Pensions Committee

2.00pm, Monday, 26 March 2018

2017 Actuarial Valuation for Scottish Homes Pension Fund

Item number	5.8
Report number	
Executive/routine	
Wards	All
Council Commitments	Delivering a Council that works for all

Executive Summary

The Scottish Homes Pension Fund is required by law to undertake an actuarial valuation once every three years. The Fund's Actuary assesses the financial health of the pension fund and sets the employer contribution rates required for the next three years.

This report presents the results of the actuarial valuation of the Scottish Homes Pension Fund as at 31 March 2017.

The funding level at 31 March 2017 was 104.7%, increased from 88.8% from the 2014 actuarial valuation. This Actual Funding Level (AFL) of 104.7% is greater than the Target Funding Level (TFL) of 93.0%, as specified in the Scottish Government Guarantee. Accordingly, no deficit contributions are required from the Scottish Government (as Guarantor) for the period from 1 April 2018 to 31 March 2021.

The Scottish Government, however, is required to pay a total of £70,000 per annum towards the cost of administration expenses over the three years from 1 April 2018 to 31 March 2021.

Consultation has been undertaken with the Scottish Government on the potential benefits offered by a revised Funding Agreement. The Scottish Government, however, has recently advised that it does not wish to revisit such.

Report

2017 Actuarial Valuation for Scottish Homes Pension Fund

1. Recommendations

Committee is requested to:

1.1 Note the results of the 2017 actuarial valuation for the Scottish Homes Pension Fund;

1.2 Note that the funding level of the Scottish Homes Pension Fund at 31 March 2017 was 104.7%. This Actual Funding Level (AFL) of 104.7% is greater than the Target Funding Level (TFL) of 93.0%, as specified in the Scottish Government Guarantee. Accordingly, no deficit contributions are required from the Scottish Government (as Guarantor) for the period from 1 April 2018 to 31 March 2021;

1.3 Note that the Scottish Government is required to pay a total of £70,000 per annum towards the cost of administration expenses over the three years from 1 April 2018 to 31 March 2021;

1.4 Note that the Scottish Government was consulted on the potential benefits offered by a revised Funding Agreement, incorporating an amended investment strategy for the Fund; and

1.5 Note that the Scottish Government has recently advised that it does not wish to revise the Funding Agreement and that the equity and property investments are being sold with proceeds being reinvested in index-linked gilts, in accordance with the current Funding Agreement.

2. Background

2.1 The City of Edinburgh Council took over the administration of the deferred and pensioner liabilities of Scottish Homes in July 2005. An agreement between the Scottish Government and the City of Edinburgh Council (‘the Guarantee’) was put in place in June 2005. The Scottish Government acts as the ‘Guarantor’ for the Fund liabilities.

2.2 The Scottish Homes Pension Fund is required by law to undertake an actuarial valuation once every three years. Based on data as at 31 March 2017, this actuarial valuation must be completed by 31 March 2018.

2.3 The actuarial valuation of a 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 employer / guarantor.

2.4 The funding strategy for the Scottish Homes Pension Fund and the valuation methodology is set out in the Guarantee. The strategy assesses the funding level using prudent financial assumptions and sets target funding levels for the Fund at each actuarial valuation. It also sets out the conditions which will trigger contributions to be payable by the Scottish Government.

2.5 The Guarantee provides guidance on the investment strategy for the Fund including the expectation that the allocation to equities is reduced over time and the desire of the Scottish Government to 'lock away any surpluses that may occur over time by accelerating the transfer into bonds'.

2.6 A report by the Executive Director of Resources entitled "Annual Investment Update – Scottish Homes Pension Fund" was considered by Pensions Committee, at its meeting on 27 September 2017. This commented that "Changes to the Fund's asset allocation based on funding level progress were agreed by the Pensions Committee in December 2014. During 2016/17, there were a number of changes to asset allocation reflecting further improvements in the estimated funding level. The equity strategic allocation was decreased over the year from 30% to 17.5%. The portfolio structure has also been revised, resulting in a portfolio where the expected cash flows will more closely match the expected liability outflows for the Fund. The bulk of the Fund's assets are also now managed in-house, resulting in reduced ongoing investment manager fees. Committee has previously agreed that the Executive Director of Resources should progress an updated funding agreement with Scottish Government, in consultation with the Actuary, Investment Strategy Panel and Convener of the Pensions Committee."

