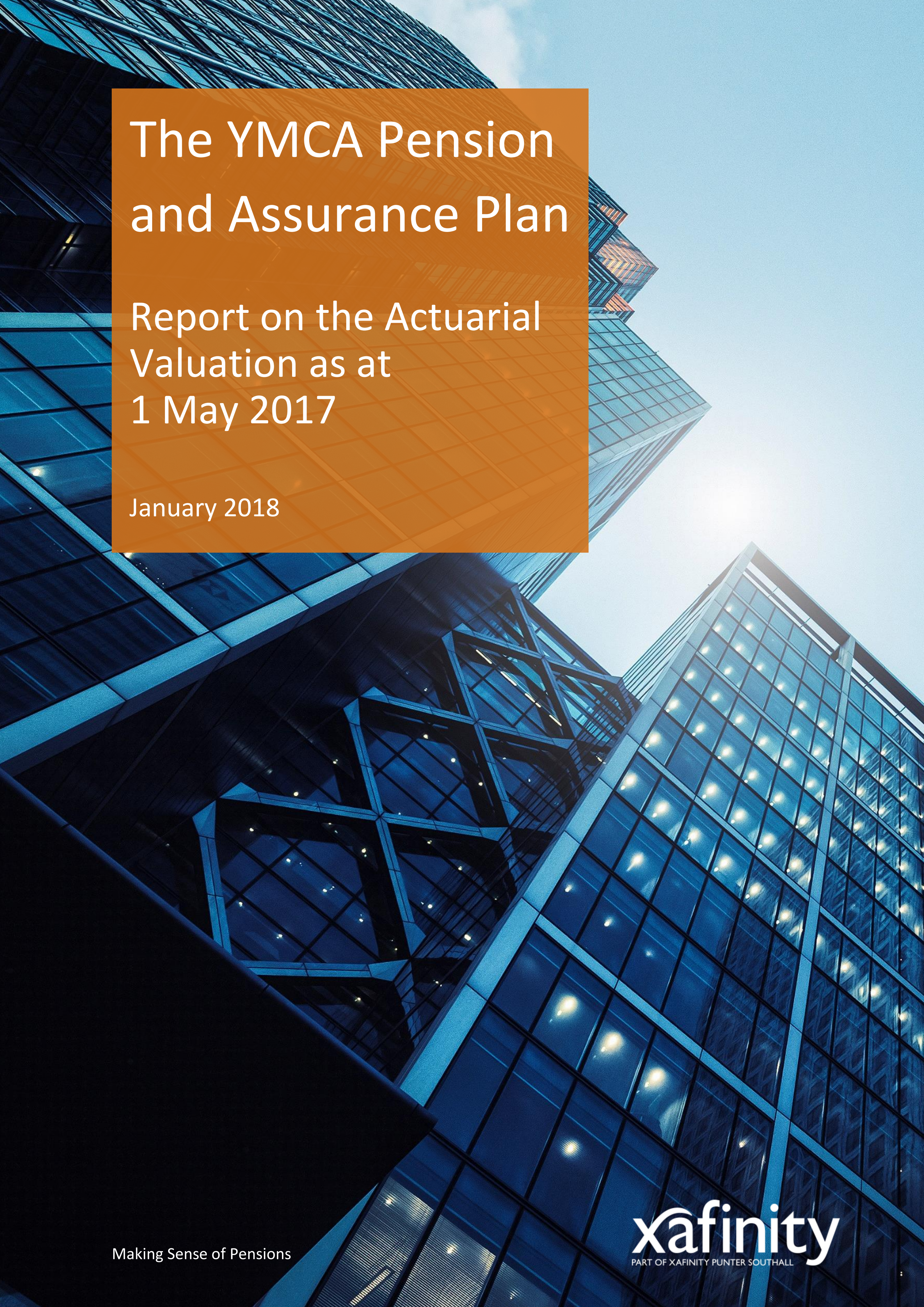


The YMCA Pension and Assurance Plan

Report on the Actuarial Valuation as at 1 May 2017

January 2018

Making Sense of Pensions

PART OF XAFINITY PUNTER SOUTHALL

Contents

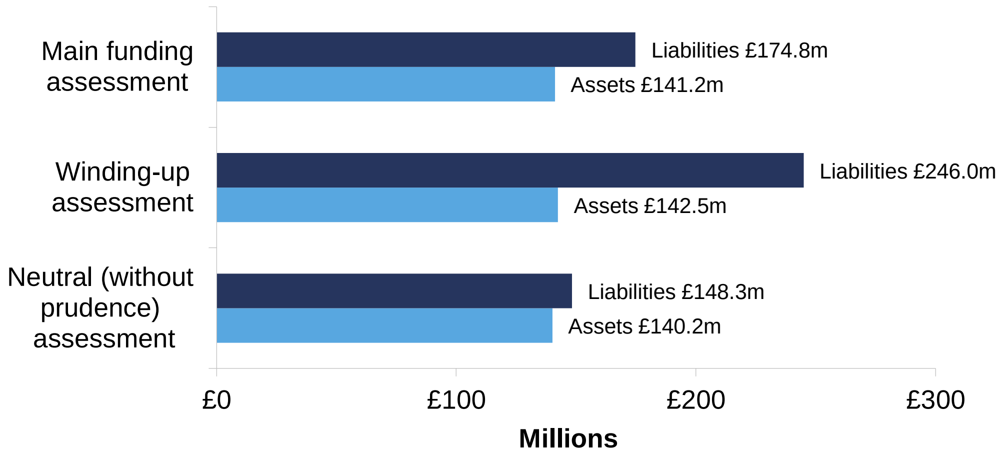
This report and the work relating to it falls within the scope of the Technical Actuarial Standards TAS100: Principles for Technical Actuarial Work and TAS300: Pensions, issued by the Financial Reporting Council. I confirm that my work complies with those standards.

