

Employer ABC

XYZ Pension Fund

Pension accounting disclosure as at 31 March 2018

Prepared in accordance with FRS102

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## Introduction

We have been instructed by XYZ, the administering authority to the XYZ Pension Fund (the Fund), to undertake pension expense calculations in respect of pension benefits provided by the Local Government Pension Scheme (the LGPS) to employees of Employer ABC (the Employer) as at 31 March 2018.

This report is addressed to the Employer and its advisers; in particular, this report is likely to be of relevance to the Employer's auditor.

These figures are prepared in accordance with our understanding of Financial Reporting Standard 102 (FRS102).

This advice complies with Technical Actuarial Standard 100: Principles for Technical Actuarial Work (TAS 100).

The figures quoted will form the basis of the balance sheet and funding status disclosures to be made by the Employer as at 31 March 2018 in respect of its pension obligations under the LGPS. The projected pension expense calculations for the year to 31 March 2019 may be used for the purpose of any interim financial reporting during the year to 31 March 2019. However, it may subsequently be necessary to adjust these projections following the occurrence of any material events such as curtailments, settlements or the discontinuance of the Employer's participation in the Fund.

FRS102 also requires the disclosure of any other employer provided pension benefits which are not paid from the Fund itself: examples include additional pensions paid on retirement under the Discretionary Payment Regulations. We have only valued such additional liabilities, which would not be covered in the formal LGPS valuation, to the extent that they have been notified to us and are as disclosed in the Valuation data section of this report.

## Characteristics of defined benefit plans and associated risks

The LGPS is a defined benefit statutory scheme administered in accordance with the Local Government Pension Scheme Regulations 2013 and currently provides benefits based on career average revalued earnings.

The administering authority for the Fund is XYZ. The Pension Fund Committee oversees the management of the Fund whilst the day to day fund administration is undertaken by a team within the administering authority. Where appropriate some functions are delegated to the Fund's professional advisers.

As administering authority to the Fund, XYZ, after consultation with the Fund Actuary and other relevant parties, is responsible for the preparation and maintenance of the Funding Strategy Statement and the Investment Strategy Statement. These should be amended when appropriate based on the Fund's performance and funding.

Contributions are set every three years as a result of the actuarial valuation of the Fund required by the Regulations. The next actuarial valuation of the Fund will be carried out as at 31 March 2019 and will set contributions for the period from 1 April 2020 to 31 March 2023. There are no minimum funding requirements in the LGPS but the contributions are generally set to target a funding level of 100% using the actuarial valuation assumptions.

On the Employer's withdrawal from the Fund, a cessation valuation will be carried out in accordance with Regulation 64 of the LGPS Regulations 2013 which will determine the termination contribution due by the Employer, on a set of assumptions deemed appropriate by the Fund Actuary.

In general, participating in a defined benefit pension scheme means that the Employer is exposed to a number of risks:

- Investment risk. The Fund holds investment in asset classes, such as equities, which have volatile market values and while these assets are expected to provide real returns over the long-term, the short-term volatility can cause additional funding to be required if a deficit emerges;
- Interest rate risk. The Fund's liabilities are assessed using market yields on high quality corporate bonds to discount future liability cashflows. As the Fund holds assets such as equities the value of the assets and liabilities may not move in the same way;
- Inflation risk. All of the benefits under the Fund are linked to inflation and so deficits may emerge to the extent that the assets are not linked to inflation; and
- Longevity risk. In the event that the members live longer than assumed a deficit will emerge in the Fund. There are also other demographic risks.

In addition, as many unrelated employers participate in the XYZ Pension Fund, there is an orphan liability risk where employers leave the Fund but with insufficient assets to cover their pension obligations so that the difference may fall on the remaining employers.

All of the risks above may also benefit the Employer e.g. higher than expected investment returns or employers leaving the Fund with excess assets which eventually get inherited by the remaining employers.