3. Main report

2017 Actuarial Valuation

3.1 The 2017 Actuarial Valuation report is provided in Appendix 1. The report is marked as 'Draft' pending the formal approval of the Funding Strategy Statement which is also on Committee's agenda.

3.2 Liability cashflows (projected benefit payments) have been estimated based on financial and demographic assumptions, as detailed in the appendix.

3.3 The table below summarises the financial position of the Fund at 31 March 2017, with the result at the 2014 formal valuation shown for comparison.

Valuation Date	**2014**	**2017**
	£M	**£M**
Past Service Liabilities	153.5	162.9
Market Value of Assets	136.3	170.6
Surplus / (Deficit)	(17.1)	7.7
Actual Funding Level %	**88.8%**	**104.7%**
Target Funding Level %	**91.5%**	**93.0%**

3.4 The Fund's Actuary has commented "The assets have grown substantially over the inter-valuation period. This is a result of much better than assumed asset returns. The strong investment return has more than offset the increase in liabilities".

3.5 The Target Funding Level (TFL), as set out in the Guarantee, is 93.0% at 31 March 2017. The Actual Funding Level (AFL) is greater than the TFL at the 2017 valuation date and therefore no deficit contributions are required from the Scottish Government (as Guarantor) for the period from 1 April 2018 to 31 March 2021.

3.6 The Guarantor, however, should also meet the cost of administration expenses. To ensure prudence, therefore, the Guarantor is required to pay a total of £70,000 per annum over the three years from 1 April 2018. Investment expenses will be met from the current funding surplus.

Investment Strategy

3.7 The funding agreement with the Scottish Government and the investment strategy are designed to reduce investment risk as the Fund is closed to new members and the liabilities will mature over the time.

3.8 The Scottish Government has previously stated that it does not wish to explore the purchase of insurance (annuities) contracts for the Fund. These could provide greater (and potentially full) protection from all risks, including longevity. This option would only be pursued further should there be intimation of a change in its stance by the Scottish Government.

3.9 A summary of the movements in strategic allocation of the investments is shown below:

SCOTTISH HOMES PENSION FUND	Sep-16 Strategy Allocation %	Oct-17 Strategy Allocation %	Jan-17 Strategy Allocation %	Mar-17 Strategy Allocation %	Jun-17 Strategy Allocation %	Sep-17 Strategy Allocation %
Equities	25.0	22.5	20.0	17.5	15.0	10.0
Bonds	70.0	72.5	75.0	77.5	80.0	85.0
Property	5.0	5.0	5.0	5.0	5.0	5.0
Total Fund	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

3.10 The Fund's officers have advised the Scottish Government that with the funding level in excess of 100%, the investments are expected to be fully invested in index-linked gilts as required under the current funding agreement. Investment in such assets provides a less volatile funding level. However, the expected income and investment returns from index-linked gilts is lower than other asset classes (such as equities, property and corporate debt). Furthermore, index-linked gilts cannot provide an exact match for the liabilities and longevity risks remain. Hence, there will continue to be a risk of further contributions being required from Scottish Government. Other funding options, specifically less restrictive investment strategies (which include assets other than index-linked gilts), were being explored, with the objective being to provide investment income which would match the benefit outgoings more closely. Such a strategy would have expected to deliver a lower risk of contributions being required and an expectation of a buffer to cover unexpected experience. Revisions to the funding agreement would be required to implement such a strategy. Consultation with the Scottish Government took place on this basis.

3.11 The Scottish Government confirmed its agreement to delaying the further transfer from equities to index linked gilts which adherence to the Guarantee would have dictated, pending its consideration of the options.

3.12 In late February 2018, however, the Scottish Government advised that it does not wish to revisit the Funding Agreement. With the Actual Funding Level standing at 104.7% as at 31 March 2017, at the time of writing the equity and property investments are being sold with proceeds being invested in index-linked gilts, in accordance with the Funding Agreement.

4. Measures of success

4.1 The Guarantee agreement with the Scottish Government sets out the target funding levels for the Scottish Homes Pension Fund every 3 years until 2044. Actual funding levels are measured against the target funding levels on a regular basis.

5. Financial impact

5.1 The funding strategy, together with the Guarantee from the Scottish Government, should ensure that the Fund has sufficient assets in the long term. The results of the actuarial valuation have a financial impact on the Scottish Government as guarantor. The actuarial valuation sets the contribution rates payable by the Scottish Government over the next 3 years.