This report is solely for the purpose described in the Introduction section. It should not be relied upon for any other purpose and it should be noted that neither I nor Xafinity Consulting Limited accept liability to any third party in respect of the contents.

Executive Summary

The Trustee of the YMCA Pension and Assurance Plan (the 'Plan') has recently completed a valuation of the Plan as at 1 May 2017. This report sets out the approach adopted by the Trustee, the results obtained and the decisions which need to be taken in the light of those results.

The key results are as follows



£33.6m

Deficit on the Trustee agreed assumptions and methodology

81%

Funding level

Main funding assessment

In funding the Plan, the Trustee's key objective is to ensure that there will be sufficient assets to meet all benefit payments as they fall due. With this in mind, the Trustee has set a target reserve for the Plan based on a prudent estimate of the amount needed to meet all payments in respect of the benefits earned up to the valuation date.

The funding assessment gives a target reserve of £174.8m as at 1 May 2017. This compares with an asset value at the same date of £141.2m. Thus, there was a funding deficit of £33.6m and a funding level (assets as a percentage of the target reserve) of 81%.

The previous valuation was undertaken as at 1 May 2014. That valuation revealed a funding deficit of £38.7m. The key influences on the funding position between the two valuations were as follows:

- Deficit reduction contributions and the S75 debt payments from former participating employers.
- Better than expected asset performance.
- These were partly offset by a decrease in underlying gilt yields leading to a decrease in both the pre and post-retirement discount rates and hence an increased value placed on the Plan liabilities.

Executive Summary

In order to address the funding shortfall, the Employer has agreed with the Trustee a recovery plan. The aim of the recovery plan is that the shortfall with be made up over a period of 9 years by making contributions to the plan at the rate of £3.04 million per annum in equal monthly instalments commencing 1 May 2018 and increasing by 3% each May thereafter.

Neutral assessment

In addition to the main funding assessment, I have completed calculations using what I consider to be a 'neutral' set of assumptions. The approach is similar to that taken by the Trustee for the main funding assessment, except that the neutral assumptions do not contain any margins for prudence. Under my neutral assumptions, the value placed on the Plan's liabilities was £148.3m giving a shortfall on that assessment of £8.2m.

Winding-up assessment

£103.5m

Estimated winding-up deficit

I have also completed a winding-up assessment of the Plan. This determines the extent to which the Plan's assets would be sufficient to secure members' benefits by the purchase of insurance policies if the Plan were to be wound up. The winding-up assessment places a value on the Plan's liabilities of £246.0m, compared with the asset value of £142.5m. This gives a winding-up funding level of 58%.

The winding-up liabilities are much higher than the ongoing funding liabilities because the estimated cost of purchasing insurance policies to secure the benefits is significantly higher than the anticipated cost of providing the benefits from the Plan's assets.

Introduction

Background and purpose

The Trustee of the YMCA Pension and Assurance Plan has undertaken a formal valuation of the Plan as at 1 May 2017.

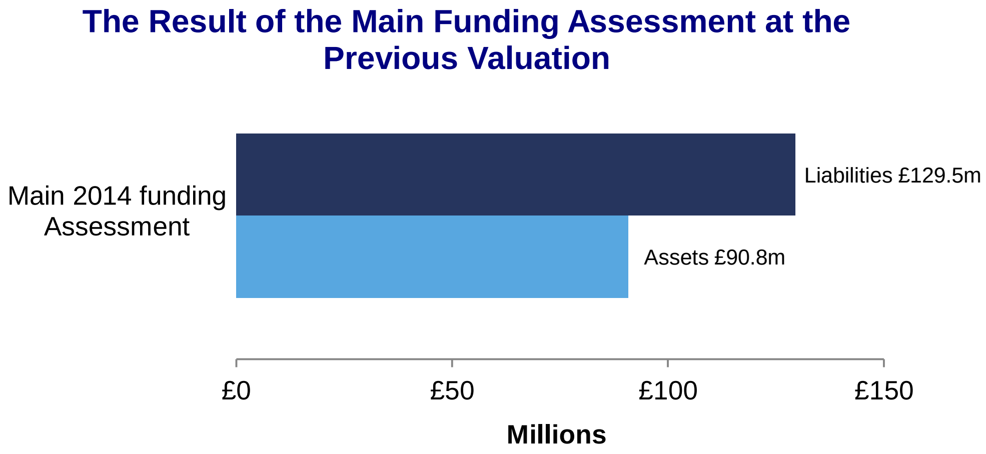
The purpose of this report, addressed to the Trustee, is to provide a formal record of the the valuation, including the approach adopted by the Trustee, the results obtained and the actions which need to be taken as a result.

