

SOUTH YORKSHIRE PENSION FUND

2016 ACTUARIAL VALUATION

INITIAL WHOLE FUND
RESULTS AND FUNDING
STRATEGY CONSIDERATIONS

6 OCTOBER 2016



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2016 VALUATION STATUS SUMMARY

What we have done so far ✓

- Full demographic analysis and impact
- Initial data quality assessment
- Produced whole of Fund results using updated membership data
- Analysed the change in deficit from the 2013 valuation
- Considered the sensitivity of the results on a range of key assumptions
- Produced provisional results for the major employers
- Initial meeting held with major employers on 19 September

What we still need to consider

- The affordable level of contributions over 2017/20.
- More detailed risk analysis on future outcomes in different economic scenarios e.g. Brexit
- Final individual results for all employers
- Scheme maturity and cashflow analysis
- Finalise Employer Covenant assessments
- Develop Funding Strategy and begin consultation with all employers
- Section 13 valuation and KPIs (awaiting confirmation of final basis)

2016 VALUATION- DEVELOPING THE FUNDING STRATEGY

MAIN AREAS



OBJECTIVES OF THE FUND

1. 100% solvency level in a reasonable timeframe
2. Maintain sufficient assets to pay all benefits as they arise
3. Sufficiently prudent funding plan to protect against downside outcomes



DEFICIT RECOVERY PLAN

1. Sets out timeframe and plan to address any shortfall
2. Sets out the treatment of different employers when determining the recovery plan, taking into account affordability
3. Average recovery period expected to fall by at least 3 years i.e. from 22 to 19 years.



EMPLOYER ASSET SHARES AND CONTRIBUTIONS

1. Multi employer scheme so each employer has it's own notional asset share
2. Contribution rates set on a bespoke basis
3. Reflects different underlying investment strategies e.g. a corporate bond strategy

SOLVENCY AND LONG TERM COST EFFICIENCY

1. Solvency - where the Fund's liabilities (i.e. benefit payments) can be reasonably met as they arise
2. Long-term cost efficiency - Contribution levels cannot be set at a level that is likely to give rise to additional costs in the future
3. Desirability of a stable primary rate



ACTUARIAL ASSUMPTIONS

1. Allow for appropriate prudence and reflecting the demographic characteristics of the Fund
2. Linked to the Fund's investment strategy and economic outlook
3. Determines pace of funding along with recovery period



FUND AND EMPLOYER POLICIES

1. Covenant assessment and monitoring
2. Policy for admitting employers
3. Policy for employer terminations
4. Potential insurance arrangements



2016 VALUATION

RECAP OF KEY FUNDING STRATEGY ISSUES



DISCOUNT RATE – LINKED EXPLICITLY TO REAL RETURNS VERSUS CPI. MAINTAIN FOR SOLVENCY CALCULATION BUT REDUCE BY 0.25% P.A. FOR FUTURE SERVICE RATE.



REMOVAL OF ALLOWANCE FOR FUTURE 50/50 SCHEME MEMBERSHIP



UPDATE DEMOGRAPHIC ASSUMPTIONS – LIFE EXPECTANCY, ILL HEALTH ETC



REDUCTION IN AVERAGE DEFICIT RECOVERY PERIOD (SUBJECT TO REASONABLE AFFORDABILITY) TO MAINTAIN DEFICIT RECOVERY PLAN



CONSIDER THE IMPACT OF BREXIT AND INTEREST RATE CHANGE ON FUNDING STRATEGY

2016 VALUATION

DATA QUALITY – IMPACT ASSESSMENT

Of the active members valued around 2,350 members had a missing CARE salary within the valuation data provided. A summary of these members is shown below.

Number of members affected	c2,350
CARE salary provided	Nil
CARE salary adopted	c£26m
Past Service Liabilities	c£40m
Proportion of the Fund's liabilities	0.5%






For the c2,350 members, we suspect that the majority are unprocessed/un-notified leavers or there is a lack of data provided by the employers. As we have no way of deriving the CARE data easily, as agreed, for the Whole Fund results we have created a proxy pay and benefit amount based on pre-2014 data (where credible) or an average amount when calculating past service liabilities.

We have also left them as being active members which has some inherent prudence in the liability calculation. Similar estimates for CARE pay / benefits were made for members for whom a pay figure was provided but did not appear credible.