6. Risk, policy, compliance and governance impact

6.1 The investment strategy of the pension fund is one of the main determinants of risk, in terms of volatility of funding level and contributions payable by the Scottish Government.

7. Equalities impact

7.1 There are no adverse equalities impacts arising from 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 The Scottish Government has been consulted during the actuarial valuation process.

10. Background reading/external references

10.1 None

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11. Appendices

Appendix 1 – 2017 Actuarial Valuation Report for Scottish Homes Pension Fund

Appendix 1

Scottish Homes 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 Scottish Homes Pension Fund ("the Fund") as at 31 March 2017.

The Scottish Government (previously known as the Scottish Executive) acts as the 'Guarantor' for the Fund's liabilities. The results are presented in this report and are 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	153.5	162.9
Market Value of Assets	136.3	170.6
Surplus / (Deficit)	(17.1)	7.7
Funding Level	**88.8%**	**104.7%**

The Actual Funding Level (AFL) has improved due primarily to better than anticipated investment returns. This has been partially offset by a reduction in future expected investment returns. Further details are set out in **Section 4**.

Contribution rates

The Target Funding Level (TFL), as set out in the Funding Agreement, is 93.0% at 31 March 2017. The AFL is greater than the TFL at the 2017 valuation date and therefore no deficit contributions are required from the Guarantor for the period from 1 April 2018 to 31 March 2021.

The Guarantor has a responsibility to pay towards the cost of administration expenses. The Fund's current best estimate of these is £70,000 per annum.

In addition, the Guarantor is responsible for meeting the cost of investment expenses. Given the Fund's surplus, we and the Administering Authority are comfortable that investment expenses can be met directly from the Fund over the next three years.

The Guarantor is therefore being asked to pay total contributions to the Fund of £70,000 per annum from 1 April 2018 to 31 March 2021. This contribution requirement is set out 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

The deferred pensioner and pensioner members of the Scottish Homes Pension Fund were transferred to the City of Edinburgh Council ("the Administering Authority") prior to the wind-up of the Scottish Homes Residuary Body. The Administering Authority assumed the management of its assets and liabilities from 1 July 2005.

The Scottish Government (formerly the Scottish Executive) acts as the Guarantor for the transferred liabilities. The Guarantor's intention is that over time the transferred assets together with any additional contributions required should be sufficient to fund the former Scottish Homes Pension Fund liabilities.

The Administering Authority has commissioned us to carry out a formal actuarial valuation of the Scottish Homes 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 users of this advice. All reliances, limitations and caveats, including third 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 Guarantor 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:

- Correspondence relating to data including the Data Report dated 5 March 2018;
- The Initial Results report dated 12 December 2017 which outlined the whole fund results and proposed valuation assumptions;
- The operation of the Scottish Executive Funding Agreement dated 29 June 2005, confirming the approach to determining contributions payable to the Fund by the Scottish Government (the "Funding Agreement").

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. 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/.

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. Such a valuation can only ever be an estimate as the future cannot be predicted with certainty.

The principal measurement 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. 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.

3 Assumptions

Assumptions must be made about the factors affecting the Fund's finances in the future. These assumptions broadly fall into two categories – financial and demographic.

The Scottish Government acts as the 'Guarantor' for the Fund liabilities.

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.

The terms of the Funding Agreement impose restrictions on the discount rate that is used to calculate the value of the past service liabilities. In particular, no allowance for anticipated out-performance resulting from investment in assets that are riskier than Government bonds, such as equities and property, should be included. In any event, the Fund intends to de-risk its investment strategy to invest solely in Government bonds and will no longer hold riskier assets.

The discount rate is in line with the Bank of England nominal yield curve at the valuation date. This means that each future cashflow has been discounted at an appropriate spot rate dependent on the expected timing of the cashflow. This approach is similar to the 2014 valuation.