## Valuation data

### Data sources

In completing our calculations for pension accounting purposes we have used the following items of data, which we received from XYZ:

- The results of the valuation as at 31 March 2016 which was carried out for funding purposes and the results of the 31 March 2017 FRS102 report which was carried out for accounting purposes;
- Estimated whole Fund income and expenditure items for the period to 31 March 2018;
- Estimated Fund returns based on Fund asset statements provided (or estimated where necessary) as at 31 March 2016, 31 March 2017 and 28 February 2018, Fund income and expenditure as noted above, and estimated market returns thereafter for the period to 31 March 2018;
- Estimated Fund income and expenditure in respect of the Employer for the period to 31 March 2018; and
- Details of any new early retirements for the period to 31 March 2018 that have been paid out on an unreduced basis, which are not anticipated in the normal employer service cost.

Although some of these data items have been estimated, we do not believe that they are likely to have a material effect on the results of this report. Further, we are not aware of any material changes or events since we received the data. The data has been checked for reasonableness and we are happy that the data is sufficient for the purposes of this advice.

### Employer membership statistics

The table below summarises the membership data, as at 31 March 2016 for members receiving funded benefits.

Member data summary	Number	Salaries/Pensions	Average age
		£000s	
Actives	48	1,259	48
Deferred pensioners	58	156	48
Pensioners	15	119	63

The service cost for the year ending 31 March 2018 is calculated using an estimate of the total pensionable payroll during the year. The estimated total pensionable payroll during the year is £1,400,000, as advised by the Employer. The projected service cost for the year ending 31 March 2019 has been calculated assuming the payroll remains at this level over the year.

## Scheduled contributions

The table below summarises the minimum employer contributions due from Employer ABC to the Fund over this inter-valuation period. The calculated cost of accrual of future benefits is 16.6% of payroll p.a. The monetary amounts are due to be paid in monthly instalments.

Minimum employer contributions due for the period beginning	Current period		
	1 Apr 2017	1 Apr 2018	1 Apr 2019
Percent of payroll	16.6%	16.6%	16.6% <b>ERC010</b>
plus monetary amount (£000s)	49	51	52

Employer ABC may pay further amounts at any time and future periodic contributions, or the timing of contributions may be adjusted on a basis approved by us.

## Early retirements

We requested data on any early retirements in respect of the Employer from the administering authority for the year ending 31 March 2018.

It is our understanding that there were no new early retirements over the year which were not allowed for at the previous accounting date.

## Assets

The return on the Fund (on a bid value to bid value basis) for the year to 31 March 2018 is estimated to be 5%. The actual return on Fund assets over the year may be different.

The estimated asset allocation for Employer ABC as at 31 March 2018 is as follows:

Asset breakdown	31 Mar 2018		31 Mar 2017	
	£000s	%	£000s	%
Equities <b>MCA010</b>	5,491	71%	5,063	71%
Gilts <b>MCA020</b>	416	5%	435	6%
Other bonds <b>MCA030</b>	720	9%	697	10%
Property <b>MCA040</b>	730	9%	627	9%
Cash <b>MCA050</b>	334	4%	280	4%
<b>Total</b>	<b>7,691</b>	<b>100%</b>	<b>7,102</b>	<b>100%</b>

**Derivatives = MCA060**  
**Investment funds (LLP's, Hedge funds, Div growth fund) = MCA070**  
**Asset backed securities = MCA080**  
**Other = MCA090**

We have estimated the bid values where necessary. Please note that the individual percentages shown are to the nearest percentage point for each asset class and may not sum to 100%. The final asset allocation of the Fund assets as at 31 March 2018 is likely to be different from that shown due to estimation techniques.

Based on the above, the Employer's share of the assets of the Fund is less than 1%.

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## Actuarial methods and assumptions

### Valuation approach

To assess the value of the Employer's liabilities at 31 March 2018, we have rolled forward the value of the Employer's liabilities calculated for the funding valuation as at 31 March 2016, using financial assumptions that comply with FRS102.

The full actuarial valuation involved projecting future cashflows to be paid from the Fund and placing a value on them. These cashflows include pensions currently being paid to members of the Fund as well as pensions (and lump sums) that may be payable in future to members of the Fund or their dependants. These pensions are linked to inflation and will normally be payable on retirement for the life of the member or a dependant following a member's death.