Whilst the valuation result can be reasonably signed off, there is a real potential impact on individual employers. If the above liability estimate is wrong by say 10%, the liabilities could be overstated by c£4m resulting in an increased deficit contribution of £0.25m per annum













2016 VALUATION – WHOLE FUND RESULTS

INTERVALUATION EXPERIENCE

Actual vs Expected	Impact	Comment
Investment Returns		c21% return over 2013/16 – greater than expected and hence decrease in deficit
Membership Profile		Increase in Future Service Rate but decrease in deficit, in particular, number of early leavers greater than expected.
CPI Pension Increases		Overall liabilities are around 3% lower compared to those expected
Pensioner Deaths		Analysis shows that the impact on liabilities is positive
Pay Increases		Based on a “data implied” overall salary growth of 7% pay increase over 2013/16 (after credibility adjustment)

2016 VALUATION – WHOLE FUND RESULTS

DEMOGRAPHIC ASSUMPTIONS UPDATE

Analysis	Effect on Deficit (Whole Fund)	Effect on Future Service Rate (Whole Fund)	Comment in relation to Fund
Life Expectancy			Analysis indicates reductions from last time of around 0.2 years for current pensioners.
Ill-Health Retirement			Decrease for future service rate but no material impact for deficit
Withdrawal			Marginal decrease in deficit, no real impact on future service rate
50/50			As expected! – 0.6% p.a. increase to FSR given take up c0.1% compared to 10% assumed
Commutation			No change from 2013 assumption
Proportions with Partner / Dependants			Marginal impact only

2016 VALUATION – WHOLE FUND RESULTS

PRELIMINARY RESULTS AS AT 31 MARCH 2016

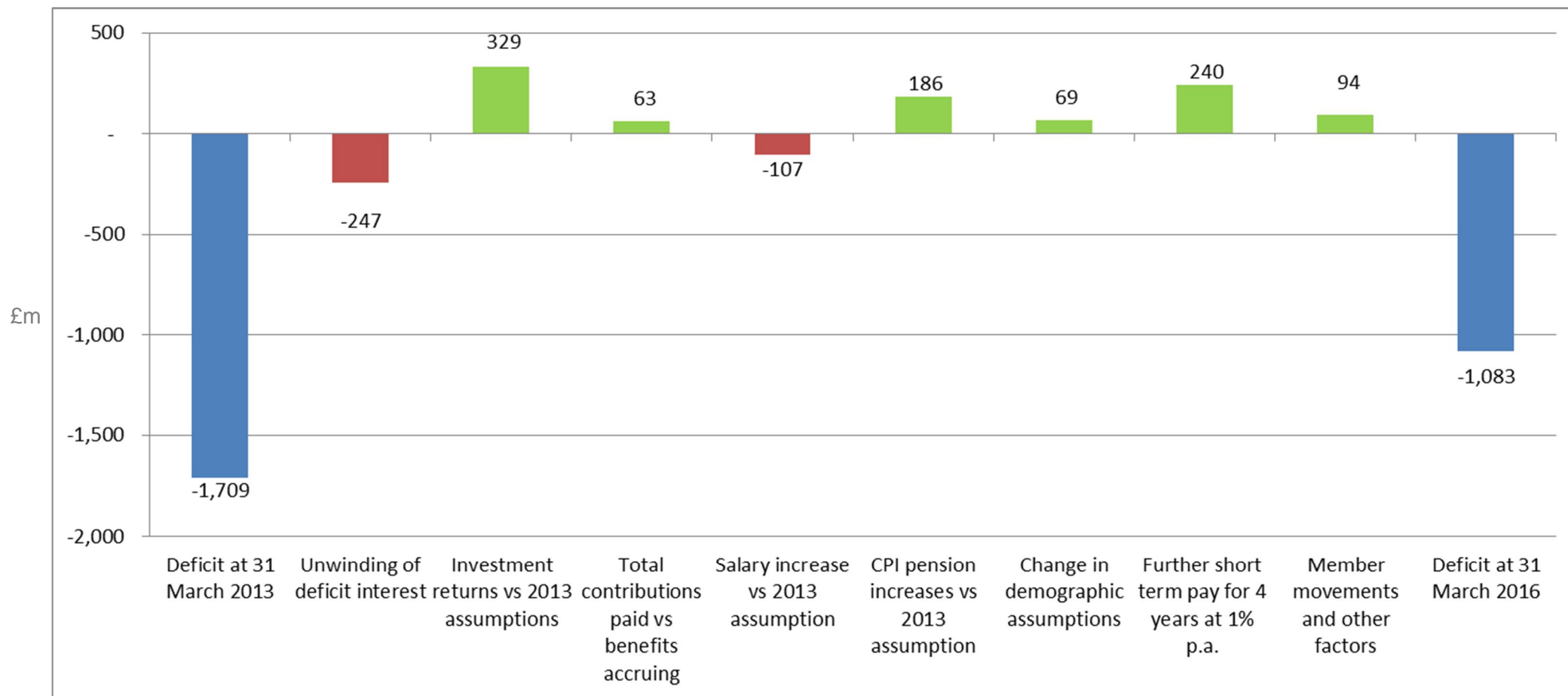
Discount Rate	31 March 2013	31 March 2016
	Final Results	Maintain Real Return vs CPI at 2013 (CPI plus 2% p.a.) plus changes to demographics
Assets	£5,288m	£6,254m
Liabilities	£6,997m	£7,337m
Deficit ¹	£1,709m	£1,083m
Funding Level	76%	85%
Employer Future Service Rate ² (% of pay per annum)	12.8% ³	14.8% ³
Illustrative deficit contributions payable over 19 years (2017/18) <u>indexing</u> in line with long-term CPI inflation (2.2% p.a.)	£80.5m p.a. ⁴	£69.6m p.a.