Price inflation / benefit increases

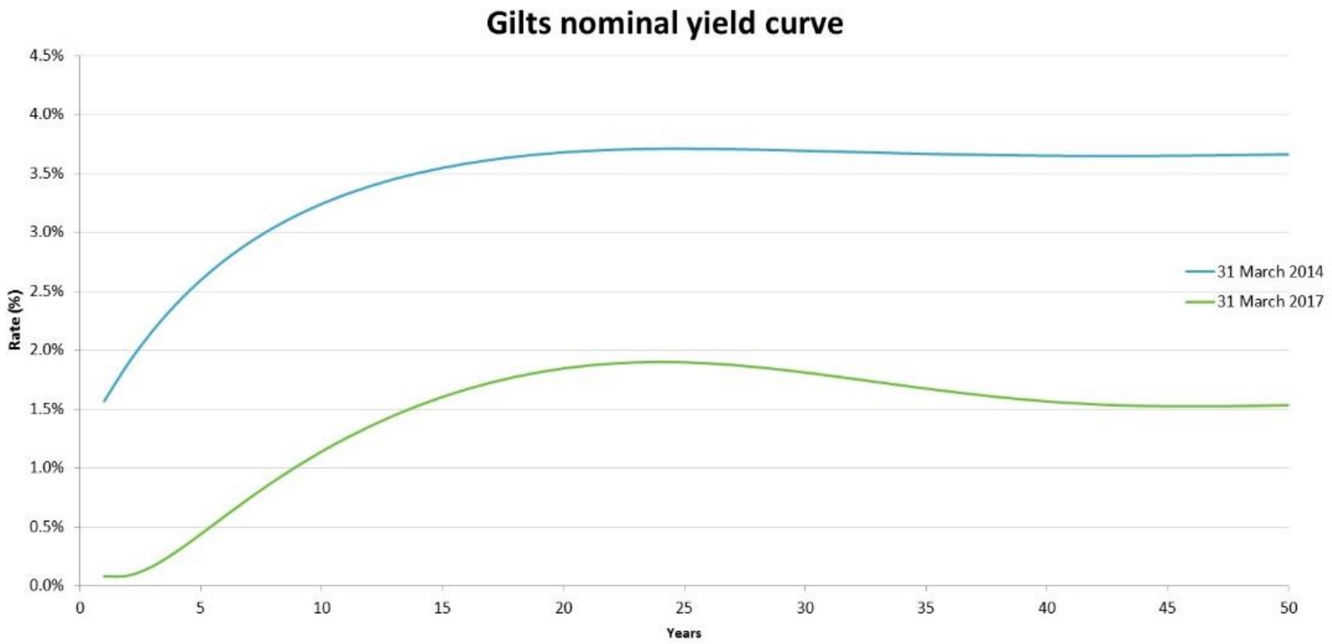
Benefit increases are awarded in line with the Consumer Prices Index (CPI). As there continues to be no deep market for CPI linked financial instruments, the Fund derives the expected level of future CPI with reference to the Retail Prices Index (RPI).

Similar to the previous valuation, the assumption for RPI is derived from the Bank of England implied inflation (RPI) curve to recognise differing expected inflation assumptions at different durations. We expect the average long term difference between RPI and CPI to be 1.0% p.a. (compared to 0.8% p.a. at the 2014 valuation).

A summary of the main financial assumptions adopted for the valuation of members' benefits is shown below (the assumptions at the 2014 valuation are shown for comparison).