It is not possible to assess the accuracy of the estimated value of liabilities as at 31 March 2018 without completing a full valuation. However, we are satisfied that the approach of rolling forward the previous valuation data to 31 March 2018 should not introduce any material distortions in the results provided that the actual experience of the Employer and the Fund has been broadly in line with the underlying assumptions, and that the structure of the liabilities is substantially the same as at the latest formal valuation. From the information we have received there appears to be no evidence that this approach is inappropriate.

To calculate the asset share we have rolled forward the assets allocated to the Employer at 31 March 2016 allowing for investment returns (estimated where necessary), contributions paid into, and estimated benefits paid from, the Fund by and in respect of the Employer and its employees.

### Demographic/Statistical assumptions

We have adopted a set of demographic assumptions that are consistent with those used for the most recent Fund valuation, which was carried out as at 31 March 2016. The post retirement mortality tables adopted are the S2PA tables with a multiplier of 85% for males and 95% for females. These base tables are then projected using the CMI 2015 Model, allowing for a long-term rate of improvement of 1.5% p.a.

The assumed life expectations from age 65 are:

Life expectancy from age 65 (years)			31 Mar 2018	31 Mar 2017
Retiring today				
	Males	<b>ALE010</b>	24.0	23.9
	Females	<b>ALE020</b>	25.2	25.0
Retiring in 20 years				
	Males	<b>ALE030</b>	26.2	26.1
	Females	<b>ALE040</b>	27.5	27.4



We have also assumed that:

- Members will exchange half of their commutable pension for cash at retirement;
- Members will retire at one retirement age for all tranches of benefit, which will be the pension weighted average tranche retirement age; and
- The proportion of the membership that had taken up the 50:50 option at the previous valuation date will remain the same.

## Financial assumptions

The financial assumptions used to calculate the results are as follows:

Assumptions as at		31 Mar 2018	31 Mar 2017	31 Mar 2016
		% p.a.	% p.a.	% p.a.
Discount rate	<b>MAP040</b>	2.55%	2.80%	3.80%
Pension increases	<b>MAP030</b>	2.30%	2.70%	2.50%
Salary increases	<b>MAP020</b>	3.80%	4.20%	4.30%

These assumptions are set with reference to market conditions at 31 March 2018.

Our estimate of the Employer's past service liability duration is 22 years.

An estimate of the Employer's future cashflows is made using notional cashflows based on the estimated duration above. These estimated cashflows are then used to derive a Single Equivalent Discount Rate (SEDR). The discount rate derived is such that the net present value of the notional cashflows, discounted at this single rate, equates to the net present value of the cashflows, discounted using the annualised Merrill Lynch AA rated corporate bond yield curve (where the spot curve is assumed to be flat beyond the 30 year point). The approach has changed from the "spot rate" approach adopted at the previous accounting date to reflect national auditor preferences.

Similarly to the approach used to derive the discount rate, the Retail Prices Index (RPI) increase assumption is set using a Single Equivalent Inflation Rate (SEIR) approach, using the notional cashflows described above. The single inflation rate derived is that which gives the same net present value of the cashflows, discounted using the annualised Merrill Lynch AA rated corporate bond yield curve, as applying the BoE implied inflation curve. As above, the Merrill Lynch AA rated corporate bond yield spot curve is assumed to be flat beyond the 30 year point and the BoE implied inflation spot curve is assumed to be flat beyond the 40 year point. The approach has changed from the "spot rate" approach adopted at the previous accounting date to reflect national auditor preferences.

As future pension increases are expected to be based on the Consumer Prices Index (CPI) rather than RPI, we have made a further assumption about CPI which is that it will be 1.0% p.a. below RPI i.e. 2.3% p.a. We believe that this is a reasonable estimate for the future differences in the indices, based on the different calculation methods and recent independent forecasts. This is a slightly higher deduction than at the last accounting date where we assumed that CPI was 0.9% lower than RPI.