NOTES :

1. 2016 figure includes allowance for short-term pay of 1% p.a. for 4 years up to 2019/20 for all employers for illustration.
2. Allows for different discount rate assumption to past service (CPI plus 3% p.a. at 2013 and CPI plus 2.75% p.a. at 2016).
3. 2013 figure allows for 10% take up rate of 50/50 Scheme. 2016 figure includes no allowance.
4. Actual deficit contributions emerging from 2013 valuation were based on updated funding positions as at 31 August/December 2013 – ignores impact of prepayments

2016 VALUATION – WHOLE FUND RESULTS

ANALYSIS OF CHANGE IN DEFICIT POSITION

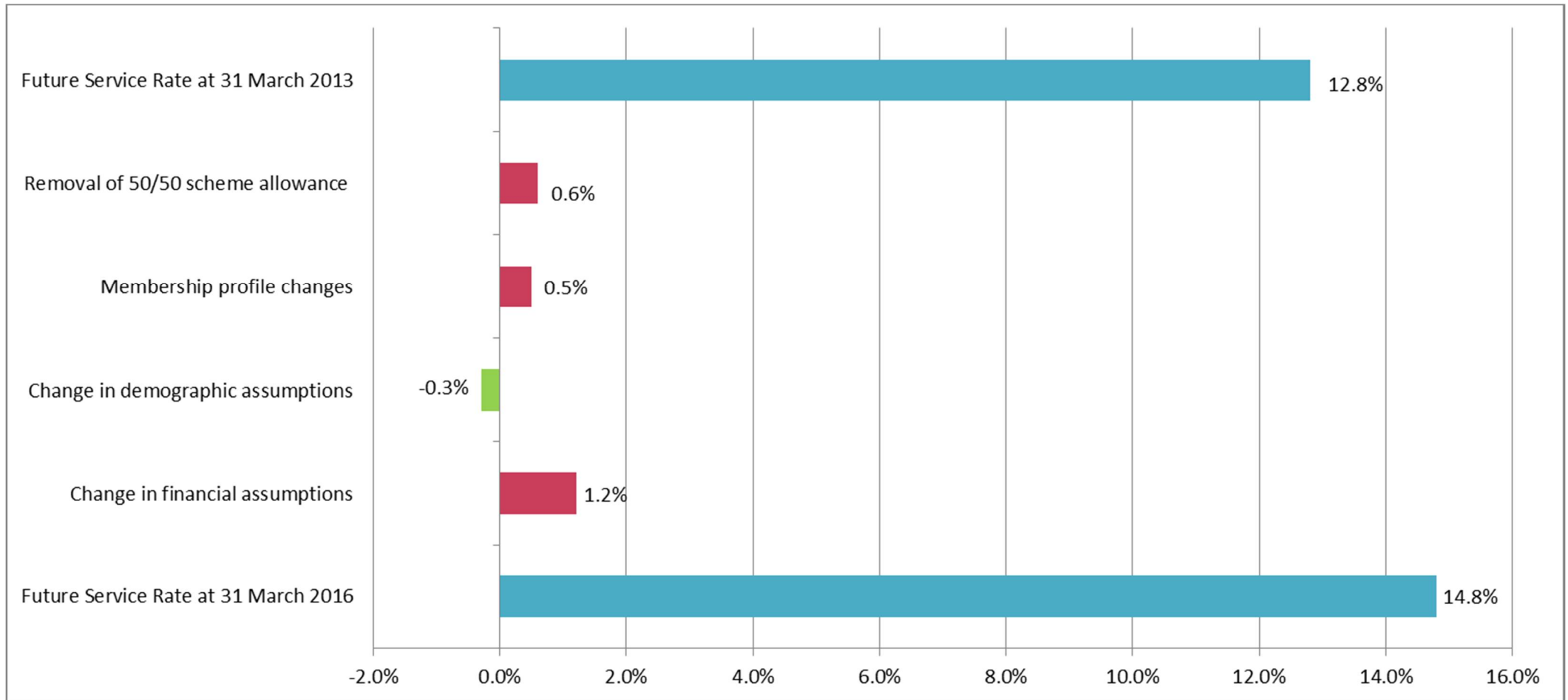


Notes:

1. The short term pay figure assumes it is incorporated for all employers at 1% for 4 years which is unlikely to be the case in practice.
2. The salary increase vs 2013 assumption item currently incorporates an implied average pay increase of 7% for 2013/16.

2016 VALUATION – WHOLE FUND RESULTS

ANALYSIS OF CHANGE IN FUTURE SERVICE RATE



2016 VALUATION – FUNDING STRATEGY CONSIDERATIONS

SOLVENCY VS STABILITY

ASSUMPTIONS



- Links to investment strategy
- Prudence
- Long-term cost efficiency
- Phasing of FSR increases?

RECOVERY PLAN



- Minimum contribution requirements
- Recovery Period
- Phasing of Deficit Contribution increases
- Prepayments

Funding Strategy will be subject to greater level of scrutiny

2016 VALUATION – WHOLE FUND RESULTS

ILLUSTRATIVE CONTRIBUTION OUTCOMES – 2017/20

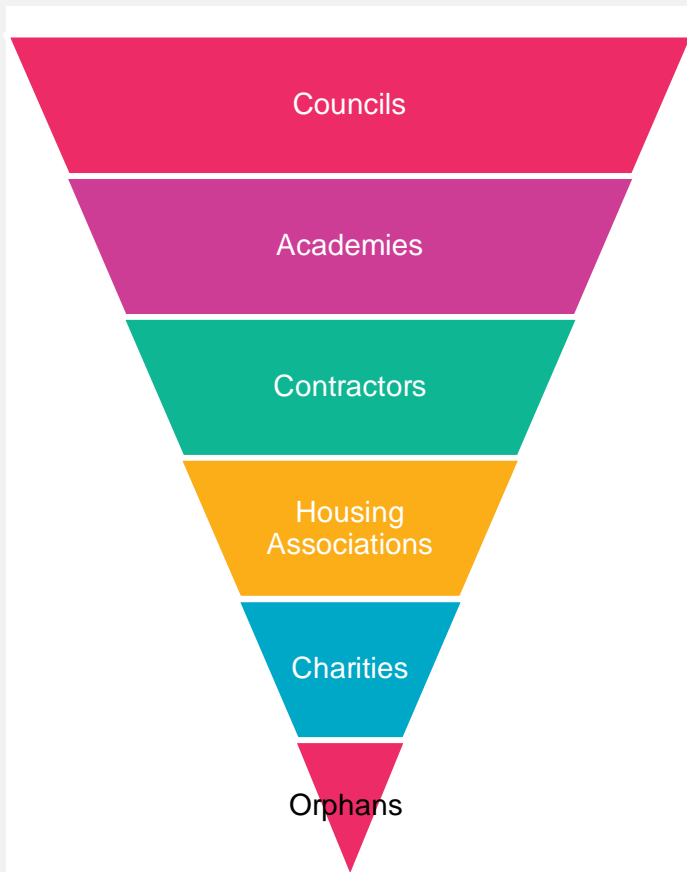
Discount Rate	31 March 2013		31 March 2016		31 March 2016	
	Current Contributions		“Minimum” Contributions		“Recommended” Contributions	
			Move to new 2016 contribution outcomes		Maintain 2013 deficit contributions for 2017/20	
Deficit	£1,709m as at 31 March 2013		£1,083m		£1,083m	
Employer Future Service Rate (% of pay per annum)	12.8%		14.8%		14.8%	
Contributions Payable	Deficit (Indexed at 2.6% p.a.)	Future Service ¹	Deficit (Indexed at 2.2% p.a.)	Future Service ¹	Deficit (Fixed)	Future Service ¹
	2017/18 2018/19 2019/20 <u>Total</u>	£80.5m p.a. £82.3m p.a. £84.1m p.a. £246.9m	£111.0m p.a. £112.1m p.a. £113.2m p.a. £336.3m	£69.6m p.a. £71.1m p.a. £72.7m p.a. £213.4m	£128.3m p.a. £129.6m p.a. £130.9m p.a. £388.8m	£80.5m p.a. £80.5m p.a. £80.5m p.a. £241.5m
Total Contributions payable over 2017/20 (ignoring prepayments)	£583.2m		£602.2m		£630.3m	
Potential saving if all deficit contributions prepaid in April 2017			(£12.8m)		(£14.3m)	
Total Contributions payable over 2017/20 (allowing for 3 year prepayment)			£589.4m		£616.0m	

¹Based on projected 2017/18 payroll of £867m p.a. increasing at 1% p.a. In practice, under the 2016 scenarios it may be possible for employers to phase in the increase to the 2016 rate where applicable under the Funding Strategy.