Significant events since the previous valuation

The previous valuation was undertaken with an effective date of 1 May 2014. That valuation revealed a funding deficit of £38.7m.

£38.7m

Deficit at 1 May 2014



Since then there have been a number of events which have had a substantial impact on the Plan. The foremost among these are as follows:

- Deficit reduction contributions and the S75 debt payments from former participating employers, acting to reduce the deficit.
- Better than expected asset performance, acting to reduce the deficit.
- These were partly offset by a decrease in underlying gilt yields leading to a decrease in both the pre and post-retirement discount rates and hence an increased value placed on the Plan liabilities.

The Funding Approach and Assumptions

The funding objective

The Trustee's key funding objective is to ensure that there will be sufficient assets to meet all benefit payments as they fall due.

With this in mind, the Trustee has a funding target for the Plan based on a prudent estimate of the amount needed to meet those payments.

Methodology

Benefits already accrued

In funding the Plan, the Trustee has assumed that it will continue in its current form in the long term, with benefits being paid directly from Plan assets. They have also adopted the Defined Accrued Benefit actuarial funding method.

The valuation calculations determine the assets needed to meet benefit payments in this way. The calculations include an allowance for the invested assets to grow between the valuation date and the time that the benefits are paid.

Funding assumptions

Placing a value on the Plan's liabilities requires a number of assumptions to be made about the future. Such assumptions include how long members might live after retiring and the return that will be generated by the Plan's assets.

After taking advice from the Plan Actuary the Trustee has adopted what they consider to be 'prudent' funding assumptions, having regard to the Employer's covenant and to financial market conditions. The Trustee's assumptions are prudent in that they are deliberately cautious about the future. Using such assumptions increases the target funding reserve and reduces the risk that the combination of the accumulated assets and future contributions will prove to be inadequate.

I have adopted a working assumption that the Employer covenant is strong based on discussions with the Trustee.

Employer Covenant

The Plan is supported by the covenant of the Employer. Generally speaking, covenant is the extent of a sponsor's obligation and financial ability to support its pension scheme now and in the future. The sponsor's covenant underwrites the risks to its pension scheme.

The Funding Approach and Assumptions

Other considerations

The Scheme's investments include a number of insurance policies held in the name of the Trustee. I have shown the value of these as both a liability and an asset although, as the proceeds from these policies will generally match the associated benefits, they could equally be excluded from my assessment.

Plan expenses, including statutory levies, are paid directly by the Participating Employers. Hence, I have not included an explicit expense reserve in my calculations.

Funding Assessment

Benefits accrued before the valuation date

Cashflows

The valuation calculations project all future benefit payments earned in respect of pensionable service to the date of the valuation using a set of assumptions about the future.

Next, we calculate the amount of money that would need to be set aside now in order to meet all of these projected cashflows exactly. Because we expect any money invested to grow between now and the time the benefits are paid, the amount that would need to be set aside is typically less than the total of the projected cashflows. The amount to be set aside is known as the ‘present value’ of the liabilities.

The nature of the cashflows quantified varies for each member, some are fixed in nature while others will be linked to inflation. As the Plan currently pays pensions from the fund, the cashflows have a relatively long term.

A full cashflow analysis over the lifetime of the Plan would show how the size of the Plan varies with time. I have carried out a cashflow analysis to assist with the Plan’s investment strategy but do not consider it to materially affect this funding report.

Funding Assessment

£33.6m

Deficit at 1 May 2017

£5.1m

Decrease in deficit over the valuation period

The funding position

The Trustee's funding target, known in legislation as the 'Technical Provisions', is the amount needed at the valuation date to meet the projected benefit payments as they fall due. The funding target and the current funding position are as follows:

	Funding Assessment at 1 May 2017 £m	Funding Assessment at 1 May 2014 £m
Past service liabilities		
• Deferred pensioners	94.4	75.1
• Current pensioners	70.0	47.4
• Insured pensioners*	10.4	7.0
Total past service liabilities (L) (Funding target or 'technical provisions')	**174.8**	**129.5**
Assets		
• Total assets shown in accounts	130.8	83.8
• Insured pensioners*	10.4	7.0
Total assets (A)	**141.2**	**90.8**
Funding surplus or (deficit) (A minus L)	**(33.6)**	**(38.7)**
Funding level (A as a percentage of L)	**81%**	**70%**

*The Insured pensioner value at 1 May 2014 includes pensioner members insured with L&G only. Since 2014 we have acquired information for additional Insured Pensioners who are not insured with L&G as part of the new SORP requirements. Therefore, the 2017 Insured pensioner value includes these additional pensioners who have a liability/asset value of £4.068m at 1 May 2017.

Reconciliation with the results of the previous valuation

Clearly, the funding position has improved since the previous valuation was undertaken. I have analysed the reasons for the change and my findings are set out below. It should be noted that many of the factors influencing the results are fundamentally interconnected. As such, the financial impact ascribed to each individual factor will necessarily be approximate.