**MAP010**

Salaries are assumed to increase at 1.5% p.a. above CPI in addition to a promotional scale. However, as was requested by the Employer in previous years, we have allowed for a short-term overlay from 31 March 2017 to 31 March 2020 for salaries to rise at 1.0% p.a. This is consistent with the approach last year.

## Past service costs/gains

Past service costs/gains arise as a result of introduction or withdrawal of, or changes to, member benefits. For example, an award of additional discretionary benefits to a member such as added years by a member would be considered a past service cost.

We are not aware of any additional benefits which were granted over the year ending 31 March 2018.

## Curtailments

We have calculated the cost of curtailments arising as a result of the payment of unreduced pensions on early retirement. The Employer may also have to account for non-pension related costs (e.g. lump sum payments on redundancy) but for the avoidance of doubt, we have only calculated the cost of curtailments which affect the Employer's LGPS pension liabilities.

We calculate the cost of curtailments at the point of exit, with interest applied to the accounting date accounted for separately.

Over the year, we understand no employees were permitted by the Employer to take unreduced early retirement that they would not otherwise have been entitled to.

## Settlements

We are not aware of any liabilities being settled at a cost materially different to the accounting reserve during the year.

## Results and disclosures

We estimate that the value of the net liability as at 31 March 2018 is a liability of £4,903,000.

The results of our calculations for the year ended 31 March 2018 are set out in the appendices below:

- Appendix 1 sets out the Statement of financial position as at 31 March 2018;
- Appendix 2 sets out the Statement of profit and loss for the year ended 31 March 2018;
- Appendix 3 details a reconciliation of assets and liabilities during the year;
- Appendix 4 shows a sensitivity analysis on the major assumptions;
- Appendix 5 shows the Re-measurements in other comprehensive income for the year;
- Appendix 6 contains our estimates of the projected profit and loss account costs for the year ending 31 March 2019. Please note that no allowance has been made for the costs of any early retirements or augmentations which may occur over the year and whose additional capitalised costs would be included in the value of liabilities. It is only an estimate so actual experience over the year is likely to differ. We have not provided balance sheet projections on the basis that they will depend upon market conditions and the asset value of the Fund at the end of the following year.

The figures presented in this report are prepared only for the purposes of FRS102. In particular, they are not relevant for calculations undertaken for funding purposes or for other statutory purposes under UK pensions legislation.

We would be pleased to answer any questions arising from this report.



**Louise Lau FFA**  
**Actuary**

## Appendix 1 **Statement of financial position as at 31 March 2018**

Net pension asset as at	31 Mar 2018	31 Mar 2017	31 Mar 2016
	£000s	£000s	£000s
Present value of the defined benefit obligation	12,594	12,116	8,952
Fair value of Fund assets (bid value)	7,691	7,102	5,536
<b>Deficit / (Surplus)</b>	<b>4,903</b>	<b>5,014</b>	<b>3,416</b>
Present value of unfunded obligation	-	-	-
Unrecognised past service cost	-	-	-
Impact of asset ceiling	-	-	-
<b>Net defined benefit liability / (asset)</b>	<b>4,903</b>	<b>5,014</b>	<b>3,416</b>

## Appendix 2 **Statement of profit and loss for the year to 31 March 2018**

The amounts recognised in the profit and loss statement are:	Year to	Year to
	31 Mar 2018	31 Mar 2017
	£000s	£000s
Service cost	578	415
Net interest on the defined liability (asset)	137	126
Administration expenses	4	5
<b>Total loss (profit)</b>	<b>719</b>	<b>546</b>

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## Appendix 3 **Asset and benefit obligation reconciliation for the year to 31 March 2018**