2016 VALUATION – FUNDING STRATEGY CONSIDERATIONS

MANAGING EMPLOYERS AND RISK

TYPES OF EMPLOYERS



KEY EMPLOYER FEATURES:

- FUNDING LEVEL
- SIZE & MATURITY
- COVENANT
- EMPLOYER OBJECTIVES

SETTING EMPLOYER CONTRIBUTIONS:

- INVESTMENT STRATEGY
- AFFORDABLE PAYMENTS?
- RECOVERY PERIODS
- RISK MANAGEMENT /PROTECTION

2016 VALUATION TIMELINE

Initial meetings with
Fund, Councils, etc.



Develop initial funding
considerations/analysis



Get Data



Commence FSS draft and
policy refresh and updates



Initial results for
total Fund and
major employers



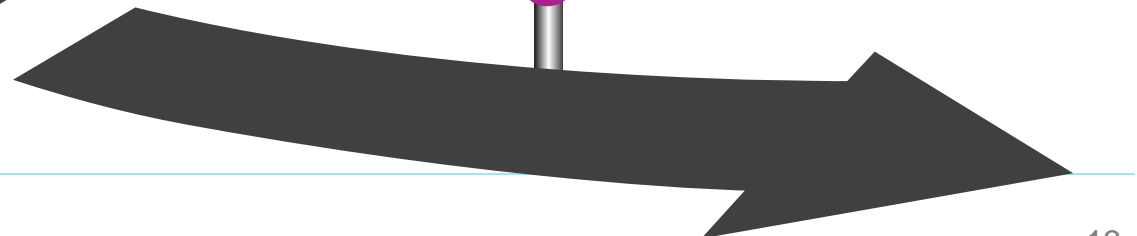
Feedback from consultation



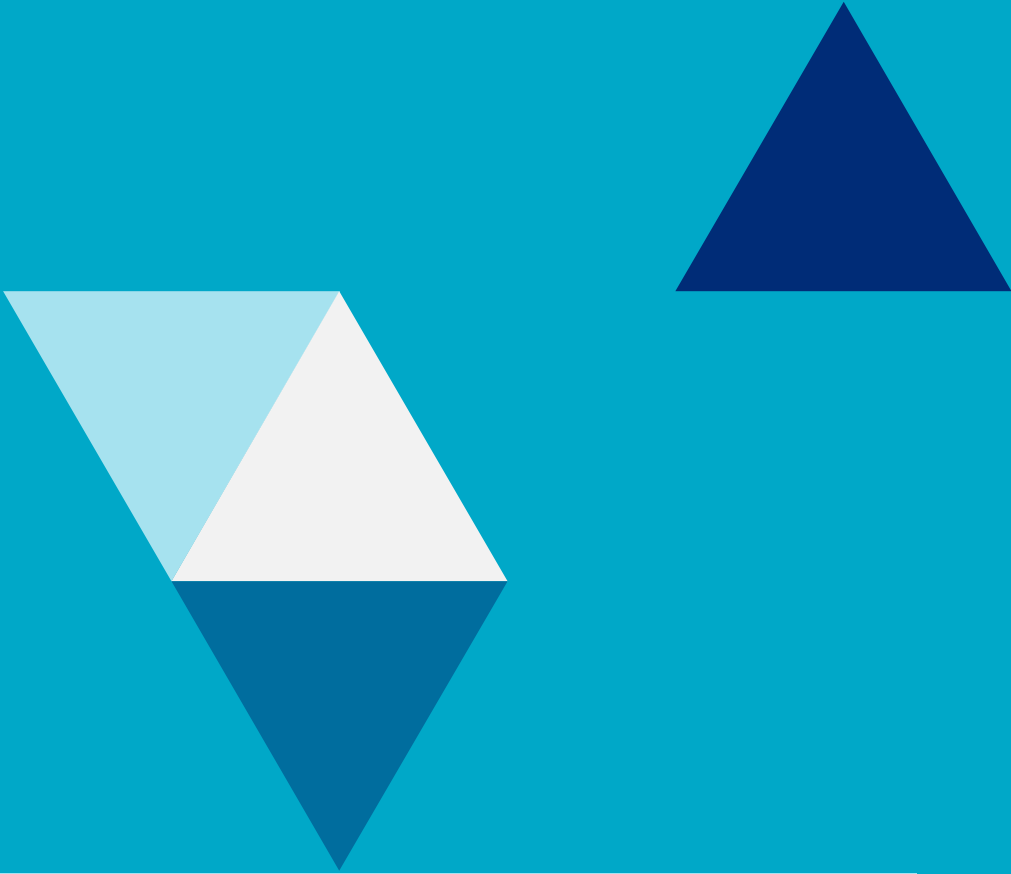
Employer
meeting



Valuation sign off

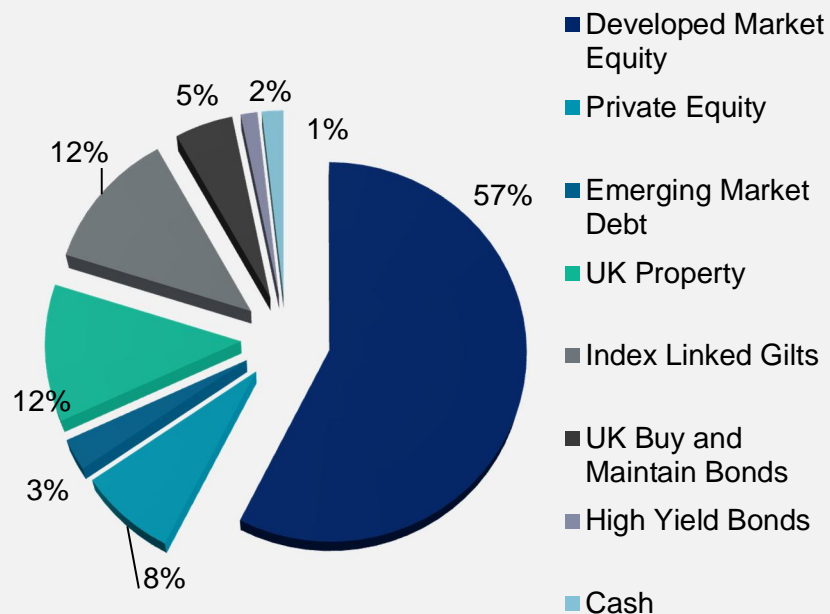


APPENDIX



DISCOUNT RATE EXPECTED INVESTMENT RETURNS

Your strategic asset allocation



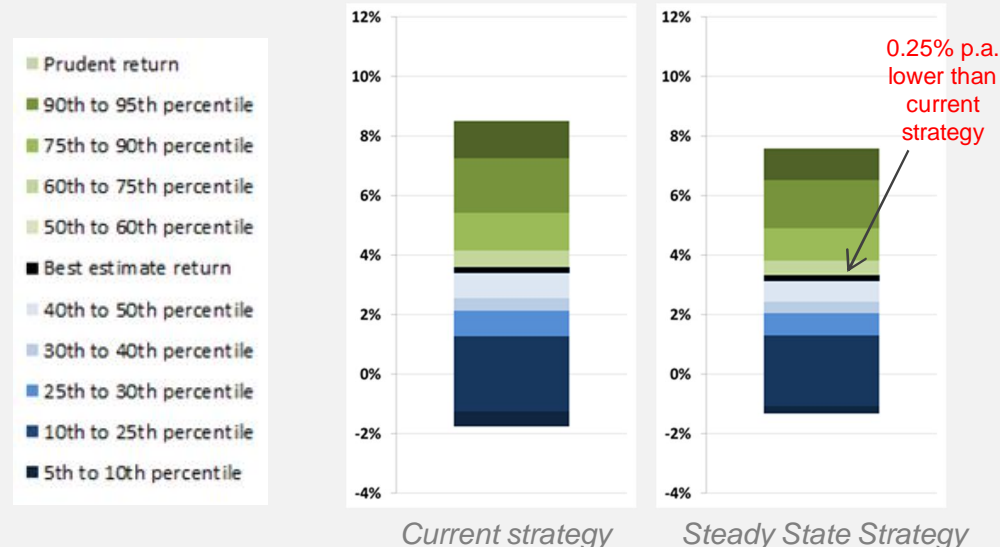
Chance of achieving return on <u>current strategy</u>	Expected Real Return
50%	CPI + 3.4% p.a.
60%	CPI + 2.6% p.a.
67%	CPI + 2.0% p.a.
75%	CPI + 1.3% p.a.