Funding Assessment

£31.5m

Asset gain over the valuation period due to investments being higher than expected

£ 39.3m

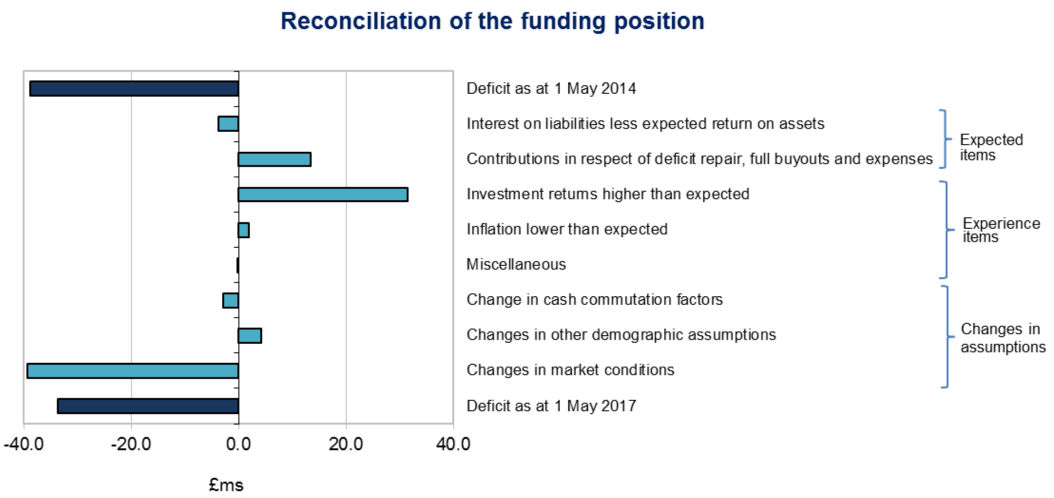
Increase in Scheme liabilities over the valuation period due to changes in market conditions

The most significant influences on the funding position have been as follows;

- Deficit reduction contributions and the S75 debt payments from former participating employers, acting to reduce the deficit.
- Better than expected asset performance, acting to reduce the deficit.
- These were partly offset by a decrease in underlying gilt yields leading to a decrease in both the pre and post-retirement discount rates and hence an increased value placed on the Plan liabilities.

A more detailed reconciliation is set out in the following chart. Within the chart, I have grouped the items into;

- Those items which would have been expected if experience since the previous valuation had been in line with the assumptions
- Those items due to experience differing from the assumptions made at the previous valuation
- Those items due to changes in assumptions



Further information on the investment returns and the contributions paid in the period between the two valuations may be found in Appendix C.

Funding Assessment

Addressing the deficit

In order to address the deficit the Trustee and the Employer have established a Recovery Plan. The aim of the Recovery Plan is for the deficit to be removed over a period of 9 years through employer contributions paid to the Plan at a rate of £3.04 million per annum, payable in equal monthly instalments commencing from 1 May 2018 and increasing by 3% at each 1 May thereafter.

The recovery plan will be regularly monitored by the Trustee and will be reviewed at the time of the next valuation, to ensure that it remains sufficient to address the funding shortfall.

Whilst the Plan is continuing, expenses, in the form of an annually estimated expense budget, are paid by the Participating Employers. Hence, I have not included an explicit expense reserve in my calculation.

Funding Assessment

Neutral assessment

To give the Trustee an insight into the degree of prudence in the funding target, I have also valued the Plan using neutral assumptions – that is, using assumptions which in my opinion contain no margins for adverse experience. The chart below sets out the results of my assessment alongside the funding results.

	Neutral Assessment as at 1 May 2017 £m	Funding Assessment as at 1 May 2017 £m
Total past service liabilities (L)	148.3	174.8
Total assets (A)	140.1	141.2
Funding surplus or (deficit) (A minus L)	(8.2)	(33.6)
Funding level (A as a percentage of L)	95%	81%

The comparison between the neutral and funding assessments show how extensive the allowance for prudence is within the funding reserve. As a result, the financial position under the neutral assessment looks stronger due to no margins for prudence.

Since the effective date of the valuation, 1 May 2017, financial conditions have been volatile with significant movements in the equity and gilt markets

Material developments since the effective date

Since the effective date of the valuation, 1 May 2017, to the date of this report, financial conditions have remained volatile with continuing movements in the equity and gilt markets. Currently, such market movements are not expected to have impacted significantly on the results.

Winding-Up Assessment

Background

In addition to providing those 'ongoing' results, I am also required to assess the funding position of the Plan if it were to close immediately, with all benefits being secured by the purchase of insurance policies. Providing this winding-up or "solvency" assessment is a statutory requirement; it does not imply that the Plan is to be wound up.

Providing benefits by purchasing insurance policies is typically much more expensive than providing benefits directly from Plan assets. This is partly because insurers include margins for profit and operating expenses in their prices, but is mainly because insurers provide guaranteed benefits and are required to follow conservative investment strategies.

Approach taken

The only accurate way to assess the true cost of winding up would be to obtain quotations from a number of insurance companies. I have not done this, but instead have estimated the cost using principles similar to those adopted by insurers when pricing annuities. Clearly, this approach will not be as accurate as obtaining actual quotations, but I am satisfied that it is sufficient for the present purpose. An actual wind-up, at a different date, could have a significantly different funding position. Full details of the approach taken are set out in Appendix E.