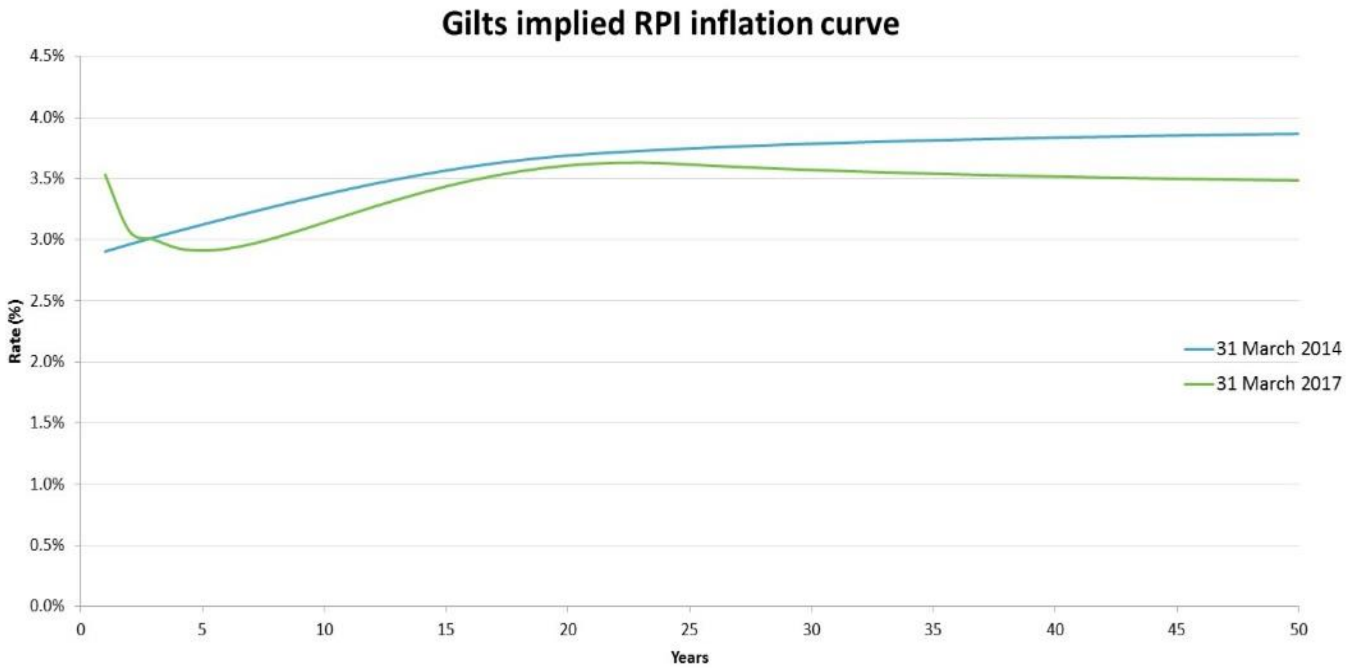
Financial Assumptions	31 March 2014	31 March 2017
Discount rate	Bank of England nominal yield curve	Bank of England nominal yield curve
Benefit increases	Bank of England implied inflation (RPI) curve less 0.8% p.a.	Bank of England implied inflation (RPI) curve less 1.0% p.a.

The chart below shows the nominal spot yields for a Government-backed loan (i.e. the yield to maturity of a zero coupon bond) as at 31 March 2017 (the equivalent curve as at 31 March 2014 is shown for comparison).



Source: Bank of England

The chart below shows the Bank of England implied inflation curve over a range of maturities at 31 March 2017 (the equivalent curve as at 31 March 2014 is shown for comparison). This is derived from the yields on both fixed and index linked gilts.



Source: Bank of England

Demographic assumptions

Demographic assumptions typically try to forecast when benefits will come into payment and what form these will take. For example, when members will retire (e.g. at their normal retirement age or earlier), how long they will then survive and whether a dependant's pension will be paid.

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	24.5 years	22.4 years
Non-pensioners	26.8 years	24.8 years
Female		
Pensioners	25.4 years	24.8 years
Non-pensioners	28.6 years	27.8 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.

Retirement age pattern

We have adopted the retirement age pattern assumption as specified by the England and Wales Scheme Advisory Board for preparing Key Performance Indicators.

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 understand that, as a result of the Fund's surplus funding position, and following discussion with the Guarantor, the Administering Authority is removing all exposure to volatile asset classes (e.g. equities) in favour of low risk assets (i.e. index-linked government bonds). The discount rate assumption (government bond yields) is based on returns from very low risk assets, and should broadly match the future investment returns that can be anticipated from the Fund's assets given the change in asset allocation.

Taken in aggregate, we believe the proposed funding basis results in a sufficiently prudent estimate of the Fund's pension liabilities.

4 Results

Funding level and surplus / (deficit)