More prudent

"Best estimate"

Prudent AOA

Range of outcomes relative to CPI



Comments

To develop the discount rate we ultimately look at the expected returns on the assets relative to CPI.

We have considered the **current** benchmark investment strategy plus an **aspirational** example lower risk strategy (the "steady state"). Under this scenario, the expected best estimate real return would be 0.25% p.a. lower i.e.

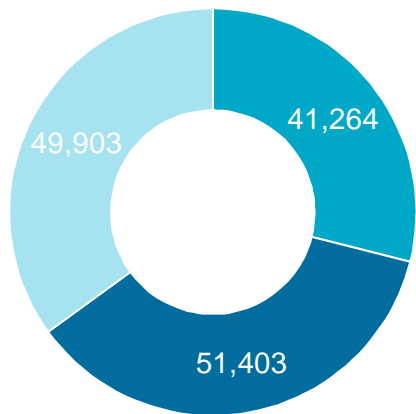
For **Past Service** i.e. "liability" calculations, we would propose to maintain a discount rate equivalent to that from 31 March 2013 i.e. **CPI + 2.0% p.a.**

For **Future Service**, we would propose a discount rate equivalent to **CPI+2.75% p.a.** (instead of CPI + 3.0% p.a.) given the current outlook.

OVERVIEW OF FUND PROFILE

MEMBERSHIP DETAILS

MEMBERSHIP DETAILS PROVIDED BY THE FUND

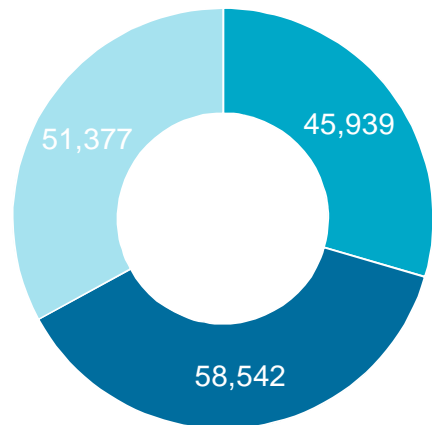


MEMBERSHIP DEVELOPMENT

31 MARCH 2013

Total membership – 142,570

- Pensioners
- Deferreds
- Actives

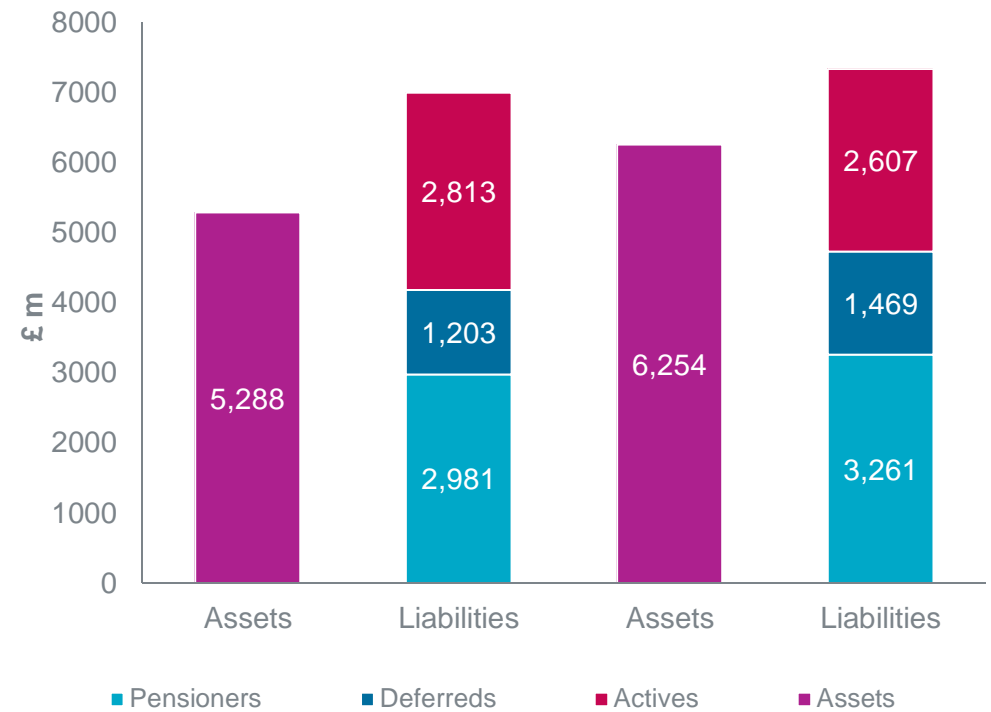


31 MARCH 2016

Total membership – 155,858

31 MARCH 2013

31 MARCH 2016



FUND MEMBERSHIP

MEMBERSHIP ANALYSIS

	31 March 2013	31 March 2016
Active members		
Number	49,903	51,377
Total Pensionable Salaries (£000s p.a.) ¹	842,122	868,395
Average Pensionable Salary (£ p.a.)	16,875	16,902
Average age ²	49.0	49.5
Average accrued pension	3,090	3,075
Deferred pensioners ³		
Number	51,403	58,542
Total deferred pensions revalued to valuation date (£000s p.a.)	64,016	79,652
Average deferred pension (£ p.a.)	1,245	1,361
Average age ²	48.3	48.9
Current Pensioners and Dependants		
Number	40,880 ⁴	47,736
Total pensions payable (£000s p.a.)	180,320	201,666
Average Pension	4,411	4,390
Average Age ²	68.9	69.8

¹ Including actual pay for part time members

² Weighted by accrued pension/deferred pension/pension

³ Including frozen refunds

⁴ Also an additional 384 current dependant pensioners

FINANCIAL ASSUMPTIONS



Market yields	31 March 2013	31 August 2013	31 March 2016
Fixed interest gilt yield	3.2% p.a.	3.6% p.a.	2.2% p.a.
Index-linked gilt yield	-0.4% p.a.	0.0% p.a.	-1.0% p.a.