Winding-Up Assessment

£103.5m

Estimated winding-up deficit at 1 May 2017

£ 1.0m

Estimated allowance of winding up expenses

Results

	Winding-up Assessment as at 1 May 2017 £m
Winding-up liabilities	
Deferred pensioners	151.7
Current pensioners	81.6
Insured Pensioners	11.7
Winding-up and payment expenses	1.0
Total winding-up liabilities (L)	**246.0**
Assets	
Total assets shown in accounts	130.8
Insured pensioners	11.7
Total assets (A)	**142.5**
Winding-up surplus or (deficit) (A minus L)	**(103.5)**
Winding-up funding level (A as a percentage of L)	**58%**

The funding level on winding-up (58%) is much lower than the ongoing funding. This is due to the difference between the anticipated cost of providing the benefits from the Plan and the cost of guaranteeing those benefits through the purchase of insurance policies.

Effect on member's benefits

If a pension scheme winds up at a time when there are insufficient assets to secure all benefits with an insurer, the shortfall becomes a debt due from the sponsor to the scheme. If the sponsor has had an insolvency event, the extent to which any or all of that debt can in practice be recovered by the trustees will depend on the value that can be realised from what remains of the sponsor's assets and the priority given to other creditors.

If the debt is not recovered in full, the assets will not be sufficient to secure all benefits. In such cases, current legislation aims to ensure that members receive at least a specified proportion of their entitlements. This may be through the trustees purchasing insurance policies, where possible, or may be through the government's pensions lifeboat, the Pension Protection Fund (PPF).

Winding-Up Assessment

The “compensation” paid by the PPF is based on the benefits accrued by each member within their own pension scheme, but with some adjustments. For example;

- Members yet to reach their Normal Pension Age have their benefits reduced by 10% and pensions are restricted so that they are no greater than a limit set by the PPF.
- No increases are applied to pension accrued before April 1997.
- Increases to pension accrued after April 1997 are limited to a maximum of 2.5% each year (or the increase in the Consumer Prices Index if lower).

If a pension scheme does not have sufficient funds to secure the equivalent of PPF compensation then it is likely to enter the PPF. If, on the other hand, the assets are sufficient to secure PPF compensation then the scheme’s trustees must first apply the available assets according to the order set out in legislation, and then any balance in accordance with their trust deed.

The following table sets out the order of priority that the Trustee would follow if the Employers were to become insolvent. It also sets out the extent to which the assets available at the valuation date could secure the benefits in each category.

	Winding-up Assessment as at 1 May 2017 Proportion of Benefits Covered by Plan Assets
1 – AVCs	100%
2 - Benefits up to the PPF level (including Insured annuity contracts)	85%
3 - Benefits above the PPF level	0%

At 1 May 2017, the Plan did not have sufficient assets to secure the equivalent of PPF benefits. If the Employer had become insolvent at that time, and if no additional funds were secured, the Plan would have been likely to enter the PPF and members would have received the benefits described above.

Next Steps and the Next Valuation

Next steps

The signing of this document, the Recovery Plan and Schedule of Contributions concludes the valuation formalities. The next step is for me, on behalf of the Trustee, to submit details of the valuation to the Pensions Regulator.

Between now and the next valuation

Between now and the next valuation I will provide annual reports to the Trustee, setting out how the funding position has evolved and the key reasons for any changes.

1 August 2018

Deadline to submit the valuation results to the Regulator

These reports, along with regular reviews of the Employer covenant, will enable the Trustee to monitor the funding of the Plan. If it appears to the Trustee that the Recovery Plan is no longer likely to meet the funding objective, they should consider what remedial actions might be taken.

I look forward to continuing to work with the Trustee on these matters.

Signature:	C S Price	**Date:**	18. 1. 18
Name:	Colin Stewart Price	**Qualification:**	Fellow of the Institute and Faculty of Actuaries
Address:	Phoenix House 1 Station Hill Reading Berkshire RG1 1NB	**Employer:**	Xafinity Consulting Limited

Appendix A – Membership Data

In this appendix I present a summary of the membership data used in my assessment and how this data compares with that used for the previous valuation.

1662

Total Scheme membership at current valuation date

1709

Total Scheme membership at previous valuation date

Deferred pensioners

	Current Valuation as at 1 May 2017			Previous Valuation as at 1 May 2014		
	Number	Deferred Pensions* (£m)	Average Age	Number	Deferred Pensions* (£m)	Average Age
Males	399	1.291	55.3	463	1.659	54.6
Females	520	0.840	53.8	583	1.019	52.7
Total	**919**	**2.131**	**54.8**	**1,046**	**2.678**	**53.9**

*Deferred pensions above are at members' date of leaving the Plan.

Plan Pensioner members

	Current Valuation as at 1 May 2017			Previous Valuation as at 1 May 2014		
	Number	Pensions in payment (£m)	Average Age	Number	Pensions in payment (£m)	Average Age
Males	292	1.991	69.3	255	1.551	68.2
Females	317	0.932	67.1	273	0.710	66.0
Total	**609**	**2.923**	**68.6**	**528**	**2.261**	**67.5**

Insured Pensioner members

	Current Valuation as at 1 May 2017			Previous Valuation as at 1 May 2014		
	Number	Pensions in payment (£m)	Average Age	Number	Pensions in payment (£m)	Average Age
Males	54	0.527	81.5	53	0.310	79.5
Females	80	0.384	74.1	82	0.303	72.2
Total	**134**	**0.911**	**78.2**	**135**	**0.613**	**75.8**

The Insured pensioner numbers at 1 May 2014 includes pensioner members insured with L&G only. Since 2014 as part of the new SORP requirements we have acquired information for additional Insured pensioners who are insured with other providers. Therefore, the 2017 Insured pensioner numbers includes an additional 26 members who have total pensions of £0.369m paid by other providers.