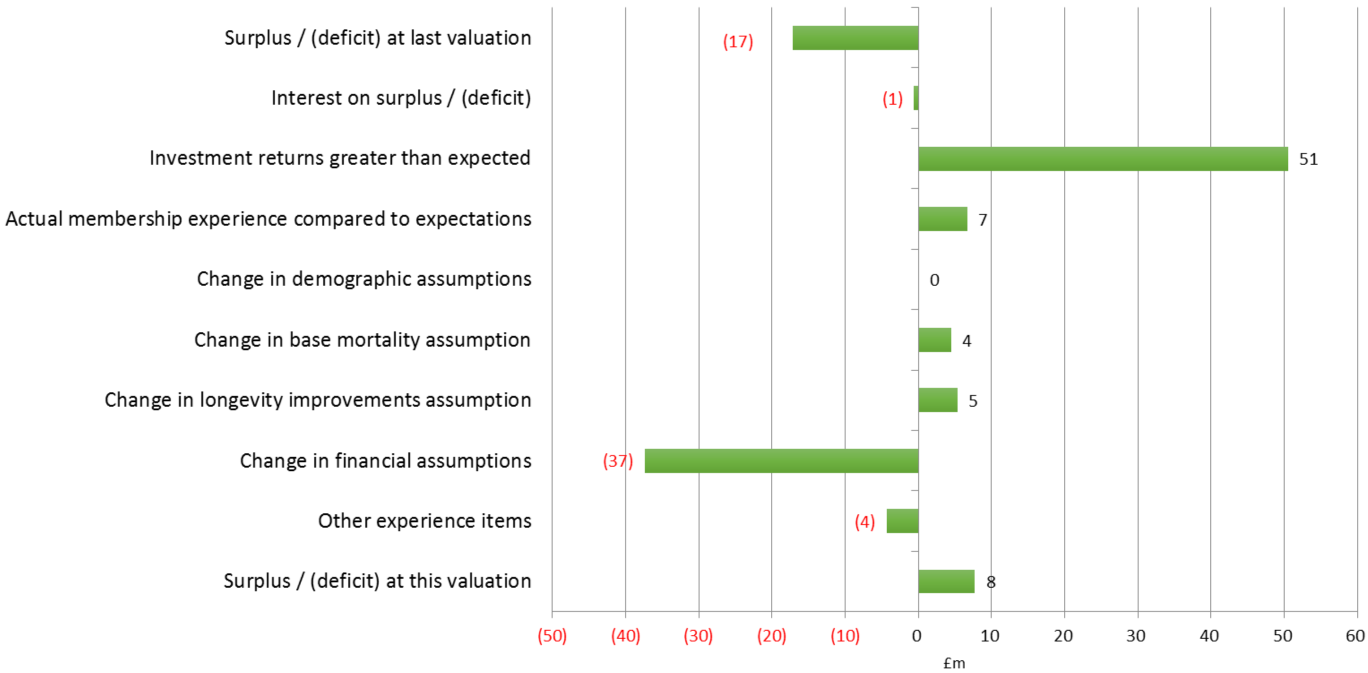
In assessing the extent to which the past service funding objective was met at the valuation date, we have used the actuarial assumptions described in the previous section of this report and the funding method also earlier described. The table below compares the value of the assets and liabilities at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

Valuation Date	31 March 2014	31 March 2017
	(£m)	(£m)
Deferred Pensioners	39.4	42.8
Pensioners	114.1	120.1
Past Service Liabilities	153.5	162.9
Total Liabilities	**153.5**	**162.9**
Assets	**136.3**	**170.6**
Surplus / (Deficit)	**(17.1)**	**7.7**
Funding Level	**88.8%**	**104.7%**

The Actual Funding Level (AFL) has improved from 88.8% to 104.7% since the previous valuation at 31 March 2014. This corresponds to a surplus of £7.7m at 31 March 2017.

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 £1m. This is broadly three years of compound interest at 1.2% p.a. (the average assumed return over the period using the yield curve approach) applied to the previous valuation deficit of £17m.
- Investment returns being higher than expected since 2014 lead to a gain of £51m. This is roughly the difference between the actual three-year return (44.7%) and the expected three-year return (3.6%) applied to

the whole fund assets from the previous valuation of £136m, with a further allowance made for cashflows during the period.

- The change in longevity assumptions (baseline and improvements) has given rise to a gain of £9m. .
- The change in financial conditions since the previous valuation has led to a loss of £37m. This is due to a decrease in the real discount rate between 2014 and 2017. This can be approximately broken down as follows:
    - Changing the discount rate leads to a loss of £47m
    - Changing the benefit increase assumption leads to a gain of £10m.
- Membership experience over the 3 years has led to a gain of £7m. The most material item of membership experience have been lower than expected pension increases leading to a gain of £6m

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 broadly unchanged.

Guarantor Contribution Rates

Deficit Recovery Contributions

The Funding Agreement sets out how payments from the Guarantor should be determined. As the Fund is in surplus as at 31 March 2017, no deficit contributions are required from the Scottish Government.

Expense Requirement

The Guarantor has a responsibility to pay towards the cost of administration expenses, which are currently estimated to be £70,000 p.a..

