Complaints Commission (SLCC)	33.0%	-15.5%	-15.5%	-15.5%	17.5%	17.5%	17.5%

Employer code	Employer/Pool name	Primary Rate (%) 1 April 2018 - 31 March 2021	Minimum Contributions for the Year Ending					
			Secondary Rate			Total Contribution Rate		
			2018/2019	2019/2020	2020/2021	2018/2019	2019/2020	2020/2021
Closed Community Admission Bodies (Medium Risk Investment Strategy)								
9	University of Edinburgh (E.C.A.)	41.8%	£404,200	£500,700	£597,200	41.8% plus £404,200	41.8% plus £500,700	41.8% plus £597,200
17	Donaldson's Trust	40.9%	-11.3%	-4.0%	£33,400	29.6%	36.9%	40.9% plus £33,400
22	Hanover (Scotland) Housing Association	41.4%	£51,000	£119,300	£187,600	41.4% plus £51,000	41.4% plus £119,300	41.4% plus £187,600
34	St Columba's Hospice	40.9%	-11.3%	-4.0%	£33,400	29.6%	36.9%	40.9% plus £33,400
44	Edinburgh International Festival Society	42.7%	-1.2%	£43,500	£90,000	41.5%	42.7% plus £43,500	42.7% plus £90,000
53	Edinburgh Cyrenians Trust	42.1%	-14.8%	-9.8%	-4.8%	27.3%	32.3%	37.3%
77	Waverley Care Ltd	41.1%	-15.3%	-12.6%	-10.0%	25.8%	28.5%	31.1%
78	ELCAP	42.1%	-15.7%	-11.5%	-7.4%	26.4%	30.6%	34.7%
79	Freespace	42.0%	-19.7%	-19.7%	-19.7%	22.3%	22.3%	22.3%
104	SRUC	42.9%	£50,400	£109,200	£168,000	42.9% plus £50,400	42.9% plus £109,200	42.9% plus £168,000
158	Royal Society of Edinburgh	41.4%	-16.1%	-13.9%	-11.7%	25.3%	27.5%	29.7%
160	Edinburgh Business School	43.1%	-6.4%	£23,000	£64,600	36.7%	43.1% plus £23,000	43.1% plus £64,600
183	Young Scot Enterprise	41.8%	-7.8%	£9,100	£36,200	34.0%	41.8% plus £9,100	41.8% plus £36,200
Closed Community Admission Bodies (Low Risk Investment Strategy)								
11	Homeless Action Scotland (see Note 3)	52.0%	-27.0% plus £4,200	-	-	25.0% plus £4,200	-	-
16	Dean Orphanage & Cauvins Trust	49.5%	£140,100	£140,100	£140,100	49.5% plus £140,100	49.5% plus £140,100	49.5% plus £140,100
38	Four Square (Scotland)	49.0%	£78,100	£78,100	£78,100	49.0% plus £78,100	49.0% plus £78,100	49.0% plus £78,100
50	Centre for the Moving Image (The) (see Note 3)	50.3%	-14.5%	-	-	35.8%	-	-
55	Open Door Accommodation Project	50.4%	£46,400	£46,400	£46,400	50.4% plus £46,400	50.4% plus £46,400	50.4% plus £46,400
59	Penumbra	48.5%	£156,600	£156,600	£156,600	48.5% plus £156,600	48.5% plus £156,600	48.5% plus £156,600
89	North Edinburgh Dementia Care	48.3%	£5,200	£5,200	£5,200	48.3% plus £5,200	48.3% plus £5,200	48.3% plus £5,200
131	West Granton Community Centre	47.2%	£2,400	£2,400	£2,400	47.2% plus £2,400	47.2% plus £2,400	47.2% plus £2,400
173	Pilton Equalities Project	51.9%	£22,500	£22,500	£22,500	51.9% plus £22,500	51.9% plus £22,500	51.9% plus £22,500
185	Youthlink Scotland	48.0%	£9,700	£9,700	£9,700	48.0% plus £9,700	48.0% plus £9,700	48.0% plus £9,700
187	Stepping Out Project	53.6%	£400	£400	£400	53.6% plus £400	53.6% plus £400	53.6% plus £400
188	Scotland's Learning Partnership (see Note 3)	50.5%	-33.4% plus £4,900	-	-	17.1% plus £4,900	-	-
199	Wester Hailes Land & Property	48.2%	£34,100	£34,100	£34,100	48.2% plus £34,100	48.2% plus £34,100	48.2% plus £34,100

Notes:

1. Scottish Water meets the criteria for participation in the Fund's Contribution Stability Mechanism (CSM). For the period from 1 April 2018 to 31 March 2021 the Employer has decided to temporarily opt out of the CSM and instead pay its non-stabilised 2017 valuation contribution rate. The Employer's non-stabilised 2017 contributions are a primary rate of 30.9% of payroll, plus a secondary rate of £415,000 per annum. Furthermore, the Employer pre-paid its calculated secondary rate in March 2018 via an actuarially reduced lump payment of £1,188,000. The contributions shown in the Rates and Adjustments certificate are the minimum contributions the Fund requires the Employer to pay (i.e. the stabilised contribution rate). In practice, it is expected that the Employer will pay 30.9% of payroll for each of the 3 years commencing 1 April 2018.

2. EDI Group is expected to cease participation in the Fund in December 2018, therefore contributions for the period 1 April 2018 to 31 December 2018 have been certified. Should the employer not cease participation at this time, a revised contribution rate will be certified.

3. This employer has contacted the Fund to note its intention to cease participation in the Fund. Participation will cease on 1 July 2018, therefore contributions for the period 1 April 2018 to 30 June 2018 only have been certified. Should the employer not cease participation at this time, a revised contribution rate will be certified.

4. Contributions should be paid into Lothian Pension Fund ('the Fund') at a frequency in accordance with the requirements of the Regulations.

5. Further sums should be paid to the Fund to meet the costs of any non-ill health early retirements and/or augmentations (i.e. additional pension) using methods and factors issued by me from time to time, or GAD guidance if I consider it to be appropriate.

6. In addition, further sums may be required to be paid to the Fund by employers to meet the capital costs of any ill-health retirements that exceed those included within my assumptions.

7. The certified contribution rates represent the minimum level of contributions to be paid. Employing authorities may pay further amounts at any time, and future periodic contributions may be adjusted on a basis approved by the Fund actuary.

Signature:		
Date:	14 March 2018	14 March 2018
Name:	Richard Warden	Laura McInroy
Qualification:	Fellow of the Institute and Faculty of Actuaries	Fellow of the Institute and Faculty of Actuaries
Firm:	Hymans Robertson LLP	Hymans Robertson LLP
	20 Waterloo Street	20 Waterloo Street
	Glasgow	Glasgow
	G2 6DB	G2 6DB