Appendix B – Plan Benefits

In this section, I present a summary of the Plan benefits.

I have valued the benefits set out in the Plan Rules dated 1 October 2012, with allowance for any subsequent changes in prescriptive legislation and for such other benefits as agreed between the Trustee and Employer as notified by me.

With effect from 1 May 2007 benefits ceased to accrue. Following this date active members became employed deferred members, retaining a salary link to their benefit entitlements but with an underpin equal to the benefit based on their 1 May 2007 Final Pensionable salary plus revaluations to their actual date of leaving active service or to 1 May 2011 for those still in employment at that date. With effect from 1 May 2011 this salary link was broken and these members became deferred members.

The Plan is closed to new entrants and accordingly no allowance for new entrants has been made in the valuation calculations.

The Plan was contracted-out of the State Second Pension arrangement on a salary-related basis.

In 2010 the government announced that it would increase State benefits as well as State pensions and public sector pensions by reference to CPI rather than RPI from April 2011. The Plan rules state that leaver benefits in relation to service after 1 December 2001 revalue in line with statutory revaluations and hence I have assumed that benefits revalue in line with CPI in deferment for future periods. In contrast, pension increases for post-1997 service are explicitly linked to the RPI.

The table that follows provides a summary of the Plan albeit that certain elements are no longer relevant now that there are no active members.

Pensionable Service	A member's last or only continuous period of service as an employee, expressed as years and complete months, and including any additional service (e.g. via a transfer in or a re-admission). Pensionable Service is limited to a maximum of 40 years.
Pensionable Salary	The annual rate of the Member's Earnings at the Plan Anniversary date
Final Pensionable Salary (FPS)	The highest average Pensionable Earnings at any three consecutive Plan Anniversary Dates in the 10 years prior to the member completing Pensionable Service
Normal Pension Age (NPA)	60, 63 or 65 depending on date of joining

Appendix B – Plan Benefits

Retirement Benefit	Pension – 1/60th of Final Pensionable Earnings for each year and complete month of Pensionable Service up to a maximum of 40/60ths of the member's Final Pensionable Earnings. Lump sum – The option to convert some of the pension above (in excess of any GMP) into a cash lump sum
Early Retirement	Ill health – The accrued pension as at date of early retirement, reduced by the Early Retirement Discount (as explained in the Plan rules). The Trustee may disapply all or part of the Early Retirement Discount at their discretion. Other – The accrued pension as at date of early retirement, reduced by the Early Retirement Discount (as explained in the Plan rules)
Benefits on withdrawal	Less than 24 months –Members who joined the Plan before 1 December 2001 are entitled to a deferred pension or a refund of contributions. Members who joined the Plan on or after 1 December 2001 are entitled to a refund of contributions. At least 24 months – Entitled to a deferred pension preserved within the Plan
Death after Retirement	Spouse's pension – 50% of the member's pension (before any cash commutation). This may be reduced if the Qualifying Spouse is more than 10 years younger than the member. Lump sum – If death occurs within 5 years of the pension starting, a lump sum equal to the remainder of the pension payments due within that 5 year period, with no allowance for pension increases
Death of Deferred Pensioner	Spouse's pension – An immediate pension equal to the member's GMP and the Reference Pension (the pension in respect of the member's Contracted-out Employment after 5 April 1997). Lump sum – A lump sum equal to the member's contributions

Appendix B – Plan Benefits

Deferred Pension Revaluation	Pensions in excess of GMP will be revalued as follows: The benefits for members who left before 1 January 1986 are not revalued in deferment. For members who left Service on or after 1 January 1986 but before 1 January 1991: • Pension accrued in respect of Pensionable Service on or after 1 January 1985, 5% per annum compound, • Pension accrued in respect of Pensionable Service before 1 January 1985, 0% per annum. For members who joined the Plan before 1 December 2001 and left Service on or after 1 January 1991: • Pension accrued in respect of Pensionable Service on or after 1 January 1991 and up to but not including 1 December 2001, 5% per annum compound, • Pension accrued in respect of Pensionable Service on or after 1 December 2001, in line with the statutory revaluation requirements. For members who joined the Plan on or after 1 December 2001, in line with the statutory revaluation requirements.
Pension Increases	For pensions commencing before 10th October 1987, 2.5% per annum compound. For pensions commencing on or after 10 October 1987 but before 6 April 1997, 3% per annum compound. For members who joined the Plan before 1 December 2001 and who retire on or after 6 April 1997, • for pension accrued prior to 6 April 1997, 3% per annum compound • for pension accrued on or after 6 April 1997, the annual percentage increase in the Retail Price Index, rounded to the nearest 0.1%, subject to a minimum of 3% and a maximum of 5% per annum For members who joined the Plan on or after 1 December 2001, the annual percentage increase in the Retail Price Index, rounded to the nearest 0.1%, subject to a maximum of 5%.