The Fund is now well ahead of its Target Funding Level. It therefore intends to shortly de-risk its investment strategy and invest 100% of its assets in index-linked gilts. As required by the Funding Agreement, the liabilities are valued using yield curves that make no allowance for investment returns. The proposed switch to a full gilts-based investment strategy means that in future expected returns should be broadly in line with those curves. To maintain prudence in future valuations, the Guarantor should also pay for investment expenses otherwise these would act to reduce the returns expected from the gilts-based strategy to below those implied by the yield curves. Given the surplus position at this valuation, we and the Administering Authority are comfortable for investment expenses to be met by the Fund over the next three years.

The total Expense Requirement is therefore £70,000 p.a. from 1 April 2018 to 31 March 2021.

Certified contributions

The Guarantor is being asked to pay total contributions of £70,000 p.a. to the Fund from 1 April 2018 to 31 March 2021. This contribution requirement is set out in the Rates and Adjustment Certificate in **Appendix D**.

The Actual Funding Level and Expense Requirement will be reassessed at the 2020 valuation of the Fund and contributions (either towards any Past Service Deficit or towards expenses) will be reviewed at that time.

Guaranteed Minimum Pension (GMP) consultation

The GMP is the minimum pension which a UK occupational pension scheme has to provide for those employees who were contracted out of the State Earnings Related Pension Scheme (SERPS) between 6 April 1978 and 5 April 1997. A UK Government consultation issued in November 2016 sought views on a long term solution to address the indexation and equalisation of GMPs for members reaching State Pension Age (SPA) on or after 6 December 2018.

The Government recently announced that the existing 'interim solution' should be extended by 2 years and 4 months to cover members who reach SPA before 6 April 2021 but is yet to make a decision on the longer term solution. It is possible that its final decision could lead to the Fund paying full pension increases on the GMP of the affected members. If this happens, we estimate that around £2m could be added to the Fund's liabilities.

The majority of members benefits increase in line with CPI. Only one element of pension, namely pre 1988 GMP, is fixed in nature (i.e. it does not increase in line with any inflation index). The liability in respect of pre 1988 GMP is equal to approximately 12% of the total liabilities.

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.)				
		+0.2%	Curve	-0.2%	
	-0.5%	4 102%	5 103%	6 103%	(Deficit) Funding Level
	Curve	7 104%	8 105%	8 105%	(Deficit) Funding Level
	+0.5%	9 106%	10 107%	11 107%	(Deficit) Funding Level

Please note, the Fund is primarily invested in index-linked gilts. The table above allows for movements in liabilities to be 75% matched by movements in assets. This approximate approach is for illustrative purposes only as the index linked gilts held do not match the liabilities exactly.

The table makes no allowance for the proposed change in asset allocation to full investment in gilts. Once this is in place, changes to the assumptions should have little impact on the funding level and surplus/deficit position, as movements in asset values should be broadly matched by corresponding movements to liability values.

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 may increase.

The proposed valuation assumption assumes that in the longer term mortality rates will improve at a rate of 1.75% each year. The more prudent assumptions shown for sensitivity analysis assumes that mortality rates will improve at a rate of 2.0% each year in the longer term.

	1.75% long term rate of improvement	2.00% long term rate of improvement
Surplus	8	6
Funding Level	105%	104%

Unless otherwise noted, 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.

Funding risks

The Guarantor is 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 above that assumed in **Section 3**). The proposed change to a full gilts-based investment strategy should help to minimise this risk.
- Demographic risks – these include anything that affects the timing or type of benefits (e.g. members living longer than anticipated).
- 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 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 material inaccuracies in respect of the level of deficit and contributions may occur at future valuations

6 Related issues

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

- the operation of the Scottish Executive Funding Agreement, confirming the approach to determining contributions payable to the Fund by the Scottish Government.
- 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.

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. The move to a gilts-based investment strategy should reduce the volatility of the funding level. We would be happy to provide funding updates on request if the Fund would like to test the impact of the new strategy.

Investment strategy and risk management

The Administering Authority in consultation with the Guarantor has recently reviewed the investment strategy and has agreed to adopt an index linked gilts strategy. We recommend that the Administering Authority continues to regularly review its investment strategy and ongoing risk management programme.

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.