Assumed CPI price inflation (derived by differencing yields on fixed-interest and index-linked gilts less 1% p.a.)	2.6% p.a.	2.6% p.a.	2.2% p.a.
Assumptions used for Liabilities			
Derivation of Discount Rate /Expected Return	CPI plus 2.0% p.a. (Gilts + 1.4% p.a.)	CPI plus 2.4% p.a. (Gilts +1.4% p.a.)	CPI plus 2.0% p.a.
Discount rate:	4.6% p.a.	5.0% p.a.	4.2% p.a.
Inflation: Consumer Prices Index (CPI)	2.6% p.a.	2.6% p.a.	2.2% p.a.
Long term pay growth assumption	4.35% p.a.	4.35% p.a.	3.95% p.a.
Pension increases	2.6% p.a.	2.6% p.a.	2.2% p.a.
Short term pay growth assumption	1% p.a. to 31 March 2016	1% p.a. to 31 March 2016	1% p.a. to 31 March 2020
Fund investment return	A total return of 21% over the period from 1 April 2013 to 31 March 2016.		

FUNDING FRAMEWORK

SECTION 13 VALUATION DRY RUN – SYPF OUTCOME

Funding Levels:

	Local Basis	Standardised Basis
South Yorkshire	76%	94%

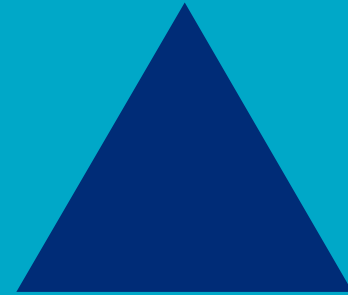
Solvency Measures:

PENSION FUND	MATURITY (RANK)	SOLVENCY MEASURES						
		RISKS ALREADY PRESENT				EMERGING RISKS		
		SAB FUNDING LEVEL	OPEN FUND	NON-STATUTORY EMPLOYEES	CASHFLOW POSITION	LIABILITY SHOCK	ASSET SHOCK	EMPLOYER DEFAULT
SOUTH YORKSHIRE	6.4 (47)	94%	YES	10%	0%	+4%	+4%	+0%

Long Term Cost Efficiency Measures:

PENSION FUND	MATURITY (RANK)	LONG TERM COST EFFICIENCY MEASURES						
		RELATIVE CONSIDERATIONS				ABSOLUTE CONSIDERATIONS		
		DEFICIT REPAID	DEFICIT PERIOD	REQUIRED RETURN	REPAYMENT SHORTFALL	RETURN SCOPE	DEFICIT EXTENSION	INTEREST COVER
SOUTH YORKSHIRE	6.4 (47)	>50%	1	2%	17%	3.7%	-3	Yes

IMPORTANT NOTICES



ACTUARIAL ADVICE

- We have prepared this document for the Administering Authority for the purpose of planning for the 2016 Actuarial Valuation.
- Unless otherwise stated, we have relied on the information and data supplied to us in preparing the information, without independent verification. We will not be responsible for any inaccuracy in the advice that is a result of any incorrect information provided to us.
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- This presentation is correct as at September 2016. It will not be updated unless requested.

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TOMORROW,
TODAY