Appendix C – Assets and Investment Strategy

Assets held at the valuation date

I have taken the value of the Plan's assets from the Trustee's audited Report and Accounts as at 1 May 2017. The accounts state that at that date the Plan had invested assets of £129,801,097 (excluding AVCs).

The following table summarises the assets held at the valuation date.

	1 May 2017 £'000s
Equities	26,870
Bonds and Credit	44,672
LDI and Leveraged Bonds	36,756
Alternatives	15,215
Property	3,612
Cash	2,676
Total invested assets	129,801
AVCs	204
Net current assets / (liabilities)	1,025
Total assets in Plan accounts	131,030

A number of Plan pensions are paid from annuity policies held in the name of the Trustee. In the valuation calculations, I have shown the value of these as both as an asset and liability.

The investment strategy

The assets held at the effective date of the valuation broadly reflected the Trustee's investment strategy, as set out in the Trustee's statement of investment principles. The key decision in the investment strategy was to seek a long term solution to 'de-risk' the Plan's assets relative to its liabilities over time.

Appendix C – Assets and Investment Strategy

£10.0m

Total deficit reduction contributions and expenses paid over the valuation period

£5.0m

Total contributions paid by over the valuation period in relation to Employer's full buyout payments

Investment returns

The returns on the market as a whole translated into volatile returns on the Plan's investments. The following table sets out the approximated return on the Plan's investments between the two valuations.

Year Ending	Approximate Return on Whole Portfolio
30 April 2015	22.0%
30 April 2016	2.8%
30 April 2017	22.7%

These returns have been estimated using the information provided in the Plan's audited financial statements.

Contributions paid to the Scheme

Following completion of the 1 May 2014 valuation, the Trustee agreed a Recovery Plan with the Participating Employers. That plan required additional contributions from the Participating Employers at an annual rate of £2.97 million per annum, payable in equal monthly instalments commencing on 1 May 2015 and increasing at 3% each 1 May thereafter. The shortfall was expected to be eliminated in 2027 (12 years).

The contributions actually paid between the two valuations were as follows.

Year Ending	Deficit Reduction Contributions plus Contributions towards regular expenses	Contributions in relation to Employer's full buyout payments	Total
1 May 2015	3,358,071	3,379,385	**6,737,456**
1 May 2016	3,271,964	1,194,573	**4,466,537**
1 May 2017	3,333,467	448,819	**3,782,286**
Total	**9,963,502**	**5,022,777**	**14,986,279**

The auditors have confirmed that the contributions paid were in line with the schedules of contributions in force over the period.

Appendix D – Projected funding position

The next valuation

The next formal valuation of the Plan is due to take place as at 1 May 2020. Below, I project the funding position to the next valuation date.

The future is uncertain and it is inevitable that the true position will differ from my projection. In particular, financial market conditions can be very volatile, especially over short periods. This could mean that the actual asset and liability values turn out to be substantially higher or lower than the projected values.

Method of projection

In order to produce the projection I have assumed that over the period to the next valuation:

- Investment performance will be in line with the discount rates used in the funding assessment plus a premium of 0.5%.
- Future deficit contributions will be in line with the newly agreed Schedule of Contributions.
- All other items of experience, and the terms available in the insurance market, will be in line with the assumptions as set out in Appendix E.

Please note in particular that I have not made allowance for changes in financial conditions between the valuation date and the date of this report.

Projected results – main funding assessment

The results of my projection of the funding position are as follows.

	Projection to 1 May 2020 £m	Valuation as at 1 May 2017 £m
Total past service liabilities (L)	176.9	174.8
Total assets (A)	151.5	141.2
Ongoing surplus or deficit (A minus L)	(25.4)	(33.6)
Ongoing funding level (A as a percentage of L)	86%	81%
Winding-up funding level	64%	58%

Appendix E – Assumptions

Key financial assumptions

	Funding Assumptions at 1 May 2017	Winding-up Assumptions at 1 May 2017	Neutral Assumptions at 1 May 2017	Funding Assumptions at 1 May 2014
Discount rate before retirement	3.75%	0.70%	4.75%	5.35%
Discount rate after retirement	2.25%	1.36% (Deferreds) / 1.40% (Pensioners)	2.75%	3.85%
Future price inflation (RPI)	3.40%	3.32%	3.30%	3.30%
Future price inflation (CPI)	2.90%	2.82%	2.30%	2.80%

Pension increase assumptions

	Funding Assumptions at 1 May 2017	Winding-up Assumptions at 1 May 2017	Neutral Assumptions at 1 May 2017	Funding Assumptions at 1 May 2014
Revaluation of deferred pensions before retirement (CPI max 5%)	2.90%	2.82%	2.30%	2.80%
Pension increases in payment				
LPI max 5% min 3%	3.60%	3.57%	3.55%	3.55%
LPI max 5%	3.35%	3.30%	3.30%	3.30%