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 dated 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

12 March 2018

Laura McInroy

Fellow of the Institute and Faculty of Actuaries

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

Deferred pensioners

	31 March 2014		31 March 2017	
	Number	Deferred pension (£000)	Number	Deferred pension (£000)
Total deferred membership	598	1,353	471	1,110

Current pensioners, spouses and children

	31 March 2014		31 March 2017	
	Number	Pension (£000)	Number	Pension (£000)
Members	953	6,225	919	5,799
Dependants	314	805	289	956
Children	3	3	1	1
Total pensioner members	**1,270**	**7,033**	**1,209**	**6,755**

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)	
	2014	2017
Deferred Pensioners	53.5	54.7
Pensioners	71.6	71.9

The average ages are weighted by liability.

Assets at 31 March 2017

A summary of the Fund's assets provided by the Administering Authority as at 31 March 2017 and 31 March 2014 is as follows:

Asset class	31 March 2014 (Market Value) (£000)	Allocation %	31 March 2017 (Market Value) (£000)	Allocation %
UK equities	8,777	6%	0	0%
UK fixed interest gilts	17,336	13%	0	0%
UK index-linked gilts	69,498	51%	128,477	75%
Overseas equities	31,189	23%	29,037	17%
Property	6,960	5%	7,998	5%
Cash and net current assets	2,544	2%	5,132	3%
Total	**136,305**	**100%**	**170,644**	**100%**

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

Consolidated accounts (£000)	Year to			Total
	31 March 2015	30 March 2016	31 March 2017	
Income				
Employer - normal contributions	771	675	675	2,121
Employer - additional contributions	0	0	0	0
Employer - early retirement and augmentation strain contributions	0	0	0	0
Employee - normal contributions	0	0	0	0
Employee - additional contributions	0	0	0	0
Transfers In Received (including group and individual)	0	0	0	0
Other Income	0	0	0	0
Total Income	**771**	**675**	**675**	**2,121**
Expenditure				
Gross Retirement Pensions	7,057	6,890	6,789	20,736
Lump Sum Retirement Benefits	372	472	563	1,407
Death in Service Lump sum	11	7	0	18
Death in Deferment Lump Sum	0	0	0	0
Death in Retirement Lump Sum	0	0	0	0
Gross Refund of Contributions	0	0	0	0
Transfers out (including bulk and individual)	93	290	120	503
Fees and Expenses	69	53	68	190
Total Expenditure	**7,602**	**7,712**	**7,540**	**22,854**
Net Cashflow	**-6,831**	**-7,037**	**-6,865**	**-20,733**
Assets at start of year	**136,305**	**154,720**	**150,275**	**136,305**
Net cashflow	**-6,831**	**-7,037**	**-6,865**	**-20,733**
Change in value	**25,246**	**2,592**	**27,234**	**55,072**
Assets at end of year	**154,720**	**150,275**	**170,644**	**170,644**
Approximate rate of return on assets	**19.0%**	**1.7%**	**18.5%**	**43.4%**

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	31 March 2017
Discount rate	Bank of England nominal yield curve	Bank of England nominal yield curve
Price inflation	Bank of England implied inflation (RPI) curve less 0.8% p.a.	Bank of England implied inflation (RPI) curve less 1.0% p.a.

Mortality 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 1.75% p.a..

Other demographic valuation assumptions

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).

Sample rates of the incidence of death from deferred status are shown in the table below

Age	Death in Deferment Rates Incidence per 1000 members per annum	
	All Males	All Females
20	0.27	0.14
25	0.27	0.14
30	0.31	0.21
35	0.38	0.34
40	0.64	0.55
45	1.07	0.89
50	1.72	1.30
55	2.68	1.71
60	4.83	2.19
65	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 and there has been a small increase in long term interest rates which places a lower value on the past service liabilities. Overall, the funding position at end February 2018 is likely to have improved since 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. Had the funding position improved or worsened, we would not have proposed amending the contribution rate shown in the Rates and Adjustments Certificate.

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 the Guarantor 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 our report on the actuarial valuation dated 12 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 12 March 2018. These assumptions cover members who become entitled to payment of pension via normal retirement and ill health retirement.

The required minimum contribution rates are set out below.

Period	Guarantor's Minimum Contribution Rate
1 April 2018 to 31 March 2019	£70,000
1 April 2019 to 31 March 2020	£70,000
1 April 2020 to 31 March 2021	£70,000

Signature:		
Date:	12 March 2018	12 March 2018
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