Reconciliation of opening & closing balances of the present value of the defined benefit obligation		Year to 31 Mar 2018	Year to 31 Mar 2017
		£000s	£000s
	<b>Opening defined benefit obligation</b>	<b>12,116</b>	<b>8,952</b>
<b>DBO050</b>	Current service cost	578	362
<b>DBO060</b>	Interest cost	339	340
<b>DBO070</b>	Change in financial assumptions	(396)	2,667
<b>DBO080</b>	Change in demographic assumptions	-	(144)
<b>DBO090</b>	Experience loss/(gain) on defined benefit obligation	-	(78)
<b>DBO150</b>	Liabilities assumed / (extinguished) on settlements	-	-
<b>DBO110</b>	Estimated benefits paid net of transfers in	(138)	(126)
<b>DBO120</b>	<b>DBO130 (See earlier note for split but generally DBO120)</b> Past service costs, including curtailments	-	53
<b>DBO100</b>	Contributions by Scheme participants and other employers	95	90
<b>DBO140</b>	Unfunded pension payments	-	-
	<b>Closing defined benefit obligation</b>	<b>12,594</b>	<b>12,116</b>

Reconciliation of opening & closing balances of the fair value of Fund assets		Year to	Year to
		31 Mar 2018	31 Mar 2017
		£000s	£000s
<b>Opening fair value of Fund assets</b>		<b>7,102</b>	<b>5,536</b>
FVA050	Interest on assets	202	214
FVA080	Return on assets less interest	152	1,188
	Other actuarial gains/(losses)	-	(35)
FVA150	Administration expenses	(4)	(5)
FVA090	Contributions by employer including unfunded	282	240
FVA100	Contributions by Scheme participants and other employers	95	90
FVA110	Estimated benefits paid plus unfunded net of transfers in	(138)	(126)
FVA120	Settlement prices received / (paid)	-	-
<b>Closing Fair value of Fund assets</b>		<b>7,691</b>	<b>7,102</b>

The total return on the fund assets for the year to 31 March 2018 is £354,000.

**FVA060 & FVA070 = Zero**

## Appendix 4 Sensitivity analysis

BASE

Sensitivity analysis	£000s	£000s	£000s
Adjustment to discount rate	+0.1%	<b>SAP010</b> 0.0%	<b>SAP020</b> -0.1%
Present value of total obligation	12,328	12,594	12,866
Projected service cost	540	553	567
Adjustment to long term salary increase	+0.1%	0.0%	-0.1%
Present value of total obligation	12,611	12,594	12,577
Projected service cost	553	553	553
Adjustment to pension increases and deferred revaluation	+0.1%	<b>SAP050</b> 0.0%	<b>SAP060</b> -0.1%
Present value of total obligation	12,849	12,594	12,344
Projected service cost	567	553	540
Adjustment to life expectancy assumptions	+1 Year	<b>SAP040</b> None	<b>SAP030</b> - 1 Year
Present value of total obligation	13,049	12,594	12,155
Projected service cost	571	553	536

### Sensitivity Analysis

**SAP010 (negative value) e.g. £12,328 - £12,594 = -£266**

**SAP020 (positive value) e.g. £12,866 - £12,594 = £272**

**SAP030 (negative value) e.g. £12,155 - £12,594 = -£439**

**SAP040 (positive value) e.g. £13,049 - £12,594 = £455**

**SAP050 (positive value) e.g. £12,849 - £12,594 = £255**

**SAP060 (negative value) e.g. £12,344 - £12,594 = -£250**



## Appendix 5 Re-measurements in other comprehensive income

Remeasurement of the net assets / (defined liability)	Year to	Year to
	31 Mar 2018	31 Mar 2017
	£000s	£000s
Return on Fund assets in excess of interest	152	1,188
Other actuarial gains/(losses) on assets	-	(35)
Change in financial assumptions	396	(2,667)
Change in demographic assumptions	-	144
Experience gain/(loss) on defined benefit obligation	-	78
Changes in effect of asset ceiling	-	-
<b>Remeasurement of the net assets / (defined liability)</b>	<b>548</b>	<b>(1,292)</b>

## Appendix 6 **Projected pension expense for the year to 31 March 2019**

Projections for the year to 31 March 2019	Year to 31 Mar 2019 £000s
Service cost	553
Net interest on the defined liability (asset)	122
Administration expenses	4
<b>Total loss (profit)</b>	<b>679</b>
<b>Employer contributions</b>	<b>283</b>

Note that these figures exclude the capitalised cost of any early retirements or augmentations which may occur after 31 March 2018. These projections are based on the assumptions as at 31 March 2018, as described in the main body of this report.