Appendix E – Assumptions

Demographic assumptions

	Funding Assumptions at 1 May 2017	Winding-up Assumptions at 1 May 2017	Neutral Assumptions at 1 May 2017	Funding Assumptions at 1 May 2014
Mortality				
Base table	SAPS S2PxA	SAPS S2PxA	SAPS S2PxA	SAPS S2PxA
Projection	CMI 2016 tables with 1.5% long term improvement	CMI 2014 tables with 1.5% (M) / 1.25% (F) long term improvement	CMI 2016 tables with 1% long term improvement	CMI 2013 tables with 1.5% long term improvement
Age adjustment	N/A	N/A	Assume members are aged 1 year older	N/A
Commutation	75% of members commute 25% of their pension	Nil	75% of members commute 25% of their pension	75% of members commute 25% of their pension
Retirement	All members are assumed to retire at the earliest age at which they are entitled to all or part of their pension unreduced			

Appendix F – Risks and Sensitivity

Funding risks

There are a number of funding risks which might ultimately affect the Trustee's ability to pay benefits to members. Foremost among these are the risks relating to;

- **Funding shortfalls** – If experience turns out to be less favourable than was assumed for the funding assessment, the funding level will be lower than anticipated. In that event additional contributions would be required from the Participating Employers.
- **Employer covenant** - The Employers may become less able or less willing to continue to make contributions to the Plan.

Key factors which could cause a funding shortfall

- **Investment performance** – investment returns below those assumed will cause a shortfall to emerge. This risk is greatest in pension schemes with a high proportion of assets invested in more volatile assets such as equities.
- **Changes in bond yields** – the discount rates used in the valuation are based on yields on government bonds. In the event that the yields on these bonds fall, the discount rates will fall also. This increases the funding target, worsening the funding position.
- **Life expectancies** – if members live longer than has been allowed for, then benefits will need to be paid for a longer period, worsening the funding position.
- **Weakened covenant –** if the Employer's covenant weakens, greater prudence will be needed in the funding assumptions and that will lead to higher liabilities.

Risk mitigation measures

The Trustee has taken a number of actions to mitigate the risks. These include:

- Funding
  - → The assumptions used in the funding assessment have been chosen prudently, making it less likely that experience will turn out to be worse than assumed.
- Investment
  - → The Trustee has an investment strategy which aims to 'de-risk' the Plan over time, and currently invests in some bonds and LDI-type investments. Movements in the value of these assets act to partially offset movements in the funding target when bond yields change.

Appendix F – Risks and Sensitivity

- Monitoring
  - → Regular updates are received by the Trustee to keep abreast of any changes in the Employer's covenant and the funding position.

Despite these risk mitigation measures, some funding risk remains. In future the Trustee may wish to consider further measures to reduce risk.

Funding level sensitivity

To give the Trustee an idea of the extent of some of the key risks, I set out below the sensitivity of the funding level to market movements and to the assumptions made. Please note that these calculations are approximate and intended for illustration only, notably they do not allow for any corresponding LDI asset movements.

Sensitivity to investment performance – sudden market movements

16%

Approximate proportionate change in Plan deficit as a result of equity assets varying by +/-20%

	Equity markets 20% lower	Asset value at valuation date	Equity markets 20% higher
Assets	135.9	141.2	146.6
Liabilities	174.8	174.8	174.8
Surplus or (deficit)	(38.9)	(33.6)	(28.2)

The effect of this sensitivity is restricted to the Global Equity portfolio. It is possible that other asset classes would also be impacted in this scenario, which could increase the extent of this change.

Sensitivity to assumptions – investment returns

9%

Approximate proportionate change in Plan liabilities as a result of discount rate moving up/down by 0.5%

	Lower discount rate	Discount rate	Higher discount rate
	0.5% lower	3.75% before retirement 2.25% after retirement	0.5% higher
Assets	141.7	141.2	140.8
Liabilities	191.1	174.8	160.6
Surplus or (deficit)	(49.4)	(33.6)	(19.8)

Appendix F – Risks and Sensitivity

4%

Proportionate change in Plan liability as a result of inflation rate moving up by 0.5% pa

Sensitivity to assumptions - future inflation

	Lower future inflation	Assumed future inflation	Higher future inflation
	0.5% lower	RPI at 3.40% p.a. and CPI at 2.90% p.a.	0.5% higher
Assets	141.2	141.2	141.2
Liabilities	170.0	174.8	181.3
Surplus or (deficit)	(28.8)	(33.6)	(40.1)

Sensitivity to assumptions – life expectancies

4.5%

Proportionate change in Plan liability as a result of life expectancy increasing/decreasing by 1 year

	Life expectancies 1 year lower	Valuation assumptions	Life expectancies 1 year higher
Assets	140.5	141.2	141.9
Liabilities	167.0	174.8	182.7
Surplus or (deficit)	(26.5)	(33.6)	(40.8)

Appendix G – Certification of Technical Provisions

The YMCA Pension and Assurance Plan

Calculation of Technical Provisions

I certify that, in my opinion, the calculation of the Scheme's technical provisions as at 1 May 2017 is made in accordance with regulations under section 222 of the Pensions Act 2004. The calculation uses a method and assumptions determined by the Trustee of the Plan and set out in the Statement of Funding Principles dated 18 January 2018.

Signature:		**Date:**	18.1.18
Name:	Colin Stewart Price	**Qualification:**	Fellow of the Institute and Faculty of Actuaries
Address:	Phoenix House 1 Station Hill Reading Berkshire RG1 1NB	**Employer:**	Xafinity Consulting Limited